From: HO Philip -FIN & C CTRL
To: John Kim; Ronald Kwan
Cc: CHENG Alec -FIN & C CTRL
Subject: Draft Global Adjustment disclosure for OPG
Date: Thursday, March 02, 2017 1:30:48 PM

Hi John and Ronald,

We are proposing to include the following language regarding the Global Adjustment refinancing portion of the Ontario's Fair Hydro Plan into OPG's 2016 MD&A and AIF.

We will be mailing the relevant documents to our Board today. Your comments will be appreciated. Please let us know if you have questions.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 per cent on average for all residential consumers in the province. As part of the Plan, the Province has proposed refinancing a portion of total electricity system Global Adjustment costs over a longer time period for residential consumers. According to the Plan, the Province intends to introduce legislation that would, if passed, enable the IESO and OPG to work together to undertake this financing. The Global Adjustment portion of the total price of electricity in the province is administered by the IESO. The Global Adjustment includes the difference between Ontario's electricity market clearing price used to dispatch generation and the prices paid to contracted and regulated generators in the province, and the cost of conservation and demand management programs. Virtually all generators in Ontario have bilateral contracts with the IESO that provide for payments that are different from the market clearing price of electricity, while the prices for all of OPG's nuclear and most of its hydroelectric generation are set by the OEB. OPG intends to work with the Province and the IESO as part of the refinancing proposal.

Regards,

Philip

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy (Acting)| Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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From: John Kim
To: Ronald Kwan
Cc: Gavin He
Subject: FW: Draft Global Adjustment disclosure for OPG
Date: Thursday, March 02, 2017 2:01:09 PM

Hi Ron,

I have no issue with the paragraph for the reason that it is largely consistent with the backgrounder.

Thanks,

John.

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: Thursday, March 02, 2017 1:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: Draft Global Adjustment disclosure for OPG

Hi John and Ronald,

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Regards,

Philip

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From:	Ronald Kwan
To:	Gadi Mayman; Nancy Kennedy (MOHLTC); Scott Nelms (ENERGY)
Subject:	FW: Draft Global Adjustment disclosure for OPG
Date:	Thursday, March 02, 2017 7:49:22 PM

Hi Gadi, Nancy, Scott,

Did you see the proposed disclosure below?

Ron

From: Ronald Kwan
Sent: March-02-17 7:48 PM
To: John Kim <John.Kim@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: Draft Global Adjustment disclosure for OPG

Hi,

A few suggested edits below.

Ron

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 per cent on average for all residential consumers in the province. As part of the Plan, the Province has proposed refinancing a portion of total electricity system Global Adjustment costs over a longer time period for regulated price plan eligible customers (e.g., residential , farm, small businesses). According to the Plan, the Province intends to introduce legislation that would, if passed, enable the IESO and OPG to work together to undertake this financing. The Global Adjustment portion of the total price of electricity in the province is administered by the IESO. The Global Adjustment includes the difference between Ontario's electricity market clearing price used to dispatch generation and the prices paid to contracted and regulated generators in the province, and the cost of conservation and demand management programs. Virtually all generators in Ontario have bilateral contracts with the IESO that provide for payments that are different from the market clearing price of electricity, while the prices for all of OPG's nuclear and a majority of its hydroelectric generation are set by the OEB. OPG intends to work with the Province and the IESO as part of the refinancing proposal.

From: John Kim
Sent: March-02-17 2:01 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: FW: Draft Global Adjustment disclosure for OPG

Hi Ron,

I have no issue with the paragraph for the reason that it is largely consistent with the backgrounder.

Thanks,

John.

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: Thursday, March 02, 2017 1:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: Draft Global Adjustment disclosure for OPG

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We will be mailing the relevant documents to our Board today. Your comments will be appreciated. Please let us know if you have questions.

Ontario's Fair Hydro Plan

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Regards,

Philip

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy (Acting)| Ontario

Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail:
philip.ho@opg.com

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From:	Nelms, Scott (MOF)
To:	Ronald Kwan
Cc:	Gadi Mayman; Nancy Kennedy (MOHLTC)
Subject:	FW: EXTERNAL - Re: OPG Q4 2016 submission to Province - Draft Global Adjustment disclosure
Date:	Monday, March 06, 2017 1:52:45 PM

Hi Ron,

To your point, I like the following language more (red words are mine). While this may add a bit more detail relative to comms products, it is in line with the technical briefing and I think it may be helpful in meeting the independence test.

Does that work for you?

Scott

From: Montgomery, Kaitlin (MOF)
Sent: March 6, 2017 1:48 PM
To: Nelms, Scott (MOF)
Subject: FW: EXTERNAL - Re: OPG Q4 2016 submission to Province - Draft Global Adjustment disclosure

OPG accepted some changes to their annual report that ESP requested but added new language which I've highlighted below.

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: March 6, 2017 11:15 AM
To: Montgomery, Kaitlin (MOF)
Subject: RE: EXTERNAL - Re: OPG Q4 2016 submission to Province - Draft Global Adjustment disclosure

Hi Kaitlin,

Please see the amended current wording which takes into consideration your edits. Please let us know if you have any further comments. Thank you.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 percent on average for all residential consumers in the province. As part of the Plan, the Province has proposed refinancing a portion of the Global Adjustment costs over a longer time period for Regulated Price Plan eligible customers (e.g., residential , farm, small businesses). According to the Plan, the Province intends to introduce legislation that would, if passed, enable the IESO and OPG to work together to undertake this financing. The Global Adjustment is administered by the IESO. OPG intends to work with the Province and the IESO as part of the refinancing proposal. Based on the Province's Plan, OPG is exploring implementation options. The implementation approach ~~final plan~~ is expected to be reviewed and is subject to approval by OPG's Board of Directors. The Global Adjustment includes the difference between Ontario's electricity market clearing

price used to dispatch generation and the prices paid to contracted and regulated generators in the province, and the cost of conservation and demand management programs. Virtually all generators in Ontario have bilateral contracts with the IESO that provide for payments that are different from the market clearing price of electricity, while the prices for all of OPG's nuclear and a majority of its hydroelectric generation are set by the OEB.

Regards,

Philip

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: March 2, 2017 1:36 PM
To: Montgomery, Kaitlin (MOF); Talwar, Shruti (ENERGY); Chander, Sunita (ENERGY)
Cc: CHENG Alec -FIN & C CTRL
Subject: OPG Q4 2016 submission to Province - Draft Global Adjustment disclosure

Hi Kaitlin, Shruti and Sunita,
We are proposing to include the following language regarding the Global Adjustment refinancing portion of the Ontario's Fair Hydro Plan into OPG's 2016 MD&A and AIF. The wording is based on the announcement by the Province today.
We will be mailing the relevant documents to our Board today. Your comments will be appreciated. Please let us know if you have questions.

Ontario's Fair Hydro Plan
On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 per cent on average for all residential consumers in the province. As part of the Plan, the Province has proposed refinancing a portion of total electricity system Global Adjustment costs over a longer time period for residential consumers. According to the Plan, the Province intends to introduce legislation that would, if passed, enable the IESO and OPG to work together to undertake this financing. The Global Adjustment portion of the total price of electricity in the province is administered by the IESO. The Global Adjustment includes the difference between Ontario's electricity market clearing price used to dispatch generation and the prices paid to contracted and regulated generators in the province, and the cost of conservation and demand management programs. Virtually all generators in Ontario have bilateral contracts with the IESO that provide for payments that are different from the market clearing price of electricity, while the prices for all of OPG's nuclear and most of its hydroelectric generation are set by the OEB. OPG intends to work with the Province and the IESO as part of the refinancing proposal.
Regards,
Philip
Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy (Acting)| Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com<mailto:philip.ho@opg.com>

From: Montgomery, Kaitlin (ENERGY) [mailto:Kaitlin.Montgomery@ontario.ca]
Sent: Monday, February 27, 2017 3:14 PM
To: DYKXHOORN Sandra -CORPRELCOMM
Cc: CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL

Subject: RE: EXTERNAL - FW: OPG Q4 2016 submission to Province

Hi Sandra – attached are our proposed comments.

Let me know if you have any questions.
Kaitlin

From: DYKXHOORN Sandra -CORPRELCOMM [mailto:sandra.dykxhoorn@opg.com]
Sent: February 15, 2017 9:15 AM
To: Kim, John (OFA); Kwan, Ronald (OFA); Talwar, Shruti (ENERGY); Chander, Sunita (ENERGY)
Cc: CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
Subject: OPG Q4 2016 submission to Province

Good morning,

Please find attached OPG's draft Q4 2016 News Release, Management's Discussion and Analysis (MD&A), Annual Information Form (AIF) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above no later than Monday, February 27th.

These documents will be filed with the Ontario Securities Commission on Friday, March 10th following OPG's Board of Directors meeting.

Kindly forward all comments directly to Sandra Dykxhoorn (copy to Alec Cheng – alec.cheng@opg.com<mailto:alec.cheng@opg.com> and Philip Ho – philip.ho@opg.com<mailto:philip.ho@opg.com>).

To assist the review process, the following are the key items in the Q4 2016 MD&A:

Highlights
Recent Developments

MD&A p.11-16

Darlington Refurbishment

MD&A p.11-12; 24-25

Peter Sutherland Sr. GS project

MD&A p.25

Outlook – OEB application on OPG's results, impact of ONFA update on Nuclear Segregated Funds earnings, and the expected income and cash flow trends for 2017

MD&A p.30-31

Sandra Dykxhoorn | Acting Director, Provincial Relations | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | p: (416) 592-2887 | c: (416) 571-4366 |
sandra.dykxhoorn@opg.com<mailto:philip.ho@opg.com>

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From: Ronald Kwan
To: Francisco Chinchon
Subject: FW: EXTERNAL – OPG NF Final FS
Date: Thursday, March 23, 2017 4:16:37 PM
Attachments: 16 - NFWA Trust FS French (Final).pdf
16 - Used Fuel Fund FS (Final).pdf
16 - Decommissioning Fund FS (Final).pdf
16 - NFWA Trust FS (Final).pdf

FYI.

Ron

From: YIU Joe -FUNDMGMT [mailto:joseph.yiu@opg.com]
Sent: March-23-17 16:14
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: FW: EXTERNAL – OPG NF Final FS

Hi Ken,

Attached are the final 2016 f/s for the Decommissioning Fund and Used Fuel Fund in accordance with ONFA.

The NFWA Trust f/s will be sent out to the Minister of Natural Resources by the Trustee.

Regards,
Joe

From: Michelle Cho [mailto:michelle.cho@ca.ey.com]
Sent: Friday, March 17, 2017 12:32 PM
To: HO Philip -FIN & C CTRL; MAK Ricky -FIN & C CTRL; YIU Joe -FUNDMGMT; CHAN Sarah -FUNDMGMT
Cc: Andrew Morgan
Subject: EXTERNAL – OPG NF Final FS

*** Exercise caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Hi all,

Please find attached the final financial statements for the Nuclear Funds with our signature, including the French translated statements.

Please let me know if you have any questions or comments.

Thanks,
Michelle

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ÉTATS FINANCIERS AUDITÉS DE
LA FIDUCIE DE LA LDCN DE L'ONTARIO
31 DÉCEMBRE 2016
[ÉBAUCHE]

EY

Travailler ensemble
pour un monde meilleur

RAPPORT DES AUDITEURS INDÉPENDANTS

Au fiduciaire de La Fiducie de la LDCN de l'Ontario

Nous avons effectué l'audit des états financiers ci-joints de **La Fiducie de la LDCN de l'Ontario** (la «Fiducie»), qui comprennent l'état de l'actif net au 31 décembre 2016 et les états des résultats et du résultat étendu, les états de l'évolution de l'actif net et les états des flux de trésorerie pour l'exercice clos à cette date, ainsi qu'un résumé des principales méthodes comptables et d'autres informations explicatives.

Responsabilité de la direction pour les états financiers

La direction est responsable de la préparation et de la présentation fidèle de ces états financiers conformément aux principes comptables généralement reconnus des États-Unis, ainsi que du contrôle interne qu'il considère comme nécessaire pour permettre la préparation d'états financiers exempts d'anomalies significatives, que celles-ci résultent de fraudes ou d'erreurs.

Responsabilité des auditeurs

Notre responsabilité consiste à exprimer une opinion sur les états financiers, sur la base de notre audit. Nous avons effectué notre audit selon les normes d'audit généralement reconnues du Canada. Ces normes requièrent que nous nous conformions aux règles de déontologie et que nous planifiions et réalisions l'audit de façon à obtenir l'assurance raisonnable que les états financiers ne comportent pas d'anomalies significatives.

Un audit implique la mise en œuvre de procédures en vue de recueillir des éléments probants concernant les informations et les montants fournis dans les états financiers. Le choix des procédures relève du jugement des auditeurs, et notamment de leur évaluation des risques que les états financiers comportent des anomalies significatives, que celles-ci résultent de fraudes ou d'erreurs. Dans l'évaluation de ces risques, les auditeurs prennent en considération le contrôle interne de l'entité portant sur la préparation et la présentation fidèle des états financiers afin de concevoir des procédures d'audit appropriées aux circonstances, et non dans le but d'exprimer une opinion sur l'efficacité du contrôle interne de l'entité. Un audit comporte également l'appréciation du caractère approprié des méthodes comptables retenues et du caractère raisonnable des estimations comptables faites par la direction, de même que l'appréciation de la présentation d'ensemble des états financiers.

Nous estimons que les éléments probants que nous avons obtenus sont suffisants et appropriés pour fonder notre opinion d'audit.

Opinion

À notre avis, les états financiers donnent, dans tous leurs aspects significatifs, une image fidèle de l'actif net de la Fiducie au 31 décembre 2016, de ses résultats d'exploitation, de l'évolution de son actif net et de ses flux de trésorerie pour l'exercice clos à cette date selon les principes comptables généralement reconnus des États-Unis.

Ernst & Young s.r.l./s.e.n.c.r.l.

Comptables professionnels agréés
Experts-comptables autorisés

Toronto, Canada
Le 8 mars 2017

ÉTATS DE L'ACTIF NET

Aux 31 décembre *(en millions de dollars)*	**2016**	**2015**
Actif		
Placements *(notes 3 et 8)*		
Trésorerie et équivalents de trésorerie	**35**	71
Placements à court terme	**75**	-
Placements à revenu fixe	**3 121**	2 822
Fonds communs	**437**	501
	3 668	3 394
Autres		
Revenu de placement à recevoir *(note 4)*	**17**	15
Montant à recevoir au titre d'opérations de placement	**17**	16
	34	31
	3 702	3 425
Passif		
Créditeurs et charges à payer *(note 5)*	**1**	1
Montant à payer au titre d'opérations de placement	**13**	15
	14	16
Actif net	**3 688**	3 409

Voir les notes afférentes aux états financiers.

ÉTATS DES RÉSULTATS ET DU RÉSULTAT ÉTENDU

Exercices clos les 31 décembre *(en millions de dollars)*	**2016**	**2015**
Revenu de placement *(note 6)*		
Intérêts	**106**	104
Charges		
Frais de gestion de placements et d'administration *(note 9)*	**5**	3
Revenu de placement net	**101**	101
Autre revenu		
Gains nets réalisés *(note 6)*	**38**	57
Pertes nettes latentes *(note 6)*	**(60)**	(51)
Bénéfice net et résultat étendu	**79**	107

Voir les notes afférentes aux états financiers.

ÉTATS DE L'ÉVOLUTION DE L'ACTIF NET

Exercices clos les 31 décembre *(en millions de dollars)*	**2016**	**2015**
Actif net au début de l'exercice	**3 409**	3 114
Bénéfice net et résultat étendu	**79**	107
Apports *(note 7)*	**200**	188
Actif net à la fin de l'exercice	**3 688**	3 409

Voir les notes afférentes aux états financiers.

ÉTATS DES FLUX DE TRÉSORERIE

Exercices clos les 31 décembre *(en millions de dollars)*	**2016**	**2015**
Activités d'exploitation		
Intérêts reçus	**104**	104
Frais de gestion et d'administration de placements payés	**(5)**	(3)
Produit tiré des gains réalisés sur des placements	**38**	57
Produit tiré de placements vendus à l'exercice précédent	**16**	63
Paiements au titre de placements acquis à l'exercice précédent	**(15)**	(93)
Acquisition de placements	**(374)**	(297)
Flux de trésorerie des activités d'exploitation	**(236)**	(169)
Activités de financement		
Apports *(note 7)*	**200**	188
Flux de trésorerie des activités de financement	**200**	188
Variation nette de la trésorerie et des équivalents de trésorerie	**(36)**	19
Trésorerie et équivalents de trésorerie, aux 1er janvier	**71**	52
Trésorerie et équivalents de trésorerie, aux 31 décembre	**35**	71

Voir les notes afférentes aux états financiers.

NOTES AFFÉRENTES AUX ÉTATS FINANCIERS

1. DESCRIPTION DE LA FIDUCIE DE LA LDCN DE L'ONTARIO

La *Loi sur les déchets de combustible nucléaire* (la «LDCN»), a reçu la sanction royale le 13 juin 2002 et est entrée en vigueur par proclamation le 15 novembre 2002. Cette loi est un élément clé du Cadre d'action pour la gestion des déchets radioactifs de 1996 du gouvernement canadien en vertu duquel le gouvernement fédéral, grâce à une surveillance efficace, prévoit s'assurer que la gestion à long terme des déchets de combustible nucléaire est réalisée de manière globale, intégrée et économique.

Tel que l'exige la LDCN, les propriétaires de déchets de combustible nucléaire ont constitué en personne morale la Société de gestion des déchets nucléaires (la «SGDN»), dont le rôle consiste à proposer au gouvernement canadien différentes façons de gérer les déchets de combustible nucléaire et à mettre en œuvre celle choisie par le gouvernement fédéral. En novembre 2005, conformément à la LDCN, la SGDN a présenté au gouvernement fédéral ses recommandations à l'égard d'une stratégie de gestion à long terme des déchets de combustible nucléaire usé. En juin 2007, le gouvernement fédéral a choisi l'option recommandée par la SGDN, intitulée Gestion adaptative progressive.

À la suite de l'entrée en vigueur de la LDCN en novembre 2002, les propriétaires de déchets de combustible nucléaire ont dû constituer des fonds en fiducie et effectuer des versements annuels dans ces fonds afin de financer la gestion à long terme des déchets de combustible nucléaire usé. En conséquence, Ontario Power Generation Inc. («OPG») a établi La Fiducie de la LDCN de l'Ontario (la «Fiducie») et a effectué un dépôt initial de 500 $ dans ce fonds en fiducie le 25 novembre 2002. Aux termes de la LDCN, OPG doit faire un apport annuel à la Fiducie dans les 30 jours suivant le dépôt du rapport annuel de la SGDN au ministre des Ressources naturelles du Canada. Jusqu'en 2007, les apports à la Fiducie s'élevaient à 100 $ par année. Depuis 2008, l'apport annuel est fondé sur la formule de financement approuvée par le ministre des Ressources naturelles du Canada.

Les fonds déposés dans la Fiducie sont utilisés aux fins du paiement des coûts de gestion à long terme du combustible nucléaire usé à radioactivité élevée, tel qu'autorisé par la LDCB. Les présents états financiers ne sont pas représentatifs des exigences de financement au titre de la gestion à long terme des déchets de combustible nucléaire.

Un énoncé des politiques et procédures de placement (l'«EPPP») a été formulé pour la Fiducie et établit la structure de placement de la Fiducie, y compris les hypothèses de placement, les placements autorisés ainsi que diverses contraintes de placement. En outre, l'EPPP fournit la composition de l'actif cible à long terme de la Fiducie, qui est prise en considération dans le contexte du Used Fuel Segregated Fund, créé en vertu de l'Ontario Nuclear Funds Agreement (l'«ONFA») conclue entre OPG et la Province d'Ontario (la «Province») et tient compte de la situation de capitalisation du Used Fuel Segregated Fund et de ses objectifs de placement à l'égard du profil de passif à long terme sous-jacent et des flux de trésorerie prévus, du rendement passé des instruments de placement, du niveau approprié de diversification pour optimiser la prise de risques et le rendement, ainsi que des préférences d'OPG et de la province d'Ontario (la «Province») en matière de risque. La direction d'OPG et la Province surveillent trimestriellement la conformité des placements à l'EPPP.

Le sous-ministre des Finances examine et approuve chaque année l'EPPP pour le compte de la Province.

OPG et l'Office ontarien de financement (l'«OOF»), organisme de la province d'Ontario, prennent conjointement les décisions relatives à la composition de l'actif de la Fiducie ainsi qu'au choix et au maintien en poste du gestionnaire des placements. Il existe un risque qu'OPG et l'OOF aient des priorités divergentes à cet égard, ce qui pourrait avoir une incidence sur la composition de l'actif et les décisions en matière de placement.

Le fiduciaire de la Fiducie est Compagnie Trust CIBC Mellon. La Société de services de titres mondiaux CIBC Mellon est le dépositaire indépendant des actifs de la Fiducie en vertu de la convention de garde datée du 20 septembre 2010. La province et OPG sont les bénéficiaires de la Fiducie.

La Fiducie fait partie du Used Fuel Segregated Fund créé par l'OPG en vertu de l'ONFA. Pour le Used Fuel Segregated Fund, l'EPPP a établi un objectif de rendement réel annuel de 3,25 %, ce qui correspond au taux de variation de l'indice des prix à la consommation de l'Ontario, plus 3,25 % composé annuellement, déduction faite des charges. En 2016, le taux de rendement réel de la Fiducie s'est fixé à 2,3 % (3,5 % en 2015), déduction faite des charges.

2. SOMMAIRE DES PRINCIPALES MÉTHODES COMPTABLES

Mode de présentation

Les états financiers de la Fiducie ont été dressés par la direction conformément aux principes comptables généralement reconnus («PCGR») des États-Unis dont le mode de présentation correspond au référentiel comptable suivi par OPG.

La Fiducie répond à la définition d'une société de placement en vertu de l'Accounting Standards Codification Topic 946, *Investment Companies* révisé, qui exige que tous les placements soient comptabilisés à la juste valeur. La préparation des états financiers selon les PCGR des États-Unis exige que la direction fasse des estimations et pose des hypothèses qui ont une incidence sur les montants déclarés des actifs, des passifs, des revenus et des charges et sur la présentation d'actifs et de passifs éventuels. Les résultats réels pourraient être différents de ces estimations.

Étant donné qu'OPG est le propriétaire de la Fiducie et que la Province détient toutes les actions d'OPG, les parties liées comprennent OPG et la Province.

Certains montants comparatifs de 2015 ont été reclassés par rapport aux états financiers présentés antérieurement afin de les rendre conformes à la présentation des états financiers consolidés de 2016

Trésorerie et équivalents de trésorerie

La trésorerie et les équivalents de trésorerie comprennent les fonds en dépôt et des titres du marché monétaire dont l'échéance est inférieure à 90 jours à la date d'achat. Tous les autres titres du marché monétaire dont l'échéance est de plus de 90 jours, mais de moins d'un an à la date d'achat, sont comptabilisés comme des placements à court terme. Ces titres sont évalués au coût ou à la valeur de marché, selon le moins élevé des deux montants. Les intérêts gagnés sur la trésorerie et les équivalents de trésorerie ainsi que sur les placements à court terme sont comptabilisés en tant qu'intérêts créditeurs.

Évaluation des placements

Les actifs financiers et les passifs financiers sont mesurés à la juste valeur, les gains et les pertes étant comptabilisés dans les résultats. Les actifs financiers faisant l'objet d'un achat ou d'une vente dont le contrat exige que la livraison de l'actif ait lieu dans un délai établi sont comptabilisés à la date de transaction. Tous les instruments dérivés sont comptabilisés à la juste valeur dans les états de l'actif net. Les coûts de transaction des instruments financiers sont passés en charges lorsqu'ils sont engagés.

La juste valeur est définie comme le montant pour lequel un actif pourrait être échangé ou un passif réglé entre des parties bien informées et consentantes, agissant dans des conditions de concurrence normale. Lorsque les cours acheteur sont publiés sur un marché actif, la juste valeur reflète les cours acheteur à la fin de la période. Dans le cas où les cours ne sont pas publiés sur un marché actif, la Fiducie établit sa juste valeur en utilisant des techniques d'évaluation qui font le plus possible appel aux données observables sur les marchés.

Les placements sont présentés dans les états financiers à leur juste valeur, et les écarts entre la juste valeur et le coût moyen sont comptabilisés à titre de gains latents ou de pertes latentes dans les états des résultats et du résultat étendu de la Fiducie.

La valeur comptable de la trésorerie, des équivalents de trésorerie et des placements à court terme se rapproche de leur juste valeur en raison de leur échéance immédiate ou à court terme.

Les valeurs marchandes des placements étrangers sont converties en dollars canadiens aux taux de change en vigueur à la clôture de chaque jour ouvrable. Les achats et les ventes de titres étrangers et les produits et les charges sont convertis en dollars canadiens aux taux de change en vigueur aux dates des transactions. Les gains et les pertes découlant des opérations de change sont comptabilisés dans les états des résultats et du résultat étendu.

Les titres négociés sur une Bourse nationale sont évalués au cours acheteur du dernier jour ouvrable de l'exercice. Les titres inscrits pour lesquels aucune transaction n'est enregistrée le dernier jour ouvrable de l'exercice sont évalués en fonction du dernier cours enregistré le dernier jour ouvrable où le titre a été négocié. Les fonds communs sont évalués en fonction de la valeur des parts du fonds commun telle qu'elle est déclarée par le gestionnaire de placements et sont inclus dans une catégorie distincte des états de l'actif net. Les opérations sur titres sont inscrites à la date où elles ont lieu. Les dividendes sont courus à partir de la date ex-dividende. Les dividendes en actions sont comptabilisés à titre de revenu selon la valeur marchande du titre. Les gains réalisés ou les pertes réalisées sur la vente des titres sont calculés en regard du coût moyen des titres et sont compris dans les gains nets réalisés ou les pertes nettes réalisées dans les états des résultats et du résultat étendu. La Fiducie suit la méthode de la comptabilité d'exercice pour comptabiliser le revenu de placement.

Dans le cas d'autres placements dont la juste valeur n'est pas établie, celle-ci est estimée en fonction des titres comparables de sociétés émettrices ayant des notes ou une valeur de réalisation nette similaires, et ce, à partir de l'information disponible.

Contrats de change à terme

La Fiducie peut conclure des contrats de change à terme à des fins de gestion du risque lorsqu'une telle activité est conforme à ses objectifs de placement.

Les variations de la valeur de fin d'exercice du montant à recevoir au titre de contrats de change à terme ont été comptabilisées dans les placements aux états de l'actif net, et les gains nets latents ou les pertes nettes latentes ont été inclus dans les gains nets latents ou les pertes nettes latentes aux états des résultats et du résultat étendu.

Les gains ou les pertes provenant de l'écart entre la valeur du contrat de change à terme initial et la valeur de ce contrat à la clôture ou à la livraison sont réalisés et comptabilisés à titre de gains nets réalisés ou de pertes nettes réalisées dans les états des résultats et du résultat étendu.

Impôts

Tout revenu gagné par la Fiducie est exempt d'impôt en vertu de l'alinéa 149(1)(z.2) de la *Loi de l'impôt sur le revenu* (Canada), puisque la Fiducie a été créée aux termes du paragraphe 9(1) de la LDCN et qu'aucune personne autre que celles nommées à cet alinéa ne possède un droit de bénéficiaire dans la Fiducie. Par conséquent, la Fiducie n'a comptabilisé aucune charge d'impôts dans les présents états financiers.

3. PLACEMENTS

La juste valeur et les coûts historiques des placements aux 31 décembre 2016 et 2015 se résumaient comme suit :

	2016		2015	
	Juste valeur	**Coût historique**	**Juste valeur**	**Coût historique**
Trésorerie et équivalents de trésorerie	**35**	**35**	71	71
Placements à court terme	**75**	**75**	-	-
Placements à revenu fixe				
Marché intérieur	**3 039**	**3 013**	2 773	2 692
Ailleurs	**82**	**85**	49	50
Fonds communs	**437**	**448**	501	509
Total des placements	**3 668**	**3 656**	3 394	3 322

La répartition des placements à revenu fixe du marché intérieur par secteur aux 31 décembre 2016 et 2015 se présentait comme suit :

	2016	**2015**
Placements à revenu fixe du marché intérieur		
Gouvernement	**2 213**	1 906
Services financiers	**445**	492
Services publics	**100**	87
Énergie	**60**	59
Immobilier	**59**	51
Autre	**162**	178
	3 039	2 773

La proportion de chacune des catégories de placements en pourcentage de l'actif net aux 31 décembre 2016 et 2015 était comme suit :

	2016		2015	
	Juste valeur	**% de l'actif net**	**Juste Valeur**	**% de l'actif net**
Trésorerie et équivalents de trésorerie	**35**	**1 %**	71	2 %
Placements à court terme	**75**	**2 %**	-	-
Placements à revenu fixe	**3 121**	**85 %**	2 822	83 %
Fonds communs	**437**	**12 %**	501	15 %
Total des placements	**3 668**	**100 %**	3 394	100 %
Actif net	**3 688**		3 409	

Le seul placement ayant une juste valeur supérieure à 5 % de l'actif net du Fonds aux 31 décembre 2016 et 2015 était un placement dans un fonds d'obligations de sociétés de qualité supérieure dont le coût s'élevait, au 31 décembre 2016, à 285 $ (348 $ en 2015) et la juste valeur, à 277 $ (340 $ en 2015).

Les émetteurs dont l'ensemble des placements est supérieur à 5 % sur l'actif net aux 31 décembre 2016 et 2016 étaient les suivants :

	2016		2015	
	Montant en capital	**Juste valeur**	**Montant en capital**	**Juste valeur**
Province d'Ontario	**828**	**957**	634	739
Gouvernement du Canada	**506**	**540**	423	484
Fonds à revenu fixe[1]	**s. o.**	**437**	s. o.	501
Province de Québec	**170**	**205**	177	214
		2 139		1 938

[1] Représente un total de 43 642 461 parts (49 712 728 en 2015) dans quatre fonds distincts d'un même émetteur.

4. REVENU DE PLACEMENT À RECEVOIR

Le revenu de placement à recevoir de 17 $ (15 $ en 2015) comprend principalement les intérêts à recevoir sur l'encaisse, les placements à court terme et les placements à revenu fixe.

5. CRÉDITEURS ET CHARGES À PAYER

Les créditeurs et charges à payer comprenaient ce qui suit aux 31 décembre 2016 et 2015 :

	2016	**2015**
Frais de gestion de placements et autres	**1**	1

6. REVENU DE PLACEMENT, GAINS NETS RÉALISÉS ET PERTES NETTES LATENTES

Pour les exercices clos les 31 décembre 2016 et 2015, le revenu de placement, les gains nets réalisés ainsi que les gains nets latents (pertes nettes latentes) comprennent ce qui suit :

	2016	**2015**
Revenu de placement		
Intérêts créditeurs sur l'encaisse, les placements à court terme et les obligations et débentures	**106**	104
Gains nets réalisés		
Gains réalisés	**38**	57
Pertes nettes latentes		
Pertes latentes	**(60)**	(51)

7. APPORTS

Les apports de fonds à la Fiducie se sont établis à 200 $ pour 2016 (188 $ en 2015).

8. INSTRUMENTS FINANCIERS

Risques liés aux instruments financiers

Risque de crédit

Le risque de crédit s'entend du risque de perte lié à l'incapacité d'une contrepartie de respecter ses obligations aux termes d'un instrument financier, entraînant, par conséquent, une perte financière pour l'autre partie à l'opération. La Fiducie est principalement exposée au risque de crédit en raison de la répartition de ses placements à revenu fixe dans des titres d'emprunt émis par le gouvernement fédéral, les gouvernements provinciaux et les sociétés. Le risque de crédit est régi par l'EPPP, qui exige que les placements à revenu fixe respectent les diverses contraintes de placement visant à assurer une diversification prudente et un seuil minimal de qualité en ce qui a trait à la notation. La conformité des placements à l'EPPP est surveillée trimestriellement par un fournisseur tiers externe et présentée chaque trimestre à la direction d'OPG et à l'OOF.

Le tableau ci-après résume l'exposition de la Fiducie aux titres d'emprunt assortis des notes suivantes aux 31 décembre 2016 et 2015 :

Note	2016	2015
AAA	**24,8 %**	25,8 %
AA	**12,7 %**	9,6 %
A	**51,1 %**	52,2 %
BBB	**10,7 %**	11,6 %
Inférieure à BBB ou non notée	**0,7 %**	0,8 %
	100,0 %	100,0 %

Les notes sont obtenues auprès de Standard & Poor's, de Moody's ou de Dominion Bond Rating Services, ou des trois. Lorsque plus d'une note a été obtenue pour un titre, la note la plus basse a été utilisée.

Risque d'illiquidité

Le risque d'illiquidité s'entend du risque que la Fiducie ne puisse pas respecter ses obligations financières à un moment donné. Pour gérer son risque d'illiquidité, la Fiducie s'assure d'avoir suffisamment de liquidités pour remplir ses obligations financières à l'échéance sans subir de pertes indues.

Risque de marché

Le risque de marché s'entend du risque que la valeur d'un placement diminue en raison des variations de facteurs sous-jacents du marché, entre autres, le risque de concentration, le risque de change et le risque de taux d'intérêt.

Le risque de marché est géré par la Fiducie au moyen de la composition diversifiée de son actif qui, conformément à l'EPPP, doit être examinée au moins tous les cinq ans. L'examen coïncide généralement avec la préparation et l'approbation des plans de référence en vertu de l'ONFA. La composition de l'actif cible de la Fiducie, y compris les fourchettes de tolérance relatives à la répartition cible entre les différentes catégories d'actif, est régie en vertu de l'EPPP. La conformité aux fourchettes de la composition de l'actif cible est surveillée mensuellement en interne et trimestriellement par un fournisseur tiers externe, et présentée chaque trimestre à la direction d'OPG et à l'OOF.

Risque de concentration

Le risque de concentration s'entend du risque qu'une perte de placement se produise en raison du manque de diversification du portefeuille. L'exposition au risque de concentration de la Fiducie est régie en vertu de l'EPPP. En ce qui concerne les actions, aucune société ne doit représenter plus de 10 % de la valeur marchande totale de chaque portefeuille d'actions du gestionnaire de placements. En ce qui concerne les placements à revenu fixe, un maximum de 10 % de chaque portefeuille du gestionnaire de placements peut être investi dans des obligations d'un émetteur unique et de ses sociétés liées, à l'exception des obligations des gouvernements provinciaux et fédéral du Canada et de leurs organismes. La conformité à l'EPPP est surveillée trimestriellement par un fournisseur tiers externe et présentée à la direction d'OPG et à l'OOF.

Risque de change

Le risque de change s'entend du risque que la valeur d'un instrument financier diminue en raison des variations du cours du change. La Fiducie est exposée au risque de change en raison de l'achat d'instruments à revenu fixe libellés en devises.

Aux 31 décembre 2016 et 2015, l'exposition nette au risque de change pour la Fiducie, compte tenu du rajustement au titre des couvertures de change, était négligeable.

Risque de taux d'intérêt

Le risque de taux d'intérêt, y compris le risque au titre des écarts de taux, s'entend de la possibilité qu'un placement perde de la valeur en raison des fluctuations des taux d'intérêt et du prix du crédit sur le marché. L'exposition de la Fiducie au risque de taux d'intérêt est attribuable à la composition de son actif cible, dont une partie importante se compose de titres à revenu fixe. La trésorerie, les équivalents de trésorerie et les placements à court terme dont les dates d'échéance sont de moins de un an à compter de la date de clôture sont très peu exposés aux fluctuations des taux d'intérêt. L'exposition de la Fiducie au risque de taux d'intérêt est régie par l'EPPP, qui s'assure que l'exposition de la Fiducie aux titres à revenu fixe est diversifiée avec prudence. La conformité des placements à l'EPPP est surveillée trimestriellement par un fournisseur tiers externe et présentée chaque trimestre à la direction d'OPG et à l'OOF.

Le tableau ci-dessous résume l'exposition de la Fiducie aux titres à revenu fixe par date d'échéance, aux 31 décembre 2016 et 2015 :

	2016	2015
Placements à revenu fixe		
De 1 an à 5 ans	**746**	709
De 5 ans à 10 ans	**643**	549
Plus de 10 ans	**1 732**	1 564
	3 121	2 822
Rendement moyen	**2,47%**	2,59%

La durée effective est une mesure de la sensibilité du prix d'un titre à revenu fixe aux fluctuations des taux d'intérêt. En utilisant la durée effective de la Fiducie de 10,0 ans au 31 décembre 2016 (9,4 ans en 2015), un déplacement parallèle de la courbe de rendement de +/- 0,5 % aurait une incidence de 156 $ (132 $ en 2015) sur l'actif net de la Fiducie, toute autre variable étant constante. Les résultats réels peuvent différer considérablement de cette analyse de sensibilité.

Instruments dérivés

La Fiducie peut conclure des contrats dérivés, comme des contrats de change à terme, à des fins de gestion du risque lorsqu'une telle activité est conforme à ses objectifs de placement. Les contrats de change à terme exposent la Fiducie au risque de crédit de la contrepartie si la contrepartie de la Fiducie devait manquer à ses obligations contractuelles à l'égard d'une transaction. Aux 31 décembre 2016 et 2015, l'exposition nette de la Fiducie aux contrats de change à terme était négligeable.

La Fiducie peut aussi conclure d'autres contrats dérivés, comme des contrats à terme standardisés, pour reproduire les placements directs dans des titres sous-jacents. Aux 31 décembre 2016 et 2015, la Fiducie ne détenait aucun contrat à terme standardisé.

Information additionnelle sur la juste valeur

Les actifs financiers sont évalués à la juste valeur selon une hiérarchie des évaluations à la juste valeur. Cette hiérarchie regroupe les actifs et les passifs financiers dans trois niveaux en fonction de l'importance des données utilisées pour évaluer la juste valeur des actifs et passifs financiers. La hiérarchie des évaluations à la juste valeur se compose des niveaux suivants :

- Niveau 1 : L'évaluation des données d'entrée est fondée sur les prix du marché non rajustés cotés qui sont observés sur des marchés actifs pour des actifs et des passifs identiques.
- Niveau 2 : L'évaluation est fondée sur des données d'entrée autres que les prix cotés visés au niveau 1 qui sont observables pour les actifs ou les passifs, directement ou indirectement.
- Niveau 3 : L'évaluation est fondée sur des données d'entrée visant des actifs et des passifs qui ne sont pas fondées sur des données de marché observables.

Le niveau dans lequel l'actif ou le passif financier est classé est établi en fonction des données d'entrées du plus bas niveau qui est important pour évaluer la juste valeur.

La juste valeur des fonds communs est présentée à la valeur liquidative et est classée au niveau 2.

Les tableaux suivants présentent les actifs évalués à la juste valeur dans les états de l'actif net classés selon la hiérarchie des évaluations à la juste valeur aux 31 décembre 2016 et 2015 :

2016	**Niveau 1**	**Niveau 2**	**Niveau 3**	**Total**
Trésorerie et équivalent de trésorerie	**35**	**-**	**-**	**35**
Placements à court terme	**-**	**75**	**-**	**75**
Placements à revenu fixe	**-**	**3 121**	**-**	**3 121**
Fonds communs	**-**	**437**	**-**	**437**
	35	**3 633**	**-**	**3 668**

2015	**Niveau 1**	**Niveau 2**	**Niveau 3**	**Total**
Trésorerie et équivalent de trésorerie	71	-	-	71
Placements à court terme	-	-	-	-
Placements à revenu fixe	-	2 822	-	2 822
Fonds communs	-	501	-	501
	71	3 323	-	3 394

Les tableaux ci-dessus ne tiennent pas compte des débiteurs et des créditeurs.

Aucun placement n'était évalué à la valeur liquidative à titre de substitut pratique de la juste valeur en date des 31 décembre 2016 et 2015.

Au cours de l'exercice, il n'y a eu aucun transfert entre les niveaux 1 et 2.

9. FRAIS DE GESTION DE PLACEMENTS ET D'ADMINISTRATION

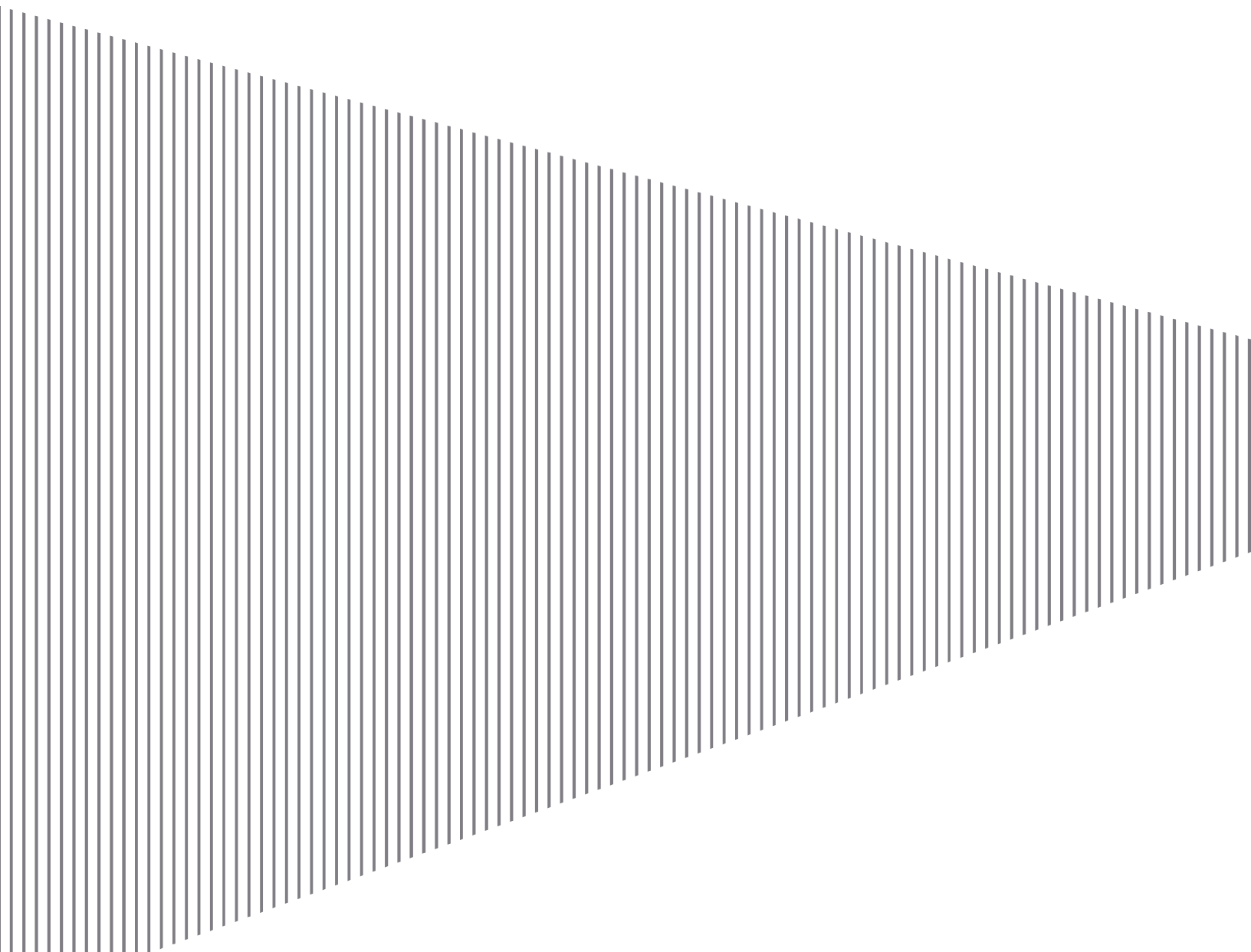
Les frais de gestion de placements et d'administration pour les exercices clos les 31 décembre 2016 et 2015 se sont établis comme suit :

	2016	2015
Frais de gestion de placements et autres	**5**	5

Pour l'exercice clos le 31 décembre 2016, le ratio des charges sur l'actif net s'est établi à 0,1 % (0,1 % en 2015)

10. PAIEMENTS OU RETRAITS

Au 31 décembre 2016, la Fiducie n'avait enregistré aucun paiement ni retrait relativement à l'élimination des déchets de combustible nucléaire à long terme, comme il est permis en vertu de la LDCN, depuis la création de la Fiducie.



USED FUEL SEGREGATED FUND

AUDITED FINANCIAL STATEMENTS

DECEMBER 31, 2016

EY

Building a better working world

INDEPENDENT
AUDITORS' REPORT

To the Audit and Risk Committee of Ontario Power Generation Inc.
and to the Audit and Risk Management Committee of Ontario Financing Authority

We have audited the accompanying financial statements of the **Used Fuel Segregated Fund** (the "Fund"), which comprise the statement of net assets as at December 31, 2016, and the statements of operations and comprehensive income, changes in net assets, and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with United States generally accepted accounting principles, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the net assets of the Fund as at December 31, 2016, and the results of its operations, changes in its net assets and its cash flows for the year then ended in accordance with United States generally accepted accounting principles.

Ernst & Young LLP

Chartered Professional Accountants
Licensed Public Accountants

Toronto, Canada
March 8, 2017

STATEMENTS OF NET ASSETS

As at December 31 *(millions of dollars)*	2016	2015
Assets		
Investments *(Notes 4 and 7)*		
Cash and cash equivalents	**140**	203
Short-term investments	**105**	8
Fixed income investments	**3,406**	3,394
Marketable equity securities	**5,441**	4,891
Pooled funds	**883**	906
Alternative investments	**1,086**	883
	11,061	10,285
Other		
Receivable for investment transactions	**20**	18
Investment income receivable *(Note 11)*	**29**	26
	49	44
	11,110	10,329
Liabilities		
Accounts payable and accrued liabilities *(Note 5)*	**21**	14
Payable for investment transactions	**22**	19
Derivative contracts *(Note 7)*	**-**	15
Payable to Province of Ontario for rate of return adjustment *(Notes 7 and 10)*	**1,913**	1,703
	1,956	1,751
Net assets	**9,154**	8,578

Commitments *(Note 12)*

See accompanying notes to the financial statements

STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Investment income *(Note 6)*		
Interest	**120**	122
Dividends	**133**	142
Income from alternative investments	**25**	47
Security lending income	**2**	2
	280	313
Expenses		
Investment management and administration fees *(Note 9)*	**37**	27
Net investment income	**243**	286
Other income		
Net realized gains *(Note 6)*	**221**	292
Net unrealized gains *(Note 6)*	**226**	64
Province of Ontario rate of return adjustment *(Note 10)*	**(210)**	(274)
Net income and comprehensive income	**480**	368

See accompanying notes to the financial statements

STATEMENTS OF CHANGES IN NET ASSETS

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Net assets, beginning of year	**8,578**	8,115
Net income and comprehensive income	**480**	368
Contributions *(Note 3)*	**150**	143
Eligible nuclear costs *(Note 8)*	**(54)**	(48)
Net assets, end of year	**9,154**	8,578

See accompanying notes to the financial statements

STATEMENTS OF CASH FLOWS

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Operating activities		
Interest received	**117**	123
Dividends received	**131**	140
Proceeds received from alternative investments	**60**	44
Security lending income	**2**	2
Investment management and adminstration fees paid	**(22)**	(19)
Proceeds from realized gains on investments	**233**	291
Proceeds from investments sold in prior year	**18**	66
Payments for investments purchased in prior year	**(19)**	(95)
Purchase of investments	**(670)**	(598)
Foreign exchange contracts settlement from prior year	**(15)**	(5)
Disbursements for eligible nuclear costs	**(48)**	(57)
Cash flow used in operating activities	**(213)**	(108)
Financing activities		
Contributions *(Note 3)*	**150**	143
Cash flow provided by financing activities	**150**	143
Net change in cash and cash equivalents	**(63)**	35
Cash and cash equivalents, January 1	**203**	168
Cash and cash equivalents, December 31	**140**	203

See accompanying notes to the financial statements

NOTES TO THE FINANCIAL STATEMENTS

1. DESCRIPTION OF USED FUEL SEGREGATED FUND

The Ontario Nuclear Funds Agreement ("ONFA"), as amended, is an agreement between the Province of Ontario (the "Province"), Ontario Power Generation Inc. ("OPG"), and various subsidiaries of OPG that became effective in July 2003. The ONFA outlines the roles and responsibilities of the Province and OPG concerning the establishment of the following investment funds in segregated custodial and trust accounts:

- The "Used Fuel Segregated Fund" (the "Fund") to cover eligible costs for the long-term nuclear used fuel waste management; and
- The "Decommissioning Segregated Fund" to cover eligible costs for the nuclear fixed asset removal and long-term low and intermediate level nuclear waste management.

On July 24, 2003, the ONFA became effective upon the appointment of external investment managers to manage the assets of these funds. CIBC Mellon Global Securities Services Company is an independent custodian of the Fund's assets under the custody agreement dated October 5, 2010.

OPG is the owner of the Fund. The Province, pursuant to the ONFA, has a security interest in the assets of the Fund.

OPG and the Ontario Financing Authority ("OFA"), an agency of the Province, jointly make decisions on the Fund's asset mix and investment manager selection and retention. There is a risk that OPG and the OFA may have differing priorities respecting these matters that could impact asset mix and investment decisions.

The Fund includes the net assets of The Ontario NFWA Trust (the "Trust"). The Trust was established by OPG in November 2002 in accordance with the *Nuclear Fuel Waste Act* (Canada) ("NFWA"). Also in accordance with the NFWA, owners of nuclear fuel waste established, by incorporation, the Nuclear Waste Management Organization ("NWMO"), whose purpose is to propose to the Government of Canada approaches for the management of nuclear fuel waste and to implement the approach that is selected by the Federal Government. In June 2007, the Government of Canada selected the Adaptive Phased Management approach recommended by the NWMO. OPG and the Province are beneficiaries of the Trust. The Province, pursuant to ONFA, has a security interest in OPG's beneficial interest in the Trust. As at December 31, 2016, the net assets in the Trust were $3,688 (2015 – $3,409). The remaining assets in the Fund are held in segregated custodian accounts.

The Fund is funded in accordance with the ONFA using the reference plans and associated cost estimates that have been prepared by OPG and approved by the Province and may be adjusted from time to time in accordance with the ONFA. Based on the 2012 ONFA Reference Plan in effect since 2012, OPG was required to contribute annual amounts to the Used Fuel Segregated Fund up to the end of 2016. In December 2016, the Province approved a new ONFA reference plan with an effective date of January 1, 2017 ("2017 ONFA Reference Plan"), which, for the first time since its inception, placed the Fund in a fully funded position. As such, no overall contributions to the fund are required for the 2017-2021 period covered by the 2017 ONFA Reference Plan. Contributions may be required in the future should the Fund be in an underfunded position when a new reference plan is prepared. Variability in asset performance due to volatility inherent in financial markets may result in the Fund becoming underfunded. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the funding obligation in a future approved ONFA reference plan.

Under the NFWA, OPG is required to make a contribution to the Trust each year, within 30 days of the submission of the NWMO's Annual Report to the federal Minister of Natural Resources. The contribution amount each year is based on the funding formula approved by the federal Minister of Natural Resources. OPG's contributions to the Fund as well as any portion of the Fund currently not in the Trust can be applied to satisfy the Trust's annual contribution requirements. Refer to Note 3 for details on contributions made to the Trust.

Under ONFA, the Province guarantees OPG's cumulative return in the Fund at 3.25 percent, plus the rate of change in the Ontario Consumer Price Index ("CPI") as defined by the ONFA, compounded annually, for funding related to the first 2.23 million used fuel bundles ("Committed Return"). The difference between the Committed Return on the Fund and the actual market return based on the fair value of the Fund's assets, which includes realized and unrealized returns, is recorded as due to or due from the Province. If the Fund cumulatively earns a market return that is less than the Committed Return, upon approval of a new ONFA reference plan, the Province is obligated to make a corresponding contribution to the Fund.

As prescribed under the ONFA, earnings on OPG's contributions for fuel bundles in excess of the 2.23 million bundle threshold ("incremental fuel bundles") are not subject to the Province's guaranteed rate of return and earn the return of the Fund based on the net realized investment income and changes in the market value of the assets.

The target rate of return for the Fund is a total annual real return of 3.25 percent, which equals the rate of change in the Ontario CPI plus 3.25 percent compounded annually, after expenses. Refer to Note 10 for information on the Fund's actual rate of return.

The Fund's net assets of $9,154 as at December 31, 2016 consist of $7,611 (2015 – $7,183) for the cumulative funding contributions, including the compounded Committed Return, related to the first 2.23 million used fuel bundles, and $1,543 (2015 – $1,395) attributed to OPG's funding liability associated with the incremental fuel bundles.

Amounts are disbursed from the Fund solely for reimbursement of eligible costs associated with long-term nuclear used fuel waste management.

The Province is entitled, at any time prior to the termination of the Fund, to any surplus in the Fund subject to a threshold over-funded ratio of 110 percent. Upon termination of the Fund, the Province is entitled to any surplus above the 100 percent funded threshold in the Fund. Funds may not be directed from the Fund to the Decommissioning Segregated Fund.

As part of OPG's licensing requirements for financial guarantees under the *Nuclear Safety and Control Act* (Canada) in respect of OPG's nuclear station decommissioning and nuclear waste management obligations, the Province, OPG and the Canadian Nuclear Safety Commission ("CNSC") have entered into an agreement that gives the CNSC access, under certain conditions, to the assets of the Fund, excluding the Trust.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The Fund represents the assets maintained by OPG in segregated custodial accounts pursuant to ONFA and does not have a separate legal status. The Fund's financial statements have been prepared by management in accordance with United States generally accepted accounting principles ("US GAAP"), which is consistent with Section 9.4 of ONFA.

The Fund meets the definition of an investment company under the revised Accounting Standards Codification Topic 946, "Investment Companies", which requires all investments to be recorded at fair value. The preparation of

financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, income and expenses, and the disclosure of contingent assets and liabilities. Actual results could differ from these estimates.

Given that OPG is the owner of the Fund and the Province owns all of the shares of OPG, related parties include OPG and the Province.

Certain of the 2015 comparative amounts have been reclassified from financial statements previously presented to conform to the 2016 consolidated financial statement presentation.

Cash and Cash Equivalents

Cash and cash equivalents include cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments. These securities are valued at the lower of cost and market. Interest earned on cash and cash equivalents and short-term investments is recognized as interest income.

Valuation of Investments

Financial assets and liabilities, including the corresponding payable to the Province, are measured at fair value with gains and losses recognized in income. Financial assets purchased and sold where the contract requires the asset to be delivered within an established time frame are recognized on a trade-date basis. All derivatives are recorded at fair value in the statements of net assets. Transaction costs for financial instruments are expensed as incurred.

Fair value is defined as the amount at which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's-length transaction. Where a quoted bid price in an active market is available, the fair value is based on the quoted bid price at the end of the reporting period. In the absence of a quoted price in an active market, the Fund determines fair value using valuation techniques that make maximum use of observable market inputs.

Investments are presented in the financial statements at fair value, with the differences between fair value and average cost recorded as unrealized gains or losses in the Fund's statements of operations and comprehensive income.

The carrying value of cash and cash equivalents and short-term investments approximates their fair value due to their immediate or short-term maturity.

The market values of foreign investments are translated into Canadian dollars at the exchange rates prevailing at the close of each business day. Purchases and sales of foreign securities and income and expenses are translated into Canadian dollars at the exchange rates prevailing on the transaction dates. The gains and losses arising from foreign exchange transactions are recorded in the statements of operations and comprehensive income.

Securities traded on a national securities exchange are valued at the bid price on the last business day of the year. Listed securities for which no trades are recorded on the last business day of the year are valued at the last reported traded price on the last business day on which the security was traded. Pooled funds are valued based on the unit value of the pooled fund as reported by the investment manager and are presented as a separate category on the statements of net assets. Management fees for the pooled funds are expensed as incurred. Securities transactions are recorded on the trade date. Dividends are accrued as of the ex-dividend date. Stock dividends are recorded in income based on the market value of the security. The realized gains or losses on the sale of securities are calculated with reference to the average cost of the securities and included in net realized gains or losses in the

statements of operations and comprehensive income. The Fund follows the accrual method of recording investment income.

Alternative investments consist of infrastructure, real estate, and agriculture investments that are valued based on estimated fair values using acceptable industry valuation methods. Management fees for the alternative investments are expensed as incurred.

For other investments that do not have an established fair value, the fair value is estimated based on comparable securities of issuers with similar credit ratings or net realizable value using available information.

Forward Foreign Exchange Contracts

The Fund may enter into forward foreign exchange contracts for risk management purposes where such activity is consistent with its investment objectives.

The changes in the year-end value of forward foreign exchange contracts have been included in the investments on the statements of net assets with the net unrealized gain or loss included in the statements of operations and comprehensive income. The gain or loss arising from the difference between the value of the original forward foreign exchange contract and the contract at close or delivery is realized and recorded in net realized gains or losses in the statements of operations and comprehensive income.

Taxation

Any investment income earned by the Fund is exempt from tax under the *Income Tax Act* (Canada) since the Fund is owned by a tax-exempt entity, namely OPG, and income earned by the Fund is attributed for tax purposes to OPG. Any income earned by the Trust is also exempt from tax under the *Income Tax Act* (Canada).

Under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG paying taxes similar to those imposed under the federal and Ontario tax acts.

Investment income earned in the Fund is exempt from payments in lieu of corporate income taxes based on O. Reg. 207/99 made under the *Electricity Act, 1998*.

Accordingly, the Fund has made no provision for income taxes in these financial statements.

Recent Accounting Pronouncements

In May 2015, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2015-07, *Fair Value Measurement (Topic 820) – Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent)*. Under the new guidance, investments measured at net asset value ("NAV"), which have been elected under the guidance as a practical expedient for fair value, are excluded from the fair value hierarchy. Removing investments measured using the practical expedient from the fair value hierarchy is intended to eliminate the diversity in practice that has existed with respect to the categorization of these investments. The criterion for categorizing investments in the fair value hierarchy is the observability of the inputs. The Fund has adopted these updates to Accounting Standards Codification Topic 820, *Fair Value Measurement* in 2016. The changes in disclosures required under this update are reflected in Note 7.

3. CONTRIBUTIONS

The Fund is funded by OPG in accordance with the ONFA based on the applicable reference plan, as approved by the Province and may be adjusted from time to time in accordance with the ONFA. In 2016, OPG contributed $150 (2015 – $143) to the Fund. The annual contribution to the Trust was $200 (2015 – $188), which was transferred from the non-Trust portion of the Fund. The table below summarizes OPG's inception-to-date contributions to the Fund.

Contributions to Used Fuel Segregated Fund	Annual	Cumulative
2016	**150**	**5,812**
2015	143	5,662
Inception to 2014	n/a	5,519

4. INVESTMENTS

The fair values and historical costs of the investments as at December 31, 2016 and 2015 are summarized as follows:

	2016		2015	
	Fair Value	**Historical Cost**	**Fair Value**	**Historical Cost**
Cash and cash equivalents	**140**	**139**	203	201
Short-term investments	**105**	**105**	8	8
Fixed income investments				
Domestic	**3,319**	**3,282**	3,339	3,180
United States	**79**	**82**	45	45
Other	**8**	**8**	10	9
	3,406	**3,372**	3,394	3,234
Equities				
Domestic	**2,211**	**1,598**	1,834	1,549
United States	**1,708**	**1,242**	1,561	1,134
Japan	**329**	**244**	334	227
United Kingdom	**268**	**226**	280	203
Switzerland	**135**	**102**	120	79
Other[1]	**785**	**622**	755	567
	5,436	**4,034**	4,884	3,759
Preferred	**5**	**5**	7	7
Marketable equity securities	**5,441**	**4,039**	4,891	3,766
Pooled funds				
Equities	**426**	**345**	402	339
Fixed income investments	**437**	**448**	501	509
Short-term investments	**20**	**20**	3	3
	883	**813**	906	851
Alternative investments				
Infrastructure	**655**	**488**	530	403
Real estate	**392**	**371**	330	310
Agriculture	**39**	**38**	23	24
	1,086	**897**	883	737
Total investments	**11,061**	**9,365**	10,285	8,797

[1] Includes equities from over 40 geographical locations

A breakdown of domestic fixed income investment, domestic equities and United States (US) equities by industry as at December 31, 2016 and 2015 is as follows:

	2016	2015
Domestic fixed income investments		
Government	**2,424**	2,365
Financial	**477**	538
Utilities	**110**	103
Energy	**64**	46
Real estate	**64**	67
Other	**180**	220
	3,319	3,339
Domestic equities		
Financial	**511**	432
Energy	**482**	314
Materials	**231**	162
Insurance	**165**	151
Media and telecommunications	**136**	128
Transportation	**131**	118
Technology	**105**	89
Automobiles and components	**82**	86
Other	**368**	354
	2,211	1,834
US equities		
Technology	**309**	290
Financial	**218**	164
Media and telecommunications	**149**	143
Energy	**138**	139
Healthcare	**121**	114
Pharmaceuticals	**109**	112
Retail	**90**	78
Insurance	**65**	64
Commercial services	**63**	56
Other	**446**	401
	1,708	1,561

The proportion of each category of investments as a percentage of net assets as at December 31, 2016 and 2015 is as follows:

	2016		2015	
	Fair Value	**% of Net Assets**	**Fair Value**	**% of Net Assets**
Cash and cash equivalents	**140**	**2%**	203	2%
Short-term investments	**105**	**1%**	8	-
Fixed income investments	**3,406**	**37%**	3,394	40%
Marketable equity securities	**5,441**	**59%**	4,891	57%
Pooled funds	**883**	**10%**	906	11%
Alternative investments	**1,086**	**12%**	883	10%
Total investments	**11,061**	**121%**	10,285	120%
Net assets	**9,154**		8,578	

Issuers representing aggregated investments of greater than 5% of net assets as at December 31, 2016 and 2015 are as follows:

	2016		2015	
	Principal Amount	**Fair Value**	**Principal Amount**	**Fair Value**
Province of Ontario	**863**	**998**	806	959
Government of Canada	**580**	**625**	509	583
Fixed income funds[1]	**n/a**	**437**	n/a	501
		2,060		2,043

[1] The fixed income funds represent a total of 43,642,461 units (2015 − 49,712,728) in four separate funds of the same issuer. These securities did not exceed the 5% of net assets as at December 31, 2016, but are shown for comparative purposes.

5. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities consist of the following as at December 31, 2016 and 2015:

	2016	2015
Eligible nuclear costs	**15**	10
Investment management and other fees	**6**	4
	21	14

6. INVESTMENT INCOME, NET REALIZED GAINS, AND NET UNREALIZED GAINS (LOSSES)

Investment income, net realized gains, and net unrealized gains (losses) for the years ended December 31, 2016 and 2015 consist of the following:

	2016	2015
Investment income		
Interest on cash, short-term investments, and bonds and debentures	**120**	122
Dividends	**133**	142
Income from alternative investments	**25**	47
Security lending income	**2**	2
	280	313
Net realized gains		
Realized gains	**180**	221
Realized foreign exchange gains	**41**	71
	221	292
Net unrealized gains (losses)		
Unrealized gains (losses)[1]	**442**	(375)
Unrealized foreign exchange (losses) gains	**(216)**	439
	226	64

[1] Unrealized (losses) gains for alternative investments are based on the fair values of the assets held, net of operating results of the underlying investments reported as income from alternative investments.

7. FINANCIAL INSTRUMENTS

The primary objective of the Fund is to meet the payment obligations associated with OPG's long-term nuclear used fuel waste management activities, as contemplated under the ONFA. In order to meet this objective, the Fund invests in a diversified portfolio of investments comprising primarily equity and fixed income securities.

A Statement of Investment Policies and Procedures ("SIPP") for the Fund sets out the investment framework of the Fund, including the investment assumptions, permitted investments and various investment constraints. The SIPP also establishes the long-term target asset mix of the Fund, which considers the Fund's funded status and investment objectives in relation to the projected profile of the underlying long-term liability and cash flows, historical experience of investment vehicles, the appropriate level of diversification to optimize risk and return, and the risk preferences of OPG and the Province. The Fund is invested in equities, fixed income, and alternative investments. It is primarily assumed that certain equity and other types of investments are expected to provide higher long-term returns than fixed income investments with a correspondingly higher level of short-term volatility, and that exposure to alternative investments will improve portfolio diversification, provide the potential for enhanced long-term returns, and reduced portfolio volatility. The management of OPG and the Province monitor investment compliance with the SIPP on a quarterly basis.

The SIPP is reviewed and approved annually by the Deputy Minister of Finance, on behalf of the Province.

Risks Associated with Financial Instruments

Credit Risk

Credit risk is the risk that the counterparty to a financial instrument may fail to meet its obligation under the terms of a financial instrument, thereby resulting in a financial loss for the other party to the transaction. The Fund is primarily exposed to credit risk through its fixed income allocation, which is invested in federal, provincial and corporate debt. Credit risk is governed by the SIPP, which requires fixed income investments to comply with various investment constraints that ensure prudent diversification and minimum credit rating quality. To manage credit risk, compliance with the SIPP is monitored quarterly by an external third-party vendor and reported to the management of OPG and the OFA on a quarterly basis.

The table below summarizes the Fund's exposure to debt instruments with the following credit ratings as at December 31, 2016 and 2015:

Rating	2016	2015
AAA	**25.8%**	26.0%
AA	**12.6%**	9.1%
A	**50.3%**	53.3%
BBB	**10.6%**	10.9%
Less than BBB or not rated	**0.7%**	0.7%
	100.0%	100.0%

Credit ratings are obtained from Standard & Poor's, Moody's and/or the Dominion Bond Rating Services. In the case where more than one rating is obtained for a security, the lowest rating has been used.

Liquidity Risk

Liquidity risk is the risk that the Fund is unable to meet its financial obligations due at any point in time. The Fund's approach to managing liquidity risk is to ensure that the Fund has sufficient liquidity to meet its financial obligations when due without incurring unacceptable losses. The Fund manages liquidity risk at the overall fund level by considering the expected liquidity of each asset class during the development of the Fund's asset mix and diversifying investments across different asset class types.

Market Risk

Market risk is defined as the risk that an investment's value decreases due to changes in underlying market factors including, but not limited to, concentration risk, currency risk, interest rate risk, and equity price risk.

Market risk is managed by the Fund through its diversified asset mix, which, in accordance with the SIPP, is expected to be reviewed at least every five years. The review generally coincides with the preparation and approval of reference plans under the ONFA. The target asset mix of the Fund, including tolerance ranges around the target allocation to various asset classes, is governed by the SIPP. Compliance with the target asset mix range is monitored internally on a monthly basis and by an external third-party vendor on a quarterly basis, and reported quarterly to the management of OPG and the OFA.

Concentration Risk

Concentration risk is the risk of investment loss due to lack of diversification in the portfolio. The Fund's exposure to concentration risk is governed by the SIPP. For equities, no holding shall represent more than 10 percent of the total market value of each investment manager's equity portfolio. For fixed income investments, no more than 10 percent of each investment manager's portfolio may be invested in the bonds of a single issuer and its related companies, except for Canadian federal and provincial bonds and bonds of their agencies. Investment compliance with the SIPP is monitored quarterly by an external third-party vendor and reported to the management of OPG and the OFA.

Currency Risk

Currency risk is the risk that the value of a financial instrument decreases due to changes in foreign exchange rates. The Fund is exposed to foreign currency risk primarily through its foreign equity investment, which is governed through the target asset mix of the Fund as approved annually in the SIPP. Investment compliance with the target asset mix is monitored monthly internally and quarterly by an external third-party vendor, and reported quarterly to the management of OPG and the OFA.

The table below summarizes the major foreign currencies (in Canadian dollars) to which the Fund was exposed to as at December 31, 2016 and 2015, adjusting for any forward foreign exchange contracts if applicable. The table also illustrates the impact of a one percent change in the value of the Canadian dollar relative to each foreign currency shown on the net assets of the Fund, with all other variables held constant.

	Market Value of Investments	**Foreign Exchange Contracts Payable**	**Net Currency Exposure**		**Impact of a One Percent Change**	
Currency	**2016**	**2016**	**2016**	**2015**	**2016**	**2015**
US Dollar	**2,787**	**(54)**	**2,733**	2,218	**27**	22
Euro	**598**	**-**	**598**	380	**6**	4
Japanese Yen	**333**	**-**	**333**	340	**3**	3
British Pound	**290**	**-**	**290**	321	**3**	3
Swiss Franc	**126**	**-**	**126**	117	**1**	1

Actual results may differ materially from this sensitivity analysis.

Interest Rate Risk

Interest rate risk, which includes credit spread risk, is the risk of investment loss due to changes in interest rates and changes in the market price of credit. The Fund is exposed to interest rate risk through its target asset mix, which includes an allocation to fixed income securities. Cash and cash equivalents and short-term investments with maturity dates of less than one year from the financial statement date have minimal exposure to interest rate fluctuations. The Fund's exposure to interest rate risk is governed by the SIPP, which ensures that the Fund's fixed income exposure is prudently diversified. Investment compliance with the SIPP is monitored quarterly by an external third-party vendor and reported quarterly to the management of OPG and the OFA.

The table below provides a summary of the Fund's fixed income exposures by maturity as at December 31, 2016 and 2015:

	2016	**2015**
Fixed income investments		
1 to 5 years	**824**	822
5 to 10 years	**696**	624
Over 10 years	**1,886**	1,948
	3,406	3,394
Average yield	**2.48%**	2.46%

Effective duration is a measure of the sensitivity of the price of a fixed income instrument to a change in interest rates. Using the Fund's effective duration of 9.9 years as at December 31, 2016 (2015 – 9.7 years), a parallel shift in the yield curve of +/- 0.5 percent would result in a $169 (2015 – $165) impact on the net assets of the Fund, with all other variables held constant. Actual results may differ materially from this sensitivity analysis.

Equity Price Risk

Equity price risk is the risk of loss due to a decline in equity prices. The Fund is exposed to equity price risk through its target asset mix, which includes an allocation to equity securities. The Fund's exposure to equity risk is governed by the SIPP, which ensures that the Fund's equity exposure is prudently diversified. Investment compliance with the SIPP is monitored quarterly by an external third-party vendor and reported quarterly to the management of OPG and the OFA.

The table below approximates the potential dollar impact on the Fund's net income and comprehensive income associated with a one percent change in each of the specified equity indices as at December 31. This analysis is based on the market values of the Fund's equity holdings at the end of the specified periods, as well as on the assumption that when one equity index changes by one percent, all other variables are held constant.

		2016	2015
Asset Class	**Equity Index**		
Domestic equity	S&P/TSX	**22**	18
US equity	S&P 500	**17**	16
Other equity	MSCI EAFE	**15**	15

Actual results may differ materially from this sensitivity analysis.

Derivatives

The Fund may enter into derivative contracts, such as forward foreign exchange contracts, for risk management purposes where such activity is consistent with its investment objectives. Forward contracts expose the Fund to counterparty credit risk should the Fund's counterparty to any such transaction default on its contractual obligations. Since the fair value of the forward foreign exchange contracts outstanding as at December 31, 2016 represents less than one percent of the Fund's net assets, the counterparty credit risk exposures on such transactions have a minimal impact on the Fund.

The following table summarizes forward foreign exchange contracts that were outstanding as at December 31, 2016 and 2015:

	2016	2015
Forward foreign exchange contracts Payable	**-**	(15)

The Fund may also enter into derivative contracts, such as futures contracts, to replicate direct investments in underlying securities. As at December 31, 2016, the Fund held equity futures contracts with a market value of $0.1 (2015 – $0.1). In accordance with the Fund's SIPP, 100 percent of these investments are secured by cash and short-term investments.

Securities Lending

The Fund is also exposed to counterparty credit risk associated with its security lending activities. The risk is mitigated by the use of non-cash collateral and through a borrower default protection that is jointly and severally provided to OPG by the Fund's custodian and its related entities. The Fund requires the borrower to pledge and to deliver collateral as security for each loan at no less than 105 percent of the market value of the securities loaned for Canadian securities, 102 percent of the market value of the securities loaned for US securities and the percentage that reflects best practices in other local markets in which other foreign currency securities are loaned.

The following table provides a summary of the Fund's securities on loan and collateral held as at December 31, 2016 and 2015:

	2016	2015
Securities on loan		
Marketable equity securities	**580**	681
Fixed income investments	**60**	72
	640	753
Collateral held	**682**	794
Collateral percentage	**106.6%**	105.4%

Additional Information on Fair Value

Financial assets are measured at fair value in accordance with the fair value hierarchy. This hierarchy groups financial assets and financial liabilities into three levels based on the significance of inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The level within which the asset or liability is classified is determined based on the lowest level input that is significant to the fair value measurement.

The fair value of pooled funds is reported on the basis of NAV and is classified as Level 2. Alternative investments are measured at fair value by their investment managers using NAV as a practical expedient. Investments measured at NAV as a practical expedient for determining fair value are excluded from the fair value hierarchy.

The following tables provide summaries of the financial assets and financial liabilities measured at fair value in the statements of net assets grouped into the fair value hierarchy as at December 31, 2016 and 2015:

2016	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Cash and cash equivalents	**140**	**-**	**-**	**140**
Short-term investments	**-**	**105**	**-**	**105**
Fixed income investments	**-**	**3,406**	**-**	**3,406**
Marketable equity securities	**5,441**	**-**	**-**	**5,441**
Pooled funds	**-**	**883**	**-**	**883**
	5,581	**4,394**	**-**	**9,975**
Investments measured at NAV[1]				**1,086**
Payable to Province of Ontario for rate of return adjustment[2]				**(1,913)**
				9,148

2015	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Cash and cash equivalents	203	-	-	203
Short-term investments	-	8	-	8
Fixed income investments	-	3,394	-	3,394
Marketable equity securities	4,891	-	-	4,891
Pooled funds	-	906	-	906
Liabilities				
Derivative contracts	-	(15)	-	(15)
	5,094	4,293	-	9,387
Investments measured at NAV[1]				883
Payable to Province of Ontario for rate of return adjustment[2]				(1,703)
				8,567

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to the total fair value of plan assets presented on the statements of net assets.

[2] Represents the cumulative excess in actual market return over the Committed Return based on the fair value of the Fund's assets related to the first 2.23 million used fuel bundles.

The tables above exclude receivables and payables.

There were no transfers between Levels 1 and 2 during the reporting period.

Certain real estate investments were purchased from entities related to investment managers of the Fund. These entities were related to the investment manager due to common control. The real estate investments were measured at the exchange amount of the consideration paid as established by third party real estate appraisers. The recorded amount of consideration paid in 2016 was $6 (2015 - $22) and proceeds received in 2016 was nil (2015 – nil).

8. ELIGIBLE NUCLEAR COSTS

ONFA sets out a process that must be followed prior to any amounts being disbursed from the Fund and gives the Province the right to review and approve all disbursements for eligible costs associated with long-term used fuel waste management. All disbursements to date have been made to OPG. The NFWA imposes additional restrictions on disbursements from the Trust. As at December 31, 2016, no disbursements have been made from the Trust since its inception.

Eligible costs from inception to December 31, 2016 were as follows:

	Annual	Inception-to-date
2016	**54**	**394**
2015	48	340
Inception to 2014	n/a	292

9. INVESTMENT MANAGEMENT AND ADMINISTRATION FEES

Investment management and administration fees for the years ended December 31, 2016 and 2015 were as follows:

	2016	2015
Investment management fees	**31**	24
Custodian fees	**1**	1
Other administration fees (audit, consulting, legal)	**5**	2
	37	27

For the year ended December 31, 2016, the ratio of expenses over net assets was 0.4 percent (2015 – 0.3 percent).

10. PROVINCE OF ONTARIO RATE OF RETURN ADJUSTMENT

In 2016, the actual rate of return of the Fund was 6.7 percent (2015 – 6.7 percent), net of expenses, which was higher than the Committed Return of 5.4 percent (2015 – 4.1 percent), equal to an annual rate of return of 3.25 percent (2015 – 3.25 percent) plus an annual inflation component of 2.1 percent (2015 – 0.8 percent). This resulted in an increase of $210 in the Province of Ontario rate of return adjustment payable during the year ended December 31, 2016 (2015 – $274). As at December 31, 2016, the Fund had a payable to the Province of $1,913 (2015 – $1,703) for the rate of return adjustment.

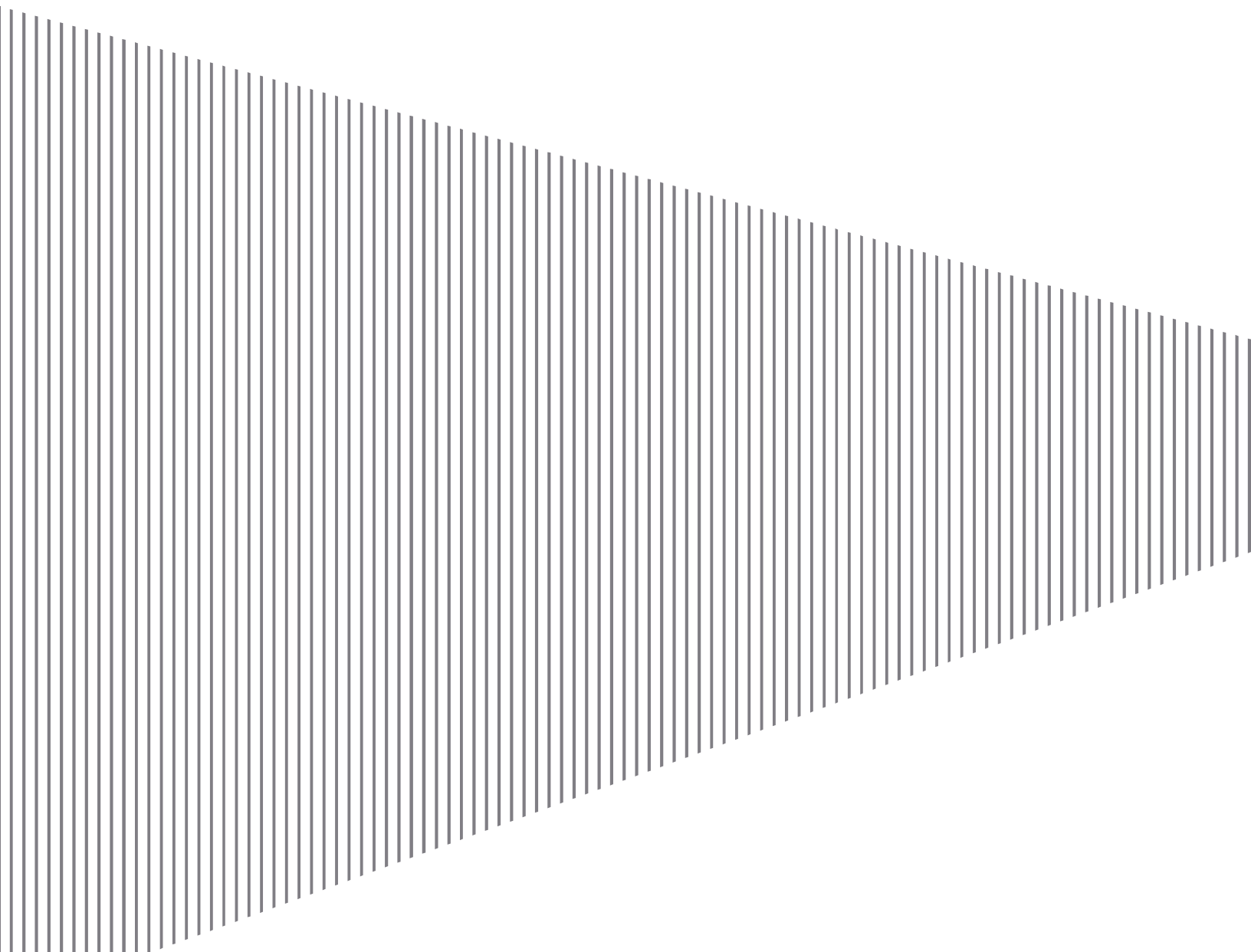
11. INVESTMENT INCOME RECEIVABLE

Investment income receivable comprises of interest receivable, net of foreign exchange gains or losses, dividends receivable, net of foreign exchange gains or losses, security lending income, and other investment income receivable. The following table summarizes investment income receivables that were outstanding as at December 31, 2016 and 2015:

	2016	2015
Interest receivable	**19**	18
Dividends receivable and other receivables	**10**	8
	29	26

12. COMMITMENTS

The Fund has committed to entering into alternative investments, which may be funded over the next several years in accordance with the agreed upon terms and conditions. As at December 31, 2016, these commitments totalled $651 (2015 – $422). The investments in alternative investments are generally not redeemable.



DECOMMISSIONING SEGREGATED FUND

AUDITED FINANCIAL STATEMENTS

DECEMBER 31, 2016

Building a better working world

INDEPENDENT

AUDITORS' REPORT

To the Audit and Risk Committee of Ontario Power Generation Inc.
and to the Audit and Risk Management Committee of the Ontario Financing Authority

We have audited the accompanying financial statements of the **Decommissioning Segregated Fund** (the "Fund"), which comprise the statement of net assets as at December 31, 2016, and the statements of operations and comprehensive income, changes in net assets, and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with United States generally accepted accounting principles, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the net assets of the Fund as at December 31, 2016, and the results of its operations, changes in its net assets and its cash flows for the year then ended in accordance with United States generally accepted accounting principles.

Ernst & Young LLP

Chartered Professional Accountants
Licensed Public Accountants

Toronto, Canada
March 8, 2017

STATEMENTS OF NET ASSETS

As at December 31 *(millions of dollars)*	2016	2015
Assets		
Investments *(Notes 3 and 6)*		
Cash and cash equivalents	**87**	122
Short-term investments	**22**	10
Fixed income investments	**2,775**	2,825
Marketable equity securities	**4,062**	3,730
Pooled funds	**446**	405
Alternative investments	**903**	737
	8,295	7,829
Other		
Receivable for investment transactions	**7**	3
Investment income receivable *(Note 9)*	**25**	22
	32	25
	8,327	7,854
Liabilities		
Accounts payable and accrued liabilities *(Note 4)*	**12**	9
Payable for investment transactions	**6**	4
Derivative contracts *(Note 6)*	**-**	13
	18	26
Net assets	**8,309**	7,828

Commitments *(Note 10)*

See accompanying notes to the financial statements

STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Investment income *(Note 5)*		
Interest	**101**	102
Dividends	**101**	110
Income from alternative investments	**21**	40
Security lending income	**1**	1
	224	253
Expenses		
Investment management and administration fees *(Note 8)*	**28**	22
Net investment income	**196**	231
Other income		
Net realized gains *(Note 5)*	**114**	215
Net unrealized gains *(Note 5)*	**195**	61
Net income and comprehensive income	**505**	507

See accompanying notes to the financial statements

STATEMENTS OF CHANGES IN NET ASSETS

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Net assets, beginning of year	**7,828**	7,338
Net income and comprehensive income	**505**	507
Eligible nuclear costs *(Note 7)*	**(24)**	(17)
Net assets, end of year	**8,309**	7,828

See accompanying notes to the financial statements

STATEMENTS OF CASH FLOWS

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Operating activities		
Interest received	**98**	102
Dividends received	**100**	109
Proceeds received from alternative investments	**51**	36
Security lending income	**1**	1
Investment management and administration fees paid	**(16)**	(15)
Proceeds from realized gains on investments	**124**	214
Proceeds from investments sold in prior year	**3**	9
Payments for investments purchased in prior year	**(4)**	(7)
Purchase of investments	**(357)**	(404)
Foreign exchange contracts settlement from prior year	**(13)**	(3)
Disbursements for eligible nuclear costs	**(22)**	(19)
Cash flow (used in) provided by operating activities	**(35)**	23
Cash and cash equivalents, January 1	**122**	99
Cash and cash equivalents, December 31	**87**	122

See accompanying notes to the financial statements

NOTES TO THE FINANCIAL STATEMENTS

1. DESCRIPTION OF DECOMMISSIONING SEGREGATED FUND

The Ontario Nuclear Funds Agreement ("ONFA"), as amended, is an agreement between the Province of Ontario (the "Province"), Ontario Power Generation Inc. ("OPG"), and various subsidiaries of OPG that became effective in July 2003. The ONFA outlines the roles and responsibilities of the Province and OPG concerning the establishment of the following investment funds in segregated custodial accounts:

- The "Decommissioning Segregated Fund" (the "Fund") to cover eligible costs for the nuclear fixed asset removal and long-term low and intermediate level nuclear waste management; and
- The "Used Fuel Segregated Fund" to cover eligible costs for the long-term nuclear used fuel waste management.

On July 24, 2003, the ONFA became effective upon the appointment of external investment managers to manage the assets of these funds. CIBC Mellon Global Securities Services Company is an independent custodian of the Fund's assets under the custody agreement dated October 5, 2010.

OPG is the owner of the Fund. Each of the Province and the Ontario Electricity Financial Corporation ("OEFC"), pursuant to the ONFA, has a security interest in the assets of the Fund.

OPG and the Ontario Financing Authority ("OFA"), an agency of the Province, jointly make decisions on the Fund's asset mix and investment manager selection and retention. There is a risk that OPG and the OFA may have differing priorities respecting these matters that could impact asset mix and investment decisions.

The Fund is funded in accordance with the ONFA using the reference plans and associated cost estimates that have been prepared by OPG and approved by the Province and may be adjusted from time to time in accordance with the ONFA.

The target rate of return for the Fund based on the discount rate established by the ONFA is as set out in the current approved reference plan. In December 2016, the Province approved a new ONFA reference plan with an effective date of January 1, 2017 ("2017 ONFA Reference Plan") to replace the 2012 ONFA Reference Plan previously in effect since January 1, 2012. The 2017 Reference Plan covers the 2017-2021 period. Based on the 2017 ONFA Reference Plan, the target rate of return for the Fund is at 5.15 percent per annum (annual return of 3.25 percent plus an annual inflation component of 1.90 percent), after expenses. The target rate of return for the Fund is unchanged from the previous approved reference plan. For the year ended December 31, 2016, the actual rate of return of the Fund was 6.5 percent (2015 – 6.9 percent), net of expenses.

OPG has not made contributions to the Fund, which has been fully funded at its inception through the initial contribution made by the Province and, taking into account asset performance and changes in underlying funding obligations over time, at the time of every subsequent approved ONFA reference plan. No overall contributions are required to be made to the Fund based on the 2017 ONFA Reference Plan.

OPG bears the risk and liability for funding liability increases and fund earnings.

If the actual rate of return of the Fund deviates from the target rate of return, or if there is a change in the value of the funding liabilities as a result of the approval of a new ONFA reference plan, the Fund may become underfunded in the future. Contributions may be required in the future should the Fund be in an underfunded position when a new reference plan is prepared. Variability in asset performance due to volatility inherent in financial markets may result in the Fund becoming underfunded. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the funding obligation in a future approved ONFA reference plan.

Amounts are disbursed from the Fund solely for reimbursement of eligible costs associated with nuclear fixed asset removal and long-term low and intermediate level waste management.

If there is a surplus in the Fund such that the liabilities are at least 120 percent funded, OPG may direct up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Upon termination of the ONFA, the Province has a right to any excess funds, which is the extent to which the fair value of the Fund exceeds the estimated completion costs under the current approved reference plan.

As part of OPG's licensing requirements for financial guarantees under the *Nuclear Safety and Control Act* (Canada) in respect of its nuclear generating station decommissioning and nuclear waste management obligations, the Province, OPG and the Canadian Nuclear Safety Commission ("CNSC") have entered into an agreement that gives the CNSC access to the assets of the Fund under certain conditions.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The Fund represents the assets maintained by OPG in segregated custodial accounts pursuant to the ONFA and does not have a separate legal status. The Fund's financial statements have been prepared by management in accordance with United States generally accepted accounting principles ("US GAAP"), which is consistent with Section 9.4 of ONFA.

The Fund meets the definition of an investment company under the revised Accounting Standards Codification Topic 946, "Investment Companies", which requires all investments to be recorded at fair value. The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, income and expenses, and the disclosure of commitments. Actual results could differ from these estimates.

Given that OPG is the owner of the Fund and the Province owns all of the shares of OPG, related parties include OPG, the Province, and the OEFC.

Certain of the 2015 comparative amounts have been reclassified from financial statements previously presented to conform to the 2016 consolidated financial statement presentation.

Cash and Cash Equivalents

Cash and cash equivalents include cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments. These securities are valued at the lower of cost and market. Interest earned on cash and cash equivalents and short-term investments is recognized as interest income.

Valuation of Investments

Financial assets and liabilities are measured at fair value with gains and losses recognized in income. Financial assets purchased and sold, where the contract requires the asset to be delivered within an established time frame, are recognized on a trade-date basis. All derivatives are recorded at fair value in the statements of net assets. Transaction costs for financial instruments are expensed as incurred.

Fair value is defined as the amount at which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's-length transaction. Where a quoted bid price in an active market is available, the fair value is based on the quoted bid price at the end of the reporting period. In the absence of a quoted price in an active market, the Fund determines fair value using valuation techniques that make maximum use of observable market inputs.

Investments are presented in the financial statements at fair value, with the differences between fair value and average cost recorded as unrealized gains or losses in the Fund's statements of operations and comprehensive income.

The carrying value of cash and cash equivalents and short-term investments approximates their fair value due to their immediate or short-term maturity.

The market values of foreign investments are translated into Canadian dollars at the exchange rates prevailing at the close of each business day. Purchases and sales of foreign securities and income and expenses are translated into Canadian dollars at the exchange rates prevailing on the transaction dates. The gains and losses arising from foreign exchange transactions are recorded in the statements of operations and comprehensive income.

Securities traded on a national securities exchange are valued at the bid price on the last business day of the year. Listed securities for which no trades are recorded on the last business day of the year are valued at the last reported traded price on the last business day on which the security was traded. Pooled funds are valued based on the unit values of the funds as reported by the investment manager and are presented as a separate category on the statements of net assets. Management fees for the pooled funds are expensed as incurred. Securities transactions are recorded on the trade date. Dividends are accrued as of the ex-dividend date. Stock dividends are recorded in income based on the market value of the security. The realized gains or losses on the sale of securities are calculated with reference to the average cost of the securities and included in net realized gains or losses in the statements of operations and comprehensive income. The Fund follows the accrual method of recording investment income.

Alternative investments consist of infrastructure, real estate, and agriculture investments that are valued based on estimated fair values using acceptable industry valuation methods. Management fees for the alternative investments are expensed as incurred.

For other investments that do not have an established fair value, the fair value is estimated based on comparable securities of issuers with similar credit ratings or net realizable value using available information.

Forward Foreign Exchange Contracts

The Fund may enter into forward foreign exchange contracts for risk management purposes where such activity is consistent with its investment objectives.

The changes in the year-end value of forward foreign exchange contracts have been included on the statements of net assets, with the net unrealized gain or loss included in the statements of operations and comprehensive income. The gain or loss arising from the difference between the value of the original forward foreign exchange contract and the contract at close or delivery is realized and recorded in net realized gains or losses in the statements of operations and comprehensive income.

Taxation

Any investment income earned by the Fund is exempt from tax under the *Income Tax Act* (Canada) since the Fund is owned by a tax-exempt entity, namely OPG, and income earned by the Fund is attributed for tax purposes to OPG.

Under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG paying taxes similar to those imposed under the federal and Ontario tax acts.

Investment income earned in the Fund is exempt from payments in lieu of corporate income taxes based on O. Reg. 207/99 made under the *Electricity Act, 1998*. Accordingly, the Fund has made no provision for income taxes in these financial statements.

Recent Accounting Pronouncements

In May 2015, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2015-07, *Fair Value Measurement (Topic 820) – Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent)*. Under the new guidance, investments measured at net asset value ("NAV"), which have been elected under the guidance as a practical expedient for fair value, are excluded from the fair value hierarchy. Removing investments measured using the practical expedient from the fair value hierarchy is intended to eliminate the diversity in practice that has existed with respect to the categorization of these investments. The criterion for categorizing investments in the fair value hierarchy is the observability of the inputs. The Fund has adopted these updates to Accounting Standards Codification Topic 820, *Fair Value Measurement* in 2016. The changes in disclosures required under this update are reflected in Note 6.

3. INVESTMENTS

The fair values and historical costs of the investments as at December 31, 2016 and 2015 are summarized as follows:

	2016		2015	
	Fair Value	**Historical Cost**	**Fair Value**	**Historical Cost**
Cash and cash equivalents	**87**	**87**	122	122
Short-term investments	**22**	**22**	10	10
Fixed income investments				
Domestic	**2,751**	**2,598**	2,809	2,596
United States	**7**	**7**	1	1
Other	**17**	**16**	15	13
	2,775	**2,621**	2,825	2,610
Equities				
Domestic	**1,624**	**1,193**	1,395	1,192
United States	**1,277**	**922**	1,183	854
Japan	**249**	**184**	255	173
United Kingdom	**203**	**167**	215	153
Switzerland	**100**	**73**	92	59
Other[1]	**606**	**471**	585	432
	4,059	**3,010**	3,725	2,863
Preferred	**3**	**4**	5	6
Marketable equity securities	**4,062**	**3,014**	3,730	2,869
Pooled funds				
Equities	**316**	**263**	296	258
Fixed income investments	**116**	**116**	107	107
Short-term investments	**14**	**14**	2	2
	446	**393**	405	367
Alternative investments				
Infrastructure	**550**	**407**	449	339
Real estate	**321**	**303**	270	253
Agriculture	**32**	**31**	18	20
	903	**741**	737	612
Total investments	**8,295**	**6,878**	7,829	6,590

[1] Includes equities from over 40 geographical locations

A breakdown of the domestic fixed income investments, domestic equities and United States (US) equities by industry as at December 31, 2016 and 2015 is as follows:

	2016	2015
Domestic fixed income investments		
Government	**1,889**	1,904
Financial	**485**	524
Utilities	**99**	96
Energy	**56**	37
Real estate	**55**	55
Other	**167**	193
	2,751	2,809
Domestic equities		
Financial	**374**	326
Energy	**360**	239
Materials	**171**	123
Insurance	**115**	109
Transportation	**104**	97
Media and telecommunications	**90**	88
Technology	**83**	72
Automobiles and components	**53**	67
Other	**274**	274
	1,624	1,395
US equities		
Technology	**236**	219
Financial	**156**	126
Healthcare	**112**	106
Media and telecommunications	**109**	104
Energy	**104**	107
Retail	**66**	58
Pharmaceuticals	**61**	67
Insurance	**49**	48
Commercial services	**47**	42
Other	**337**	306
	1,277	1,183

The proportion of each category of investments as a percentage of net assets as at December 31, 2016 and 2015 is as follows:

	2016		2015	
	Fair Value	**% of Net Assets**	**Fair Value**	**% of Net Assets**
Cash and cash equivalents	**87**	**1%**	122	2%
Short-term investments	**22**	**-**	10	-
Fixed income investments	**2,775**	**34%**	2,825	36%
Marketable equity securities	**4,062**	**49%**	3,730	48%
Pooled funds	**446**	**5%**	405	5%
Alternative investments	**903**	**11%**	737	9%
Total investments	**8,295**	**100%**	7,829	100%
Net assets	**8,309**		7,828	

Issuers representing aggregated investments of greater than 5% of net assets as at December 31, 2016 and 2015 are as follows:

	2016		2015	
	Principal Amount	**Fair Value**	**Principal Amount**	**Fair Value**
Province of Ontario	**551**	**654**	520	638
Government of Canada[1]	**349**	**405**	390	476
		1,059		1,114

[1] These securities did not exceed the 5% of net assets as at December 31, 2016, but are shown for comparative purposes.

4. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities consist of the following as at December 31, 2016 and 2015:

	2016	**2015**
Eligible nuclear costs	**8**	5
Investment management and related fees	**4**	4
	12	9

5. INVESTMENT INCOME, NET REALIZED GAINS AND NET UNREALIZED GAINS (LOSSES)

Investment income, net realized gains, and net unrealized gains (losses) for the years ended December 31, 2016 and 2015 consist of the following:

	2016	2015
Investment income		
Interest on cash, short-term investments, and bonds and debentures	**101**	102
Dividends	**101**	110
Income from alternative investments	**21**	40
Security lending income	**1**	1
	224	253
Net realized gains		
Realized gains	**84**	159
Realized foreign exchange gains	**30**	56
	114	215
Net unrealized gains (losses)		
Unrealized gains (losses)[1]	**360**	(274)
Unrealized foreign exchange (losses) gains	**(165)**	335
	195	61

[1] Unrealized gains (losses) for alternative investments are based on the fair values of the assets held, net of operating results of the underlying investments reported as income from alternative investments.

6. FINANCIAL INSTRUMENTS

The primary objective of the Fund is to meet the payment obligations associated with OPG's nuclear generating station decommissioning and low and intermediate level waste disposal activities as contemplated under the ONFA. In order to meet this objective, the Fund invests in a diversified portfolio of investments comprising primarily equity and fixed income securities.

A Statement of Investment Policies and Procedures ("SIPP") for the Fund sets out the investment framework of the Fund, including the investment assumptions, permitted investments and various investment constraints. The SIPP also establishes the long-term target asset mix of the Fund, which considers the Fund's funded status and investment objectives in relation to the projected profile of the underlying long-term liability and cash flows, historical experience of investment vehicles, the appropriate level of diversification to optimize risk and return, and the risk preferences of OPG and the Province. The Fund is invested in equities, fixed income, and alternative investments. It is primarily assumed that certain equity and other types of investments are expected to provide higher long-term returns than fixed income investments with a correspondingly higher level of short-term volatility, and that exposure to alternative investments will improve portfolio diversification, provide the potential for enhanced long-term returns, and reduced portfolio volatility. The management of OPG and the Province monitor investment compliance with the SIPP on a quarterly basis.

The SIPP is reviewed and approved annually by the Audit and Risk Committee of OPG's Board of Directors and by the Deputy Minister of Finance, on behalf of the Province.

Risks Associated with Financial Instruments

Credit Risk

Credit risk is the risk that the counterparty to a financial instrument might fail to meet its obligation under the terms of a financial instrument, thereby resulting in a financial loss for the other party to the transaction. The Fund is primarily exposed to credit risk through its fixed income allocation, which is invested in federal, provincial and corporate debt. Credit risk is governed by the SIPP, which requires fixed income investments to comply with various investment constraints that ensure prudent diversification and minimum credit rating quality. To manage credit risk, compliance with the SIPP is monitored quarterly by an external third-party vendor and reported to the management of OPG and the OFA on a quarterly basis.

The table below summarizes the Fund's exposure to debt instruments with the following credit ratings as at December 31, 2016 and 2015:

Rating	2016	2015
AAA	**26.0%**	27.7%
AA	**13.3%**	10.0%
A	**49.2%**	51.6%
BBB	**11.2%**	10.6%
Less than BBB or not rated	**0.3%**	0.1%
	100.0%	100.0%

Credit ratings are obtained from Standard & Poor's, Moody's and/or the Dominion Bond Rating Services. In the case where more than one rating is obtained for a security, the lowest rating has been used.

Liquidity Risk

Liquidity risk is the risk that the Fund is unable to meet its financial obligations as they become due. The Fund's approach to managing liquidity risk is to ensure that the Fund has sufficient liquidity to meet its financial obligations when due without incurring unacceptable losses. The Fund manages liquidity risk at the overall fund level by considering the expected liquidity of each asset class during the development of the Fund's asset mix and diversifying investments across different asset class types.

Market Risk

Market risk is defined as the risk that an investment's value decreases due to changes in underlying market factors including, but not limited to, concentration risk, currency risk, interest rate risk, and equity price risk.

Market risk is managed by the Fund through its diversified asset mix, which, in accordance with the SIPP, is expected to be reviewed at least every five years. The review generally coincides with the preparation and approval of reference plans under the ONFA. The target asset mix of the Fund, including tolerance ranges around the target allocation to various asset classes, is governed by the SIPP. Compliance with the target asset mix range is monitored internally on a monthly basis and by an external third-party vendor on a quarterly basis, and reported quarterly to the management of OPG and the OFA.

Concentration Risk

Concentration risk is the risk of investment loss due to lack of diversification in the portfolio. The Fund's exposure to concentration risk is governed by the SIPP. For equities, no holding shall represent more than 10 percent of the total market value of each investment manager's equity portfolio. For fixed income investments, no more than 10 percent of each investment manager's portfolio may be invested in the bonds of a single issuer and its related companies, except for Canadian federal and provincial bonds and bonds of their agencies. Investment compliance with the SIPP is monitored quarterly by an external third-party vendor and reported to the management of OPG and the OFA.

Currency Risk

Currency risk is the risk that the value of a financial instrument decreases due to changes in foreign exchange rates. The Fund is exposed to foreign currency risk primarily through its foreign equity investment, which is governed through the target asset mix as approved annually in the SIPP. Investment compliance with the target asset mix of the Fund is monitored monthly internally and quarterly by an external third-party vendor, and reported quarterly to the management of OPG and the OFA.

The table below summarizes the major foreign currencies (in Canadian dollars) to which the Fund was exposed to as at December 31, 2016 and 2015, adjusting for forward foreign exchange contracts, if applicable. The table also illustrates the impact of a one percent change in the value of the Canadian dollar relative to each foreign currency shown on the net assets of the Fund, with all other variables held constant.

Currency	Market Value of Investments 2016	Foreign Exchange Contracts Payable 2016	Net Currency Exposure 2016	Net Currency Exposure 2015	Impact of a One Percent Change 2016	Impact of a One Percent Change 2015
US Dollar	**2,132**	**-**	**2,132**	1,687	**21**	17
Euro	**476**	**-**	**476**	291	**5**	3
Japanese Yen	**253**	**-**	**253**	260	**3**	3
British Pound	**220**	**-**	**220**	248	**2**	2
Swiss Franc	**94**	**-**	**94**	90	**1**	1

Actual results may differ materially from this sensitivity analysis.

Interest Rate Risk

Interest rate risk, which includes credit spread risk, is the risk of investment loss due to changes in interest rates and changes in the market price of credit. The Fund is exposed to interest rate risk through its target asset mix, which includes an allocation to fixed income securities. Cash and cash equivalents and short-term investments with maturity dates of less than one year from the financial statement date have minimal exposure to interest rate fluctuations. The Fund's exposure to interest rate risk is governed by the SIPP, which ensures that the Fund's fixed income exposure is prudently diversified. Investment compliance with the SIPP is monitored quarterly by an external third-party vendor and reported quarterly to the management of OPG and the OFA.

The table below provides a summary of the Fund's fixed income exposures by maturity as at December 31, 2016 and 2015:

	2016	2015
Fixed income investments		
1 to 5 years	**630**	635
5 to 10 years	**368**	378
Over 10 years	**1,777**	1,812
	2,775	2,825
Average yield	**2.63%**	2.54%

Effective duration is a measure of the sensitivity of the price of a fixed income instrument to a change in interest rates. Using the Fund's effective duration of 10.9 years as at December 31, 2016 (2015 – 10.8 years), a parallel shift in the yield curve of +/- 0.5 percent would result in a $151 impact (2015 – $153) on the net assets of the Fund, with all other variables held constant. Actual results may differ materially from this sensitivity analysis.

Equity Price Risk

Equity price risk is the risk of loss due to a decline in equity prices. The Fund is exposed to equity price risk through its target asset mix, which includes an allocation to equity securities. The Fund's exposure to equity risk is governed by the SIPP, which ensures that the Fund's equity exposure is prudently diversified. Investment compliance with the SIPP is monitored quarterly by an external third-party vendor and reported quarterly to the management of OPG and the OFA.

The table below approximates the potential dollar impact on the net assets of the Fund associated with a one percent change in each of the specified equity indices as at December 31. This analysis is based on the market values of the Fund's equity holdings at the end of the specified periods, as well as on the assumption that when one equity index changes by one percent, all other variables are held constant.

		2016	2015
Asset Class	**Equity Index**		
Domestic equity	S&P/TSX	**16**	14
US equity	S&P 500	**13**	12
Other equity	MSCI EAFE	**12**	11

Actual results may differ materially from this sensitivity analysis.

Derivatives

The Fund may enter into derivative contracts, such as forward foreign exchange contracts, for risk management purposes where such activity is consistent with its investment objectives. Forward contracts expose the Fund to counterparty credit risk should the Fund's counterparty to any such transaction default on its contractual obligations. Since the fair value of the forward foreign exchange contracts outstanding as at December 31, 2016 represents less than one percent of the Fund's net assets, the counterparty credit risk exposures on such transactions have a minimal impact on the Fund.

The following table summarizes forward foreign exchange contracts that were outstanding as at December 31, 2016 and 2015:

	2016	2015
Forward foreign exchange contracts Payable	-	(13)

The Fund may also enter into derivative contracts, such as futures contracts, to replicate direct investments in underlying securities. As at December 31, 2016, the Fund held equity futures contracts with a market value of $0.1 (2015 – $0.1). In accordance with the Fund's SIPP, 100 percent of these investments are secured by cash and short-term investments.

Securities Lending

The Fund is also exposed to counterparty credit risk associated with its security lending activities. The risk is mitigated by the use of non-cash collateral and through a borrower default protection that is jointly and severally provided to OPG by the Fund's custodian and its related entities. The Fund requires the borrower to pledge and to deliver collateral as security for each loan at no less than 105 percent of the market value of the securities loaned for Canadian securities, 102 percent of the market value of the securities loaned for US securities and the percentage that reflects best practices in other local markets in which other foreign currency securities are loaned.

The following table provides a summary of the Fund's securities on loan and collateral held as at December 31, 2016 and 2015:

	2016	2015
Securities on loan		
Marketable equity securities	**394**	497
Fixed income investments	**324**	280
	718	777
Collateral held	**760**	818
Collateral percentage	**105.8%**	105.3%

Additional Information on Fair Value

Financial assets are measured at fair value in accordance with the fair value hierarchy. This hierarchy groups financial assets and financial liabilities into three levels based on the significance of inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The level within which the financial asset or financial liability is classified is determined based on the lowest level input that is significant to the fair value measurement.

The fair value of pooled funds is reported on the basis of NAV and is classified as Level 2. Alternative investments are measured at fair value by their investment managers using NAV as a practical expedient. Investments measured at NAV as a practical expedient for determining fair value are excluded from the fair value hierarchy.

The following tables provide summaries of the assets and liabilities measured at fair value in the statements of net assets grouped into the fair value hierarchy as at December 31, 2016 and 2015:

2016	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Cash and cash equivalents	**87**	**-**	**-**	**87**
Short-term investments	**-**	**22**	**-**	**22**
Fixed income investments	**-**	**2,775**	**-**	**2,775**
Marketable equity securities	**4,062**	**-**	**-**	**4,062**
Pooled funds	**-**	**446**	**-**	**446**
	4,149	**3,243**	**-**	**7,392**
Investments measured at NAV[1]				**903**
				8,295

2015	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Cash and cash equivalents	122	-	-	122
Short-term investments	-	10	-	10
Fixed income investments	-	2,825	-	2,825
Marketable equity securities	3,730	-	-	3,730
Pooled funds	-	405	-	405
Liabilities				
Derivative contracts	-	(13)	-	(13)
	3,852	3,227	-	7,079
Investments measured at NAV[1]				737
				7,816

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to the total fair value of plan assets presented on the statements of net assets.

The tables above exclude receivables and payables.

There were no transfers between Levels 1 and 2 during the reporting period.

Certain real estate investments were purchased from entities related to investment managers of the Fund. These entities were related to the investment manager due to common control. The real estate investments were measured at the exchange amount of the consideration paid as established by third party real estate appraisers. The recorded amount of consideration paid in 2016 was $5 (2015 - $18) and proceeds received in 2016 were nil (2015 – nil).

7. ELIGIBLE NUCLEAR COSTS

ONFA sets out a process that must be followed prior to any amounts being disbursed from the Fund and gives the Province the right to review and approve all disbursements for eligible costs associated with nuclear fixed asset removal and long-term low and intermediate level nuclear waste management and storage. All disbursements to date have been made to OPG.

Eligible costs from inception to December 31, 2016 were as follows:

	Annual	Inception-to-date
2016	**24**	**519**
2015	17	495
Inception to 2014	n/a	478

8. INVESTMENT MANAGEMENT AND ADMINISTRATION FEES

Investment management and administration fees for the years ended December 31, 2016 and 2015 were as follows:

	2016	2015
Investment management fees	**23**	19
Custodian fees	**1**	-
Other administration fees (audit, consulting, legal)	**4**	3
	28	22

For the year ended December 31, 2016, the ratio of expenses over net assets was 0.3 percent (2015 – 0.3 percent).

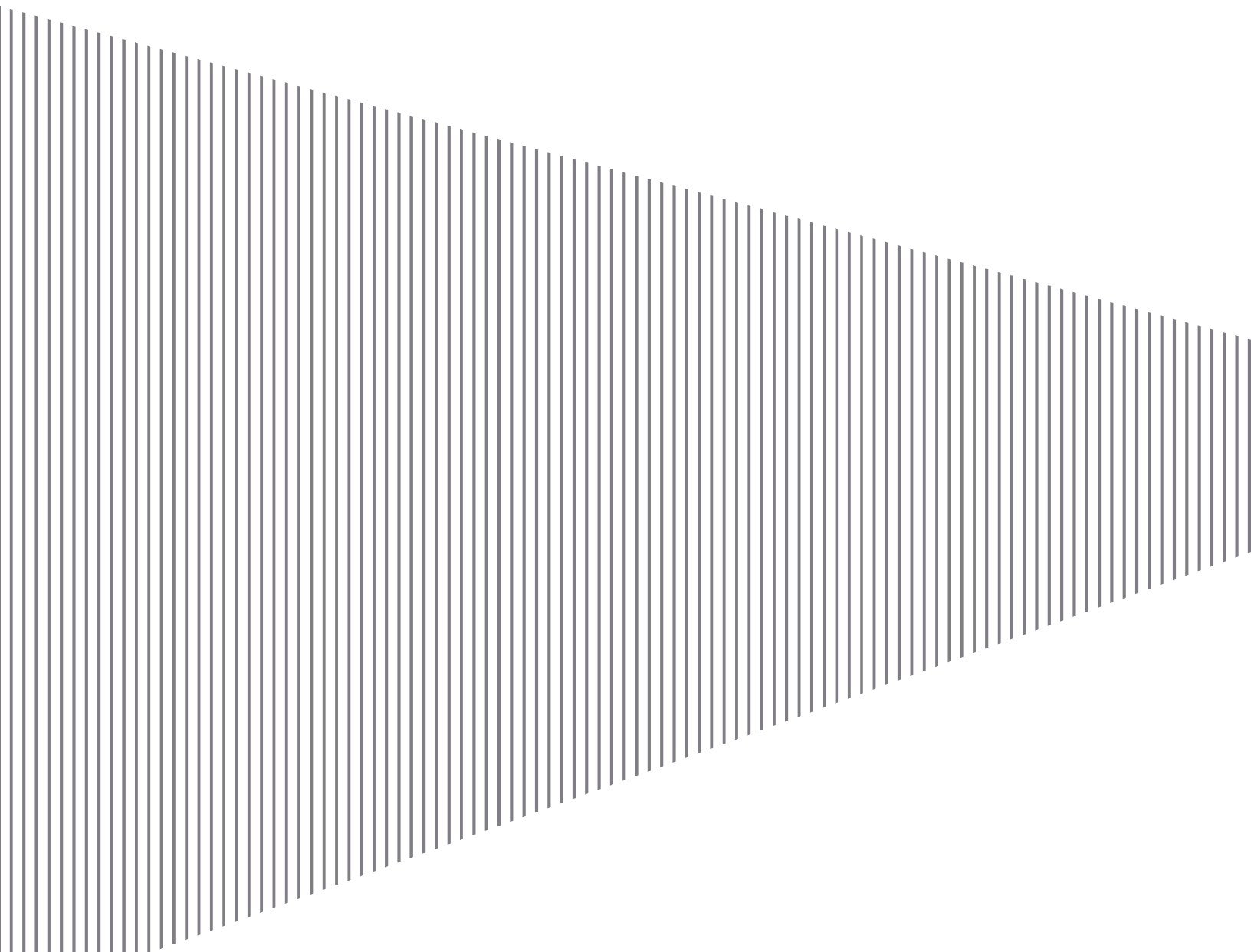
9. INVESTMENT INCOME RECEIVABLE

Investment income receivable comprises of interest receivable, net of foreign exchange gains or losses, dividends receivable, net of foreign exchange gains or losses and foreign taxes payable, and security lending income. The following table summarizes investment income receivables that were outstanding as at December 31, 2016 and 2015:

	2016	2015
Interest receivable	**17**	16
Dividends receivable and other receivables	**8**	6
	25	22

10. COMMITMENTS

The Fund has committed to entering into alternative investments, which may be funded over the next several years in accordance with the agreed upon terms and conditions. As at December 31, 2016, these commitments totalled $531 (2015 – $349). The investments in alternative investments are generally not redeemable.



THE ONTARIO NFWA TRUST

AUDITED FINANCIAL STATEMENTS

DECEMBER 31, 2016

Building a better working world

INDEPENDENT
AUDITORS' REPORT

To the Trustee of The Ontario NFWA Trust

We have audited the accompanying financial statements of **The Ontario NFWA Trust** (the "Trust"), which comprise the statement of net assets as at December 31, 2016, and the statements of operations and comprehensive income, changes in net assets, and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with United States generally accepted accounting principles, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the net assets of the Trust as at December 31, 2016, and the results of its operations, changes in its net assets and its cash flows for the year then ended in accordance with United States generally accepted accounting principles.

Ernst & Young LLP

Chartered Professional Accountants
Licensed Public Accountants

Toronto, Canada
March 8, 2017

STATEMENTS OF NET ASSETS

As at December 31 *(millions of dollars)*	**2016**	**2015**
Assets		
Investments *(Notes 3 and 8)*		
Cash and cash equivalents	**35**	71
Short-term investments	**75**	-
Fixed income investments	**3,121**	2,822
Pooled funds	**437**	501
	3,668	3,394
Other		
Investment income receivable *(Note 4)*	**17**	15
Receivable for investment transactions	**17**	16
	34	31
	3,702	3,425
Liabilities		
Accounts payable and accrued liabilities *(Note 5)*	**1**	1
Payable for investment transactions	**13**	15
	14	16
Net assets	**3,688**	3,409

See accompanying notes to the financial statements

STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Investment income *(Note 6)*		
Interest	**106**	104
Expenses		
Investment management and administration fees *(Note 9)*	**5**	3
Net investment income	**101**	101
Other income		
Net realized gains *(Note 6)*	**38**	57
Net unrealized losses *(Note 6)*	**(60)**	(51)
Net income and comprehensive income	**79**	107

See accompanying notes to the financial statements

STATEMENTS OF CHANGES IN NET ASSETS

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Net assets, beginning of year	**3,409**	3,114
Net income and comprehensive income	**79**	107
Contributions *(Note 7)*	**200**	188
Net assets, end of year	**3,688**	3,409

See accompanying notes to the financial statements

STATEMENTS OF CASH FLOWS

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Operating activities		
Interest received	**104**	104
Investment management and administration fees paid	**(5)**	(3)
Proceeds from realized gains on investments	**38**	57
Proceeds from investments sold in prior year	**16**	63
Payments for investments purchased in prior year	**(15)**	(93)
Purchase of investments	**(374)**	(297)
Cash flow used in operating activities	**(236)**	(169)
Financing activities		
Contributions *(Note 7)*	**200**	188
Cash flow provided by financing activities	**200**	188
Net change in cash and cash equivalents	**(36)**	19
Cash and cash equivalents, January 1	**71**	52
Cash and cash equivalents, December 31	**35**	71

See accompanying notes to the financial statements

NOTES TO THE FINANCIAL STATEMENTS

1. DESCRIPTION OF THE ONTARIO NFWA TRUST

The *Nuclear Fuel Waste Act* ("NFWA") received Royal Assent on June 13, 2002 and was proclaimed into force on November 15, 2002. The NFWA is a key component of the Government of Canada's 1996 Policy Framework for Radioactive Waste. Under this policy, the Federal Government, through effective oversight, intends to ensure that the long-term management of nuclear fuel waste is carried out in a comprehensive, integrated and economically sound manner.

As required under the NFWA, the owners of nuclear fuel waste established, by incorporation, the Nuclear Waste Management Organization ("NWMO"), whose purpose is to propose to the Government of Canada approaches for the management of nuclear fuel waste and to implement the approach that is selected by the Federal Government. In accordance with the NFWA, the NWMO submitted its recommendations for a long-term nuclear used fuel waste management strategy to the Federal Government in November 2005. In June 2007, the Federal Government selected the NWMO's recommended option, titled Adaptive Phased Management.

Upon the NFWA coming into force in November 2002, the owners of nuclear fuel waste were required to establish trust funds and to make annual payments into those trust funds to finance the long-term management of nuclear fuel waste. Accordingly, Ontario Power Generation Inc. ("OPG") established The Ontario NFWA Trust (the "Trust") and made an initial deposit of $500 into the Trust fund on November 25, 2002. Under the NFWA, OPG is required to make a contribution to the Trust each year within 30 days of the submission of the NWMO's Annual Report to the federal Minister of Natural Resources. The annual contribution amount to the Trust was $100 up to 2007. Since 2008, the annual contribution amount is based on the funding formula approved by the federal Minister of Natural Resources.

The funds in the Trust will be used to meet the payment obligations associated with the long-term management of highly radioactive nuclear used fuel, as permitted by the NFWA. These financial statements do not portray the funding requirements for the long-term management of nuclear fuel waste obligations.

A Statement of Investment Policies and Procedures ("SIPP") was established for the Trust, which sets out the investment framework of the Trust, including the investment assumptions, permitted investments and various investment constraints. Further, the SIPP establishes the long-term target asset mix of the Trust, considered in the context of the Used Fuel Segregated Fund established pursuant to the Ontario Nuclear Funds Agreement ("ONFA") between OPG and the Province of Ontario (the "Province"), and takes into account the funded status of the Used Fuel Segregated Fund and its investment objectives in relation to the projected profile of the underlying long-term liability and cash flows, historical experience of investment vehicles, the appropriate level of diversification to optimize risk and return, and the risk preferences of OPG and the Province. The management of OPG and the Province monitor investment compliance quarterly with the SIPP.

The SIPP is reviewed and approved annually by the Deputy Minister of Finance, on behalf of the Province.

OPG and the Ontario Financing Authority ("OFA"), an agency of the Province, jointly make decisions on the Trust's asset mix and investment manager selection and retention. There is a risk that OPG and the OFA may have differing priorities respecting these matters that could impact asset mix and investment decisions.

The Trustee of the Trust is CIBC Mellon Trust Company. CIBC Mellon Global Securities Services Company is an independent custodian of the Trust's assets under the custody agreement dated September 20, 2010. The Province and OPG are the beneficiaries of the Trust.

The Trust forms part of the Used Fuel Segregated Fund set up by OPG under the ONFA. The target rate of return as established by the SIPP for the Used Fuel Segregated Fund is a total annual real return of 3.25 percent, which equals the rate of change in the Ontario Consumer Price Index plus 3.25 percent compounded annually, after expenses. In 2016, the actual rate of return of the Trust was 2.3 percent (2015 – 3.5 percent), after expenses.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The financial statements of the Trust have been prepared by management in accordance with United States generally accepted accounting principles ("US GAAP"), which is consistent with the basis of accounting followed by OPG.

The Trust meets the definition of an investment company under the revised Accounting Standards Codification Topic 946, "Investment Companies", which requires all investments to be recorded at fair value. The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, income and expenses, and the disclosure of contingent assets and liabilities. Actual results could differ from these estimates.

Given that OPG is the owner of the Trust and the Province owns all of the shares of OPG, related parties include OPG and the Province.

Certain of the 2015 comparative amounts have been reclassified from financial statements previously presented to conform to the 2016 consolidated financial statement presentation.

Cash and Cash Equivalents

Cash and cash equivalents include cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments. These securities are valued at the lower of cost and market. Interest earned on cash and cash equivalents and short-term investments is recognized as interest income.

Valuation of Investments

Financial assets and liabilities are measured at fair value with gains and losses recognized in income. Financial assets purchased and sold where the contract requires the asset to be delivered within an established time frame are recognized on a trade-date basis. All derivatives are recorded at fair value in the statements of net assets. Transaction costs for financial instruments are expensed as incurred.

Fair value is defined as the amount at which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's-length transaction. Where a quoted bid price in an active market is available, the fair value is based on the quoted bid price at the end of the reporting period. In the absence of a quoted price in an active market, the Trust determines fair value using valuation techniques that make maximum use of observable market inputs.

Investments are presented in the financial statements at fair value, with the differences between fair value and average cost recorded as unrealized gains or losses in the Trust's statements of operations and comprehensive income.

The carrying value of cash and cash equivalents and short-term investments approximates their fair value due to their immediate or short-term maturity.

The market values of foreign investments are translated into Canadian dollars at the exchange rates prevailing at the close of each business day. Purchases and sales of foreign securities and income and expenses are translated into Canadian dollars at the exchange rates prevailing on the transaction dates. The gains and losses arising from foreign exchange transactions are recorded in the statements of operations and comprehensive income.

Securities traded on a national securities exchange are valued at the bid price on the last business day of the year. Listed securities for which no trades are recorded on the last business day of the year are valued at the last reported traded price on the last business day on which the security was traded. Pooled funds are valued based on the unit value of the pooled fund as reported by the investment manager and are presented as a separate category in the statements of net assets. Securities transactions are recorded on the trade date. Dividends are accrued as of the ex-dividend date. Stock dividends are recorded in income based on the market value of the security. The realized gains and losses on the sale of securities are calculated with reference to the average cost of the securities and included in net realized gains or losses in the statements of operations and comprehensive income. The Trust follows the accrual method of recording investment income.

For certain other investments that do not have an established fair value, the fair value is estimated based on comparable securities of issuers with similar credit ratings or net realizable value using available information.

Forward Foreign Exchange Contracts

The Trust may enter into forward foreign exchange contracts for risk management purposes where such activity is consistent with its investment objectives.

The changes in the year-end value of forward foreign exchange contracts receivable have been included in the investments in the statements of net assets, with the net unrealized gain or loss included as part of the net unrealized gains or losses in the statements of operations and comprehensive income.

The gain or loss arising from the difference between the value of the original forward foreign exchange contract and the contract at close or delivery is realized and recorded in net realized gains or losses on the statements of operations and comprehensive income.

Taxation

Any income earned by the Trust is tax exempt under paragraph 149(1)(z.2) of the *Income Tax Act (Canada)*, as it was created pursuant to subsection 9(1) of the NFWA and no person other than those specified in the paragraph are beneficially interested in the Trust. Accordingly, the Trust has made no provision for income taxes in these financial statements.

3. INVESTMENTS

The fair values and historical costs of the investments as at December 31, 2016 and 2015 are summarized as follows:

	2016		2015	
	Fair Value	**Historical Cost**	**Fair Value**	**Historical Cost**
Cash and cash equivalents	**35**	**35**	71	71
Short-term investments	**75**	**75**	-	-
Fixed income investments				
Domestic	**3,039**	**3,013**	2,773	2,692
Other	**82**	**85**	49	50
Pooled funds	**437**	**448**	501	509
Total investments	**3,668**	**3,656**	3,394	3,322

A breakdown of the domestic fixed income investments by industry as at December 31, 2016 and 2015 is as follows:

	2016	**2015**
Domestic fixed income investments		
Government	**2,213**	1,906
Financial	**445**	492
Utilities	**100**	87
Energy	**60**	42
Real estate	**59**	59
Other	**162**	187
	3,039	2,773

The proportion of each category of investments as a percentage of net assets as at December 31, 2016 and 2015 is as follows:

	2016		2015	
	Fair Value	% of Net Assets	Fair Value	% of Net Assets
Cash and cash equivalents	**35**	**1%**	71	2%
Short-term investments	**75**	**2%**	-	-
Fixed income investments	**3,121**	**85%**	2,822	83%
Pooled funds	**437**	**12%**	501	15%
Total investments	**3,668**	**100%**	3,394	100%
Net assets	**3,688**		3,409	

The only investment with a fair value greater than 5% of the net assets of the fund as at December 31, 2016 and 2015 is an investment grade corporate bond fund with a cost as at December 31, 2016 of $285 (2015 – $348) and fair value of $277 (2015 – $340).

Issuers representing aggregated investments of greater than 5% of net assets as at December 31, 2016 and 2015 are as follows:

	2016		2015	
	Principal Amount	Fair Value	Principal Amount	Fair Value
Province of Ontario	**828**	**957**	634	739
Government of Canada	**506**	**540**	423	484
Fixed income funds[1]	**n/a**	**437**	n/a	501
Province of Quebec	**170**	**205**	177	214
		2,139		1,938

[1] Represents a total of 43,642,461 units (2015 – 49,712,728) in four separate funds of the same issuer.

4. INVESTMENT INCOME RECEIVABLE

Investment income receivable of $17 (2015 – $15) mainly comprises interest receivable from cash, short-term investments and fixed income investments.

5. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities consist of the following as at December 31, 2016 and 2015:

	2016	2015
Investment management fees and other fees	**1**	1

6. INVESTMENT INCOME, NET REALIZED GAINS, AND NET UNREALIZED LOSSES

Investment income, net realized gains, and net unrealized losses for the years ended December 31, 2016 and 2015 consist of the following:

	2016	2015
Investment income		
Interest income on cash, short-term investments, and bonds and debentures	**106**	104
Net realized gains		
Realized gains	**38**	57
Net unrealized losses		
Unrealized losses	**(60)**	(51)

7. CONTRIBUTIONS

Cash contributions to the Trust during 2016 were $200 (2015 – $188).

8. FINANCIAL INSTRUMENTS

Risks Associated with Financial Instruments

Credit Risk

Credit risk is the risk that the counterparty to a financial instrument might fail to meet its obligation under the terms of a financial instrument, thereby resulting in a financial loss for the other party to the transaction. The Trust is primarily exposed to credit risk through its fixed income allocation, which is invested in federal, provincial and corporate debt. Credit risk is governed by the SIPP, which requires fixed income investments to comply with various investment constraints that ensure prudent diversification and minimum credit rating quality. Investment compliance with the SIPP is monitored quarterly by an external third-party vendor and reported quarterly to management of OPG and the OFA.

The table below summarizes the Trust's exposure to debt instruments with the following credit ratings as at December 31, 2016 and 2015:

Rating	2016	2015
AAA	**24.8%**	25.8%
AA	**12.7%**	9.6%
A	**51.1%**	52.2%
BBB	**10.7%**	11.6%
Less than BBB or not rated	**0.7%**	0.8%
	100.0%	100.0%

Credit ratings are obtained from Standard & Poor's, Moody's and/or the Dominion Bond Rating Services. In the case where more than one rating is obtained for a security, the lowest rating has been used.

Liquidity Risk

Liquidity risk is the risk that the Trust may be unable to meet its financial obligations due at any point in time. The approach to managing liquidity risk is to ensure that the Trust has sufficient liquidity to meet its financial obligations when due without incurring unacceptable losses.

Market Risk

Market risk is defined as the risk that an investment's value decreases due to changes in underlying market factors including, but not limited to, concentration risk, currency risk and interest rate risk.

Market risk is managed by the Trust through its diversified asset mix, which, in accordance with the SIPP, is expected to be reviewed at least every five years. The review generally coincides with the preparation and approval of reference plans under the ONFA. The target asset mix of the Trust, including tolerance ranges around the target allocation to various asset classes, is governed by the SIPP. Compliance with the target asset mix ranges is monitored monthly internally and on a quarterly basis by an external third-party vendor, and reported quarterly to management of OPG and the OFA.

Concentration Risk

Concentration risk is the risk of investment loss due to lack of diversification in the portfolio. The Trust's exposure to concentration risk is governed by the SIPP. For equities, no holding shall represent more than 10 percent of the total market value of each investment manager's equity portfolio. For fixed income investments, no more than 10 percent of each investment manager's portfolio may be invested in the bonds of a single issuer and its related companies, except for Canadian federal and provincial bonds and bonds of their agencies. Investment compliance with the SIPP is monitored quarterly by an external third-party vendor and reported to management of OPG and the OFA.

Currency Risk

Currency risk is the risk that the value of a financial instrument may decrease due to changes in foreign exchange rates. The Trust is exposed to foreign currency risk through the purchase of fixed income instruments denominated in foreign currencies.

As at December 31, 2016 and 2015, the net foreign currency exposure of the Trust, adjusted for foreign currency hedges, was negligible.

Interest Rate Risk

Interest rate risk, which includes credit spread risk, is the risk of investment loss due to changes in interest rates and changes in the market price of credit. The Trust is exposed to interest rate risk through its target asset mix, which includes a significant allocation to fixed income securities. Cash and cash equivalents and short-term investments with maturity dates of less than one year from the financial statement date have minimal exposure to interest rate fluctuations. The Trust's exposure to interest rate risk is governed by the SIPP, which ensures that the Trust's fixed income exposure is prudently diversified. Investment compliance with the SIPP is monitored quarterly by an external third-party vendor and reported quarterly to management of OPG and the OFA.

The table below provides a summary of the Trust's fixed income exposures by maturity as at December 31, 2016 and 2015:

	2016	**2015**
Fixed income investments		
1 to 5 years	**746**	709
5 to 10 years	**643**	549
Over 10 years	**1,732**	1,564
	3,121	2,822
Average yield	**2.47%**	2.59%

Effective duration is a measure of the sensitivity of the price of a fixed income instrument to a change in interest rates. Using the Trust's effective duration of 10.0 years as at December 31, 2016 (2015 – 9.4 years), a parallel shift in the yield curve of +/- 0.5 percent would result in a $156 (2015 – $132) impact on the net assets of the Trust with all other variables held constant. Actual results may differ materially from this sensitivity analysis.

Derivatives

The Trust may enter into derivative contracts, such as forward foreign exchange contracts, for risk management purposes where such activity is consistent with its investment objectives. Forward foreign exchange contracts expose the Trust to counterparty credit risk should the Trust's counterparty to any such transaction default on its contractual obligations. As at December 31, 2016 and 2015, the Trust's net exposure to forward foreign exchange contracts is negligible.

The Trust may also enter into other derivative contracts, such as futures contracts, to replicate direct investments in underlying securities. As at December 31, 2016 and 2015, the Trust did not hold any futures contracts.

Additional Information on Fair Value

Financial assets are measured at fair value in accordance with the fair value hierarchy. This hierarchy groups financial assets and financial liabilities into three levels based on the significance of inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.

- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The level within which the financial asset or financial liability is classified is determined based on the lowest level input that is significant to the fair value measurement.

The fair value of pooled funds is reported on the basis of NAV and is classified as Level 2.

The following tables provide summaries of assets measured at fair value in the statements of net assets grouped into the fair value hierarchy as at December 31, 2016 and 2015:

2016	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	**35**	-	-	**35**
Short-term investments	**-**	**75**	**-**	**75**
Fixed income investments	**-**	**3,121**	**-**	**3,121**
Pooled funds	**-**	**437**	**-**	**437**
	35	**3,633**	**-**	**3,668**

2015	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	71	-	-	71
Short-term investments	-	-	-	-
Fixed income investments	-	2,822	-	2,822
Pooled funds	-	501	-	501
	71	3,323	-	3,394

The tables above exclude receivables and payables.

There were no investments measured at NAV as a practical expedient for fair value as at December 31, 2016 and 2015.

There were no transfers between Levels 1 and 2 in the reporting period.

9. INVESTMENT MANAGEMENT AND ADMINISTRATION FEES

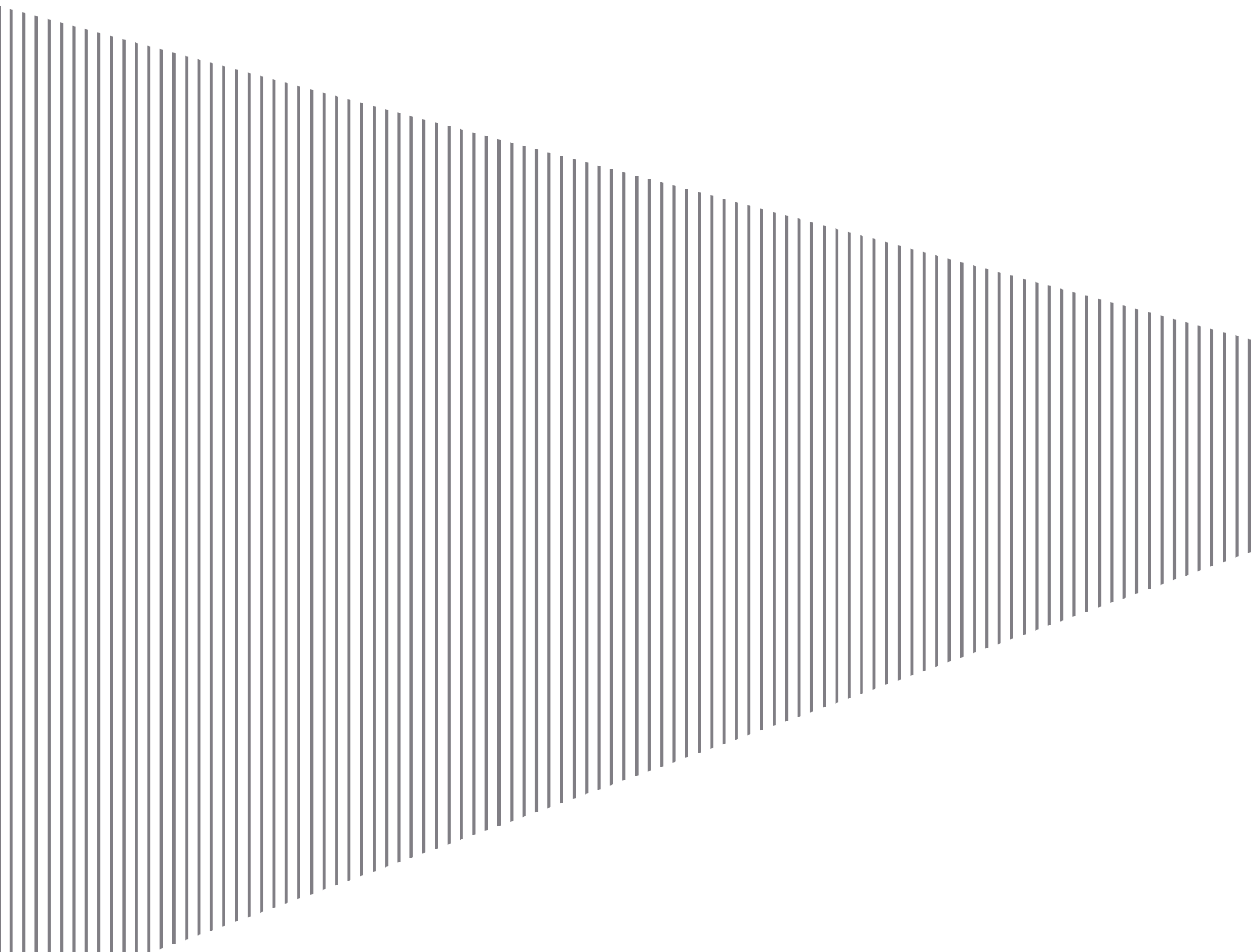
Investment management and administration fees for the years ended December 31, 2016 and 2015 were as follows:

	2016	2015
Investment management fees and other fees	**5**	3

For the year ended December 31, 2016, the ratio of expenses over net assets was 0.1 percent (2015 – 0.1 percent).

10. PAYMENTS OR WITHDRAWALS

As at December 31, 2016, there were no payments or withdrawals made from the Trust relating to the disposal of long-term nuclear fuel waste as permitted under the NFWA since the inception of the Trust.



From: John Kim
To: Ronald Kwan
Subject: FW: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG
Date: Monday, March 06, 2017 11:38:11 AM

Hi Ron,

These are my edits….just trying to simplify and delete words that could become problematic later on.

Ontario's Fair Hydro Plan

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From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: Monday, March 06, 2017 11:22 AM
To: John Kim <John.Kim@ofina.on.ca>
Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: RE: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG

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Regards,

Philip

From: John Kim [mailto:John.Kim@ofina.on.ca]
Sent: Thursday, March 02, 2017 7:55 PM
To: HO Philip -FIN & C CTRL
Cc: CHENG Alec -FIN & C CTRL; Ronald Kwan
Subject: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG

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Hi Philip,

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From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: March-02-17 1:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: Draft Global Adjustment disclosure for OPG

Hi John and Ronald,

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We will be mailing the relevant documents to our Board today. Your comments will be appreciated. Please let us know if you have questions.

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Regards,

Philip

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy (Acting)| Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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From:	Ronald Kwan
To:	Gadi Mayman; Nancy Kennedy (MOHLTC); Scott Nelms (ENERGY)
Subject:	FW: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG
Date:	Monday, March 06, 2017 11:55:45 AM

Hi Gadi, Nancy, Scott,

FYI. OPG appears to still be working on this, and have added text on OPG working with the Province and IESO, and implementation options.

Scott, have you been providing input as well?

Ron

From: Ronald Kwan
Sent: March-06-17 11:47
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG

Hi John,

Without "as part of", I'm not sure that the sentence makes sense. An alternative to "as part of" could be "on".

Ron

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Philip

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy (Acting)| Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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From:	LEE John -TREASURY
To:	Gadi Mayman; Steen Hume (CAB); Serge Imbrogno (ENERGY)
Cc:	HARTWICK Ken -FINANCE; ROWE Jennifer -CORPAFFAIRS; LADAK Lubna -TREASURY; Mike Manning; Ken Kandeepan; Tim Christie (ENERGY); Ronald Kwan; Alena.Thouin@ontario.ca; Malle Hanslep (MOF); WONG Leslie -LAWDIV
Subject:	FW: FHP - DBRS ratings
Date:	Friday, January 19, 2018 1:06:57 PM

Gadi/Steen/Serge:

DBRS has confirmed the rating of AAA for Senior, AA for sub, A for junior Sub for FHP debt. This was the last gating item for the launch.

The plan is to have the due diligence call Monday morning with the Dealer syndicate and send the Offering Memorandum and Investor Presentation shortly thereafter to potential Investors.

John

John Lee | Vice President Treasurer |
Ontario Power Generation | 700 University Avenue, H18 A6, Toronto, Ontario M5G 1X6 |
416.592.6392 | john.s.lee@opg.com

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From:	Nelms, Scott (MOF)
To:	Gadi Mayman; Ken Kandeepan; Ronald Kwan
Subject:	FW: FHT - Rating Presentation
Date:	Thursday, July 06, 2017 12:50:59 PM
Attachments:	Rating Agency Presentation July_5 r1.pptx

Fyi – I have shared with Energy as well.

From: LEE John -TREASURY [mailto:john.s.lee@opg.com]
Sent: July 5, 2017 7:26 PM
To: Nelms, Scott (MOF)
Cc: HARTWICK Ken -FINANCE; CROZZOLI Carlo -CBUSDEV&STRT; RYFA Ken -TREASURY
Subject: FHT - Rating Presentation

Scott:

As requested attached is the Rating presentation which we intend to use to solicit "soft" feedback from each Rating agency. A fulsome deck will be provided once they have been formally engaged. Our first meeting will be with DBRS tomorrow afternoon.

Please forward to both Andrew and Serge who I believe had expressed some interest in seeing the package.

John

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Fair Hydro Plan Financing Program

Rating Agency Presentation

July 6, 2017

ONTARIO POWER GENERATION

CIBC | Goldman Sachs | RBC | RBC Capital Markets

Table of Contents

I. Ontario Electricity Market
II. Fair Hydro Plan
III. Financing Strategy
IV. Transaction Structure

Executive Summary

Purpose

- To provide high-level overview of what is being contemplated by Ontario's Fair Hydro Plan and related financing
- This presentation is based on the legislation and regulations in place and anticipated contractual arrangements
- To explore both securitization and traditional structured corporate bond ratings
  - Various financing alternatives are being explored, most of which have potential rating agency involvement
- To set expectations for timing and process

Brief Overview

- On March 2, 2017 Ontario announced its Fair Hydro Plan which proposes to lower the average residential electricity bill by 25%
  - 25% reduction includes the 8% rebate introduced in January 2017 as part of the Ontario Rebate for Electricity Consumers Act, 2016
  - The 25% reduction is expected to be in effect until 2021 (approximately 4 years) although bills may be allowed to increase by the rate of inflation
- The 17% incremental reduction as part of the Fair Hydro Plan will be recorded as a regulatory deferred asset for future recovery
  - The recovery period depends on the final fair allocation but is expected to begin in 2027 with a hard stop in 2047
- The exact quantum and duration of the program is still being developed, but the deferral is expected to amount to ~C$2.5bn / year
  - It is expected that 50+% of the financing will be derived from the capital markets
- Legislation to effect the recovery right was enacted in early June, and the regulations were largely completed at the end of June
  - Legislation and regulations were designed with capital market financing objectives in mind
  - Careful consideration given to possible structural enhancements with respect to creating the regulatory asset, assignability, achieving a true-sale opinion, being non-bypassable and including a true up mechanism to ensure repayment

Ratings Objectives

- Initially we are reaching-out to better understand what methodologies you will apply to this program / structure
- Ultimately, we will be pursuing some combination of ABCP conduit rating confirmation, and/or explicit long-term ratings for the credit facility, term debt and sub-debt

Transaction Parties

Issuer	Fair Hydro Trust (“FHT”)	
Advisors	CIBC, Goldman Sachs, RBC	
Financial Services Manager	Ontario Power Generation (“OPG”) is 100% owned by the Province of Ontario (the “Province”)	A low (DBRS), BBB+ (S&P)
Servicer	Independent Electricity System Operator (“IESO”)	A high (DBRS), Aa2 (Moody’s)
Provincial Rate Authority	Ontario Energy Board (“OEB”)	
Guarantor	Province of Ontario (the “Province”)	AA low (DBRS), AA- (Fitch), Aa2 (Moody’s), A+ (S&P)
Issuer’s Counsel	Torys LLP (Canada), Hunton & Williams LLP (U.S.)	
Advisor’s Counsel	Osler, Hoskin & Harcourt LLP (Canada, U.S.)	

Timeline

- Deferral started in June 2017
- Warehouse financing to begin as soon as possible
- Currently educating agencies and seeking to better understand applicable criteria / methodologies

Key Dates

- Select Rating Agencies
- Complete Ratings Process

Market Holidays

- Canadian
- U.S.

July 2017

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Ontario Electricity Market

SECTION I

Overview of the Electricity Market in Ontario

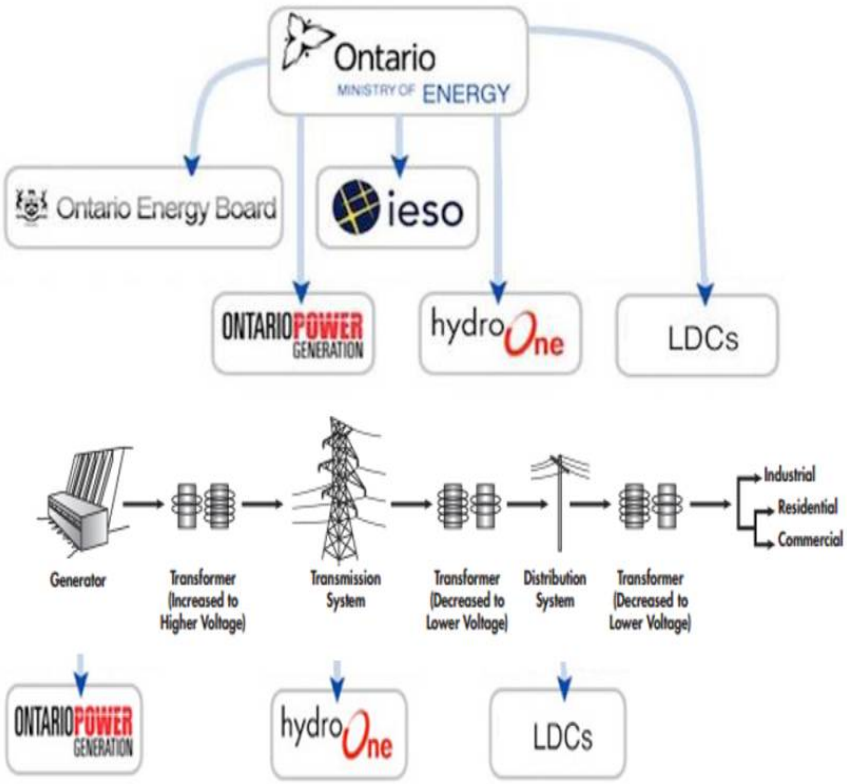
The Ontario electricity market is highly regulated

- Transmission rates, Distribution rates, and OPG's Generation are set by the Ontario Energy Board
- Rates for the majority of the remaining generation are set by direct contracts with the IESO (e.g. Bruce, Wind / Solar Power)

Key Entities

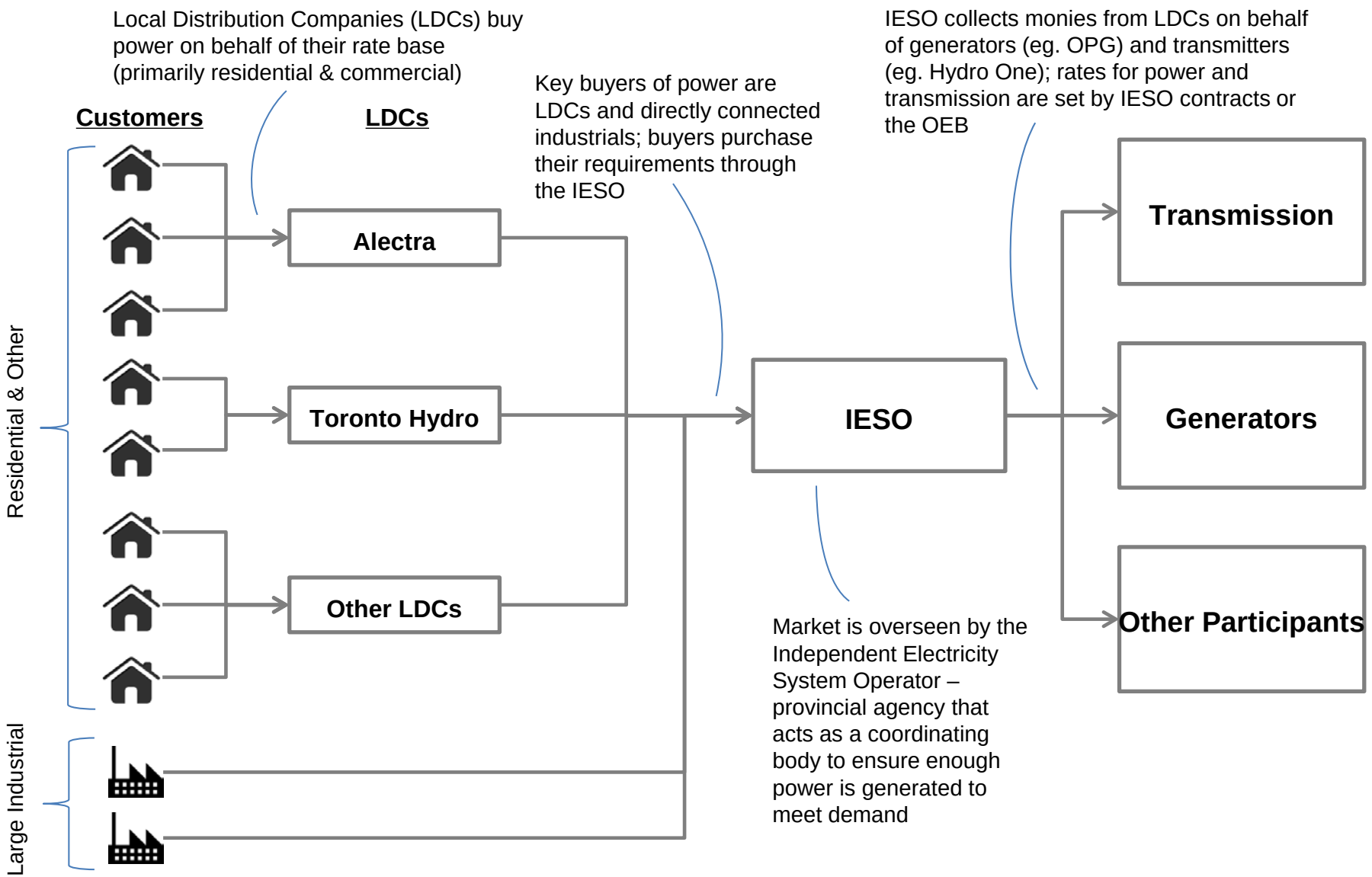
Ontario Ministry of Energy	▪ Sets policy for the electricity system
Ontario Energy Board	▪ Ontario Energy Board is Ontario's independent energy regulator that evaluates rates paid to regulated energy providers ▪ The Ontario Energy Board has a statutory obligation to set the regulated electricity price for Regulated Price Plan (RPP) consumers
IESO	▪ The Independent Electricity System Operator manages the operation and reliability of Ontario's bulk power system and administers the wholesale electricity market
OPG	▪ Ontario Power Generation is Ontario's largest electricity generator, producing approximately half of Ontario's electricity – Wholly owned by the Province of Ontario
Hydro One	▪ Owns and administers transmission in the province
LDC's	▪ Local Distribution Companies (LDC's) provide power to end-users (residential / commercial / industrial) ▪ There are 60+ LDC's operating in the IESO market; the 3 largest LDCs(1) account for ~60% of Ontario's 5.1 million customers

The Ontario electricity market has $22B in annual cash flows



(1) Hydro One, Toronto Hydro, and Alectra

Flow of Funds Through Key Market Participants



The IESO

Key Credit Strengths

- The IESO is at the center of the market, as buyers purchase power from the IESO and sellers of power are paid by the IESO
- IESO is effectively a clearing house and establishes the terms by which buyers are able to purchase power
- IESO Market Rules - Chapter 2 of the Market Rules outlines the parameters for Participation or “the procedures pursuant to which persons may apply to the IESO for the authorization to participate in the IESO-administered markets or to cause or permit electricity to be conveyed into, through or out of the IESO-controlled grid”
- The credit conditions are outlined in Chapter 2 and involves the “prudential support” provided by the LDC
- Based on public credit ratings or credit payment history, a buyer of power may be required to post collateral to support their projected exposure; LDCs, given their strong credit structure are awarded higher unsecured purchase limits
- The Prudential Rules are reviewed every few years and maintain a conservative stance regarding collateral

Strong Credit History

- Approximately $22 billion in costs flow through the Ontario electricity system each year (60% goes to generators)
- Since the beginning of the IESO open market in 2002, there have been 20 defaults
- Only three defaults could not be fully covered by the collateral posted by the defaulters
- Of the three defaults that resulted in “default levies” to the market participants, the total the levies were under $1 million
- Default levies are allocated 50% to Buyers of Power and 50% to the Sellers of Power, based on their usage/generation

LDCs

Key Credit Strengths

- The majority of power purchased in Ontario is by LDCs on behalf of residential and commercial customers; LDCs make up approximately 80% of the market
- The typical customer bill includes charges for the power itself (which goes to the generators), transmission (e.g. Hydro One), to the LDC itself (for local distribution), and for other market charges (e.g. IESO costs)
- LDC rates are governed by the OEB rate setting process; LDCs under the OEB's Retail Settlement and Distribution System Code may obtain a security deposit or letter of credit from their customers to mitigate risk of payment default
- LDCs are able to include an amount for accounts receivable write-offs within operating expenses for rate setting purposes. They can also apply for any extra-ordinary write-offs as a variance account adjustment to be considered by the OEB
- Approximately 10 LDC's have credit ratings through DBRS or S&P; the ratings are generally A, based on very low industry risk of regulated utilities and supportive regulatory framework;
- The OEB deems the capital structure of a LDC to include 40% equity and sets an allowed rate of return

Strong Credit History

- Given the strong credit mitigation measures available to the LDCs, a review of 8 LDCs (varied in size and geographic region), indicated a similar and very low loss rate
- LDC data was based on the financial statements of Toronto Hydro, North Bay Hydro, Horizon Utilities, Enersource, Collus PowerStream, Energy Plus, PowerStream, and Hydro One

	Average	Last 5 Years Average
AFDA / AR	3.40%	3.70%
AFDA / Sales	0.42%	0.44%
Write-Off / Sales	0.29%	0.28%

AFDA: Allowance for doubtful accounts

Fair Hydro Plan

SECTION II

Background

On March 2nd the Ontario Government Announced its Fair Hydro Plan

- The plan proposes to lower the average residential electricity bill by 25 percent
- In part by reallocating the charges paid by ratepayers for generation contracts and conservation programs over an extended period to match the expected life of the assets and the benefits of these initiatives
- In order to reallocate the payments, an OPG managed Financing Entity will use debt to purchase Regulatory Assets from the IESO and amortize them over a longer period
- This will lead to a near-term reduction in electricity bills followed by an increase in electricity bills over the long-term as interest and principal is repaid
- The government has further committed to capping the increase on the average residential bill at the rate of inflation for three years following the initial year

Financing Entity Overview

- OPG has the mandate to create and oversee a Trust separate from regular operations, that will finance costs related to the Fair Hydro Plan and spread the recovery through 2047
- The OEB will set the Regulated Price Plan to meet the requirements of the Fair Hydro Plan
- The IESO will create a regulatory asset approximately equal to the difference between collections from ratepayers and payment obligations to generators and conservation
- The Trust will have the right, but not the obligation, to purchase these regulatory assets / investment interests to support the debt required
  - Upon purchase by the trust, the regulatory asset becomes investment interest for the trust
- The Trust will enter the capital markets 1-3 times per year to secure long-term investment interests

Given the province's commitment to reduce electricity bills, there is a requirement to establish a financing entity, the "Trust", that will finance the shortfall in revenues not received from the market

Regulatory Asset / Investment Asset

Regulatory Asset

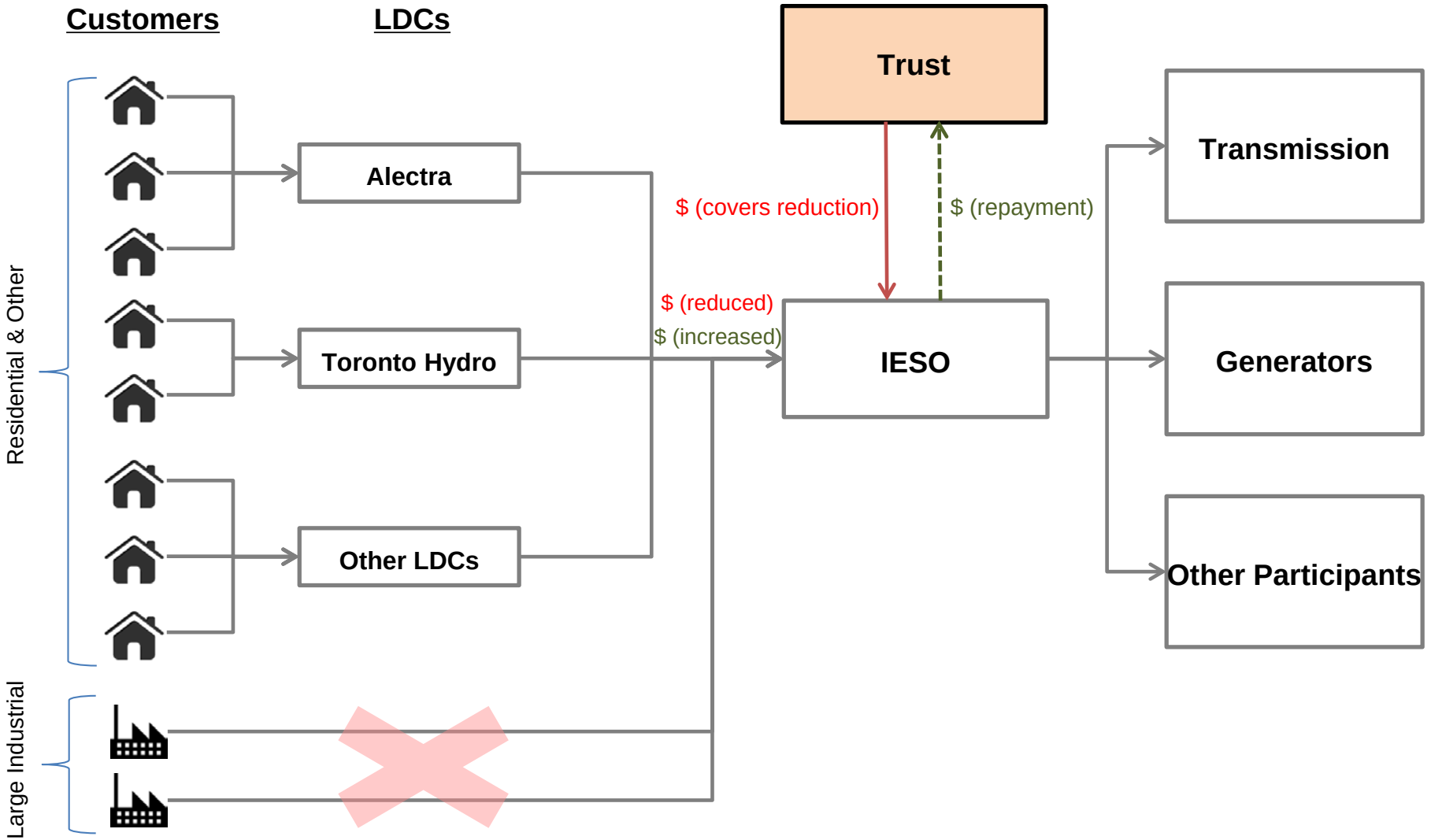
- IESO has authority under the Act to create a variance account to track the regulatory asset and is able to recover the balance in the variance account from consumers
- The OEB will set rates in accordance with regulation to recover the variance account balance through the clean energy adjustment but the OEB cannot change the amount of the clean energy adjustment to be recovered
- IESO is not able to recover the variance account balance prior to May 1, 2021
- IESO can transfer a portion of the variance account / regulatory asset to a financing entity
- A transfer of the variance account / regulatory asset is treated as an absolute sale of the IESO's right to recover the balance [and is not simply a security interest]

Investment Asset

- Transfer of the regulatory asset to a financing entity becomes an investment asset in the financing entity
- The investment asset constitutes an irrevocable property right and interest consisting of all rights of the IESO with respect to the variance account including the right to determine, impose, invoice, and collect the clean energy adjustment
- Investment interest owner can grant a security interest in order to secure a funding obligation

Addition of the Trust

In order to facilitate a ratepayer discount, the Trust is introduced to pay the difference to the IESO



Financial Services Manager - OPG

The Fair Hydro legislation names OPG, as the Financial Services Manager

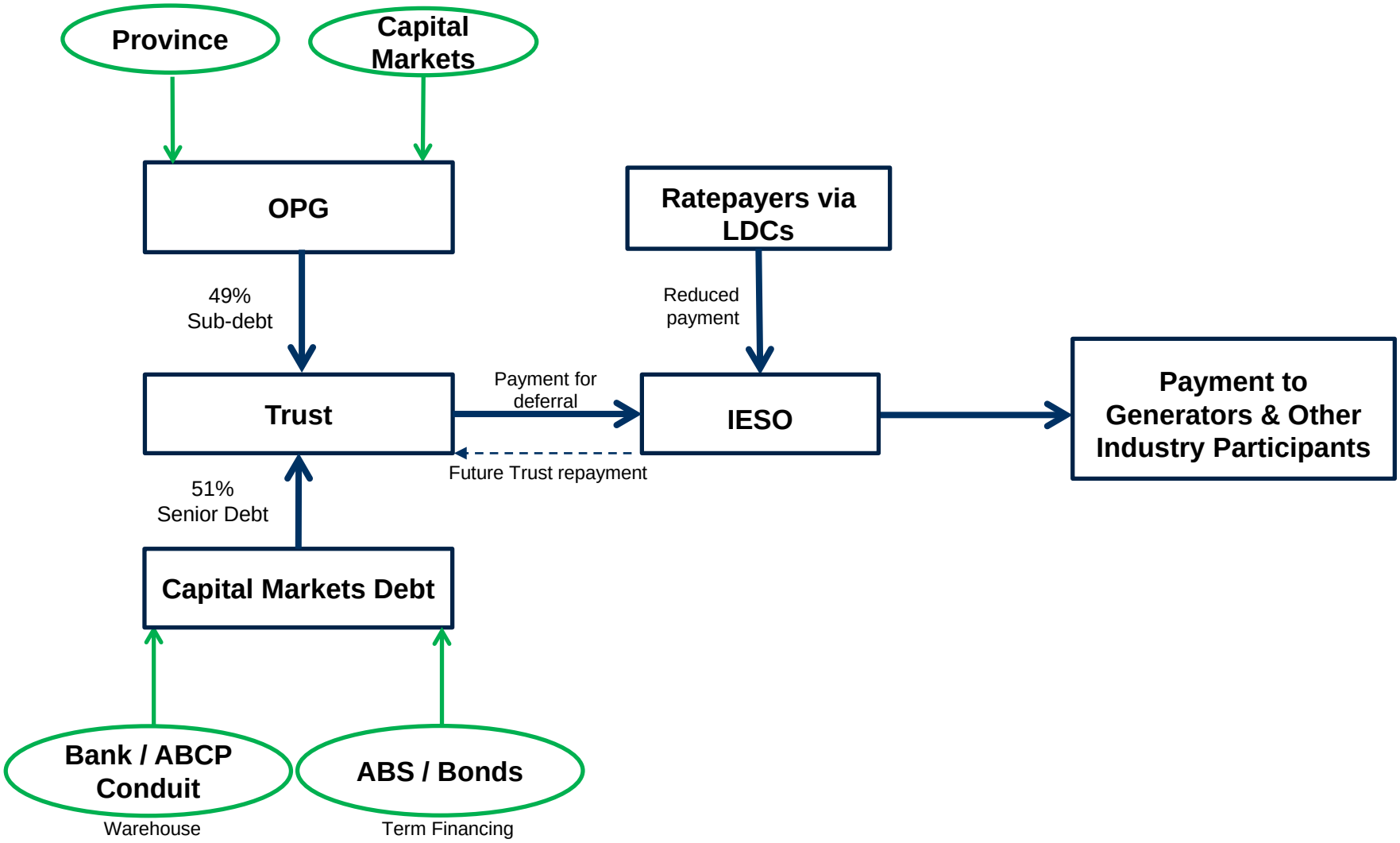
Why OPG

- One of the most experienced and largest generating companies in Canada, OPG has a broad set of relationships and capabilities that make it a valuable resource to the Province of Ontario
- Experienced in successful complex financing arrangements of large capital projects (such as OPG's recently completed Lower Mattagami project)

OPG's Role as Financial Services Manager

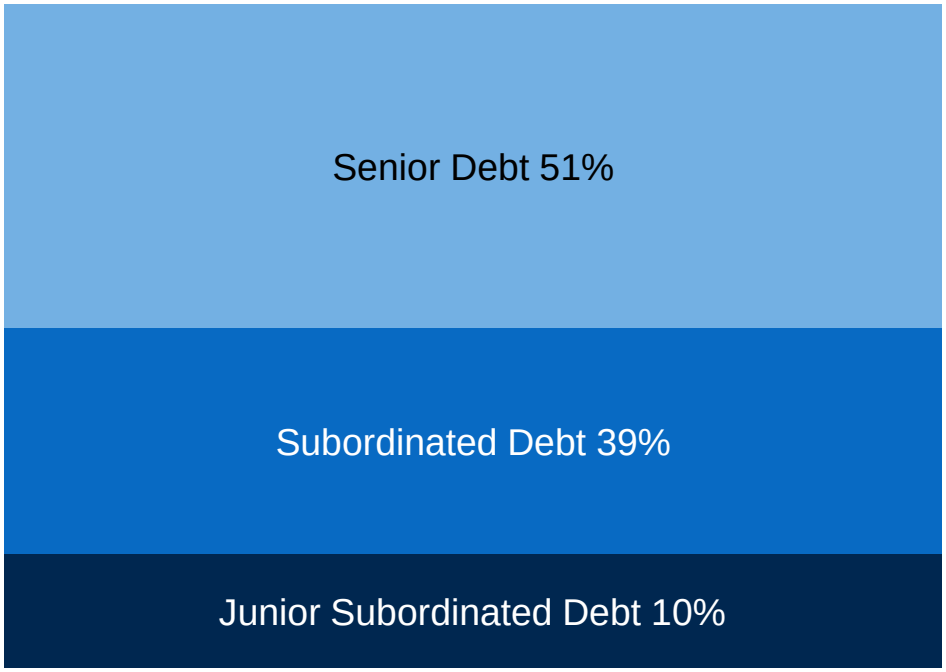
- Prepare a Financing Plan to evaluate whether potential funding obligations should be incurred for the purposes of acquiring an investment asset
- Administer the investment asset on behalf of the financing entities
- Ensure that funding obligations are incurred in a manner that is consistent with the Financing Plan
- Establish and charge fees for Financial Management Services
- Shall not provide for funding obligations to be incurred with any recourse to any assets of an electricity vendor, OPG, the OEB, the Province or the Lieutenant Governor in Council

Flow of Money between Trust and IESO



Simplified Trust Structure

- The Fair Hydro Trust will fund regulatory asset purchases through the issuance of senior and subordinated secured debt
  - Senior debt (51%) will be sourced monthly from committed warehouse facilities (bank and / or ABCP), and the periodic issuance of term debt
  - Subordinated debt (49%) will be provided by OPG; 44% of which will be obtained from an OEFC equity injection and 5% from OPG via external markets
  - Senior and subordinated principal will be scheduled to amortize to maintain the original proportions, shortfalls to be allocated first to the subordinated debt



<u>Senior Debt (Public Markets)</u>
Accessed from:
1) Canadian Securitization Program
2) U.S. Market Program

<u>Subordinated Debt</u>
- Provided to Trust by OPG via Ontario government

<u>Junior Subordinated Debt</u>
- OPG Injection (5%)
- Province to Trust by OPG via Ontario government (5%)

Financing Strategy

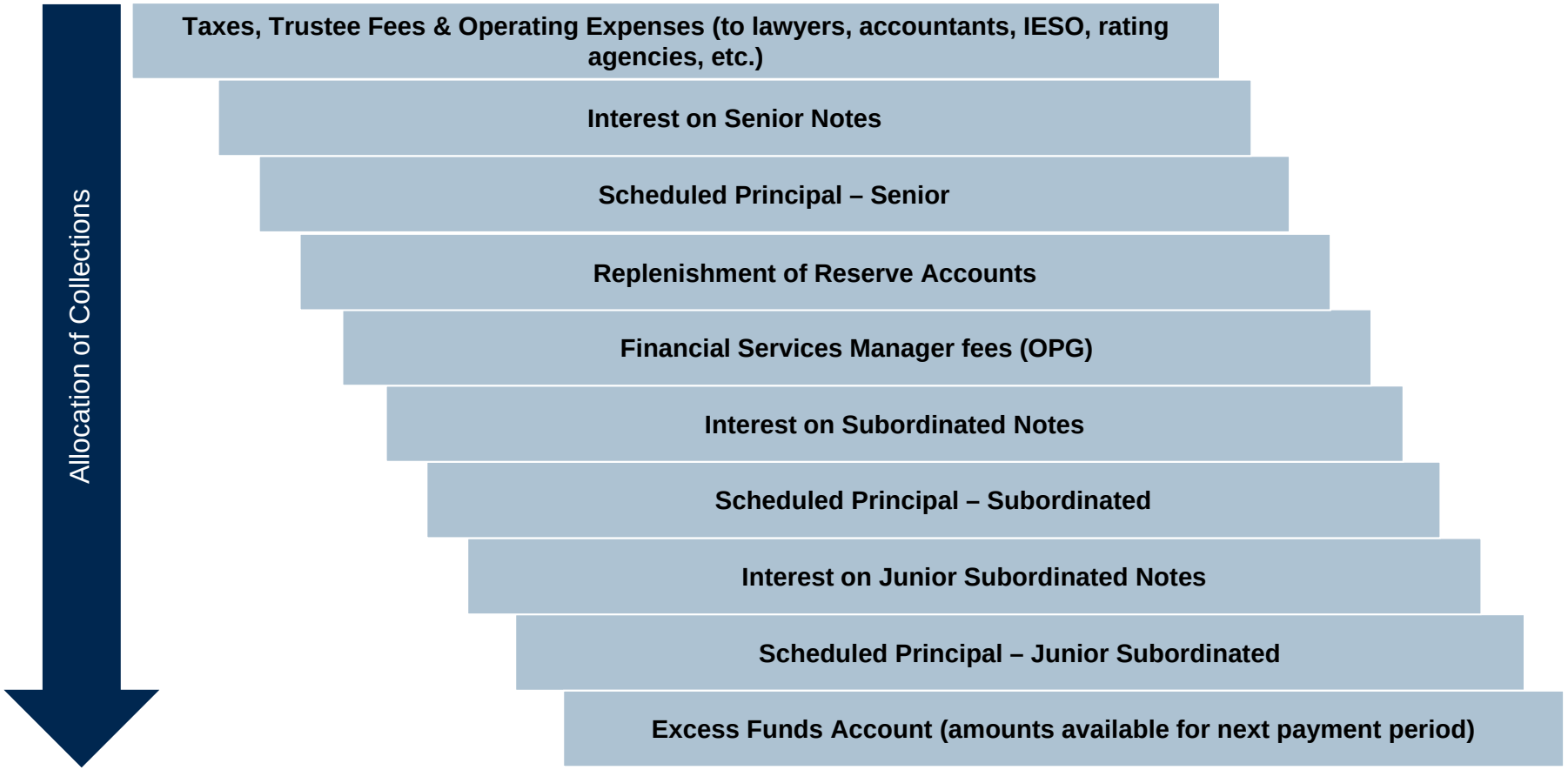
SECTION III

Financing Strategy – Funding Alternatives

- There are several potential funding sources that OPG can consider to structure the overall financing program, including securitization (issued in Canada or the U.S.), bonds, bank financing, and subordinated debt
- Warehouse financing (ABCP or bank debt) and OPG sub-debt will be used to fund monthly investment asset purchases from the IESO (monthly IESO funding shortfalls anticipated to be ~$200 million)
  - Fair Hydro Trust will periodically refinance the warehouse facility through the issuance of term debt
- It is anticipated that the first term debt takeout will be completed in the fall of 2017
  - Aggregate financing for the first offering could be ~$400 - $600 million, with senior-debt of about $200 - $300 million
- Both Canadian and U.S. term debt markets will be considered but decision on which markets to access will be determined on a deal by-deal-basis
- Term debt can take the form of bullet bonds or could be issued as amortizing bonds

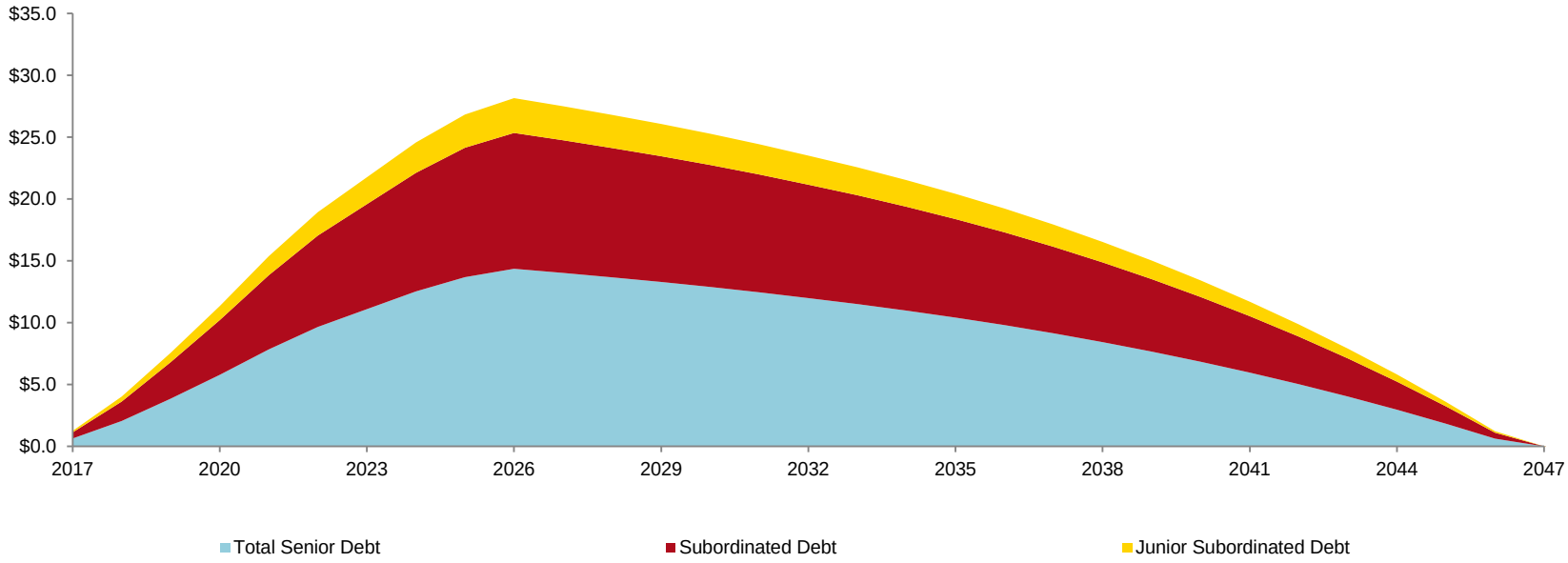
ABCP Conduit	▪ R-1(high) rating confirmation will be required from DBRS pre-closing ▪ Used to fund monthly regulatory asset purchases from the IESO
Bank	▪ Two explicit long-term ratings will be required ▪ Used to fund monthly regulatory asset purchases from the IESO
Canadian Term ABS / Bond	▪ Two explicit long-term ratings required; AAA rating will be targeted
US Term Debt (ABS / Bonds)	▪ Two explicit long-term ratings required; AAA rating will be targeted ▪ Requires cross-currency swaps
Subordinated Debt	▪ Subordinated notes will provide credit enhancement for senior debt (ranks behind senior debt in cash flow waterfall) ▪ Two explicit long-term ratings required

Indicative Waterfall



Illustrative Trust Debt Balance: Borrowing and Repayment

Illustrative Total Debt Summary - Funding / Repayment (Annual)



Transaction Structure

SECTION IV

Structural Comparison

	Precedent Utility Charge Securitizations	Proposed Fair Hydro Structure
Legislation	Legislation creates regulatory basis for implementation and servicing of the charge	
Details of Financing	Outlined in irrevocable Financing Order	Outlined in Regulations supported by province guarantee
Collateral	The right to impose and collect a charge from electric utility customers as well as transaction reserve accounts	
Government Support	State pledge not to permit any action that would impair the value of the Collateral	Province guarantee of repayment if any action taken that would impair the value of the Collateral
Non-Bypassability	Charge to be paid by all existing and future electric customers in included customer classes	
Impacted Customers	The majority of customers in service territory (including residential, commercial and industrial)	The majority of customers are residential and light commercial
Recovery Charge	Relatively low, <5% of total bill	Approximately 10% of total bill
Issuer	Varies, but generally a newly formed special purpose vehicle (“SPV”) that is a subsidiary of Investor Owned Utility	Newly formed special purpose vehicle (“SPV”) would be consolidated into Ontario Power Generation (“OPG”) financial statements
Servicer	Varies, but generally Investor Owned Utility	Independent Electricity System Operator (“IESO”)
Third Party Billing	Varies depending on State	Yes, via Local Distribution Companies (“LDC”)
Nonpayment & Partial Payment by Customers	To the extent that any electric utility customer makes a partial payment of a bill containing the charge, the charge collection will be a pro-rata portion of the payment	
Amortization	Fully amortizing with principal payments beginning at first issuance	Bullet or amortizing bonds with principal payments deferred for a number of years following issuance
Establishment of First Charge	Generally within 1 year of issuance	Delayed start
Credit Enhancement	True-up mechanism, reserve accounts	True-up mechanism, reserve accounts, and subordinated debt
Hedging	Historically limited to interest rates	May include interest rate and currency hedging
Trust Structure	Discrete (single issue) trust	Master trust with multiple series issued over a 10 year period
Legal Opinions	Standard opinions regarding Validity, Enforceability and Regulatory Issues (Constitutionality opinion not applicable for Canadian transactions)	

Transaction Includes Same Key Elements as 'AAA' Investor-Owned Utility Securitizations

- Based on the existing Ontario Electricity market infrastructure no credit losses are anticipated
- Fair Hydro Trust true-up mechanism will ensure timely and full collectability of all debt
- OPG subordinated debt will provide incremental credit enhancement for the senior debt
- Provincial guarantee protects investors from an adverse change in law or inability to fund in capital markets
- The Province of Ontario has very low credit risk and is considered to be stable
  - High likelihood of Government of Canada (Aaa, stable) actions to prevent provincial default
  - Ontario is the largest economy of Canadian provinces: 40% of national economic output, 38% of national population, strong destination for immigration, lower than national unemployment rate

✓	**Experienced Operating Agent**	▪ OPG, IESO, and LDC are experienced operators
✓	**Strong Service Territory**	▪ Stable customer base with diversified service territory
✓	**Enhanced True-up**	▪ Mandatory semi-annual true-ups to correct for any over or under collections ▪ Optional interim adjustments permitted as necessary
✓	**Irrevocable & Nonbypassable Charge**	▪ Final and effective upon issuance of Bonds ▪ Applies to all residential and small commercial consumers receiving power through T&D system
✓	**No "Cap" on Collection of Charge**	▪ No limits on collection of charge that may be imposed on all customers after moratorium period
✓	**Province Guarantee**	▪ Strong government support through guarantee of bond legal and regulatory framework
✓	**Full Cross-Collateralization**	▪ Any collection shortfall is allocated among all specified consumers
✓	**No Industrial Risk**	▪ No single large customer or industry exposure

Legislative and Regulatory Overview

Authorizes Use of Securitization and Establishes Servicing Relationship between OPG, IESO and LDCs

General Powers and Authority of Legislation

- Creation of mechanism for deferral of costs by the IESO and establishment of the Regulatory Asset
- Creation of mechanism for absolute sale of Regulatory Asset to Financing Entity
- Definition of impacted customers (“specified consumers”)
- Establishment of right to bill and collect a non-bypassable clean energy adjustment from future specified consumers
- Establishes principles of the Financing Plan
- Statement of non-impairment by the Crown and provision for a Provincial Guarantee
- Allowance for the establishment of a bankruptcy-remote issuer
- Allowance for true-up mechanism

Fair Hydro Regulations

- Details on calculation of the fair allocation amount
- Details on eligible financeable amounts
- Additional details on clean energy adjustment assessment methodology (true-up mechanism):
  - Timing (mandatory semi-annual + more frequent as needed)
  - Calculation (accounts for expected charge-offs, billing delays and usage as well as any under / over collection in previous period)
- Additional details around servicing / billing mechanics (e.g., LDCs and IESO)

Responsibilities Under New Structure

OPG

- OPG to act as Financial Services Manager including the development and implementation of the Financing Plan
- Calculates the clean energy adjustment including semi-annual true-up

IESO

- Establishment of IESO as Servicer
- Aggregation of collections by LDCs and remittance to Trustee

LDCs

- Manage the billing and remittance of the non-by-passable charge
- Includes charge as a separate line-item on customer bills

Ontario Energy Board

- Must accept clean energy adjustment, and converts to customer charge
- Allow for the charge to go into effect
- Review / approve ongoing Financial Services Manager fees and expenses

Objective of the Legislative, Regulatory and Contractual Structure

- Due to the number of related parties participating in the transaction an overarching theme of the structure is to establish the transaction on a commercial basis
- OPG expects to consolidate the results of the Trust in its financial statements based on the commercial relationship between OPG and the Trust
- The commercial basis is established by a number of elements which work together
  - Trust has the right but not the obligation to purchase a Regulatory Asset
  - Regulatory Asset purchased by the Trust provides the right to bill and collect a charge from future consumers
  - Transactions in the Trust to finance the asset purchase to be on an arm's length basis
  - Amount collected from consumers includes costs of financing the asset purchase, costs to manage the financing, costs to operate the Trust and repayment of principal
  - OEB role established to support recognition of asset and customer charge
  - Debt of the Trust structured to balance risk and cost with objective to achieve highest rating possible
  - Subordinated debt issued by the Trust will be rated and will price off of the senior debt based on a survey of banks
  - Subordinated debt will absorb uncertainties of the senior debt to support highest rating of the senior debt
  - OPG will manage the activities of the Trust for a fee comparable to fees charged by 3rd party managers. OEB role will be limited to reviewing the application of the fee methodology
- Notwithstanding consolidation of the Trust into OPG the Trust will be structured to be bankruptcy remote from OPG

Bill 132 Fair Hydro Plan Act, 2017 Legislation

The Act establishes a framework under which the costs and benefits associated with the “clean energy initiative” are to be allocated among present and future consumers of electricity

Rate Reduction Time Period

- From July 1, 2017 until April 30, 2019, electricity rates payable by a “regulated rate consumer” will be the rate that would result in a representative regulated rate consumer who meets the prescribed criteria being charged an invoice amount that is 25% less than the regulated rate that would otherwise have been determined by the OEB
  - For the 12 month period beginning May 1, 2018 the invoice amount established previously would increase by the rate of inflation in Ontario
  - Subsequent rate reductions beyond April 30, 2019 will be established by regulation

Regulatory Asset

- Each month, the IESO will determine the shortfall resulting from the rate reduction and record in a variance account. IESO has the right to recover the balance recorded in the variance account from specified consumers and this right will be a “regulatory asset” under the Act. IESO will not be entitled to collect the balance recorded in the variance account from specified consumers before May 1, 2021

Investment Asset

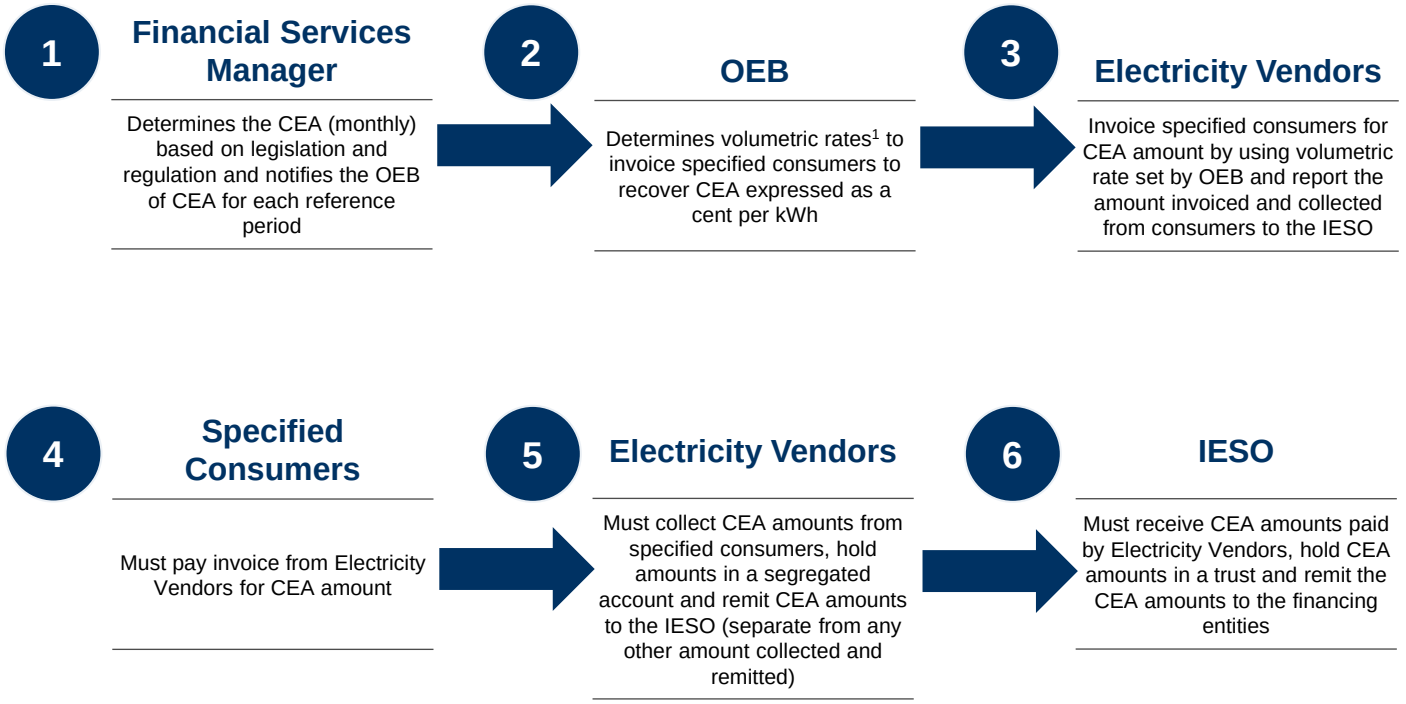
- IESO may transfer (sell) a specified portion of the regulatory asset to the financing entity established by OPG. The Trust is not obligated to purchase the asset. Upon the transfer, the financing entity acquires an interest in the investment asset that is a current and irrevocable property right consisting of the right to impose, invoice, collect, receive and recover the clean energy adjustment from specified consumers or electricity vendors

Components of the legislation and accompanying agreements that are of interest to investors

- Investment assets created by the IESO represents a claim on the rate-payers that is a current and irrevocable property right consisting of the right to impose, invoice, collect, receive and recover from the market
- The trust is not obligated to purchase the regulatory asset from the IESO
- The various investment assets are pari passu
- **The province is providing a guarantee to the trust; backstopping its obligations, either if there are changes in future legislation or if there are market disruption (liquidity) issues**

Clean Energy Adjustment – Proposed Billing and Collection Process

- Clean Energy Adjustment amounts for billing and collection purposes will be managed outside of the IESO's current settlement processes set out in the Market Rules for electricity invoice amounts
  - As such, CEA amounts will not benefit from the rights the IESO currently has under the Market Rules – ability to charge interest, draw down on prudential amounts, and borrow to cover shortfalls
  - Collections risk for CEA amounts are dealt with through statutory rights in the Act, the collection obligations of the IESO under the Master Sales and Services Agreement (to be finalized) and the ability to include amounts into the true up mechanism



[1] The rates will be determined by dividing the CEA amount by the forecasted energy consumption in the reference period by specified consumers

Indicative Allocation of Servicing Role and Responsibilities

	OPG / Financing Entity	IESO	LDC
Management of Ongoing Issuance	✔		
Meter Reading			✔
Billing			✔
Collections			✔
Cash Management		✔	
Remittance of Charge to Trustee	✔	✔	
(Responding to inquiries by customers if practicable, or forwarding such inquiries to OPG)	✔		✔
Ongoing Filings for Trustee and Rating Agencies	✔		
True-Up Calculation	✔	✔	

From:	Ronald Kwan
To:	John Kim
Subject:	FW: FHT - Rating Presentation
Date:	Thursday, July 06, 2017 1:01:55 PM
Attachments:	Rating Agency Presentation July_5 r1.pptx

Hi John,

Please review.

Thanks,
Ron

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: July-06-17 12:51
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: FW: FHT - Rating Presentation

Fyi – I have shared with Energy as well.

From: LEE John -TREASURY [mailto:john.s.lee@opg.com]
Sent: July 5, 2017 7:26 PM
To: Nelms, Scott (MOF)
Cc: HARTWICK Ken -FINANCE; CROZZOLI Carlo -CBUSDEV&STRT; RYFA Ken -TREASURY
Subject: FHT - Rating Presentation

Scott:

As requested attached is the Rating presentation which we intend to use to solicit "soft" feedback from each Rating agency. A fulsome deck will be provided once they have been formally engaged. Our first meeting will be with DBRS tomorrow afternoon.

Please forward to both Andrew and Serge who I believe had expressed some interest in seeing the package.

John

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are not the intended recipient and have received this message in error, please notify me by return e-mail and delete this message from your system. Ontario Power Generation Inc.

Fair Hydro Plan Financing Program

Rating Agency Presentation

July 6, 2017

ONTARIO POWER GENERATION

CIBC | Goldman Sachs | RBC | RBC Capital Markets

Table of Contents

I. Ontario Electricity Market
II. Fair Hydro Plan
III. Financing Strategy
IV. Transaction Structure

Executive Summary

Purpose

- To provide high-level overview of what is being contemplated by Ontario's Fair Hydro Plan and related financing
- This presentation is based on the legislation and regulations in place and anticipated contractual arrangements
- To explore both securitization and traditional structured corporate bond ratings
  - Various financing alternatives are being explored, most of which have potential rating agency involvement
- To set expectations for timing and process

Brief Overview

- On March 2, 2017 Ontario announced its Fair Hydro Plan which proposes to lower the average residential electricity bill by 25%
  - 25% reduction includes the 8% rebate introduced in January 2017 as part of the Ontario Rebate for Electricity Consumers Act, 2016
  - The 25% reduction is expected to be in effect until 2021 (approximately 4 years) although bills may be allowed to increase by the rate of inflation
- The 17% incremental reduction as part of the Fair Hydro Plan will be recorded as a regulatory deferred asset for future recovery
  - The recovery period depends on the final fair allocation but is expected to begin in 2027 with a hard stop in 2047
- The exact quantum and duration of the program is still being developed, but the deferral is expected to amount to ~C$2.5bn / year
  - It is expected that 50+% of the financing will be derived from the capital markets
- Legislation to effect the recovery right was enacted in early June, and the regulations were largely completed at the end of June
  - Legislation and regulations were designed with capital market financing objectives in mind
  - Careful consideration given to possible structural enhancements with respect to creating the regulatory asset, assignability, achieving a true-sale opinion, being non-bypassable and including a true up mechanism to ensure repayment

Ratings Objectives

- Initially we are reaching-out to better understand what methodologies you will apply to this program / structure
- Ultimately, we will be pursuing some combination of ABCP conduit rating confirmation, and/or explicit long-term ratings for the credit facility, term debt and sub-debt

Transaction Parties

Issuer	Fair Hydro Trust (“FHT”)	
Advisors	CIBC, Goldman Sachs, RBC	
Financial Services Manager	Ontario Power Generation (“OPG”) is 100% owned by the Province of Ontario (the “Province”)	A low (DBRS), BBB+ (S&P)
Servicer	Independent Electricity System Operator (“IESO”)	A high (DBRS), Aa2 (Moody’s)
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Advisor’s Counsel	Osler, Hoskin & Harcourt LLP (Canada, U.S.)	

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- U.S.

July 2017

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2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

August 2017

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Ontario Electricity Market

SECTION I

Overview of the Electricity Market in Ontario

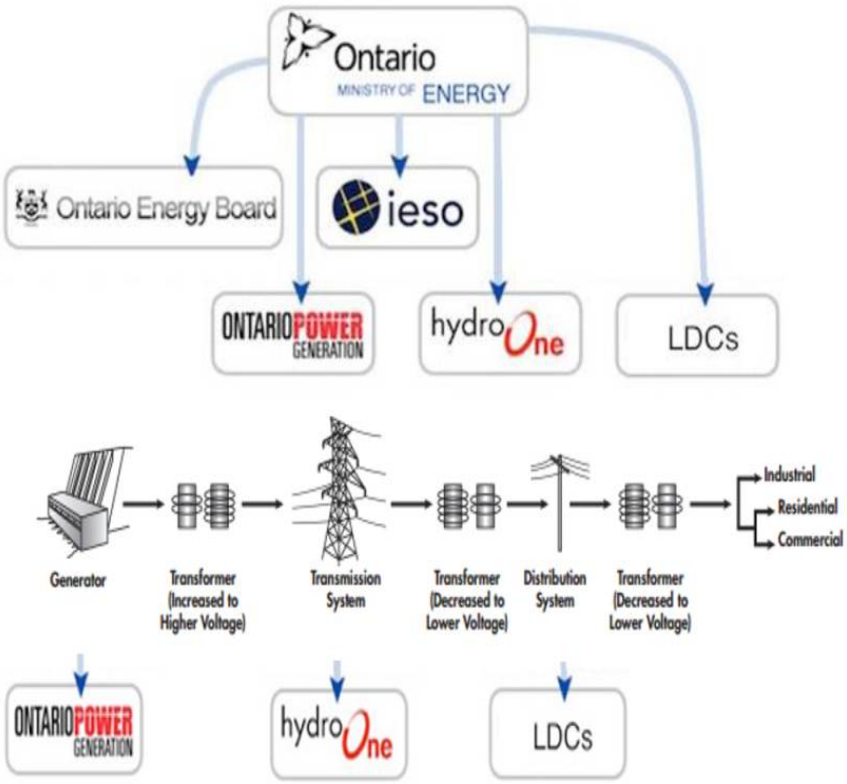
The Ontario electricity market is highly regulated

- Transmission rates, Distribution rates, and OPG's Generation are set by the Ontario Energy Board
- Rates for the majority of the remaining generation are set by direct contracts with the IESO (e.g. Bruce, Wind / Solar Power)

Key Entities

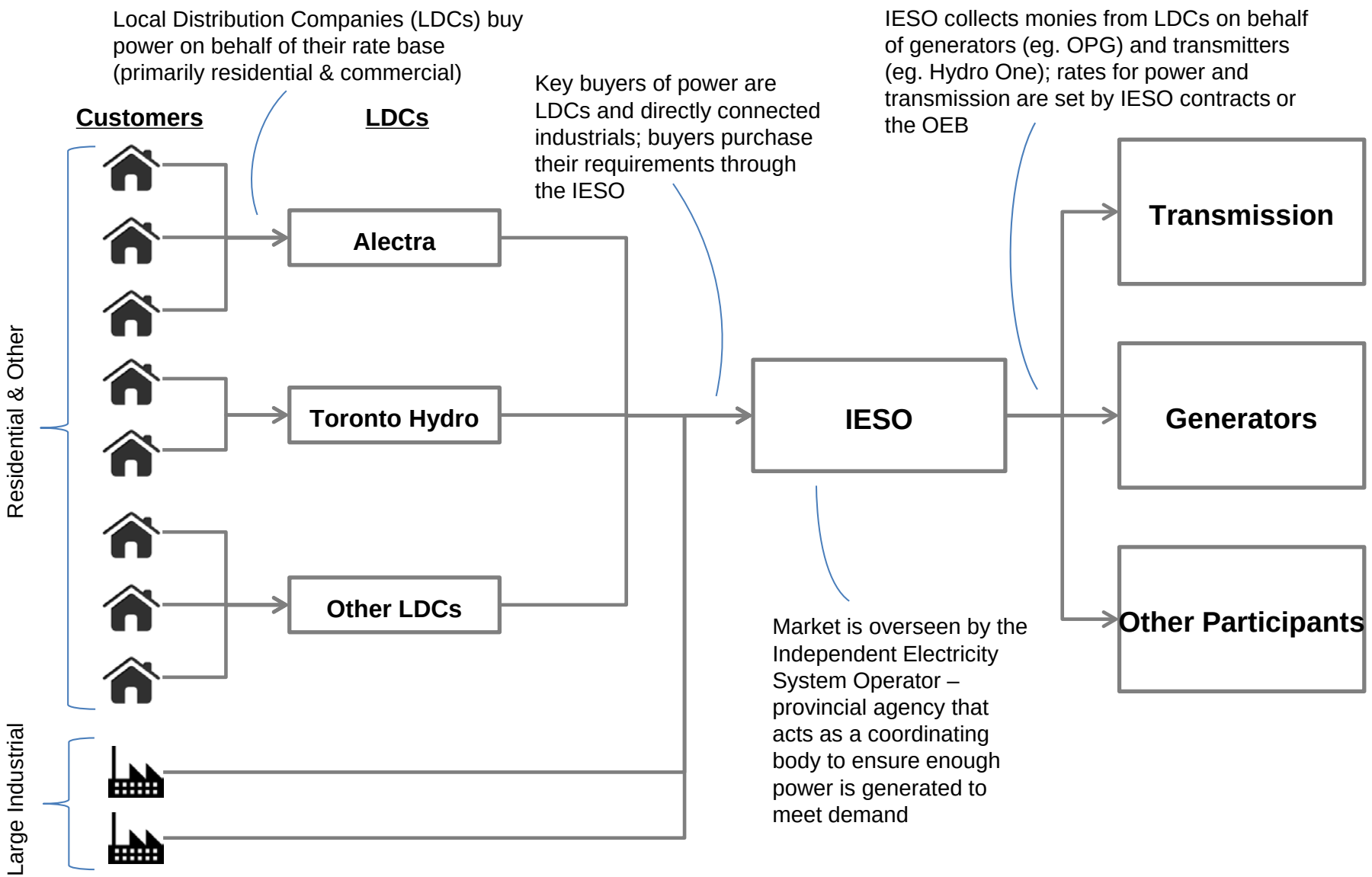
Ontario Ministry of Energy	▪ Sets policy for the electricity system
Ontario Energy Board	▪ Ontario Energy Board is Ontario's independent energy regulator that evaluates rates paid to regulated energy providers ▪ The Ontario Energy Board has a statutory obligation to set the regulated electricity price for Regulated Price Plan (RPP) consumers
IESO	▪ The Independent Electricity System Operator manages the operation and reliability of Ontario's bulk power system and administers the wholesale electricity market
OPG	▪ Ontario Power Generation is Ontario's largest electricity generator, producing approximately half of Ontario's electricity – Wholly owned by the Province of Ontario
Hydro One	▪ Owns and administers transmission in the province
LDC's	▪ Local Distribution Companies (LDC's) provide power to end-users (residential / commercial / industrial) ▪ There are 60+ LDC's operating in the IESO market; the 3 largest LDCs(1) account for ~60% of Ontario's 5.1 million customers

The Ontario electricity market has $22B in annual cash flows



(1) Hydro One, Toronto Hydro, and Alectra

Flow of Funds Through Key Market Participants



The IESO

Key Credit Strengths

- The IESO is at the center of the market, as buyers purchase power from the IESO and sellers of power are paid by the IESO
- IESO is effectively a clearing house and establishes the terms by which buyers are able to purchase power
- IESO Market Rules - Chapter 2 of the Market Rules outlines the parameters for Participation or “the procedures pursuant to which persons may apply to the IESO for the authorization to participate in the IESO-administered markets or to cause or permit electricity to be conveyed into, through or out of the IESO-controlled grid”
- The credit conditions are outlined in Chapter 2 and involves the “prudential support” provided by the LDC
- Based on public credit ratings or credit payment history, a buyer of power may be required to post collateral to support their projected exposure; LDCs, given their strong credit structure are awarded higher unsecured purchase limits
- The Prudential Rules are reviewed every few years and maintain a conservative stance regarding collateral

Strong Credit History

- Approximately $22 billion in costs flow through the Ontario electricity system each year (60% goes to generators)
- Since the beginning of the IESO open market in 2002, there have been 20 defaults
- Only three defaults could not be fully covered by the collateral posted by the defaulters
- Of the three defaults that resulted in “default levies” to the market participants, the total the levies were under $1 million
- Default levies are allocated 50% to Buyers of Power and 50% to the Sellers of Power, based on their usage/generation

LDCs

Key Credit Strengths

- The majority of power purchased in Ontario is by LDCs on behalf of residential and commercial customers; LDCs make up approximately 80% of the market
- The typical customer bill includes charges for the power itself (which goes to the generators), transmission (e.g. Hydro One), to the LDC itself (for local distribution), and for other market charges (e.g. IESO costs)
- LDC rates are governed by the OEB rate setting process; LDCs under the OEB's Retail Settlement and Distribution System Code may obtain a security deposit or letter of credit from their customers to mitigate risk of payment default
- LDCs are able to include an amount for accounts receivable write-offs within operating expenses for rate setting purposes. They can also apply for any extra-ordinary write-offs as a variance account adjustment to be considered by the OEB
- Approximately 10 LDC's have credit ratings through DBRS or S&P; the ratings are generally A, based on very low industry risk of regulated utilities and supportive regulatory framework;
- The OEB deems the capital structure of a LDC to include 40% equity and sets an allowed rate of return

Strong Credit History

- Given the strong credit mitigation measures available to the LDCs, a review of 8 LDCs (varied in size and geographic region), indicated a similar and very low loss rate
- LDC data was based on the financial statements of Toronto Hydro, North Bay Hydro, Horizon Utilities, Enersource, Collus PowerStream, Energy Plus, PowerStream, and Hydro One

	Average	Last 5 Years Average
AFDA / AR	3.40%	3.70%
AFDA / Sales	0.42%	0.44%
Write-Off / Sales	0.29%	0.28%

AFDA: Allowance for doubtful accounts

Fair Hydro Plan

SECTION II

Background

On March 2nd the Ontario Government Announced its Fair Hydro Plan

- The plan proposes to lower the average residential electricity bill by 25 percent
- In part by reallocating the charges paid by ratepayers for generation contracts and conservation programs over an extended period to match the expected life of the assets and the benefits of these initiatives
- In order to reallocate the payments, an OPG managed Financing Entity will use debt to purchase Regulatory Assets from the IESO and amortize them over a longer period
- This will lead to a near-term reduction in electricity bills followed by an increase in electricity bills over the long-term as interest and principal is repaid
- The government has further committed to capping the increase on the average residential bill at the rate of inflation for three years following the initial year

Financing Entity Overview

- OPG has the mandate to create and oversee a Trust separate from regular operations, that will finance costs related to the Fair Hydro Plan and spread the recovery through 2047
- The OEB will set the Regulated Price Plan to meet the requirements of the Fair Hydro Plan
- The IESO will create a regulatory asset approximately equal to the difference between collections from ratepayers and payment obligations to generators and conservation
- The Trust will have the right, but not the obligation, to purchase these regulatory assets / investment interests to support the debt required
  - Upon purchase by the trust, the regulatory asset becomes investment interest for the trust
- The Trust will enter the capital markets 1-3 times per year to secure long-term investment interests

Given the province's commitment to reduce electricity bills, there is a requirement to establish a financing entity, the "Trust", that will finance the shortfall in revenues not received from the market

Regulatory Asset / Investment Asset

Regulatory Asset

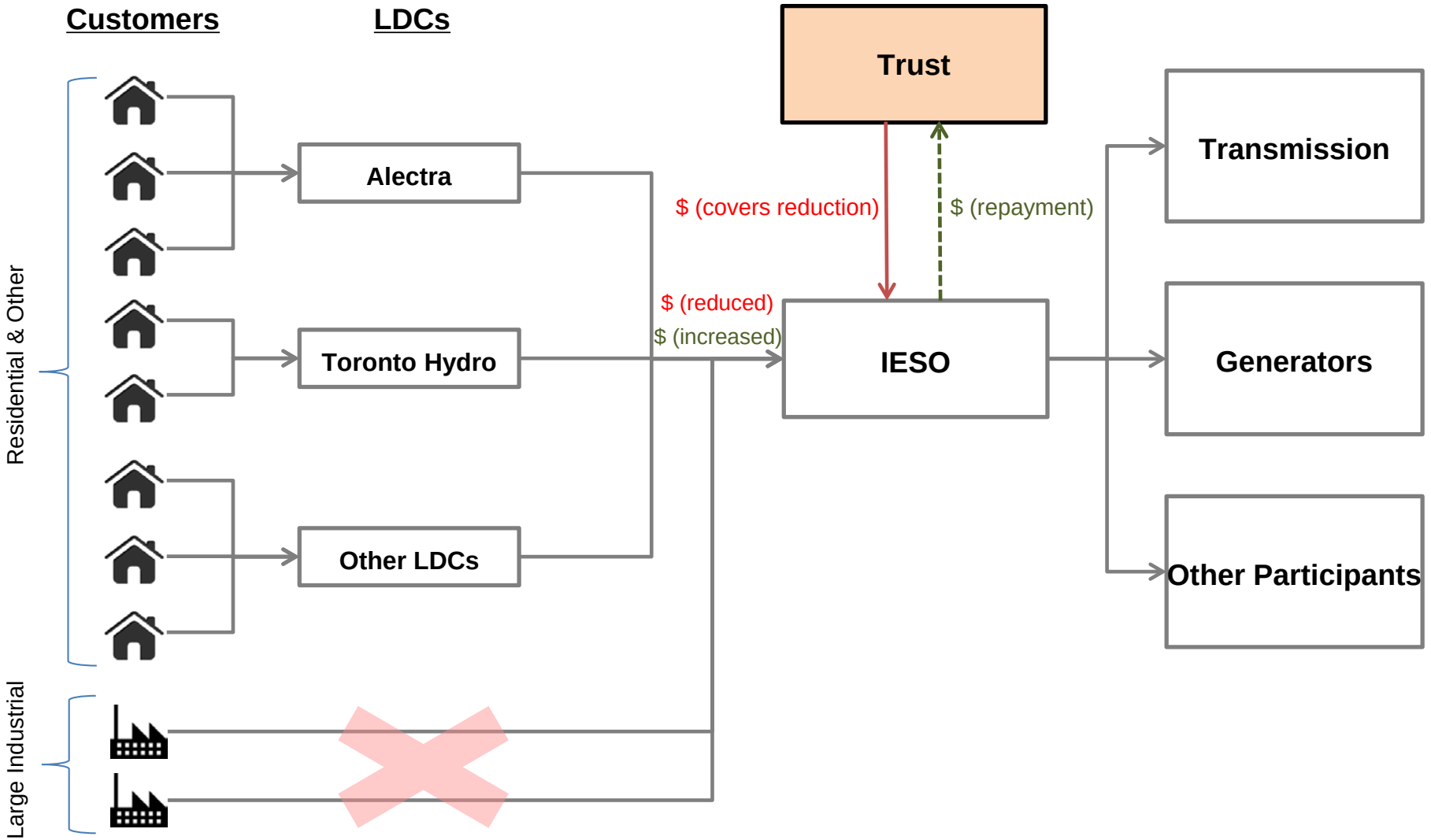
- IESO has authority under the Act to create a variance account to track the regulatory asset and is able to recover the balance in the variance account from consumers
- The OEB will set rates in accordance with regulation to recover the variance account balance through the clean energy adjustment but the OEB cannot change the amount of the clean energy adjustment to be recovered
- IESO is not able to recover the variance account balance prior to May 1, 2021
- IESO can transfer a portion of the variance account / regulatory asset to a financing entity
- A transfer of the variance account / regulatory asset is treated as an absolute sale of the IESO's right to recover the balance [and is not simply a security interest]

Investment Asset

- Transfer of the regulatory asset to a financing entity becomes an investment asset in the financing entity
- The investment asset constitutes an irrevocable property right and interest consisting of all rights of the IESO with respect to the variance account including the right to determine, impose, invoice, and collect the clean energy adjustment
- Investment interest owner can grant a security interest in order to secure a funding obligation

Addition of the Trust

In order to facilitate a ratepayer discount, the Trust is introduced to pay the difference to the IESO



Financial Services Manager - OPG

The Fair Hydro legislation names OPG, as the Financial Services Manager

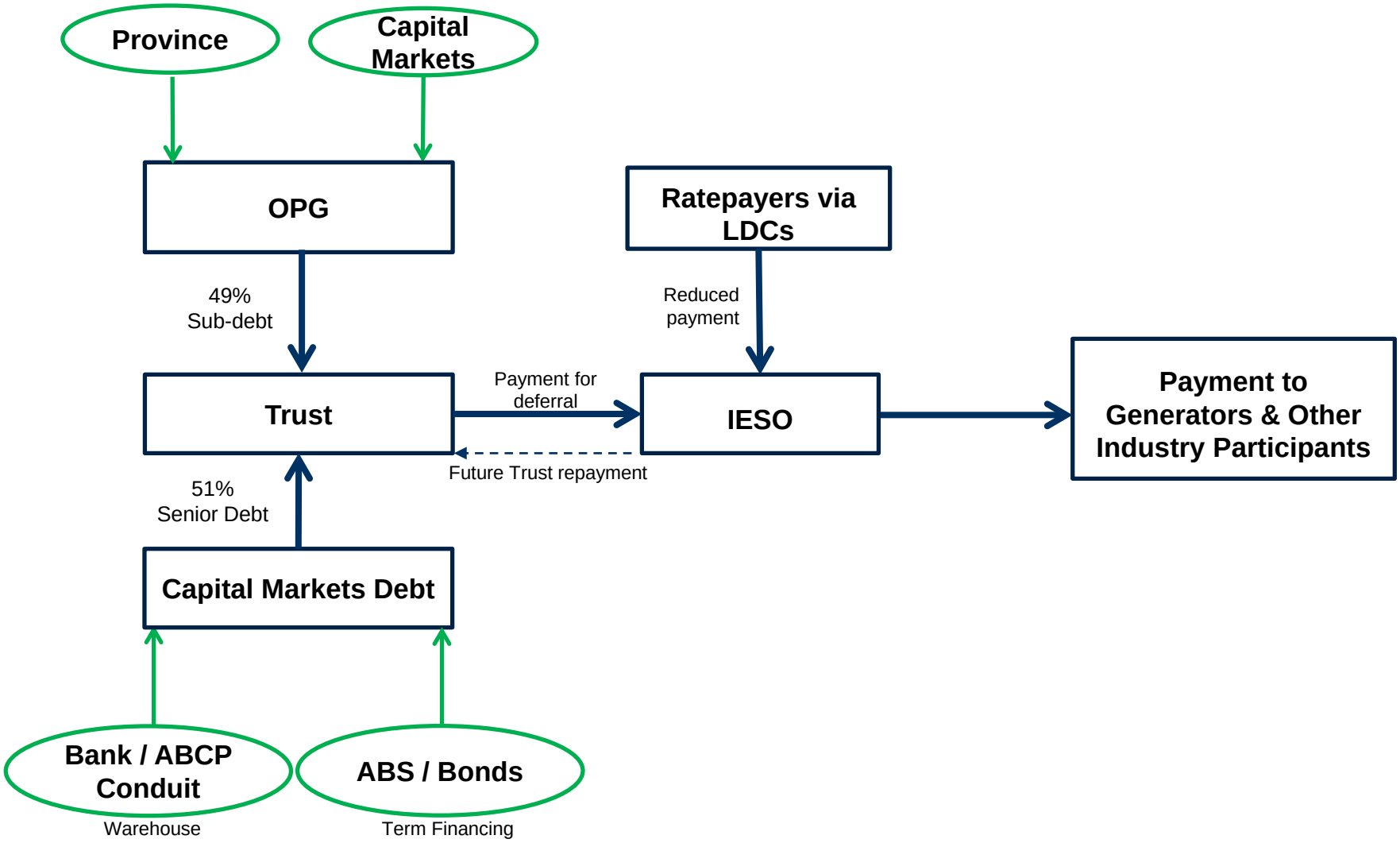
Why OPG

- One of the most experienced and largest generating companies in Canada, OPG has a broad set of relationships and capabilities that make it a valuable resource to the Province of Ontario
- Experienced in successful complex financing arrangements of large capital projects (such as OPG's recently completed Lower Mattagami project)

OPG's Role as Financial Services Manager

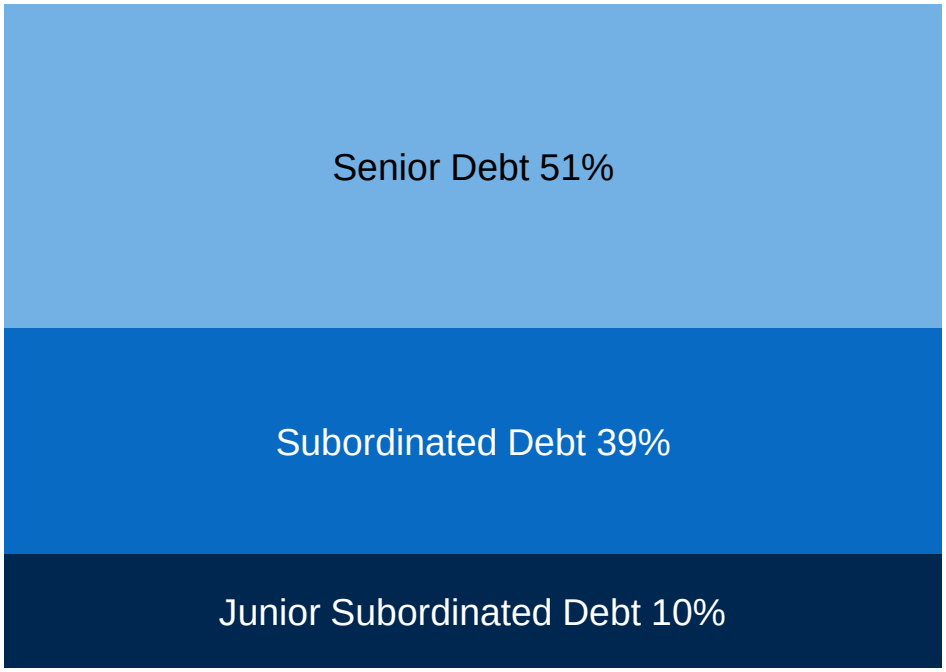
- Prepare a Financing Plan to evaluate whether potential funding obligations should be incurred for the purposes of acquiring an investment asset
- Administer the investment asset on behalf of the financing entities
- Ensure that funding obligations are incurred in a manner that is consistent with the Financing Plan
- Establish and charge fees for Financial Management Services
- Shall not provide for funding obligations to be incurred with any recourse to any assets of an electricity vendor, OPG, the OEB, the Province or the Lieutenant Governor in Council

Flow of Money between Trust and IESO



Simplified Trust Structure

- The Fair Hydro Trust will fund regulatory asset purchases through the issuance of senior and subordinated secured debt
  - Senior debt (51%) will be sourced monthly from committed warehouse facilities (bank and / or ABCP), and the periodic issuance of term debt
  - Subordinated debt (49%) will be provided by OPG; 44% of which will be obtained from an OEFC equity injection and 5% from OPG via external markets
  - Senior and subordinated principal will be scheduled to amortize to maintain the original proportions, shortfalls to be allocated first to the subordinated debt



<u>Senior Debt (Public Markets)</u>
Accessed from:
1) Canadian Securitization Program
2) U.S. Market Program

<u>Subordinated Debt</u>
- Provided to Trust by OPG via Ontario government

<u>Junior Subordinated Debt</u>
- OPG Injection (5%)
- Province to Trust by OPG via Ontario government (5%)

Financing Strategy

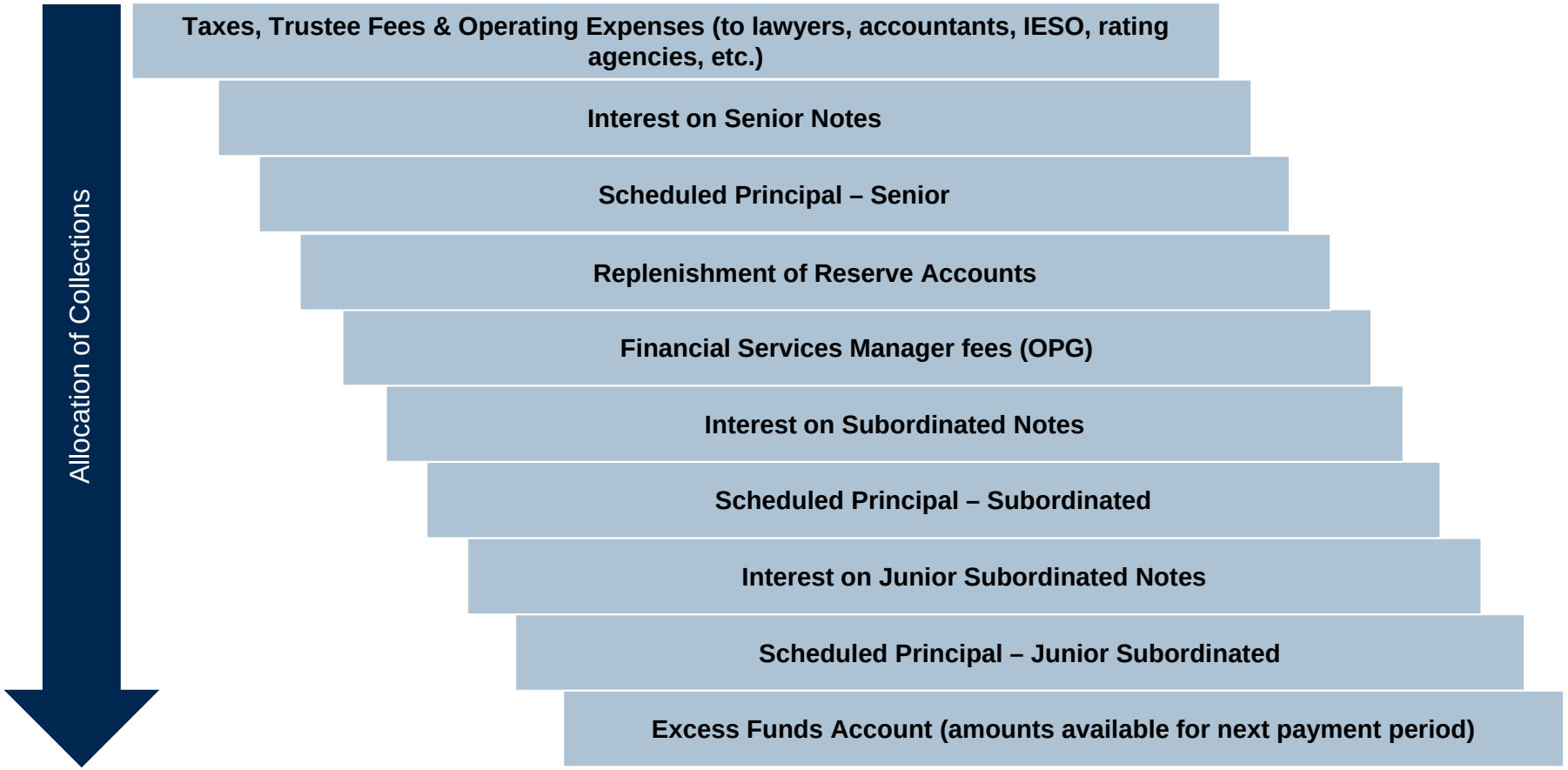
SECTION III

Financing Strategy – Funding Alternatives

- There are several potential funding sources that OPG can consider to structure the overall financing program, including securitization (issued in Canada or the U.S.), bonds, bank financing, and subordinated debt
- Warehouse financing (ABCP or bank debt) and OPG sub-debt will be used to fund monthly investment asset purchases from the IESO (monthly IESO funding shortfalls anticipated to be ~$200 million)
  - Fair Hydro Trust will periodically refinance the warehouse facility through the issuance of term debt
- It is anticipated that the first term debt takeout will be completed in the fall of 2017
  - Aggregate financing for the first offering could be ~$400 - $600 million, with senior-debt of about $200 - $300 million
- Both Canadian and U.S. term debt markets will be considered but decision on which markets to access will be determined on a deal by-deal-basis
- Term debt can take the form of bullet bonds or could be issued as amortizing bonds

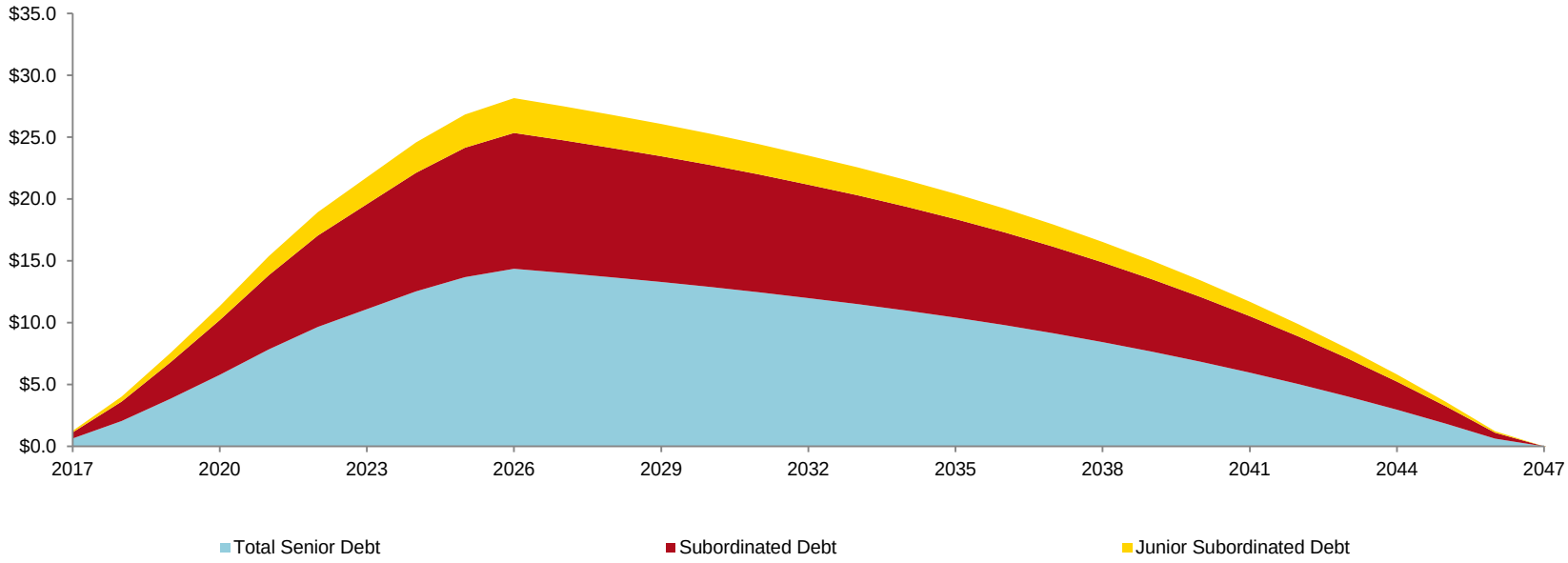
ABCP Conduit	▪ R-1(high) rating confirmation will be required from DBRS pre-closing ▪ Used to fund monthly regulatory asset purchases from the IESO
Bank	▪ Two explicit long-term ratings will be required ▪ Used to fund monthly regulatory asset purchases from the IESO
Canadian Term ABS / Bond	▪ Two explicit long-term ratings required; AAA rating will be targeted
US Term Debt (ABS / Bonds)	▪ Two explicit long-term ratings required; AAA rating will be targeted ▪ Requires cross-currency swaps
Subordinated Debt	▪ Subordinated notes will provide credit enhancement for senior debt (ranks behind senior debt in cash flow waterfall) ▪ Two explicit long-term ratings required

Indicative Waterfall



Illustrative Trust Debt Balance: Borrowing and Repayment

Illustrative Total Debt Summary - Funding / Repayment (Annual)



Transaction Structure

SECTION IV

Structural Comparison

	Precedent Utility Charge Securitizations	Proposed Fair Hydro Structure
Legislation	Legislation creates regulatory basis for implementation and servicing of the charge	
Details of Financing	Outlined in irrevocable Financing Order	Outlined in Regulations supported by province guarantee
Collateral	The right to impose and collect a charge from electric utility customers as well as transaction reserve accounts	
Government Support	State pledge not to permit any action that would impair the value of the Collateral	Province guarantee of repayment if any action taken that would impair the value of the Collateral
Non-Bypassability	Charge to be paid by all existing and future electric customers in included customer classes	
Impacted Customers	The majority of customers in service territory (including residential, commercial and industrial)	The majority of customers are residential and light commercial
Recovery Charge	Relatively low, <5% of total bill	Approximately 10% of total bill
Issuer	Varies, but generally a newly formed special purpose vehicle (“SPV”) that is a subsidiary of Investor Owned Utility	Newly formed special purpose vehicle (“SPV”) would be consolidated into Ontario Power Generation (“OPG”) financial statements
Servicer	Varies, but generally Investor Owned Utility	Independent Electricity System Operator (“IESO”)
Third Party Billing	Varies depending on State	Yes, via Local Distribution Companies (“LDC”)
Nonpayment & Partial Payment by Customers	To the extent that any electric utility customer makes a partial payment of a bill containing the charge, the charge collection will be a pro-rata portion of the payment	
Amortization	Fully amortizing with principal payments beginning at first issuance	Bullet or amortizing bonds with principal payments deferred for a number of years following issuance
Establishment of First Charge	Generally within 1 year of issuance	Delayed start
Credit Enhancement	True-up mechanism, reserve accounts	True-up mechanism, reserve accounts, and subordinated debt
Hedging	Historically limited to interest rates	May include interest rate and currency hedging
Trust Structure	Discrete (single issue) trust	Master trust with multiple series issued over a 10 year period
Legal Opinions	Standard opinions regarding Validity, Enforceability and Regulatory Issues (Constitutionality opinion not applicable for Canadian transactions)	

Transaction Includes Same Key Elements as 'AAA' Investor-Owned Utility Securitizations

- Based on the existing Ontario Electricity market infrastructure no credit losses are anticipated
- Fair Hydro Trust true-up mechanism will ensure timely and full collectability of all debt
- OPG subordinated debt will provide incremental credit enhancement for the senior debt
- Provincial guarantee protects investors from an adverse change in law or inability to fund in capital markets
- The Province of Ontario has very low credit risk and is considered to be stable
  - High likelihood of Government of Canada (Aaa, stable) actions to prevent provincial default
  - Ontario is the largest economy of Canadian provinces: 40% of national economic output, 38% of national population, strong destination for immigration, lower than national unemployment rate

✓	**Experienced Operating Agent**	▪ OPG, IESO, and LDC are experienced operators
✓	**Strong Service Territory**	▪ Stable customer base with diversified service territory
✓	**Enhanced True-up**	▪ Mandatory semi-annual true-ups to correct for any over or under collections ▪ Optional interim adjustments permitted as necessary
✓	**Irrevocable & Nonbypassable Charge**	▪ Final and effective upon issuance of Bonds ▪ Applies to all residential and small commercial consumers receiving power through T&D system
✓	**No "Cap" on Collection of Charge**	▪ No limits on collection of charge that may be imposed on all customers after moratorium period
✓	**Province Guarantee**	▪ Strong government support through guarantee of bond legal and regulatory framework
✓	**Full Cross-Collateralization**	▪ Any collection shortfall is allocated among all specified consumers
✓	**No Industrial Risk**	▪ No single large customer or industry exposure

Legislative and Regulatory Overview

Authorizes Use of Securitization and Establishes Servicing Relationship between OPG, IESO and LDCs

General Powers and Authority of Legislation

- Creation of mechanism for deferral of costs by the IESO and establishment of the Regulatory Asset
- Creation of mechanism for absolute sale of Regulatory Asset to Financing Entity
- Definition of impacted customers (“specified consumers”)
- Establishment of right to bill and collect a non-bypassable clean energy adjustment from future specified consumers
- Establishes principles of the Financing Plan
- Statement of non-impairment by the Crown and provision for a Provincial Guarantee
- Allowance for the establishment of a bankruptcy-remote issuer
- Allowance for true-up mechanism

Fair Hydro Regulations

- Details on calculation of the fair allocation amount
- Details on eligible financeable amounts
- Additional details on clean energy adjustment assessment methodology (true-up mechanism):
  - Timing (mandatory semi-annual + more frequent as needed)
  - Calculation (accounts for expected charge-offs, billing delays and usage as well as any under / over collection in previous period)
- Additional details around servicing / billing mechanics (e.g., LDCs and IESO)

Responsibilities Under New Structure

OPG

- OPG to act as Financial Services Manager including the development and implementation of the Financing Plan
- Calculates the clean energy adjustment including semi-annual true-up

IESO

- Establishment of IESO as Servicer
- Aggregation of collections by LDCs and remittance to Trustee

LDCs

- Manage the billing and remittance of the non-by-passable charge
- Includes charge as a separate line-item on customer bills

Ontario Energy Board

- Must accept clean energy adjustment, and converts to customer charge
- Allow for the charge to go into effect
- Review / approve ongoing Financial Services Manager fees and expenses

Objective of the Legislative, Regulatory and Contractual Structure

- Due to the number of related parties participating in the transaction an overarching theme of the structure is to establish the transaction on a commercial basis
- OPG expects to consolidate the results of the Trust in its financial statements based on the commercial relationship between OPG and the Trust
- The commercial basis is established by a number of elements which work together
  - Trust has the right but not the obligation to purchase a Regulatory Asset
  - Regulatory Asset purchased by the Trust provides the right to bill and collect a charge from future consumers
  - Transactions in the Trust to finance the asset purchase to be on an arm's length basis
  - Amount collected from consumers includes costs of financing the asset purchase, costs to manage the financing, costs to operate the Trust and repayment of principal
  - OEB role established to support recognition of asset and customer charge
  - Debt of the Trust structured to balance risk and cost with objective to achieve highest rating possible
  - Subordinated debt issued by the Trust will be rated and will price off of the senior debt based on a survey of banks
  - Subordinated debt will absorb uncertainties of the senior debt to support highest rating of the senior debt
  - OPG will manage the activities of the Trust for a fee comparable to fees charged by 3rd party managers. OEB role will be limited to reviewing the application of the fee methodology
- Notwithstanding consolidation of the Trust into OPG the Trust will be structured to be bankruptcy remote from OPG

Bill 132 Fair Hydro Plan Act, 2017 Legislation

The Act establishes a framework under which the costs and benefits associated with the “clean energy initiative” are to be allocated among present and future consumers of electricity

Rate Reduction Time Period

- From July 1, 2017 until April 30, 2019, electricity rates payable by a “regulated rate consumer” will be the rate that would result in a representative regulated rate consumer who meets the prescribed criteria being charged an invoice amount that is 25% less than the regulated rate that would otherwise have been determined by the OEB
  - For the 12 month period beginning May 1, 2018 the invoice amount established previously would increase by the rate of inflation in Ontario
  - Subsequent rate reductions beyond April 30, 2019 will be established by regulation

Regulatory Asset

- Each month, the IESO will determine the shortfall resulting from the rate reduction and record in a variance account. IESO has the right to recover the balance recorded in the variance account from specified consumers and this right will be a “regulatory asset” under the Act. IESO will not be entitled to collect the balance recorded in the variance account from specified consumers before May 1, 2021

Investment Asset

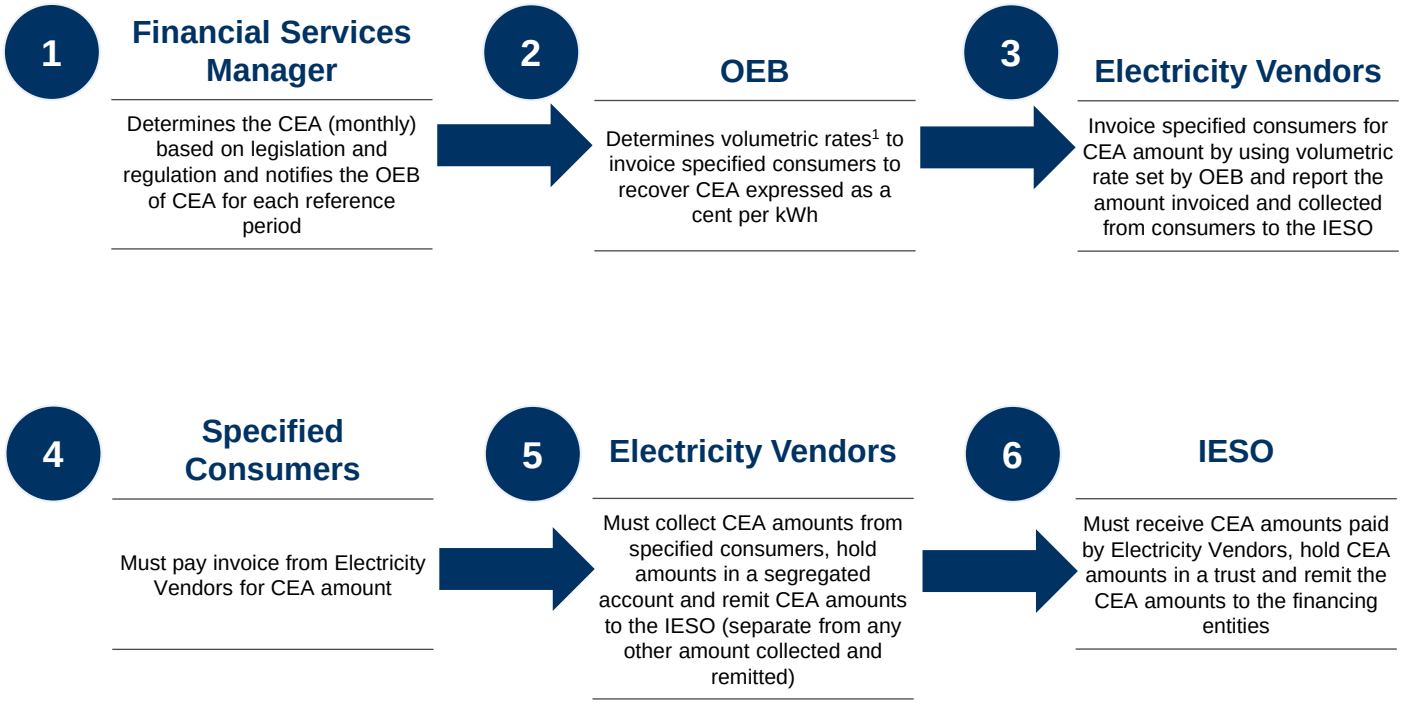
- IESO may transfer (sell) a specified portion of the regulatory asset to the financing entity established by OPG. The Trust is not obligated to purchase the asset. Upon the transfer, the financing entity acquires an interest in the investment asset that is a current and irrevocable property right consisting of the right to impose, invoice, collect, receive and recover the clean energy adjustment from specified consumers or electricity vendors

Components of the legislation and accompanying agreements that are of interest to investors

- Investment assets created by the IESO represents a claim on the rate-payers that is a current and irrevocable property right consisting of the right to impose, invoice, collect, receive and recover from the market
- The trust is not obligated to purchase the regulatory asset from the IESO
- The various investment assets are pari passu
- **The province is providing a guarantee to the trust; backstopping its obligations, either if there are changes in future legislation or if there are market disruption (liquidity) issues**

Clean Energy Adjustment – Proposed Billing and Collection Process

- Clean Energy Adjustment amounts for billing and collection purposes will be managed outside of the IESO's current settlement processes set out in the Market Rules for electricity invoice amounts
  - As such, CEA amounts will not benefit from the rights the IESO currently has under the Market Rules – ability to charge interest, draw down on prudential amounts, and borrow to cover shortfalls
  - Collections risk for CEA amounts are dealt with through statutory rights in the Act, the collection obligations of the IESO under the Master Sales and Services Agreement (to be finalized) and the ability to include amounts into the true up mechanism



[1] The rates will be determined by dividing the CEA amount by the forecasted energy consumption in the reference period by specified consumers

Indicative Allocation of Servicing Role and Responsibilities

	OPG / Financing Entity	IESO	LDC
Management of Ongoing Issuance	✔		
Meter Reading			✔
Billing			✔
Collections			✔
Cash Management		✔	
Remittance of Charge to Trustee	✔	✔	
(Responding to inquiries by customers if practicable, or forwarding such inquiries to OPG)	✔		✔
Ongoing Filings for Trustee and Rating Agencies	✔		
True-Up Calculation	✔	✔	

From:	Ronald Kwan
To:	Francisco Chinchon; Bruno Amara
Cc:	Gavin He; John Kim
Subject:	FW: OPG Q1 2017 Submission to Province
Date:	Friday, April 28, 2017 5:05:47 PM
Attachments:	Q1 2017 FS - DRAFT - PROVINCE MAILING.docx Q1 2017 MDA - DRAFT - PROVINCE MAILING.docx

Hi,

Please review.

Thanks,
Ron

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: April-28-17 17:04
To: 'Shruti.Talwar@ontario.ca' <Shruti.Talwar@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>
Subject: OPG Q1 2017 Submission to Province

Hi All,

Please find attached OPG's draft Q1 2017 Management's Discussion and Analysis (MD&A) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, May 2nd**.

These documents will be filed with the Ontario Securities Commission on **Friday, May 12th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q1 2017 MD&A:

Highlights	
Recent Developments	MD&A p.9-11
Darlington Refurbishment	MD&A p.9; 13-14
Ontario's Fair Hydro Plan	MD&A p.10
Peter Sutherland Sr. GS project	MD&A p.9, 13

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation

700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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ONTARIO POWER GENERATION INC.

INTERIM CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

MARCH 31, 2017

[DRAFT]

INTERIM CONSOLIDATED STATEMENTS OF INCOME (UNAUDITED)

Three Months Ended March 31 *(millions of dollars except where noted)*	**2017**	**2016**
Revenue *(Note 12)*	**1,176**	1,478
Fuel expense *(Note 12)*	**155**	172
Gross margin *(Note 12)*	**1,021**	1,306
Expenses *(Note 12)*		
Operations, maintenance and administration	**708**	686
Depreciation and amortization	**167**	312
Accretion on fixed asset removal and nuclear waste management liabilities	**238**	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Income from investments subject to significant influence	**(10)**	(8)
Property taxes	**11**	12
	925	1,087
Income before other gains, interest and income taxes	**96**	219
Other gains *(Note 12)*	**(3)**	(23)
Income before interest and income taxes	**99**	242
Net interest expense *(Note 5)*	**19**	33
Income before income taxes	**80**	209
Income tax expense	**12**	81
Net income	**68**	128
Net income attributable to the Shareholder	**64**	123
Net income attributable to non-controlling interest	**4**	5
Basic and diluted net income per common share *(dollars)*	**0.25**	0.48
Common shares outstanding *(millions)*	**256.3**	256.3

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (UNAUDITED)

Three Months Ended March 31 *(millions of dollars)*	**2017**	**2016**
Net income	**68**	128
Other comprehensive income, net of income taxes *(Note 7)*		
Reclassification to income of amounts related to pension and other post-employment benefits [1]	**3**	3
Reclassification to income of losses on derivatives designated as cash flow hedges [2]	**4**	4
Unrealized gain on available-for-sale securities [3]	**5**	-
Other comprehensive income for the period	**12**	7
Comprehensive income	**80**	135
Comprehensive income attributable to the Shareholder	**76**	130
Comprehensive income attributable to non-controlling interest	**4**	5

[1] Net of income tax expenses of $1 million for each of the three months ended March 31, 2017 and 2016, respectively.

[2] Net of income tax expenses of $1 million for each of the three months ended March 31, 2017 and 2016, respectively.

[3] Net of income tax expenses of $1 million and nil for the three months ended March 31, 2017 and 2016, respectively.

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

Three Months Ended March 31 *(millions of dollars)*	**2017**	**2016**
Operating activities		
Net income	**68**	128
Adjust for non-cash items:		
Depreciation and amortization	**167**	312
Accretion on fixed asset removal and nuclear waste management liabilities	**238**	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Pension and other post-employment benefit costs *(Note 8)*	**113**	117
Deferred income taxes	**11**	1
Mark-to-market on derivative instruments	**(2)**	3
Provision for used nuclear fuel and low and intermediate level nuclear waste	**27**	33
Regulatory assets and liabilities	**(28)**	(12)
Provision for materials and supplies	**4**	4
Other gains	**(1)**	(23)
Other	**(4)**	(4)
	404	644
Contributions to nuclear fixed asset removal and nuclear waste management funds	**-**	(37)
Expenditures on fixed asset removal and nuclear waste management	**(76)**	(58)
Reimbursement of eligible expenditures on nuclear fixed asset removal and nuclear waste management	**22**	15
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans	**(88)**	(116)
Expenditures on restructuring	**(1)**	(2)
Distributions received from investments subject to significant influence	**14**	18
Net changes to other long-term assets and liabilities	**11**	24
Net changes to non-cash working capital balances *(Note 13)*	**(168)**	(122)
Cash flow provided by operating activities	**118**	366
Investing activities		
Proceeds from deposit note *(Note 4)*	**45**	10
Investment in property, plant and equipment and intangible assets	**(408)**	(320)
Cash flow used in investing activities	**(363)**	(310)
Financing activities		
Issuance of long-term debt *(Note 4)*	**200**	-
Repayment of long-term debt	**(50)**	-
Distribution to non-controlling interest	**(4)**	(4)
Issuance of short-term notes *(Note 5)*	**589**	1,010
Repayment of short-term notes	**(456)**	(986)
Cash flow provided by financing activities	**279**	20
Net increase in cash and cash equivalents	**34**	76
Cash and cash equivalents, beginning of period	**186**	464
Cash and cash equivalents, end of period	**220**	540

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at *(millions of dollars)*	March 31 2017	December 31 2016
Assets		
Current assets		
Cash and cash equivalents	**220**	186
Available-for-sale securities	**218**	212
Receivables from related parties	**362**	429
Nuclear fixed asset removal and nuclear waste management funds	**19**	24
Fuel inventory	**297**	310
Materials and supplies	**95**	100
Prepaid expenses	**224**	198
Other current assets	**216**	298
	1,651	1,757
Property, plant and equipment	**29,721**	29,315
Less: accumulated depreciation	**9,473**	9,317
	20,248	19,998
Intangible assets	**503**	503
Less: accumulated amortization	**410**	404
	93	99
Other assets		
Nuclear fixed asset removal and nuclear waste management funds	**16,138**	15,960
Long-term materials and supplies	**339**	345
Regulatory assets *(Note 3)*	**5,892**	5,855
Investments subject to significant influence *(Note 14)*	**317**	321
Other long-term assets	**33**	37
	22,719	22,518
	44,711	44,372

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at *(millions of dollars)*	March 31 2017	December 31 2016
Liabilities		
Current liabilities		
Accounts payable and accrued charges	**1,014**	1,164
Short-term debt *(Note 5)*	**135**	2
Deferred revenue due within one year	**12**	12
Long-term debt due within one year *(Note 4)*	**1,328**	1,103
Income taxes payable	**6**	123
	2,495	2,404
Long-term debt *(Note 4)*	**4,342**	4,417
Other liabilities		
Fixed asset removal and nuclear waste management liabilities *(Note 6)*	**19,683**	19,484
Pension liabilities	**2,963**	3,012
Other post-employment benefit liabilities	**2,920**	2,897
Long-term accounts payable and accrued charges	**203**	213
Deferred revenue	**311**	298
Deferred income taxes	**841**	829
Regulatory liabilities *(Note 3)*	**369**	310
	27,290	27,043
Equity		
Common shares [1]	**5,126**	5,126
Retained earnings	**5,598**	5,534
Accumulated other comprehensive loss *(Note 7)*	**(283)**	(295)
Equity attributable to the Shareholder	**10,441**	10,365
Equity attributable to non-controlling interest	**143**	143
Total equity	**10,584**	10,508
	44,711	44,372

[1] 256,300,010 common shares outstanding at a stated value of $5,126 million as at March 31, 2017 and December 31, 2016.

Commitments and Contingencies *(Notes 4, 10, and 11)*

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (UNAUDITED)

Three Months Ended March 31 *(millions of dollars)*	**2017**	**2016**
Common shares	**5,126**	5,126
Retained earnings		
Balance at beginning of period	**5,534**	5,098
Net income attributable to the Shareholder	**64**	123
Balance at end of period	**5,598**	5,221
Accumulated other comprehensive loss, net of income taxes		
Balance at beginning of period	**(295)**	(319)
Other comprehensive income	**12**	7
Balance at end of period	**(283)**	(312)
Equity attributable to the Shareholder	**10,441**	10,035
Equity attributable to non-controlling interest		
Balance at beginning of period	**143**	140
Distribution to non-controlling interest	**(4)**	(4)
Net income attributable to non-controlling interest	**4**	5
Balance at end of period	**143**	141
Total equity	**10,584**	10,176

See accompanying notes to the interim consolidated financial statements

NOTES TO THE INTERIM CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

For the three months ended March 31, 2017 and 2016

1. BASIS OF PRESENTATION

These interim consolidated financial statements for the three months ended March 31, 2017 and 2016 include the accounts of Ontario Power Generation Inc. (OPG or the Company) and its subsidiaries. The Company consolidates its interest in entities over which it is able to exercise control and attributes the results to its sole shareholder, the Province of Ontario (Province). Interests owned by other parties are reflected as non-controlling interest. These interim consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States (US) Securities and Exchange Commission for interim financial statements. These interim consolidated financial statements do not contain all of the disclosures required by US GAAP for annual financial statements. Accordingly, they should be read in conjunction with the annual consolidated financial statements of the Company as at and for the year ended December 31, 2016. All dollar amounts are presented in Canadian dollars.

Certain of the 2016 comparative amounts have been reclassified from financial statements previously presented to conform to the 2017 interim consolidated financial statement presentation.

Use of Management Estimates

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the interim consolidated financial statements, and the reported amounts of revenue and expenses during the reporting periods. Management evaluates the Company's estimates on an ongoing basis based on historical experience, current conditions and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefits (OPEB) liabilities, asset retirement obligations, income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments, depreciation and amortization, valuation of the nuclear fixed assets and nuclear waste management funds, and inventories. Actual results may differ significantly from these estimates.

2. SIGNIFICANT ACCOUNTING POLICIES AND ESTIMATES

Change in Accounting Estimate

Pension and Other Post-Employment Benefits

Accounting Assumptions

Effective January 1, 2017, OPG changed the method used to estimate the current service and interest cost components of pension and OPEB costs. OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs in the first quarter of 2017 was largely offset by the

impact of OEB-authorized variance and deferral accounts.

Recent Accounting Pronouncements Not Yet Adopted

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. In March 2017, the American Institute of Certified Public Accountants posted *Revenue Recognition Implementation Issue #13-1, Scope Clarification Regarding Tariff Sales to Regulated Customers*, on its website. This implementation issue discusses whether revenues from sales under a regulated utility's tariff are within the scope of Topic 606. The guidance concludes that tariff-based revenue from the provision of regulated utility service to a utility's customers is within the scope *of ASC 606 – Revenue from Contracts with Customers.* OPG does not expect a material impact to its accounting for the base regulated payment amounts.

OPG is continuing to assess the impact of the new revenue standard on its other revenue streams. The Company is in the process of concluding on the method of adoption, as well as evaluating the impact of the new standard on its consolidated financial statements.

Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost

In March 2017, the FASB issued ASU No. 2017-07, *Compensation – Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. Under the new guidance, employers that sponsor defined benefit plans for pensions and/or other postretirement benefits are required to present the service cost component of net periodic benefit cost in the same statement of income line item as other employee compensation costs arising from services rendered during the period. The other components of the net periodic benefit cost are presented separately from the line item that includes the service cost and outside of any subtotal of income from operations. The changes would allow only the service cost component of net benefit cost to be eligible for capitalization.

This guidance is effective for fiscal years beginning after December 15, 2017, and interim periods within those years. This update will not have a material impact on OPG's consolidated financial statements since OPG currently capitalizes the service cost component of postretirement benefits costs only. As OPG already includes the service cost component with other compensation costs within the operations, maintenance and administration expenses line item in the consolidated statement of income and does not show a subtotal of income from operations, the proposed presentation change would not affect OPG.

3. REGULATORY ASSETS AND LIABILITIES

In March 2017, the OEB approved a settlement agreement reached by OPG and intervenors on a limited set of issues in OPG's application (Settlement Agreement). Among the settled issues, the agreement provided for the continuation of all applicable existing variance and deferral accounts and accepted a number of variance and deferral account balances for recovery, as requested in OPG's application. The balances of the Nuclear Liability Deferral Account, the Bruce Lease Net Revenues Variance Account, and the nuclear portion of the Capacity Refurbishment Variance Account were excluded from the scope of the Settlement Agreement. The periods of recovery or repayment for the accepted variance and deferral account balances also are excluded from the scope of the Settlement Agreement. In addition, the Settlement Agreement accepted OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017 to 2021 period.

The regulatory assets and liabilities recorded as at March 31, 2017 and December 31, 2016 are as follows:

(millions of dollars)	**March 31 2017**	**December 31 2016**
Regulatory assets		
Variance and deferral accounts authorized by the OEB		
Pension and OPEB Cost Variance Account	**716**	716
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 8)*	**517**	497
Hydroelectric Surplus Baseload Generation Variance Account	**232**	210
Bruce Lease Net Revenues Variance Account	**113**	95
Nuclear Deferral and Variance Over/Under Recovery Variance Account	**74**	74
Other variance and deferral accounts	**43**	33
	1,695	1,625
Pension and OPEB Regulatory Asset *(Note 8)*	**3,348**	3,392
Deferred Income Taxes	**849**	838
Total regulatory assets	**5,892**	5,855
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Capacity Refurbishment Variance Account	**98**	102
Other variance and deferral accounts	**271**	208
Total regulatory liabilities	**369**	310

As at March 31, 2017 and December 31, 2016, regulatory assets for other variance and deferral accounts included amounts for the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Liability Deferral Account, the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account, the Nuclear Development Variance Account, and the Pickering Life Extension Depreciation Variance Account. As at March 31, 2017 and December 31, 2016, regulatory liabilities for other variance and deferral accounts included the Impact Resulting from Changes in Station-End-of-Life Dates Deferral Account, the Pension & OPEB Cash Payment Variance Account, the Hydroelectric Water Conditions Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account.

4. LONG-TERM DEBT

Long-term debt consists of the following:

(millions of dollars)	**March 31 2017**	**December 31 2016**
Notes payable to the Ontario Electricity Financial Corporation	**3,445**	3,295
UMH Energy Partnership	**184**	184
PSS Generating Station Limited Partnership	**245**	245
Lower Mattagami Energy Limited Partnership	**1,795**	1,795
Other	**15**	15
	5,684	5,534
Less: bond issuance fees	**(14)**	(14)
Less: due within one year	**(1,328)**	(1,103)
Long-term debt	**4,342**	4,417

In the fourth quarter of 2015, PSS Generating Station Limited Partnership, a subsidiary of OPG, issued long-term debt totalling $245 million in support of the Peter Sutherland Sr. GS project. The majority of the debt proceeds,

totalling $180 million, were invested in a structured deposit note with staggered maturity dates ranging from January 2016 to April 2017. As at March 31, 2017, the remaining deposit note balance of $25 million (December 31, 2016 - $70 million) was reported as Other current assets on the interim consolidated balance sheets, based on the terms of the deposit note.

In February 2017, OPG issued senior notes payable to the Ontario Electricity Financial Corporation totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent.

5. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. As at March 31, 2017, there was $133 million of commercial paper outstanding under OPG's commercial paper program. There were no amounts outstanding under the bank credit facility.

As at March 31, 2017, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at March 31, 2017, there was no external commercial paper outstanding under LME's commercial paper program (December 31, 2016 – nil). There were also no amounts outstanding under LME's bank credit facility as at March 31, 2017.

As at March 31, 2017, OPG maintained $25 million of short-term, uncommitted overdraft facilities and $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at March 31, 2017, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the Portland Energy Centre (PEC).

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at March 31, 2017, there were Letters of Credit outstanding under this agreement of $150 million (December 31, 2016 – $150 million), which were issued in support of OPG's supplementary pension plans.

In October 2014, UMH Energy Partnership entered into an $8 million short-term, uncommitted overdraft facility and $16 million of irrevocable, standby Letters of Credit facilities in support of its operations. As at March 31, 2017, total Letters of Credit of $14 million had been issued under these facilities.

The following table summarizes the net interest expense:

(millions of dollars)	Three Months Ended March 31 2017	2016
Interest on long-term debt	**70**	72
Interest on short-term debt	**-**	1
Interest income	**-**	(2)
Interest capitalized to property, plant and equipment and intangible assets	**(42)**	(31)
Interest related to regulatory assets and liabilities [1]	**(9)**	(7)
Net interest expense	**19**	33

[1] Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Bruce Lease Net Revenues Variance Account, the Capacity Refurbishment Variance Account, and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

6. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES

The liabilities for fixed asset removal and nuclear waste management on a present value basis as at March 31, 2017 and December 31, 2016 consist of the following:

(millions of dollars)	March 31 2017	December 31 2016
Liability for nuclear used fuel management	**11,425**	11,292
Liability for nuclear decommissioning and nuclear low and intermediate level waste management	**7,877**	7,811
Liability for non-nuclear fixed asset removal	**381**	381
Fixed asset removal and nuclear waste management liabilities	**19,683**	19,484

7. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of accumulated other comprehensive loss (AOCL), net of income taxes are as follows:

	Three Months Ended March 31, 2017			
(millions of dollars)	Unrealized Gains and Losses on Cash Flow Hedges [1]	Pension and OPEB [1]	Available-for-sale Securities [1]	Total [1]
AOCL, beginning of period	**(87)**	**(207)**	**(1)**	**(295)**
Unrealized loss on available-for-sale securities	**-**	**-**	**5**	**5**
Amounts reclassified from AOCL	**4**	**3**	**-**	**7**
Other comprehensive income for the period	**4**	**3**	**5**	**12**
AOCL, end of period	**(83)**	**(204)**	**4**	**(283)**

[1] All amounts are net of income taxes.

(millions of dollars)	Three Months Ended March 31, 2016 Unrealized Gains and Losses on Cash Flow Hedges [1]	Pension and OPEB [1]	Total [1]
AOCL, beginning of period	(106)	(213)	(319)
Amounts reclassified from AOCL	4	3	7
Other comprehensive income for the period	4	3	7
AOCL, end of period	(102)	(210)	(312)

[1] All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the three months ended March 31, 2017 and 2016 are as follows:

(millions of dollars)	Amount Reclassified from AOCL 2017	2016	Statement of Income Line Item
Amortization of losses from cash flow hedges			
Losses	**5**	5	Net interest expense and fuel expense
Income tax recovery	**(1)**	(1)	Income tax expense
	4	4	
Amortization of amounts related to pension and OPEB			
Actuarial losses and past service costs	**4**	4	See (1) below
Income tax recovery	**(1)**	(1)	Income tax expense
	3	3	
Total reclassifications for the period	**7**	7	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 8 for additional details).

8. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

OPG's pension and OPEB costs for the three months ended March 31, 2017 and 2016 are as follows:

(millions of dollars)	Registered Pension Plans 2017	2016	Supplementary Pension Plans 2017	2016	Other Post-Employment Benefits 2017	2016
Components of Cost Recognized for the period						
Current service costs	**68**	69	**1**	2	**17**	17
Interest on projected benefit obligation	**137**	158	**3**	3	**27**	33
Expected return on plan assets, net of expenses	**(191)**	(183)	**-**	-	**-**	-
Amortization of net actuarial loss [1]	**46**	48	**2**	1	**-**	5
Costs recognized [2]	**60**	92	**6**	6	**44**	55

[1] The amortization of past service costs and net actuarial loss was recognized as an increase to Other Comprehensive Income. This increase in the first quarter of 2017 was partially offset by a decrease in the Pension and OPEB Regulatory Asset of $44 million (three months ended March 31, 2016 – $50 million).

[2] These pension and OPEB costs for the three months ended March 31, 2017 exclude the addition of costs resulting from the recognition of an addition to the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account of $20 million and a reduction of the regulatory asset for the Pension & OPEB Cash Payment Variance Account of $23 million (three months ended March 31, 2016 – exclude the reduction of costs resulting from the recognition of additions to the regulatory assets of $34 million and $2 million, respectively).

9. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect the Company's assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are denominated in, or tied to, US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the Independent Electricity System Operator (IESO) administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at March 31, 2017 was less than $1 million. OPG's fair value derivatives totalled a net liability of $23 million as at March 31, 2017 (December 31, 2016 - $24 million).

Existing net losses of $20 million deferred in AOCL as at March 31, 2017 are expected to be reclassified to net income within the next 12 months.

10. FAIR VALUE MEASUREMENTS

The fair value of financial instruments traded in active markets is based on quoted market prices at the interim consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments. The fair value hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the interim consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for

calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Certain alternative investments are measured at fair value by their investment managers using net asset value (NAV). Investments measured at NAV as a practical expedient for determining their fair value are excluded from the fair value hierarchy.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The following is a summary of OPG's financial instruments and their fair value as at March 31, 2017 and December 31, 2016:

	Fair Value		Carrying Value [1]		
(millions of dollars)	**2017**	**2016**	**2017**	**2016**	**Balance Sheet Line Item**
Nuclear Segregated Funds (includes current portion) [2]	**16,157**	15,984	**16,157**	15,984	Nuclear fixed asset removal and nuclear waste management funds
Investment in Hydro One shares	**218**	212	**218**	212	Available-for-sale securities
Payable related to cash flow hedges	**(46)**	(48)	**(46)**	(48)	Long-term accounts payable and accrued charges
Long-term debt (includes current portion)	**(6,206)**	(6,033)	**(5,670)**	(5,520)	Long-term debt
Other financial instruments	**(18)**	(18)	**(18)**	(18)	Various

[1] The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other current assets, short-term debt, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

[2] The Nuclear Segregated Funds are comprised of the Decommissioning Segregated Fund and the Used Fuel Segregated Fund.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs. The following tables present financial assets and financial liabilities measured at fair value in accordance with the fair value hierarchy as at March 31, 2017 and December 31, 2016:

	March 31, 2017			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**5,763**	**4,483**	**-**	**10,246**
Investments measured at NAV [1]				**1,150**
				11,396
Due to Province				**(2,155)**
Used Fuel Segregated Fund, net				**9,241**
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**4,294**	**3,310**	**-**	**7,604**
Investments measured at NAV [1]				**952**
				8,556
Due to Province				**(1,640)**
Decommissioning Segregated Fund, net				**6,916**
Investment in available-for-sale securities	**218**	**-**	**-**	**218**
Other financial assets	**5**	**2**	**7**	**14**
Liabilities				
Other financial liabilities	**(28)**	**(4)**	**-**	**(32)**

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

(millions of dollars)	Level 1	Level 2	Level 3	December 31, 2016 Total
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	5,602	4,394	-	9,996
Investments measured at NAV [1]				1,086
				11,082
Due to Province				(1,938)
Used Fuel Segregated Fund, net				9,144
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	4,171	3,243	-	7,414
Investments measured at NAV [1]				903
				8,317
Due to Province				(1,477)
Decommissioning Segregated Fund, net				6,840
Investments in available-for-sale securities	212	-	-	212
Other financial assets	6	2	9	17
Liabilities				
Other financial liabilities	(29)	(6)	-	(35)

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

During the three months ended March 31, 2017, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3 for the three months ended March 31, 2017:

(millions of dollars)	Other financial instruments
Opening balance, January 1, 2017	**9**
Realized losses included in revenue	**(1)**
Purchases	**1**
Closing balance, March 31, 2017	**9**

Nuclear Segregated Funds

The fair value of the investments within the Nuclear Segregated Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value. Alternative investments are measured at fair value using NAV as a practical expedient.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Segregated Funds that are reported on the basis of NAV as at March 31, 2017:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Alternative Investments				
Infrastructure	**1,251**	**650**	**n/a**	**n/a**
Real Estate	**776**	**413**	**n/a**	**n/a**
Agriculture	**75**	**123**	**n/a**	**n/a**
Pooled Funds				
Short-term Investments	**19**	**n/a**	**Daily**	**1 - 5 Days**
Fixed Income	**554**	**n/a**	**Daily**	**1 - 5 Days**
Equity	**832**	**n/a**	**Daily**	**1 - 5 Days**
Total	**3,507**	**1,186**		

The fair value of the pooled funds is classified as Level 2. Infrastructure, real estate and agriculture investments are measured using NAV as a practical expedient for determining their fair value.

Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

Real Estate

This class includes investments in institutional-grade real estate property. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests to another party, as stipulated in the partnership agreement. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements.

Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations, and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally

managed portfolios. The fair value of the investments in this class has been estimated using NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

11. COMMITMENTS AND CONTINGENCIES

Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power L.P. (Bruce Power) by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered by June 30, 2017, as required by the timetable.

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at March 31, 2017, the total amount of guarantees OPG provided to these entities was $83 million. OPG may terminate some of these guarantees within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at March 31, 2017, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at March 31, 2017, are as follows:

(millions of dollars)	**2017** [1]	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Fuel supply agreements	115	169	96	76	62	103	621
Contributions to the OPG registered pension plan [2]	185	251	-	-	-	-	436
Long-term debt repayment	1,053	398	368	663	413	2,789	5,684
Interest on long-term debt	173	204	185	163	134	2,451	3,310
Commitments related to Darlington Refurbishment project [3]	492	-	-	-	-	-	492
Commitments related to Peter Sutherland Sr. GS project	33	-	-	-	-	-	33
Commitments related to Ranney Falls GS	29	22	5	-	-	-	56
Commitments related to Little Long GS	11	25	8	-	-	-	44
Operating licences	33	37	23	24	28	115	260
Operating lease obligations [4]	20	26	25	25	23	93	212
Unconditional purchase obligations	46	59	58	56	5	-	224
Short-term debt	135	-	-	-	-		135
Accounts payable and accrued charges	749	-	-	-	-	18	767
Other	45	7	2	2	1	65	122
Total	3,119	1,198	770	1,009	666	5,634	12,396

[1] Represents amounts for the remainder of the year.

[2] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[3] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[4] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises in the second quarter of 2017.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

12. BUSINESS SEGMENTS

Segment Income (Loss) for the Three Months Ended March 31, 2017 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydroelectric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	652	27	363	143	17	(26)	1,176
Fuel expense	68	-	73	14	-	-	155
Gross margin	584	27	290	129	17	(26)	1,021
Operations, maintenance and administration	589	29	76	39	1	(26)	708
Depreciation and amortization	107	-	34	19	7	-	167
Accretion on fixed asset removal and nuclear waste management liabilities	-	234	-	2	2	-	238
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(189)	-	-	-	-	(189)
Income from investments subject to significant influence	-	-	-	(10)	-	-	(10)
Property taxes	6	-	-	2	3	-	11
Other gains	-	-	-	-	(3)	-	(3)
Income (loss) before interest and income taxes	(118)	(47)	180	77	7	-	99

Segment Income (Loss) for the Three Months Ended March 31, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydroelectric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	926	34	385	145	21	(33)	1,478
Fuel expense	81	-	79	12	-	-	172
Gross margin	845	34	306	133	21	(33)	1,306
Operations, maintenance and administration	563	36	76	40	4	(33)	686
Depreciation and amortization	230	-	56	19	7	-	312
Accretion on fixed asset removal and nuclear waste management liabilities	-	228	-	2	2	-	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(147)	-	-	-	-	(147)
Income from investments subject to significant influence	-	-	-	(8)	-	-	(8)
Property taxes	7	-	-	2	3	-	12
Other gains	(1)	-	(22)	-	-	-	(23)
Income (loss) before interest and income taxes	46	(83)	196	78	5	-	242

13. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	Three Months Ended March 31 2017	2016
Receivables from related parties	**67**	(4)
Prepaid expenses	**(26)**	(24)
Other current assets [1]	**36**	(6)
Fuel inventory	**13**	11
Materials and supplies	**5**	1
Income taxes payable	**(117)**	15
Accounts payable and accrued charges	**(146)**	(115)
	(168)	(122)

[1] Represents other accounts receivable.

14. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of the PEC gas-fired combined cycle generating station and the Brighton Beach gas-fired combined cycle generating station (Brighton Beach), which are accounted for using the equity method. Details of the balances as at March 31, 2017 and December 31, 2016 are as follows:

(millions of dollars)	**March 31 2017**	**December 31 2016**
PEC		
Current assets	**15**	18
Long-term assets	**252**	256
Current liabilities	**(6)**	(8)
Long-term liabilities	**(5)**	(5)
Brighton Beach		
Current assets	**6**	5
Long-term assets	**166**	168
Current liabilities	**(17)**	(16)
Long-term liabilities	**(8)**	(7)
Long-term debt	**(86)**	(90)
Investments subject to significant influence	**317**	321

15. NON-CONTROLLING INTEREST

Nanticoke Solar LP

Nanticoke Solar LP (NSLP) was formed between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation during 2016. The project is to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands is planned to commence as early as in the fourth quarter of 2017. In the first quarter of 2017, OPG acquired all of SECCLP's interests in NSLP which represented a 25 percent equity interest in NSLP. Subsequent to the acquisition, OPG owned 89 percent of equity interest in NSLP with approximately $2 million in value.

16. SUBSEQUENT EVENT

Shareholder Declaration and Shareholder Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. An active program to locate a buyer was initiated in October 2016. As such, in the fourth quarter of 2016, OPG reclassified the net book value of $96 million for these assets out of Property, plant and equipment of the Services, Trading, and Other Non-Generation segment into Other current assets. Depreciation on the assets ceased in the fourth quarter of 2016. In December 2016, a purchase and sale agreement was executed, and the sale was completed in April 2017. An estimated after-tax gain on sale in excess of approximately $280 million **[MONITOR]** was recognized upon completion of the transaction. Pursuant to the December 2015 Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act 2014*, OPG is required to transfer the proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund.

Peter Sutherland Sr. GS LP

PSS Generating Station LP (PSS) is a limited partnership between OPG, Coral Rapids Power Corporation (CRP), and PSS Generating Station Inc. OPG and PSS GS Inc. are general partners, and CRP is a limited partner in the Partnership. CRP is a wholly owned subsidiary of the Taykwa Tagamou Nation. The principal business of the Partnership is the development, construction, ownership, operation and maintenance of a 28 megawatt hydroelectric generating station (GS) on the New Post Creek. In March 2017, the GS was placed in-service and, in April 2017, CRP acquired a 33 percent interest in PSS under the partnership agreement. CRP made contributions of approximately $21 million to acquire their equity interest.

ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

2017 FIRST QUARTER REPORT

[DRAFT]

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ONTARIO POWER GENERATION

ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the unaudited interim consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the three months ended March 31, 2017. OPG's unaudited interim consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

For a complete description of OPG's corporate strategies, risk management, corporate governance, and the effect of critical accounting policies and estimates on OPG's results of operations and financial condition, this MD&A should also be read in conjunction with OPG's audited consolidated financial statements, accompanying notes, the Annual Information Form, and the MD&A as at and for the year ended December 31, 2016.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Exemptive Relief for Reporting under US GAAP,* in OPG's 2016 annual MD&A. This MD&A is dated May 12, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy, and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), Total Generating Cost (TGC) and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at March 31, 2017, OPG's electricity generation portfolio had an in-service capacity of 16,205 megawatts (MW). OPG operates two nuclear generating stations, 66 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report. A description of OPG's segments is provided in OPG's 2016 annual MD&A in the section, *Business Segments*.

All of OPG's owned and co-owned generating facilities are located in Ontario. OPG does not operate PEC, Brighton Beach, the Bruce A GS and the Bruce B GS.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of March 31, 2017 and December 31, 2016 was as follows:

(MW)	As at March 31 2017	As at December 31 2016
Regulated – Nuclear Generation [1]	**5,728**	5,728
Regulated – Hydroelectric	**6,421**	6,421
Contracted Generation Portfolio [2]	**4,056**	4,028
Total	**16,205**	16,177

[1] The in-service generating capacity as of March 31, 2017 and December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

During the three months ended March 31, 2017, the total in-service capacity increased by 28 MW. The increase was due to the completion of Peter Sutherland Sr. hydroelectric GS, which was placed in-service on March 31, 2017. The Peter Sutherland Sr. GS is discussed in the section, *Highlights* under the heading, *Recent Developments*.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's unaudited interim consolidated operating results. Significant factors which contributed to OPG's results during the three months ended March 31, 2017, compared to the same period in 2016, are discussed below.

(millions of dollars – except where noted) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**1,176**	1,478
Fuel expense	**155**	172
Gross margin	**1,021**	1,306
Operations, maintenance and administration	**708**	686
Depreciation and amortization	**167**	312
Accretion on fixed asset removal and nuclear waste management liabilities	**238**	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Income from investments subject to significant influence	**(10)**	(8)
Property taxes	**11**	12
	925	1,087
Income before other gains, interest, and income taxes	**96**	219
Other gains	**(3)**	(23)
Income before interest and income taxes	**99**	242
Net interest expense	**19**	33
Income before income taxes	**80**	209
Income tax expense	**12**	81
Net income	**68**	128
Net income attributable to the Shareholder	**64**	123
Net income attributable to non-controlling interest [1]	**4**	5
Electricity production (TWh) [2]	**18.6**	21.0
Cash flow		
Cash flow provided by operating activities	**118**	366

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $64 million for the first quarter of 2017, a decrease of $59 million compared to 2016. Income before interest and income taxes was $99 million for 2017, a decrease of $143 million compared to 2016. The following summarizes the significant factors which contributed to the variance:

Significant factors that reduced income before interest and income taxes:

- As expected, lower revenue from the nuclear base regulated price of approximately $134 million, partially offset by the largely associated decrease in fuel expense of $13 million, reflecting lower electricity generation of 2.3 terawatt hours (TWh) from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. Existing base regulated prices continue to be in effect pending the OEB's decision on OPG's current application for new regulated prices, expected in the second half of 2017. The lower nuclear generation was primarily due to the ongoing

refurbishment of Unit 2 at the Darlington GS since October 2016. The existing base regulated prices were set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. OPG has requested January 1, 2017 as the effective date of the new regulated prices. Further details on OPG's current application for new regulated prices can be found under the heading, *Recent Developments – OPG's Application for New Regulated Prices.*

- Higher operations, maintenance and administration (OM&A) expenses of $22 million, mainly in the Regulated – Nuclear Generation segment, reflecting use of temporary staff and planned hiring to fill vacant positions due to attrition, and higher material costs related to maintenance work at the nuclear stations.
- A gain of $22 million recorded in the first quarter of 2016 to reflect the OEB's decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices.

Significant factors that increased income before interest and income taxes:

- Higher earnings on the nuclear fixed asset removal and nuclear waste management funds (Nuclear Segregated Funds) of $42 million, primarily due to higher earnings on the Used Fuel Segregated Fund
- Higher hydroelectric incentive mechanism revenue of $7 million from the Regulated – Hydroelectric segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts (regulatory accounts) on December 31, 2016 contributed to the decrease in revenue in the first quarter of 2017, compared to the same period in 2016, but was primarily offset by a decrease in the amortization expense related to regulatory account balances. New rate riders have been requested in OPG's application for new regulated prices with the OEB, effective January 1, 2017.

Net interest expense decreased by $14 million in the first quarter of 2017, compared to the same quarter in 2016, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project.

Income tax expense decreased by $69 million in the first quarter of 2017, compared to the same quarter in 2016, primarily due to lower income before income taxes in the first quarter of 2017 and a higher income tax expense in the first quarter of 2016 due to a reduction in regulatory assets related to income taxes.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	Three Months Ended March 31	
	2017	**2016**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**(118)**	46
Regulated – Hydroelectric	**180**	196
Contracted Generation Portfolio	**77**	78
Total electricity generation business segments	**139**	320
Regulated – Nuclear Waste Management	**(47)**	(83)
Services, Trading, and Other Non-Generation	**7**	5
	99	242

Electricity Generation

Electricity generation was as follows:

(TWh)	Three Months Ended March 31 2017	2016
Regulated – Nuclear Generation	**10.0**	12.3
Regulated – Hydroelectric	**8.0**	7.9
Contracted Generation Portfolio [1]	**0.6**	0.8
Total OPG electricity generation	**18.6**	21.0
Total electricity generation by other generators in Ontario [2]	**18.6**	18.9

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the Independent Electricity System Operator (IESO), minus OPG electricity generation.

The lower electricity generation from the Regulated – Nuclear Generation segment in the first quarter of 2017 compared to the same quarter in 2016 was primarily a result of the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment that began in October 2016. This decrease in electricity generation was partially offset by an increase in generation from the Pickering GS, primarily due to a decrease in the number of planned outage days.

The higher electricity generation from the Regulated – Hydroelectric generating segment in the first quarter of 2017 was primarily due to a lower volume of water spilled as a result of less prevalent SBG conditions, largely offset by the impact of lower water flows on the eastern and northeastern Ontario river systems, compared to the first quarter in 2016.

The lower electricity generation from the Contracted Generation Portfolio segment was primarily the result of lower water flows on the northeastern Ontario river systems.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. For the first quarter of 2017, Ontario's electricity demand as reported by the IESO was 34.3 TWh compared to 35.2 TWh for the same quarter in 2016, which excludes electricity exports out of the province.

Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric, other grid-connected renewable resources and nuclear stations. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. While baseload generation supply surplus in Ontario was less prevalent in the first quarter of 2017 compared to the same period in 2016, OPG lost 0.8 TWh of hydroelectric generation due to SBG conditions in the first quarter of 2017. OPG lost 1.7 TWh of hydroelectric generation due to SBG conditions during the first quarter of 2016. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions during these periods was offset by the impact of a regulatory variance account authorized by the OEB. OPG did not forgo any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The same base regulated prices for electricity generated by these segments, authorized by the OEB effective November 1, 2014, were in effect during the first quarter of 2017 as in 2016. These prices will remain in effect until such time as the OEB approves new regulated prices based on OPG's current application, discussed under the heading, *Recent Developments – OPG's Application for New Regulated Prices.* The base regulated prices established in 2014 are discussed in OPG's 2016 annual MD&A in the section, *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment was 5.8 cents per kilowatt hour (¢/kWh) during the first quarter of 2017, compared to 7.0 ¢/kWh during the same quarter in 2016. The decrease in the average sales price was primarily due to the expiry, on December 31, 2016, of the OEB-authorized nuclear rate rider of $10.84 per megawatt hour (MWh) for the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment was 4.2 ¢/kWh during the first quarter of 2017, compared to 4.4 ¢/kWh during the same quarter in 2016. The decrease in average sales price was primarily due to the expiry, on December 31, 2016, of a regulated hydroelectric rate rider of $3.19/MWh for the recovery of variance and deferral account balances. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years. As such, the year-over-year changes in revenue from the rate riders were largely offset by changes in amortization expense related to regulatory account balances. There were no rate riders in effect during the first quarter of 2017 for either nuclear or regulated hydroelectric generation, pending the outcome of OPG's current application with the OEB for new regulated prices, including rate riders.

Cash Flow from Operations

Cash flow provided by operating activities for the three months ended March 31, 2017 was $118 million, compared to $366 million for the same period in 2016. As expected, the decrease in cash flow provided by operating activities in the first quarter of 2017, compared to the same quarter in 2016, was primarily due to lower generation revenue receipts reflecting lower generation from the Regulated – Nuclear Generation segment as a result of the ongoing refurbishment of Unit 2 at the Darlington GS and the expiry, on December 31, 2016, of the OEB-authorized rate riders for nuclear and regulated hydroelectric generation. The decrease in cash flow in the first quarter of 2017 was also due to higher income tax installments and higher OM&A expenditures, compared to the same quarter in 2016. The decrease in cash flow provided by operating activities was partially offset by lower pension plan contributions reflecting an updated actuarial valuation of the OPG registered pension plan filed with the Financial Services Commission of Ontario in September 2016, and lower contributions to the Used Fuel Segregated Fund and the Decommissioning Segregated Fund. Both the Used Fuel Segregated Fund and the Decommissioning Segregated Fund were determined to be fully funded based on an updated estimate of OPG's nuclear waste management and nuclear facilities decommissioning obligations pursuant to a reference plan approved by the Province, for years 2017 to 2021, under the Ontario Nuclear Funds Agreement (ONFA), effective January 1, 2017. Pursuant to the ONFA, the reference plan is required to be updated at least once every five years. Contributions to either or both of the Nuclear Segregated Funds may be required in the future should the funds be in an underfunded position at the time of the next ONFA reference plan update. The year-over-year decrease in cash flow also was partially offset by the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to a period in 2015. The lease agreement for the Bruce nuclear generating stations giving rise to this rebate was amended in late 2015 to eliminate this provision going forward.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. FFO Adjusted Interest Coverage was 5.1 times for the 12 month-periods ended March 31, 2017 and December 31, 2016. FFO Adjusted Interest Coverage in 2017 reflected a year-over-year decrease in FFO before interest due to lower cash flow provided by operating activities, offset by the

impact of a lower adjusted interest expense due to a decrease in the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets.

The decrease in the excess of interest on pension and OPEB benefit obligations over expected return on pension plan assets in 2017 was primarily due to the change in the method used to estimate the interest cost and current service cost component of pension and OPEB costs. Effective January 1, 2017, OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs in the first quarter of 2017 was largely offset by the impact of OEB-authorized variance and deferral accounts. Further details on the full yield curve approach can be found in the 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Pension and Other Post-Employment Benefits*. **[UPDATE]**

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for the 12 months ended March 31, 2017 was 3.5 percent, compared to 4.2 percent for the 12 months ended December 31, 2016. The decrease was primarily due to lower net income attributable to the Shareholder. As expected, reduced revenue due to the continuation of existing base regulated prices that do not reflect the lower nuclear generation as a result of the Unit 2 refurbishment outage at the Darlington GS negatively impacted net income and ROE Excluding AOCI for the 12-month period ended March 31, 2017. The continuation of existing base regulated prices until such time as new regulated prices are approved by the OEB later in 2017 will negatively affect OPG's ROE Excluding AOCI.

Enterprise Total Generating Cost per MWh

The Enterprise TGC per MWh was $47.86 for the three months ended March 31, 2017, compared to $41.82 for the same period in 2016. The increase in Enterprise TGC per MWh for the three months ended March 31, 2017, compared to the same period in 2016, was expected and primarily due to the decrease in electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $69.87 for the three months ended March 31, 2017, compared to $56.37 for the same period in 2016. The increase in Nuclear TGC per MWh for the three months ended March 31, 2017, compared to the same period in 2016, was expected and primarily due to the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $19.79 for the three months ended March 31, 2017, which was comparable to $19.94 for the same period in 2016.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow provided by operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016 and de-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017. Islanding of Unit 2, the physical separation of the unit under refurbishment from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second segment commenced immediately following the islanding of Unit 2. The second segment continues preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening the reactor air lock doors, installation of shielding, setting up specialized tooling and equipment, and commencing the disassembly and removal of reactor components. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. The project is tracking on schedule and budget.

The Darlington Refurbishment project is discussed further in the section, *Core Business, Strategy, and Outlook* under the heading, *Project Excellence.*

Peter Sutherland Sr. Hydroelectric GS

In March 2017, the project to construct the 28 MW two-unit Peter Sutherland Sr. hydroelectric GS successfully completed final testing and commissioning of the turbine and generator units and both units were declared substantially complete. On March 31, 2017, the project received a permit from the Ministry of Environment and Climate Change (MOECC) to take water for operations to allow the station to operate commercially. This in-service date is well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. The project is expected to close below the approved budget of $300 million, following the completion of site remediation, camp dismantling, demobilization and other project close-out activities.

The project was constructed in partnership with the Coral Rapids Power Corporation (CRP), a corporation wholly owned by the Taykwa Tagamou Nation, through the PSS Generating Station Limited Partnership (PSS). Under the partnership agreement, as the unit is placed in-service, the CRP may acquire up to a 33 percent partnership interest through its investment in PSS. In April 2017, the CRP acquired a 33 percent interest in PSS.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017, on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. For the hydroelectric facilities, the application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021, based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production. The application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment through rate riders that were in effect to December 31, 2016. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed further in the section, *Balance Sheet Highlights* under the heading, *Pension & OPEB Cash Versus Accrual Differential Deferral Account*.

Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application submission in May 2016 incorporated a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved annual nuclear revenue requirements during the period from January 1, 2017 to the end of the Darlington Refurbishment project in a deferral account for future collection.

In March 2017, the Province amended *Ontario Regulation 53/05* to require that the portion of the approved annual nuclear revenue requirements deferred for future collection under rate smoothing be determined with a view of making more stable year-over-year changes in OPG's weighted-average nuclear and hydroelectric regulated prices, including rate riders. Previously, the regulation required that the deferred amounts be determined with a view of making more stable year-over-year changes in OPG's nuclear regulated prices only, excluding rate riders. The amendment is intended to make more predictable the impact on customer bills resulting from changes in OPG's overall regulated prices, reducing the average year-over-year change in customer bills over the term of OPG's current application. Following the amendment, in March 2017, OPG submitted a modified rate smoothing proposal to the OEB to reflect the new requirements of the regulation, as part of the application for new regulated prices. OPG expects to recognize amounts deferred under rate smoothing as income in the period to which the underlying approved revenue requirements relate.

In March 2017, the OEB approved a settlement agreement reached by OPG and intervenors on a limited set of issues in OPG's application (Settlement Agreement). Among the settled issues, the agreement provided for the continuation of all applicable existing variance and deferral accounts and accepted a number of variance and deferral account balances for recovery, as requested in OPG's application. In addition, the Settlement Agreement accepted OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017 to 2021 period. The Settlement Agreement did not impact OPG's financial results for the three months ended March 31, 2017.

The OEB conducted 23 public oral hearing days on the unsettled issues in OPG's application between February 27, 2017 and April 13, 2017, as part of an overall public proceeding on the application. Final arguments in the proceeding are scheduled to be completed by June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected in the second half of 2017.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 percent on average for all residential consumers in the province. As part of the Plan, the Province has proposed refinancing a portion of the Global Adjustment costs over a longer time period for Regulated Price Plan eligible customers (e.g., residential, farm, small businesses). On May 11, 2017, the Province introduced legislation that, if passed, will enable the IESO and OPG to work together to implement this financing as requested by the Province. Any final agreement to implement OPG's involvement with the Plan is subject to approval by OPG's Board of Directors, which has established a Special Committee to provide oversight on behalf of the Board of Directors. **[MONITOR]**

Shareholder Declaration and Shareholder Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution requiring the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. A purchase and sale agreement was executed in December 2016, and the sale was completed in April 2017. An after-tax gain on sale of approximately $280 million **[MONITOR]** was recognized upon completion of the transaction in the second quarter of 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the act, into the Province's Consolidated Revenue Fund. OPG is working with the Ministry of Finance to finalize the prescribed costs incurred in connection with the disposition of the sale and the designated proceeds that will be transferred into the Trillium Trust Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. OPG is in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund. **[MONITOR]**

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business, and are reported under the Services, Trading, and Other Non-Generation segment.

CORE BUSINESS, STRATEGY, AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

The following sections provide an update to OPG's disclosures in the 2016 annual MD&A related to its four key strategic imperatives – operational excellence, project excellence, financial strength, and social licence. A detailed discussion of these strategic imperatives is included in the 2016 annual MD&A in the section, *Core Business, Strategy, and Outlook*.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Public Safety

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for individuals living or working near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), which is an international unit of radiation dose measurement. For 2016, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.6 μSv and 1.5 μSv, respectively, which is approximately 0.1 percent and 0.2 percent of the annual legal limit of 1,000 μSv, respectively.

Electricity Generation Production and Reliability

- As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will remain fit for service for operation to 2024. OPG is also nearing completion of component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently set at the end of 2020, are expected to be reassessed, after the required fuel channel maintenance strategies in support of extended operations have been implemented on the initial units, taking into account the requirement for the Canadian Nuclear Safety Commission's (CNSC) approval, discussed below.
- OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. Work on the Pickering licence renewal application is proceeding and is expected to be filed August 31,

2017 for the CNSC's approval in 2018. The requested licence renewal will span the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. OPG will submit a Periodic Safety Review, Global Assessment Report, and Integrated Implementation Plan (IIP) for the station to the CNSC as part of the licence renewal.

- In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications were presented to the CNSC at public hearings in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018. Renewal decisions on the WWMF and PWMF licences are expected to be issued prior to expiry of the respective current licences. **[MONITOR]**
- During the first quarter of 2017, OPG completed the reservoir refurbishment at Sir Adam Beck Pump GS and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.
- Work continues on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 1 of the Sir Adam Beck Pump GS, and the overhaul and upgrade of Unit 1 of the Harmon GS.
- Work continues work on the replacement of the Station Service System at R.H. Saunders GS and Synchronizing Breakers at Lennox GS.
- OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS.
- Later in 2017, OPG will be starting definition phase activities, including engineering studies, condition assessments, and stakeholder engagement, as part of a Water Conveyance System project to restore structural integrity, flow capacity and ensure safe and reliable operations, of the Sir Adam Beck 1 GS canal and associated structures, for approximately the next 50 years.

As part of streamlining OPG's hydroelectric operations, OPG will be reducing from five regional hydroelectric offices to four by integrating the Central Operations group into its existing operations. This will result in operational efficiency improvements. Currently, work is in progress to plan and implement this change.

OPG continues to progress on its plan to remove site structures from Nanticoke GS. Project milestones in 2017 include the elimination of coal yard equipment and structures and removal of ash silos, and the selection of a contractor to remove the stacks, the powerhouse, interior equipment and supporting site structures.

Environmental Performance

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. OPG has an internal program to meet its GHG emissions compliance obligations. With OPG's low GHG emitting fleet, these obligations do not have a material financial impact on the Company. The Ontario MOECC held the first quarterly auction of GHG allowances on March 22, 2017.

Disclosures related to the Company's environmental policy and environmental risks can be found in OPG's 2016 annual MD&A.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. The status updates for OPG's major projects as of March 31, 2017 are outlined in the following table with further details below.

Project	Capital expenditures		Approved budget	Expected in-service date	Current status
(millions of dollars)	Year-to-date	Life-to-date			
Darlington Refurbishment	306	3,491	12,800 [1]	First unit - 2020 Last unit - 2026	Islanding of Unit 2 was completed in April 2017. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies is in progress. The project is tracking on schedule and on budget.
Peter Sutherland Sr. Hydroelectric GS	22	258	300	2017	The station was placed in-service on March 31, 2017, ahead of the originally planned schedule, and is expected to close below the approved budget. Refer to the section, *Core Business, Strategy, and Outlook* under the heading, *Recent Developments* for further details.
Sir Adam Beck Pump GS Reservoir Refurbishment	2	48	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget.
Ranney Falls Hydroelectric GS	2	5	77	2019	Project definition work has been completed and site clearing and mobilization work has commenced.
Nanticoke Solar Facility	1	2		2019	Project definition work is in progress and construction is planned to commence as early as in the fourth quarter of 2017.
Deep Geologic Repository for low and intermediate level radioactive waste (L&ILW)	2 [2]	197 [2]			Additional information requested by the Canadian Environmental Assessment Agency (CEAA) based on their review of the material submitted by OPG in December 2016 is being prepared and will be submitted by May 26, 2017.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, ahead of schedule, with a total of 480 fuel channels de-fuelled. Islanding of Unit 2, the physical separation of the refurbishment unit from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second segment commenced immediately following the islanding of the unit. The second segment continues the preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening the reactor air lock doors, installation of shielding, setting up specialized tooling and equipment, and commencing the disassembly and removal of reactor components. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. The project is tracking on schedule and budget.

A number of pre-requisite projects in support of the execution phase of the project, including construction of facilities, infrastructure upgrades and installation of safety enhancements, have been completed. This includes the Containment Filtered Venting System and the Third Emergency Power Generator safety enhancement projects that were placed in-service in April 2017 **[MONITOR]**. Completion of the Heavy Water Storage and Drum Handling Facility has been delayed due to challenges with construction. Remediation measures are in progress **[UPDATE]**. This delay will not impact the overall Darlington Refurbishment project schedule, as the Heavy Water Storage and Drum Handling Facility is not on the critical path. The remaining projects are tracking for completion within the overall refurbishment execution schedule. **[UPDATE]**

In addition to the de-fuelling and islanding of Unit 2 completed, the following other key project activities are continuing in 2017:

- Completion of preparation activities to support Retube and Feeder Replacement work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Re-tube Waste Processing Building Facility.
- Continued construction of the Heavy Water Storage and Drum Handling.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of Unit 3, and is entering into associated commitments to procure major components that require long-lead times. As of March 31, 2017, $43 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The work on the project included installation of a new partial liner and construction of a grout

curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

In the first quarter of 2017, OPG completed the contractor selection process and awarded contracts for the construction of a 10 MW single-unit powerhouse on the existing Ranney Falls GS site, as part of the Regulated – Hydroelectric segment. The new unit will replace an existing unit that reached its end of life in 2014. The civil contractor has begun site clearing and mobilization. The expected in-service date is in the fourth quarter of 2019 with a budget of $77 million.

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands under a Large Renewable Procurement contract with the IESO, through Nanticoke Solar LP, is planned to commence as early as in the fourth quarter of 2017. In the first quarter of 2017, OPG purchased SunEdison Canadian Construction LP's (SECCLP) interests in Nanticoke Solar LP, originally a partnership between OPG, SECCLP and a subsidiary of the Six Nations of the Grand River Development Corporation, and is working to obtain approvals and permits required to enable the commencement of construction. The facility is expected to be completed in the first quarter of 2019.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the Environmental Assessment (EA) to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and potential for cumulative environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization were to be located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following CEAA's review of OPG's submission and a period of public comment, the CEAA has requested additional information from OPG. OPG has reviewed the information request and will respond to the CEAA by May 26, 2017. An EA Decision Statement by the Minister is expected by the fourth quarter of 2017. Based on the information submitted to the Minister in December 2016, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

OPG anticipates a site preparation and construction licence may be issued in the first half of 2018, if the EA Decision Statement supports licensing. OPG has initiated work to ensure all licensing-related submissions will be completed and ready to be submitted to the CNSC for an expeditious license review. In addition, work has been initiated to seek OPG's Board of Directors' approval to proceed to the definition phase work in 2018. This includes completion of engineering design activities. OPG also continues its engagement with the Saugeen Ojibway Nations toward

securing community support for the L&ILW DGR. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction. **[CONFIRM]**

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application incorporates a rate smoothing proposal, as amended in March 2017. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impacts on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the nuclear rate base, effective in early 2020, to reflect the planned placement in service of approximately $4.8 billion of capital expenditures upon the scheduled return to service of Unit 2 at the Darlington GS as part of the Darlington Refurbishment project and, effective in 2017, an increase in the deemed capital structure applied to the total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt reflected in the existing regulated prices. If approved, this would improve OPG's return on Shareholder's investment.

A public oral hearing on OPG's application commenced in late February 2017 and was completed in April 2017, with final arguments scheduled to be completed by June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected in the second half of 2017. Further details on OPG's rate application can be found in the section, *Highlights* under the heading, *Recent Developments*.

For generation assets that do not form part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements. In line with this strategy, virtually all of OPG's non-regulated operating facilities and assets under construction are subject to long-term Energy Supply Agreements (ESAs) or other long-term contracts with the IESO. This includes the Peter Sutherland Sr. GS, which will begin earning contracted revenue under its hydroelectric ESA once the IESO confirms commercial operation, but effective on March 31, 2017. The ESA expires in 2067. **[CONFIRM]**

Ensure Availability of Cost Effective Funding

In April 2017, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook.

Social Licence

As the largest electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish these relationships based on

a foundation of respect for the languages, customs, and political, social and cultural organizations of the Indigenous communities. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, such as the construction of the Peter Sutherland Sr. GS in partnership with Taykwa Tagamou Nation and the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River. In March 2017, the Peter Sutherland Sr. GS was placed in-service and, in April 2017, the Taykwa Tagamou Nation acquired a 33 percent interest in PSS under the partnership agreement. OPG also continues to engage with Indigenous communities regarding the Company's regulated nuclear waste operations, through regularly scheduled meetings and ongoing dialogue in connection with OPG's proposed L&ILW DGR, and the re-licensing of the PWMF and the WWMF.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of costs and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's current application for new regulated prices is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017 in its decision on the application. This would allow OPG to recover the difference between the approved new regulated prices and the existing regulated prices for the period between January 1, 2017 and the implementation date of the new prices based on the OEB's order.

The continuation of existing regulated prices until the OEB's decision on OPG's application is issued is expected to continue to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI during 2017, compared to 2016. In large part, this is due to the year-over-year reduction in nuclear electricity generation resulting from the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined in 2014 based on a higher production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision issuance, could have a significant impact on OPG's financial results during 2017. OPG's application for new regulated prices is further discussed in the section, *Highlights* under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. As expected, combined with the expiry of rate riders in effect to the end of 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment outage, this will result in lower cash flow from operations and a lower FFO Adjusted Interest Coverage ratio in 2017, compared to 2016. The continuation of existing base regulated prices until such time as new prices are determined and implemented by the OEB also is expected to contribute to lower cash flow from operations in 2017. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements.

Lower nuclear generation due to the Darlington refurbishment outages will continue to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Variability in sustaining capital investment expenditures, including major sustaining projects for the hydroelectric operations, also will impact the Enterprise TGC in future periods.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, these variance accounts include those related to the revenue impact of variability in water flows and forgone production due to SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Considering the impact of the variance and deferral accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow from operations going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric and other development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI. In the short term, these factors can be volatile and cause fluctuations in the Company's income. This volatility is partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account and, as discussed below, the funded status of the two segregated funds.

As does not have the right to withdraw surplus amounts from the Nuclear Segregated Funds when the segregated funds are overfunded relative to the life cycle funding liability pursuant an approved ONFA Reference Plan, OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle funding liability per the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus in the Decommissioning Segregated Fund that it may direct to the Used Fuel Fund in accordance with the ONFA, up to the amount, if any, by which the Used Fuel Fund is underfunded. This reduces the volatility of earnings on the Nuclear Segregated Funds reflected in net income when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at March 31, 2017, the Decommissioning Segregated Fund was overfunded by approximately 24 percent, and the Used Fuel Segregated Fund was marginally overfunded, by less than one percent, based on the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**652**	926
Fuel expense	**68**	81
Gross margin	**584**	845
Operations, maintenance and administration	**589**	563
Depreciation and amortization	**107**	230
Property taxes	**6**	7
(Loss) income before other losses, interest, and income taxes	**(118)**	45
Other gains	**-**	(1)
(Loss) income before interest and income taxes	**(118)**	46

Segment earnings decreased by $164 million during the first quarter of 2017, compared to the same quarter in 2016. The decrease in earnings was expected and primarily due to reduced revenue from the nuclear base regulated price of approximately $134 million, partly offset by the largely associated decrease in fuel expense of $13 million, reflecting lower electricity generation of 2.3 TWh and the continuation of the existing nuclear base regulated price set by the OEB in 2014. The existing regulated price continues to be in effect pending the OEB's decision on OPG's application for new regulated prices, proposed to be effective on January 1, 2017. The lower nuclear generation was primarily due to the ongoing Unit 2 refurbishment outage at the Darlington GS that began October 2016. The existing regulated price does not reflect the lower generation as a result of the refurbishment outage, as that price were set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume based on the 2014 and 2015 outage profile that did not include a refurbishment outage. The year-over-year reduction in nuclear electricity generation was partially offset by the impact of the decreased number of planned outage days at the Pickering GS in the first quarter of 2017, compared to the same quarter in 2016.

The increase in OM&A expenses of $26 million in the first quarter of 2017, compared to the same quarter in 2016, also contributed to lower segment earnings. The increase in OM&A expenses reflected use of temporary staff and planned hiring to fill vacant positions due to attrition, and higher material costs related to maintenance work at the nuclear stations.

The expiry of an OEB-authorized nuclear rate rider on December 31, 2016 contributed to the decrease in segment revenue in the first quarter of 2017, compared to the same quarter in 2016. As rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this decrease in revenue was largely offset by a decrease in amortization expense related to regulatory account balances. A new rate rider has been requested in OPG's application with the OEB for new regulated prices effective January 1, 2017.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2017 and 2016 were as follows:

	Three Months Ended March 31 2017	2016
Unit Capability Factor *(%)* [1]		
Darlington GS	**85.3**	97.2
Pickering GS	**78.5**	72.8

[1] The nuclear Unit Capability Factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS decreased in the first quarter of 2017, compared to the same quarter in 2016, primarily due to a higher number of unplanned outage days at the station in the first quarter of 2017.

The increase in the Unit Capability Factor at the Pickering GS in the first quarter of 2017, compared to the same quarter in 2016, was primarily due to a lower number of planned outage days at the station in the first quarter of 2017.

Regulated – Nuclear Waste Management Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**27**	34
Operations, maintenance and administration	**29**	36
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**234**	228
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Loss before interest and income taxes	**(47)**	(83)

Earnings from the segment improved by $36 million in the first quarter of 2017 compared to the same quarter in 2016. The year-over-year improvement in earnings was primarily due to higher earnings from the Nuclear Segregated Funds.

Higher earnings on the Used Fuel Segregated Fund, net of the impact of the Bruce Lease Net Revenue Variance Account, were the primary reasons for the higher Nuclear Segregated Fund earnings during the first quarter of 2017, compared to the same period in 2016. As the Used Fuel Segregated Fund was overfunded as at December 31, 2016 and March 31, 2017, the earnings on the fund recorded in income during the first quarter of 2017 were based at the growth rate of the present-value used fuel life cycle funding liability per the 2017 ONFA Reference Plan. During the first quarter of 2016, the Used Fuel Segregated Fund was underfunded based on the ONFA reference plan then in effect and therefore earnings on the fund reflected the CPI-adjusted rate of return guaranteed by the Province under the ONFA for funding related to the initial 2.23 million used fuel bundles and market returns on the portion of the fund not guaranteed by the Province.

As of December 31, 2016, OPG recorded a decrease of approximately $1,570 million to the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities) and associated asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to reflect the comprehensive update of the underlying assumptions and baseline cost estimates for these liabilities carried out as part of the 2017 ONFA Reference Plan update process. The resulting year-over-year decreases in accretion on fixed asset removal and nuclear waste management liabilities recorded in the Regulated – Nuclear Waste Management segment and depreciation and fuel expenses recorded in the Regulated – Nuclear Generation segment during the first quarter of 2017, compared to the same quarter in 2016, were largely offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account authorized by the OEB. Further details on the change in the estimate of the Nuclear Liabilities as of December 31, 2016 are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Asset Retirement Obligation*.

Under the current OEB-approved cost recovery methodology, the changes in expenses associated with the year-end 2016 adjustment to the Nuclear Liabilities are not expected to materially affect OPG's income during 2017, as the associated impact on expenses is expected to continue to be largely offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently to be offset by the impact of the new regulated prices.

Regulated – Hydroelectric Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue [1]	**363**	385
Fuel expense	**73**	79
Gross margin	**290**	306
Operations, maintenance and administration	**76**	76
Depreciation and amortization	**34**	56
Income before other gains, interest and income taxes	**180**	174
Other gains	**-**	(22)
Income before interest and income taxes	**180**	196

[1] During the three months ended March 31, the Regulated – Hydroelectric segment revenue included incentive payments of $8 million in 2017 and $1 million in 2016 related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $16 million during the first quarter of 2017, compared to the same period in 2016, was primarily due to a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to a motion by OPG. The decrease in income was partially offset by higher hydroelectric incentive mechanism payments in the first quarter of 2017.

The decrease in revenue was largely due to the expiry of an OEB-authorized rate rider on December 31, 2016. As the rider allowed for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, the resulting reduction in revenue was largely offset by lower amortization expense related to the regulatory account balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	Three Months Ended March 31 2017	2016
Hydroelectric Availability *(%)*	**89.5**	94.8

The Hydroelectric Availability decreased in the first quarter of 2017, compared to the same period in 2016, primarily due to the reservoir refurbishment project at the Sir Adam Beck Pump GS and a higher number of unplanned outage days for the regulated hydroelectric stations.

Contracted Generation Portfolio Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**143**	145
Fuel expense	**14**	12
Gross margin	**129**	133
Operations, maintenance and administration	**39**	40
Depreciation and amortization	**19**	19
Accretion on fixed asset removal liabilities	**2**	2
Property taxes	**2**	2
Income from investments subject to significant influence	**(10)**	(8)
Income before interest and income taxes	**77**	78

Income before interest and income taxes decreased by $1 million during the first quarter of 2017, compared to the same period in 2016. The decrease primarily resulted from lower revenues from the Lower Mattagami River generating stations. The decrease was partially offset by higher gross margin from the Lennox GS, which was primarily due to increased market demand.

The Hydroelectric Availability and the Thermal Equivalent Forced Outage Rate (EFOR) for the Contracted Generation Portfolio segment were as follows:

	Three Months Ended March 31 2017	2016
Hydroelectric Availability *(%)*	**83.6**	83.9
Thermal EFOR *(%)*	**12.6**	0.9

The Hydroelectric Availability in the first quarter of 2017, was comparable to the same period in 2016. The higher thermal EFOR in the first quarter of 2017, compared to the same period in 2016, was primarily due to a higher number of unplanned outage days at a Lennox GS unit as a result of a transmission outage.

Services, Trading, and Other Non-Generation Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**17**	21
Gross margin	**17**	21
Operations, maintenance and administration	**1**	4
Depreciation and amortization	**7**	7
Accretion on fixed asset removal liabilities	**2**	2
Property taxes	**3**	3
Loss before other losses, interest, and income taxes	**4**	5
Other gains	**(3)**	-
Income before interest and income taxes	**7**	5

Segment earnings increased by $2 million during the first quarter of 2017, compared to the same quarter in 2016, due to lower OM&A expenses reflecting the decision, in the fourth quarter of 2016, to proceed with the decommissioning of the Lambton GS, and dividend income from OPG's investment in Hydro One Limited (Hydro One) shares acquired in April 2016. OPG acquired the shares for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union and The

Society of Energy Professionals. The increase in segment earnings was partially offset by lower revenues from the Company's electricity trading activities in the first quarter of 2017.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies, to undertake major projects, to fund long-term obligations such as contributions to the pension fund and the Nuclear Segregated Funds, to make payments under the OPEB plans, to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, and to service and repay long-term debt.

Changes in cash and cash equivalents for the three months ended March 31, 2017 and 2016 were as follows:

	Three Months Ended March 31	
(millions of dollars) (unaudited)	**2017**	**2016**
Cash and cash equivalents, beginning of period	**186**	464
Cash flow provided by operating activities	**118**	366
Cash flow used in investing activities	**(363)**	(310)
Cash flow used in financing activities	**279**	20
Net increase	**34**	76
Cash and cash equivalents, end of period	**220**	540

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details in the section, *Highlights* under the heading, *Overview of Results*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities during the first quarter of 2017 increased by $53 million compared to the same quarter in 2016. The increase was primarily due to higher expenditures on the Darlington Refurbishment project, offset by the staggered maturity of a structured deposit note entered in 2015 in support of the Peter Sutherland Sr. GS project. The principal amount of the deposit note that matured in the first quarter of 2017 was higher than in the same quarter in 2016. The final maturity date of the deposit note was in April 2017.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG expects to renew and extend the expiry date of both tranches from May 2021 to May 2022. There were no amounts outstanding under the bank credit facility as at March 31, 2017.

There was $133 million of commercial paper outstanding under OPG's commercial paper program as at March 31, 2017.

As at March 31, 2017, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at March 31, 2017, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust, expiring on November 30, 2018. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. As at March 31, 2017, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

As at March 31, 2017, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at March 31, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at March 31, 2017. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. As at March 31, 2017, there were outstanding long-term borrowings of $200 million under this credit facility.

As at March 31, 2017, OPG's long-term debt outstanding was $5,684 million, including $1,328 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent.

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's unaudited interim consolidated financial position using selected balance sheet data:

(millions of dollars) (unaudited)	As At March 31 2017	As At December 31 2016
Property, plant and equipment – net	**20,248**	19,998
The increase was primarily due to capital expenditures on the Darlington Refurbishment project, partially offset by depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**16,157**	15,984
The increase was primarily due to earnings on the Nuclear Segregated Funds, partially offset by reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Short-term debt	**135**	2
The increase was due to commercial paper issued under OPG's commercial paper program.		
Long-term debt *(current and non-current portions)*	**5,670**	5,520
The increase was primarily due to the issuance of senior notes payable to the OEFC totalling $200 million in February 2017.		
Fixed asset removal and nuclear waste management liabilities	**19,683**	19,484
The increase was primarily as a result of accretion expense representing the increase in the present value liabilities due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		

Pension & OPEB Cash Versus Accrual Differential Deferral Account

In setting OPG's regulated prices effective November 1, 2014, the OEB limited the recovery of the regulated portion of OPG's pension and OPEB costs to the Company's cash expenditures for its pension and OPEB plans. Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account, which records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and OPG's corresponding actual cash expenditures for these plans. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The Company has recognized the amount set aside in the Pension & OPEB Cash Versus Accrual Differential Deferral account as a regulatory asset. As at March 31, 2017, the regulatory asset balance was $517 million, which represents the excess of pension and OPEB costs calculated using the accrual basis in accordance with US GAAP over the corresponding cash expenditures for the period from November 1, 2014 to March 31, 2017.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and OPG's corresponding cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the OEB's consultation process. If, as part of the above consultation process or another proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory asset for the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's interim consolidated financial statements or are recorded in the Company's interim consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies are outlined in Note 3 to the audited consolidated financial statements as at and for the year ended December 31, 2016. A discussion of recent accounting pronouncements is included in Note 2 to OPG's unaudited interim consolidated financial statements as at and for the three months ended March 31, 2017 under the heading, *Significant Accounting Policies and Estimates*. Disclosure regarding OPG's critical accounting policies is included in OPG's 2016 annual MD&A.

RISK MANAGEMENT

The following provides an update to the discussion of the Company's risks and risk management activities included in OPG's 2016 annual MD&A. As such, the disclosure in this section should be read in conjunction with the *Risk Management* section included in the annual MD&A.

Financial Risks

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017 [1]	2018	2019
Estimated fuel requirements hedged [2]	75%	74%	63%

[1] Based on actual fuel requirements hedged for the three months ended March 31, 2017 and forecast for the remainder of the year.

[2] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to, US dollars. To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at March 31, 2017, OPG had no foreign exchange contracts outstanding.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. For the first quarter of 2017, the VaR utilization ranged between $0.1 million and $0.3 million.

Credit

Deterioration in energy markets counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

OPG manages its exposure to suppliers or counterparties by evaluating their financial condition and negotiating appropriate collateral or other forms of security. OPG's credit exposure relating to energy markets transactions as at March 31, 2017 was $361 million, including $348 million to the IESO. Management considers the Company's risk exposure relating to electricity sales through the IESO-administered spot market to be low as the IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market. Of the $13 million remaining exposure as at March 31, 2017, over 95 percent was related to investment grade counterparties.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The

transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions are summarized below:

	Three Months Ended March 31			
	2017		2016	
(millions of dollars) (unaudited)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**4**	**-**	2	-
Services	**1**	**5**	1	5
Dividends	**2**			
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**163**	-	(177)
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**217**	-	(159)
Hydroelectric gross revenue charge	**-**	**28**	-	31
ONFA guarantee fee	**-**	**2**	-	2
OEFC				
Gross revenue charge	**-**	**38**	-	37
Interest expense on long-term notes	**-**	**41**	-	42
Income taxes, net of investment tax credits	**-**	**12**	-	32
IESO				
Electricity related revenue	**1,073**	**6**	1,364	10
	1,080	**512**	1,367	(177)

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at March 31, 2017 and December 31, 2016, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,795 million and $3,415 million, respectively. The details of accounting for the Nuclear Funds are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars) (unaudited)	**March 31 2017**	**December 31 2016**
Receivables from related parties		
Hydro One	**1**	1
IESO	**348**	421
OEFC	**5**	1
PEC	**4**	4
Province of Ontario	**4**	2
Available-for-sale securities		
Hydro One shares	**218**	212
Accounts payable and accrued charges		
Hydro One	**-**	-
OEFC	**45**	61
Province of Ontario	**7**	2
IESO	**2**	2
Long-term debt (including current portion)		
Notes payable to OEFC	**3,445**	3,295

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at March 31, 2017, the Nuclear Segregated Funds and the registered pension fund held $1,650 million and $237 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

The Company maintains a comprehensive system of policies, procedures, and processes that represents its framework for internal controls over financial reporting and for its disclosure controls and procedures (together, ICOFR). There were no changes in the Company's internal control system during the current interim period that has or is reasonably likely to have a material impact to the ICOFR.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected financial information from OPG's unaudited interim consolidated financial statements for each of the eight most recently completed quarters.

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**March 31 2017**	**December 31 2016**	**September 30 2016**	**June 30 2016**
Revenue	**1,176**	**1,388**	**1,400**	**1,387**
Net income (loss)	**68**	**(8)**	**198**	**135**
Less: Net income attributable to non-controlling interest	**4**	**5**	**4**	**3**
Net income (loss) attributable to the Shareholder	**64**	**(13)**	**194**	**132**
Per common share, attributable to the Shareholder *(dollars)*	**$0.25**	**($0.05)**	**$0.76**	**$0.51**

(millions of dollars – except where noted) *(unaudited)*	**March 31 2016**	**December 31 2015**	**September 30 2015**	**June 30 2015**
Revenue	1,478	1,312	1,426	1,383
Net income (loss)	128	(100)	85	193
Less: Net income attributable to non-controlling interest	5	1	5	4
Net income (loss) attributable to the Shareholder	123	(101)	80	189
Per common share, attributable to the Shareholder *(dollars)*	$0.48	($0.39)	$0.31	$0.74

Trends

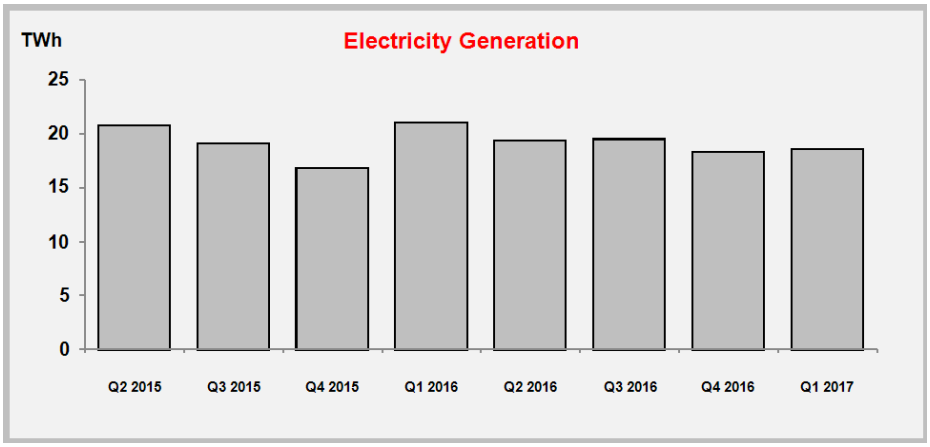
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues have been higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of forgone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

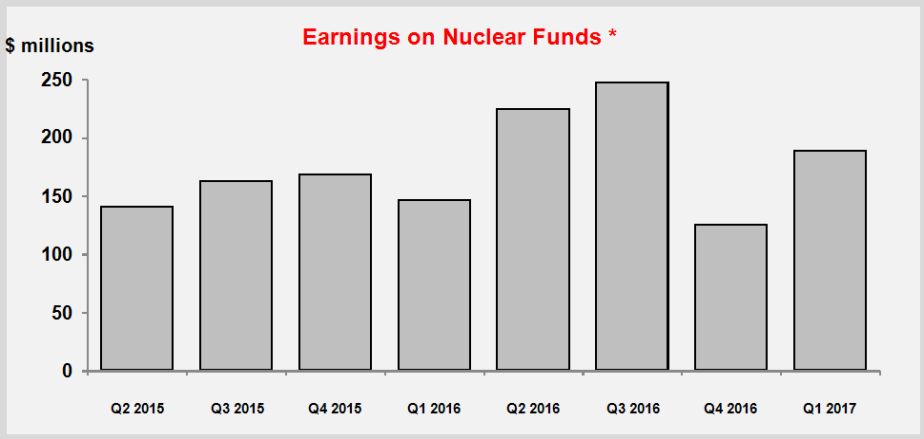
The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington Vacuum Building Outage (VBO), which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

During the fourth quarter of 2016 and the first quarter of 2017, OPG's electricity generation was reduced as a result of the Unit 2 refurbishment outage at the Darlington GS, which began in October 2016 and is expected to continue until early 2020.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items that affected net income in certain quarters above are described in OPG's 2016 annual MD&A in the section, *Quarterly Financial Highlights*.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder, improve cost performance, and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow provided by operating activities, or any other measure in accordance with US GAAP, but as indicators of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE Excluding AOCI is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended March 31 2017	December 31 2016
ROE Excluding AOCI		
Net income attributable to the Shareholder	**377**	436
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,834**	10,442
ROE Excluding AOCI *(percent)*	**3.5**	4.2

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended March 31 2017	December 31 2016
FFO before interest		
Cash flow provided by operating activities	**1,457**	1,705
Add: Interest paid	**268**	269
Less: Interest capitalized to fixed and intangible assets	**(152)**	(141)
Add: Changes to non-cash working capital balances	**(22)**	(68)
FFO before interest	**1,551**	1,765
Adjusted interest expense		
Net interest expense	**106**	120
Add: Interest income	**5**	7
Add: Interest capitalized to fixed and intangible assets	**152**	141
Add: Interest related to regulatory assets and liabilities	**32**	30
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**10**	45
Adjusted interest expense	**305**	343
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.1

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding the Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation from OPG-operated generating stations plus electricity generation forgone due to SBG conditions during the period.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Enterprise TGC		
Total OM&A expenses	**708**	686
Total fuel expense	**155**	172
Total capital expenditures	**408**	320
Less: Darlington Refurbishment capital and OM&A costs	**(309)**	(205)
Less: Other generation development project capital and OM&A costs	**(17)**	(38)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(11)**	18
Less: Nuclear fuel expense for non OPG-operated stations	**(13)**	(17)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**11**	18
Less: OM&A expenses ancillary to electricity generation business	**(5)**	(5)
Other adjustments	**(2)**	(5)
	925	944
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**18.6**	21.0
Adjust for electricity generation forgone due to SBG conditions and OPG's share of electricity generation from co-owned facilities	**0.7**	1.6
	19.3	22.6
Enterprise TGC per MWh *($/MWh)* [1]	**47.86**	**41.82**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**589**	563
Regulated – Nuclear Generation fuel expense	**68**	81
Regulated – Nuclear Generation capital expenditures	**366**	249
Less: Darlington Refurbishment capital and OM&A costs	**(309)**	(205)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(2)**	24
Less: Nuclear fuel expense for non OPG-operated stations	**(13)**	(17)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(1)**	(1)
Other adjustments	**-**	(1)
	698	693
Nuclear electricity generation *(TWh)*	**10.0**	12.3
Nuclear TGC per MWh *($/MWh)* [1]	**69.87**	56.37

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation forgone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**76**	76
Regulated – Hydroelectric Generation fuel expense	**73**	79
Contracted Generation Portfolio OM&A expenses	**39**	40
Contracted Generation Portfolio fuel expense	**14**	12
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**37**	59
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(16)**	(37)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(39)**	(37)
Less: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(9)**	(7)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**11**	18
Other adjustments	**(1)**	2
	185	205
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**8.0**	7.9
Contracted Generation Portfolio electricity generation	**0.6**	0.8
Adjust for hydroelectric electricity generation forgone due to SBG conditions and non-hydroelectric electricity generation of the Contracted Generation Portfolio	**0.7**	1.6
	9.3	10.3
Hydroelectric TGC per MWh *($/MWh)*[1]	**19.79**	19.94

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

For further information, please contact:

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From: Deena Padamadan
To: Ronald Kwan
Subject: FW: OPG Q1 2017 Submission to Province
Date: Tuesday, May 02, 2017 4:22:46 PM
Attachments: Q1 2017 MDA - DRAFT - PROVINCE MAILINGSIFB edit v3.docx

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Hi Ron,

Please see attached for your review. This version includes the edits from SIFB (already sent yesterday to you at 2:45pm yesterday) plus a few edits from EFB.
For timing, this is due EoD today.

Thanks,
Deena

From: John Kim
Sent: Tuesday, May 02, 2017 4:04 PM
To: Deena Padamadan <Deena.Padamadan@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Subject: RE: OPG Q1 2017 Submission to Province

Hi Deena,

Some very minor edits.

John

From: John Kim
Sent: Tuesday, May 02, 2017 1:26 PM
To: Deena Padamadan <Deena.Padamadan@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Subject: RE: OPG Q1 2017 Submission to Province

Thanks for the reminder. Will get back to you on this.

John

From: Deena Padamadan
Sent: Tuesday, May 02, 2017 1:20 PM
To: John Kim <John.Kim@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Subject: RE: OPG Q1 2017 Submission to Province

Hi Bruno & John,

Checking in if EFB has any edits on this, as it's due EoD today.

Thanks,
Deena

From: Francisco Chinchon
Sent: Monday, May 01, 2017 2:45 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Subject: RE: OPG Q1 2017 Submission to Province

Hi,

We have a few relatively minor edits, in particular, with respect to the sale of the OPG HQ. Also, note they are updating the figure to $280M after tax.

Thanks,

Francisco

From: Ronald Kwan
Sent: Friday, April 28, 2017 5:06 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Subject: FW: OPG Q1 2017 Submission to Province

Hi,

Please review.

Thanks,
Ron

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: April-28-17 17:04
To: 'Shruti.Talwar@ontario.ca' <Shruti.Talwar@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>
Subject: OPG Q1 2017 Submission to Province

Hi All,

Please find attached OPG's draft Q1 2017 Management's Discussion and Analysis (MD&A) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, May 2nd**.

These documents will be filed with the Ontario Securities Commission on **Friday, May 12th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q1 2017 MD&A:

Highlights	
Recent Developments	MD&A p.9-11
Darlington Refurbishment	MD&A p.9; 13-14
Ontario's Fair Hydro Plan	MD&A p.10
Peter Sutherland Sr. GS project	MD&A p.9, 13

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

2017 FIRST QUARTER REPORT

[DRAFT]

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ONTARIO POWER GENERATION

ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the unaudited interim consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the three months ended March 31, 2017. OPG's unaudited interim consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

For a complete description of OPG's corporate strategies, risk management, corporate governance, and the effect of critical accounting policies and estimates on OPG's results of operations and financial condition, this MD&A should also be read in conjunction with OPG's audited consolidated financial statements, accompanying notes, the Annual Information Form, and the MD&A as at and for the year ended December 31, 2016.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Exemptive Relief for Reporting under US GAAP,* in OPG's 2016 annual MD&A. This MD&A is dated May 12, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy, and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), Total Generating Cost (TGC) and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at March 31, 2017, OPG's electricity generation portfolio had an in-service capacity of 16,205 megawatts (MW). OPG operates two nuclear generating stations, 66 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report. A description of OPG's segments is provided in OPG's 2016 annual MD&A in the section, *Business Segments*.

All of OPG's owned and co-owned generating facilities are located in Ontario. OPG does not operate PEC, Brighton Beach, the Bruce A GS and the Bruce B GS.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of March 31, 2017 and December 31, 2016 was as follows:

	As at	
(MW)	**March 31 2017**	**December 31 2016**
Regulated – Nuclear Generation [1]	**5,728**	5,728
Regulated – Hydroelectric	**6,421**	6,421
Contracted Generation Portfolio [2]	**4,056**	4,028
Total	**16,205**	16,177

[1] The in-service generating capacity as of March 31, 2017 and December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

During the three months ended March 31, 2017, the total in-service capacity increased by 28 MW. The increase was due to the completion of Peter Sutherland Sr. hydroelectric GS, which was placed in-service on March 31, 2017. The Peter Sutherland Sr. GS is discussed in the section, *Highlights* under the heading, *Recent Developments*.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's unaudited interim consolidated operating results. Significant factors which contributed to OPG's results during the three months ended March 31, 2017, compared to the same period in 2016, are discussed below.

(millions of dollars – except where noted) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**1,176**	1,478
Fuel expense	**155**	172
Gross margin	**1,021**	1,306
Operations, maintenance and administration	**708**	686
Depreciation and amortization	**167**	312
Accretion on fixed asset removal and nuclear waste management liabilities	**238**	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Income from investments subject to significant influence	**(10)**	(8)
Property taxes	**11**	12
	925	1,087
Income before other gains, interest, and income taxes	**96**	219
Other gains	**(3)**	(23)
Income before interest and income taxes	**99**	242
Net interest expense	**19**	33
Income before income taxes	**80**	209
Income tax expense	**12**	81
Net income	**68**	128
Net income attributable to the Shareholder	**64**	123
Net income attributable to non-controlling interest [1]	**4**	5
Electricity production (TWh) [2]	**18.6**	21.0
Cash flow		
Cash flow provided by operating activities	**118**	366

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $64 million for the first quarter of 2017, a decrease of $59 million compared to 2016. Income before interest and income taxes was $99 million for 2017, a decrease of $143 million compared to 2016. The following summarizes the significant factors which contributed to the variance:

Significant factors that reduced income before interest and income taxes:

- As expected, lower revenue from the nuclear base regulated price of approximately $134 million, partially offset by the largely associated decrease in fuel expense of $13 million, reflecting lower electricity generation of 2.3 terawatt hours (TWh) from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. Existing base regulated prices continue to be in effect pending the OEB's decision on OPG's current application for new regulated prices, expected in the second half of 2017. The lower nuclear generation was primarily due to the ongoing

refurbishment of Unit 2 at the Darlington GS since October 2016. The existing base regulated prices were set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. OPG has requested January 1, 2017 as the effective date of the new regulated prices. Further details on OPG's current application for new regulated prices can be found under the heading, *Recent Developments – OPG's Application for New Regulated Prices.*

- Higher operations, maintenance and administration (OM&A) expenses of $22 million, mainly in the Regulated – Nuclear Generation segment, reflecting use of temporary staff and planned hiring to fill vacant positions due to attrition, and higher material costs related to maintenance work at the nuclear stations.
- A gain of $22 million recorded in the first quarter of 2016 to reflect the OEB's decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices.

Significant factors that increased income before interest and income taxes:

- Higher earnings on the nuclear fixed asset removal and nuclear waste management funds (Nuclear Segregated Funds) of $42 million, primarily due to higher earnings on the Used Fuel Segregated Fund
- Higher hydroelectric incentive mechanism revenue of $7 million from the Regulated – Hydroelectric segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts (regulatory accounts) on December 31, 2016 contributed to the decrease in revenue in the first quarter of 2017, compared to the same period in 2016, but was primarily offset by a decrease in the amortization expense related to regulatory account balances. New rate riders have been requested in OPG's application for new regulated prices with the OEB, effective January 1, 2017.

Net interest expense decreased by $14 million in the first quarter of 2017, compared to the same quarter in 2016, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project.

Income tax expense decreased by $69 million in the first quarter of 2017, compared to the same quarter in 2016, primarily due to lower income before income taxes in the first quarter of 2017 and a higher income tax expense in the first quarter of 2016 due to a reduction in regulatory assets related to income taxes.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	Three Months Ended March 31	
	2017	**2016**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**(118)**	46
Regulated – Hydroelectric	**180**	196
Contracted Generation Portfolio	**77**	78
Total electricity generation business segments	**139**	320
Regulated – Nuclear Waste Management	**(47)**	(83)
Services, Trading, and Other Non-Generation	**7**	5
	99	242

Electricity Generation

Electricity generation was as follows:

(TWh)	Three Months Ended March 31 2017	2016
Regulated – Nuclear Generation	**10.0**	12.3
Regulated – Hydroelectric	**8.0**	7.9
Contracted Generation Portfolio [1]	**0.6**	0.8
Total OPG electricity generation	**18.6**	21.0
Total electricity generation by other generators in Ontario [2]	**18.6**	18.9

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the Independent Electricity System Operator (IESO), minus OPG electricity generation.

The lower electricity generation from the Regulated – Nuclear Generation segment in the first quarter of 2017 compared to the same quarter in 2016 was primarily a result of the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment that began in October 2016. This decrease in electricity generation was partially offset by an increase in generation from the Pickering GS, primarily due to a decrease in the number of planned outage days.

The higher electricity generation from the Regulated – Hydroelectric generating segment in the first quarter of 2017 was primarily due to a lower volume of water spilled as a result of less prevalent SBG conditions, largely offset by the impact of lower water flows on the eastern and northeastern Ontario river systems, compared to the first quarter in 2016.

The lower electricity generation from the Contracted Generation Portfolio segment was primarily the result of lower water flows on the northeastern Ontario river systems.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. For the first quarter of 2017, Ontario's electricity demand as reported by the IESO was 34.3 TWh compared to 35.2 TWh for the same quarter in 2016, which excludes electricity exports out of the province.

Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric, other grid-connected renewable resources and nuclear stations. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. While baseload generation supply surplus in Ontario was less prevalent in the first quarter of 2017 compared to the same period in 2016, OPG lost 0.8 TWh of hydroelectric generation due to SBG conditions in the first quarter of 2017. OPG lost 1.7 TWh of hydroelectric generation due to SBG conditions during the first quarter of 2016. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions during these periods was offset by the impact of a regulatory variance account authorized by the OEB. OPG did not forgo any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The same base regulated prices for electricity generated by these segments, authorized by the OEB effective November 1, 2014, were in effect during the first quarter of 2017 as in 2016. These prices will remain in effect until such time as the OEB approves new regulated prices based on OPG's current application, discussed under the heading, *Recent Developments – OPG's Application for New Regulated Prices.* The base regulated prices established in 2014 are discussed in OPG's 2016 annual MD&A in the section, *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment was 5.8 cents per kilowatt hour (¢/kWh) during the first quarter of 2017, compared to 7.0 ¢/kWh during the same quarter in 2016. The decrease in the average sales price was primarily due to the expiry, on December 31, 2016, of the OEB-authorized nuclear rate rider of $10.84 per megawatt hour (MWh) for the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment was 4.2 ¢/kWh during the first quarter of 2017, compared to 4.4 ¢/kWh during the same quarter in 2016. The decrease in average sales price was primarily due to the expiry, on December 31, 2016, of a regulated hydroelectric rate rider of $3.19/MWh for the recovery of variance and deferral account balances. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years. As such, the year-over-year changes in revenue from the rate riders were largely offset by changes in amortization expense related to regulatory account balances. There were no rate riders in effect during the first quarter of 2017 for either nuclear or regulated hydroelectric generation, pending the outcome of OPG's current application with the OEB for new regulated prices, including rate riders.

Cash Flow from Operations

Cash flow provided by operating activities for the three months ended March 31, 2017 was $118 million, compared to $366 million for the same period in 2016. As expected, the decrease in cash flow provided by operating activities in the first quarter of 2017, compared to the same quarter in 2016, was primarily due to lower generation revenue receipts reflecting lower generation from the Regulated – Nuclear Generation segment as a result of the ongoing refurbishment of Unit 2 at the Darlington GS and the expiry, on December 31, 2016, of the OEB-authorized rate riders for nuclear and regulated hydroelectric generation. The decrease in cash flow in the first quarter of 2017 was also due to higher income tax installments and higher OM&A expenditures, compared to the same quarter in 2016. The decrease in cash flow provided by operating activities was partially offset by lower pension plan contributions reflecting an updated actuarial valuation of the OPG registered pension plan filed with the Financial Services Commission of Ontario in September 2016, and lower contributions to the Used Fuel Segregated Fund and the Decommissioning Segregated Fund. Both the Used Fuel Segregated Fund and the Decommissioning Segregated Fund were determined to be fully funded based on an updated estimate of OPG's nuclear waste management and nuclear facilities decommissioning obligations pursuant to a reference plan approved by the Province, for years 2017 to 2021, under the Ontario Nuclear Funds Agreement (ONFA), effective January 1, 2017. Pursuant to the ONFA, the reference plan is required to be updated at least once every five years. Contributions to either or both of the Nuclear Segregated Funds may be required in the future should the funds be in an underfunded position at the time of the next ONFA reference plan update. The year-over-year decrease in cash flow also was partially offset by the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to a period in 2015. The lease agreement for the Bruce nuclear generating stations giving rise to this rebate was amended in late 2015 to eliminate this provision going forward.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. FFO Adjusted Interest Coverage was 5.1 times for the 12 month-periods ended March 31, 2017 and December 31, 2016. FFO Adjusted Interest Coverage in 2017 reflected a year-over-year decrease in FFO before interest due to lower cash flow provided by operating activities, offset by the

impact of a lower adjusted interest expense due to a decrease in the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets.

The decrease in the excess of interest on pension and OPEB benefit obligations over expected return on pension plan assets in 2017 was primarily due to the change in the method used to estimate the interest cost and current service cost component of pension and OPEB costs. Effective January 1, 2017, OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs in the first quarter of 2017 was largely offset by the impact of OEB-authorized variance and deferral accounts. Further details on the full yield curve approach can be found in the 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Pension and Other Post-Employment Benefits*. **[UPDATE]**

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for the 12 months ended March 31, 2017 was 3.5 percent, compared to 4.2 percent for the 12 months ended December 31, 2016. The decrease was primarily due to lower net income attributable to the Shareholder. As expected, reduced revenue due to the continuation of existing base regulated prices that do not reflect the lower nuclear generation as a result of the Unit 2 refurbishment outage at the Darlington GS negatively impacted net income and ROE Excluding AOCI for the 12-month period ended March 31, 2017. The continuation of existing base regulated prices until such time as new regulated prices are approved by the OEB later in 2017 will negatively affect OPG's ROE Excluding AOCI.

Enterprise Total Generating Cost per MWh

The Enterprise TGC per MWh was $47.86 for the three months ended March 31, 2017, compared to $41.82 for the same period in 2016. The increase in Enterprise TGC per MWh for the three months ended March 31, 2017, compared to the same period in 2016, was expected and primarily due to the decrease in electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $69.87 for the three months ended March 31, 2017, compared to $56.37 for the same period in 2016. The increase in Nuclear TGC per MWh for the three months ended March 31, 2017, compared to the same period in 2016, was expected and primarily due to the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $19.79 for the three months ended March 31, 2017, which was comparable to $19.94 for the same period in 2016.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow provided by operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016 and de-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017. Islanding of Unit 2, the physical separation of the unit under refurbishment from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second segment commenced immediately following the islanding of Unit 2. The second segment continues preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening the reactor air lock doors, installation of shielding, setting up specialized tooling and equipment, and commencing the disassembly and removal of reactor components. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. The project is tracking on schedule and budget.

The Darlington Refurbishment project is discussed further in the section, *Core Business, Strategy, and Outlook* under the heading, *Project Excellence.*

Peter Sutherland Sr. Hydroelectric GS

In March 2017, the project to construct the 28 MW two-unit Peter Sutherland Sr. hydroelectric GS successfully completed final testing and commissioning of the turbine and generator units and both units were declared substantially complete. On March 31, 2017, the project received a permit from the Ministry of Environment and Climate Change (MOECC) to take water for operations to allow the station to operate commercially. This in-service date is well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. The project is expected to close below the approved budget of $300 million, following the completion of site remediation, camp dismantling, demobilization and other project close-out activities.

The project was constructed in partnership with the Coral Rapids Power Corporation (CRP), a corporation wholly owned by the Taykwa Tagamou Nation, through the PSS Generating Station Limited Partnership (PSS). Under the partnership agreement, as the unit is placed in-service, the CRP may acquire up to a 33 percent partnership interest through its investment in PSS. In April 2017, the CRP acquired a 33 percent interest in PSS.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017, on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. For the hydroelectric facilities, the application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021, based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production. The application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment through rate riders that were in effect to December 31, 2016. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed further in the section, *Balance Sheet Highlights* under the heading, *Pension & OPEB Cash Versus Accrual Differential Deferral Account*.

Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application submission in May 2016 incorporated a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved annual nuclear revenue requirements during the period from January 1, 2017 to the end of the Darlington Refurbishment project in a deferral account for future collection.

In March 2017, the Province amended *Ontario Regulation 53/05* to require that the portion of the approved annual nuclear revenue requirements deferred for future collection under rate smoothing be determined with a view of making more stable year-over-year changes in OPG's weighted-average nuclear and hydroelectric regulated prices, including rate riders. Previously, the regulation required that the deferred amounts be determined with a view of making more stable year-over-year changes in OPG's nuclear regulated prices only, excluding rate riders. The amendment is intended to make more predictable the impact on customer bills resulting from changes in OPG's overall regulated prices, reducing the average year-over-year change in customer bills over the term of OPG's current application. Following the amendment, in March 2017, OPG submitted a modified rate smoothing proposal to the OEB to reflect the new requirements of the regulation, as part of the application for new regulated prices. OPG expects to recognize amounts deferred under rate smoothing as income in the period to which the underlying approved revenue requirements relate.

In March 2017, the OEB approved a settlement agreement reached by OPG and intervenors on a limited set of issues in OPG's application (Settlement Agreement). Among the settled issues, the agreement provided for the continuation of all applicable existing variance and deferral accounts and accepted a number of variance and deferral account balances for recovery, as requested in OPG's application. In addition, the Settlement Agreement accepted OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017 to 2021 period. The Settlement Agreement did not impact OPG's financial results for the three months ended March 31, 2017.

The OEB conducted 23 public oral hearing days on the unsettled issues in OPG's application between February 27, 2017 and April 13, 2017, as part of an overall public proceeding on the application. Final arguments in the proceeding are scheduled to be completed by June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected in the second half of 2017.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 percent on average for all residential consumers in the province. Approximately 500,000 small businesses and farms would also benefit. As part of the Plan, the Province has proposed refinancing a portion of the Global Adjustment costs over a longer time period for Regulated Price Plan eligible customers (e.g., residential, farm, small businesses). On May 11, 2017, the Province introduced legislation that, if passed, ~~will~~ would enable the IESO and OPG to work together to implement this financing as requested by the Province. Any final agreement to implement OPG's involvement with the Plan ~~is~~ would be subject to approval by OPG's Board of Directors, which has established a Special Committee to provide oversight on behalf of the Board of Directors. **[MONITOR]**

Shareholder Declaration and Shareholder Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution requiring the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. A purchase and sale agreement was executed in December 2016, and the sale was completed in April 2017. An after-tax gain on sale of approximately $280 million **[MONITOR]** was recognized upon completion of the transaction in the second quarter of 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the act, into the Province's Consolidated Revenue Fund. OPG is working with the Ministry of Finance to finalize the prescribed costs incurred in connection with the disposition of the sale and the designated proceeds that will be transferred ~~in~~to the Trillium Trust ~~Fund~~.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. OPG is in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund. **[MONITOR]**

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business, and are reported under the Services, Trading, and Other Non-Generation segment.

CORE BUSINESS, STRATEGY, AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

The following sections provide an update to OPG's disclosures in the 2016 annual MD&A related to its four key strategic imperatives – operational excellence, project excellence, financial strength, and social licence. A detailed discussion of these strategic imperatives is included in the 2016 annual MD&A in the section, *Core Business, Strategy, and Outlook*.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Public Safety

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for individuals living or working near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), which is an international unit of radiation dose measurement. For 2016, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.6 μSv and 1.5 μSv, respectively, which is approximately 0.1 percent and 0.2 percent of the annual legal limit of 1,000 μSv, respectively.

Electricity Generation Production and Reliability

- As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will remain fit for service for operation to 2024. OPG is also nearing completion of component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently set at the end of 2020, are expected to be reassessed, after the required fuel channel maintenance strategies in support of extended operations have been implemented on the initial units, taking into account the requirement for the Canadian Nuclear Safety Commission's (CNSC) approval, discussed below.
- OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. Work on the Pickering licence renewal application is proceeding and is expected to be filed August 31,

2017 for the CNSC's approval in 2018. The requested licence renewal will span the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. OPG will submit a Periodic Safety Review, Global Assessment Report, and Integrated Implementation Plan (IIP) for the station to the CNSC as part of the licence renewal.

- In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications were presented to the CNSC at public hearings in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018. Renewal decisions on the WWMF and PWMF licences are expected to be issued prior to expiry of the respective current licences. **[MONITOR]**
- During the first quarter of 2017, OPG completed the reservoir refurbishment at Sir Adam Beck Pump GS and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.
- Work continues on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 1 of the Sir Adam Beck Pump GS, and the overhaul and upgrade of Unit 1 of the Harmon GS.
- Work continues work on the replacement of the Station Service System at R.H. Saunders GS and Synchronizing Breakers at Lennox GS.
- OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS.
- Later in 2017, OPG will be starting definition phase activities, including engineering studies, condition assessments, and stakeholder engagement, as part of a Water Conveyance System project to restore structural integrity, flow capacity and ensure safe and reliable operations, of the Sir Adam Beck 1 GS canal and associated structures, for approximately the next 50 years.

As part of streamlining OPG's hydroelectric operations, OPG will be reducing from five regional hydroelectric offices to four by integrating the Central Operations group into its existing operations. This will result in operational efficiency improvements. Currently, work is in progress to plan and implement this change.

OPG continues to progress on its plan to remove site structures from Nanticoke GS. Project milestones in 2017 include the elimination of coal yard equipment and structures and removal of ash silos, and the selection of a contractor to remove the stacks, the powerhouse, interior equipment and supporting site structures.

Environmental Performance

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. OPG has an internal program to meet its GHG emissions compliance obligations. With OPG's low GHG emitting fleet, these obligations do not have a material financial impact on the Company. The Ontario MOECC held the first quarterly auction of GHG allowances on March 22, 2017.

Disclosures related to the Company's environmental policy and environmental risks can be found in OPG's 2016 annual MD&A.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. The status updates for OPG's major projects as of March 31, 2017 are outlined in the following table with further details below.

Project	Capital expenditures		Approved budget	Expected in-service date	Current status
(millions of dollars)	Year-to-date	Life-to-date			
Darlington Refurbishment	306	3,491	12,800 [1]	First unit - 2020 Last unit - 2026	Islanding of Unit 2 was completed in April 2017. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies is in progress. The project is tracking on schedule and on budget.
Peter Sutherland Sr. Hydroelectric GS	22	258	300	2017	The station was placed in-service on March 31, 2017, ahead of the originally planned schedule, and is expected to close below the approved budget. Refer to the section, *Core Business, Strategy, and Outlook* under the heading, *Recent Developments* for further details.
Sir Adam Beck Pump GS Reservoir Refurbishment	2	48	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget.
Ranney Falls Hydroelectric GS	2	5	77	2019	Project definition work has been completed and site clearing and mobilization work has commenced.
Nanticoke Solar Facility	1	2		2019	Project definition work is in progress and construction is planned to commence as early as in the fourth quarter of 2017.
Deep Geologic Repository for low and intermediate level radioactive waste (L&ILW)	2 [2]	197 [2]			Additional information requested by the Canadian Environmental Assessment Agency (CEAA) based on their review of the material submitted by OPG in December 2016 is being prepared and will be submitted by May 26, 2017.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, ahead of schedule, with a total of 480 fuel channels de-fuelled. Islanding of Unit 2, the physical separation of the refurbishment unit from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second segment commenced immediately following the islanding of the unit. The second segment continues the preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening the reactor air lock doors, installation of shielding, setting up specialized tooling and equipment, and commencing the disassembly and removal of reactor components. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. The project is tracking on schedule and budget.

A number of pre-requisite projects in support of the execution phase of the project, including construction of facilities, infrastructure upgrades and installation of safety enhancements, have been completed. This includes the Containment Filtered Venting System and the Third Emergency Power Generator safety enhancement projects that were placed in-service in April 2017 **[MONITOR]**. Completion of the Heavy Water Storage and Drum Handling Facility has been delayed due to challenges with construction. Remediation measures are in progress **[UPDATE]**. This delay will not impact the overall Darlington Refurbishment project schedule, as the Heavy Water Storage and Drum Handling Facility is not on the critical path. The remaining projects are tracking for completion within the overall refurbishment execution schedule. **[UPDATE]**

In addition to the de-fuelling and islanding of Unit 2 completed, the following other key project activities are continuing in 2017:

- Completion of preparation activities to support Retube and Feeder Replacement work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Re-tube Waste Processing Building Facility.
- Continued construction of the Heavy Water Storage and Drum Handling.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of Unit 3, and is entering into associated commitments to procure major components that require long-lead times. As of March 31, 2017, $43 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The work on the project included installation of a new partial liner and construction of a grout

curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

In the first quarter of 2017, OPG completed the contractor selection process and awarded contracts for the construction of a 10 MW single-unit powerhouse on the existing Ranney Falls GS site, as part of the Regulated – Hydroelectric segment. The new unit will replace an existing unit that reached its end of life in 2014. The civil contractor has begun site clearing and mobilization. The expected in-service date is in the fourth quarter of 2019 with a budget of $77 million.

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands under a Large Renewable Procurement contract with the IESO, through Nanticoke Solar LP, is planned to commence as early as in the fourth quarter of 2017. In the first quarter of 2017, OPG purchased SunEdison Canadian Construction LP's (SECCLP) interests in Nanticoke Solar LP, originally a partnership between OPG, SECCLP and a subsidiary of the Six Nations of the Grand River Development Corporation, and is working to obtain approvals and permits required to enable the commencement of construction. The facility is expected to be completed in the first quarter of 2019.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the Environmental Assessment (EA) to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and potential for cumulative environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization were to be located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following CEAA's review of OPG's submission and a period of public comment, the CEAA has requested additional information from OPG. OPG has reviewed the information request and will respond to the CEAA by May 26, 2017. An EA Decision Statement by the Minister is expected by the fourth quarter of 2017. Based on the information submitted to the Minister in December 2016, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

OPG anticipates a site preparation and construction licence may be issued in the first half of 2018, if the EA Decision Statement supports licensing. OPG has initiated work to ensure all licensing-related submissions will be completed and ready to be submitted to the CNSC for an expeditious license review. In addition, work has been initiated to seek OPG's Board of Directors' approval to proceed to the definition phase work in 2018. This includes completion of engineering design activities. OPG also continues its engagement with the Saugeen Ojibway Nations toward

securing community support for the L&ILW DGR. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction. **[CONFIRM]**

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application incorporates a rate smoothing proposal, as amended in March 2017. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impacts on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the nuclear rate base, effective in early 2020, to reflect the planned placement in service of approximately $4.8 billion of capital expenditures upon the scheduled return to service of Unit 2 at the Darlington GS as part of the Darlington Refurbishment project and, effective in 2017, an increase in the deemed capital structure applied to the total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt reflected in the existing regulated prices. If approved, this would improve OPG's return on Shareholder's investment.

A public oral hearing on OPG's application commenced in late February 2017 and was completed in April 2017, with final arguments scheduled to be completed by June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected in the second half of 2017. Further details on OPG's rate application can be found in the section, *Highlights* under the heading, *Recent Developments*.

For generation assets that do not form part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements. In line with this strategy, virtually all of OPG's non-regulated operating facilities and assets under construction are subject to long-term Energy Supply Agreements (ESAs) or other long-term contracts with the IESO. This includes the Peter Sutherland Sr. GS, which will begin earning contracted revenue under its hydroelectric ESA once the IESO confirms commercial operation, but effective on March 31, 2017. The ESA expires in 2067. **[CONFIRM]**

Ensure Availability of Cost Effective Funding

In April 2017, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook.

Social Licence

As the largest electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish these relationships based on

a foundation of respect for the languages, customs, and political, social and cultural organizations of the Indigenous communities. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, such as the construction of the Peter Sutherland Sr. GS in partnership with Taykwa Tagamou Nation and the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River. In March 2017, the Peter Sutherland Sr. GS was placed in-service and, in April 2017, the Taykwa Tagamou Nation acquired a 33 percent interest in PSS under the partnership agreement. OPG also continues to engage with Indigenous communities regarding the Company's regulated nuclear waste operations, through regularly scheduled meetings and ongoing dialogue in connection with OPG's proposed L&ILW DGR, and the re-licensing of the PWMF and the WWMF.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of costs and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's current application for new regulated prices is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017 in its decision on the application. This would allow OPG to recover the difference between the approved new regulated prices and the existing regulated prices for the period between January 1, 2017 and the implementation date of the new prices based on the OEB's order.

The continuation of existing regulated prices until the OEB's decision on OPG's application is issued is expected to continue to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI during 2017, compared to 2016. In large part, this is due to the year-over-year reduction in nuclear electricity generation resulting from the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined in 2014 based on a higher production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision issuance, could have a significant impact on OPG's financial results during 2017. OPG's application for new regulated prices is further discussed in the section, *Highlights* under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. As expected, combined with the expiry of rate riders in effect to the end of 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment outage, this will result in lower cash flow from operations and a lower FFO Adjusted Interest Coverage ratio in 2017, compared to 2016. The continuation of existing base regulated prices until such time as new prices are determined and implemented by the OEB also is expected to contribute to lower cash flow from operations in 2017. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements.

Lower nuclear generation due to the Darlington refurbishment outages will continue to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Variability in sustaining capital investment expenditures, including major sustaining projects for the hydroelectric operations, also will impact the Enterprise TGC in future periods.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, these variance accounts include those related to the revenue impact of variability in water flows and forgone production due to SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Considering the impact of the variance and deferral accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow from operations going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric and other development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI. In the short term, these factors can be volatile and cause fluctuations in the Company's income. This volatility is partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account and, as discussed below, the funded status of the two segregated funds.

As OPG does not have the right to withdraw surplus amounts from the Nuclear Segregated Funds when the segregated funds are overfunded relative to the life cycle funding liability pursuant an approved ONFA Reference Plan, OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle funding liability per the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus in the Decommissioning Segregated Fund that it may direct to the Used Fuel Fund in accordance with the ONFA, up to the amount, if any, by which the Used Fuel Fund is underfunded. This reduces the volatility of earnings on the Nuclear Segregated Funds reflected in net income when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at March 31, 2017, the Decommissioning Segregated Fund was overfunded by approximately 24 percent, and the Used Fuel Segregated Fund was marginally overfunded, by less than one percent, based on the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**652**	926
Fuel expense	**68**	81
Gross margin	**584**	845
Operations, maintenance and administration	**589**	563
Depreciation and amortization	**107**	230
Property taxes	**6**	7
(Loss) income before other losses, interest, and income taxes	**(118)**	45
Other gains	**-**	(1)
(Loss) income before interest and income taxes	**(118)**	46

Segment earnings decreased by $164 million during the first quarter of 2017, compared to the same quarter in 2016. The decrease in earnings was expected and primarily due to reduced revenue from the nuclear base regulated price of approximately $134 million, partly offset by the largely associated decrease in fuel expense of $13 million, reflecting lower electricity generation of 2.3 TWh and the continuation of the existing nuclear base regulated price set by the OEB in 2014. The existing regulated price continues to be in effect pending the OEB's decision on OPG's application for new regulated prices, proposed to be effective on January 1, 2017. The lower nuclear generation was primarily due to the ongoing Unit 2 refurbishment outage at the Darlington GS that began October 2016. The existing regulated price does not reflect the lower generation as a result of the refurbishment outage, as that price were set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume based on the 2014 and 2015 outage profile that did not include a refurbishment outage. The year-over-year reduction in nuclear electricity generation was partially offset by the impact of the decreased number of planned outage days at the Pickering GS in the first quarter of 2017, compared to the same quarter in 2016.

The increase in OM&A expenses of $26 million in the first quarter of 2017, compared to the same quarter in 2016, also contributed to lower segment earnings. The increase in OM&A expenses reflected use of temporary staff and planned hiring to fill vacant positions due to attrition, and higher material costs related to maintenance work at the nuclear stations.

The expiry of an OEB-authorized nuclear rate rider on December 31, 2016 contributed to the decrease in segment revenue in the first quarter of 2017, compared to the same quarter in 2016. As rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this decrease in revenue was largely offset by a decrease in amortization expense related to regulatory account balances. A new rate rider has been requested in OPG's application with the OEB for new regulated prices effective January 1, 2017.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2017 and 2016 were as follows:

	Three Months Ended March 31 2017	2016
Unit Capability Factor *(%)* [1]		
Darlington GS	**85.3**	97.2
Pickering GS	**78.5**	72.8

[1] The nuclear Unit Capability Factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS decreased in the first quarter of 2017, compared to the same quarter in 2016, primarily due to a higher number of unplanned outage days at the station in the first quarter of 2017.

The increase in the Unit Capability Factor at the Pickering GS in the first quarter of 2017, compared to the same quarter in 2016, was primarily due to a lower number of planned outage days at the station in the first quarter of 2017.

Regulated – Nuclear Waste Management Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**27**	34
Operations, maintenance and administration	**29**	36
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**234**	228
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Loss before interest and income taxes	**(47)**	(83)

Earnings from the segment improved by $36 million in the first quarter of 2017 compared to the same quarter in 2016. The year-over-year improvement in earnings was primarily due to higher earnings from the Nuclear Segregated Funds.

Higher earnings on the Used Fuel Segregated Fund, net of the impact of the Bruce Lease Net Revenue Variance Account, were the primary reasons for the higher Nuclear Segregated Fund earnings during the first quarter of 2017, compared to the same period in 2016. As the Used Fuel Segregated Fund was overfunded as at December 31, 2016 and March 31, 2017, the earnings on the fund recorded in income during the first quarter of 2017 were based at the growth rate of the present-value used fuel life cycle funding liability per the 2017 ONFA Reference Plan. During the first quarter of 2016, the Used Fuel Segregated Fund was underfunded based on the ONFA reference plan then in effect and therefore earnings on the fund reflected the CPI-adjusted rate of return guaranteed by the Province under the ONFA for funding related to the initial 2.23 million used fuel bundles and market returns on the portion of the fund not guaranteed by the Province.

As of December 31, 2016, OPG recorded a decrease of approximately $1,570 million to the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities) and associated asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to reflect the comprehensive update of the underlying assumptions and baseline cost estimates for these liabilities carried out as part of the 2017 ONFA Reference Plan update process. The resulting year-over-year decreases in accretion on fixed asset removal and nuclear waste management liabilities recorded in the Regulated – Nuclear Waste Management segment and depreciation and fuel expenses recorded in the Regulated – Nuclear Generation segment during the first quarter of 2017, compared to the same quarter in 2016, were largely offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account authorized by the OEB. Further details on the change in the estimate of the Nuclear Liabilities as of December 31, 2016 are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Asset Retirement Obligation*.

Under the current OEB-approved cost recovery methodology, the changes in expenses associated with the year-end 2016 adjustment to the Nuclear Liabilities are not expected to materially affect OPG's income during 2017, as the associated impact on expenses is expected to continue to be largely offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently to be offset by the impact of the new regulated prices.

Regulated – Hydroelectric Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue [1]	**363**	385
Fuel expense	**73**	79
Gross margin	**290**	306
Operations, maintenance and administration	**76**	76
Depreciation and amortization	**34**	56
Income before other gains, interest and income taxes	**180**	174
Other gains	**-**	(22)
Income before interest and income taxes	**180**	196

[1] During the three months ended March 31, the Regulated – Hydroelectric segment revenue included incentive payments of $8 million in 2017 and $1 million in 2016 related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $16 million during the first quarter of 2017, compared to the same period in 2016, was primarily due to a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to a motion by OPG. The decrease in income was partially offset by higher hydroelectric incentive mechanism payments in the first quarter of 2017.

The decrease in revenue was largely due to the expiry of an OEB-authorized rate rider on December 31, 2016. As the rider allowed for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, the resulting reduction in revenue was largely offset by lower amortization expense related to the regulatory account balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	Three Months Ended March 31 2017	2016
Hydroelectric Availability *(%)*	**89.5**	94.8

The Hydroelectric Availability decreased in the first quarter of 2017, compared to the same period in 2016, primarily due to the reservoir refurbishment project at the Sir Adam Beck Pump GS and a higher number of unplanned outage days for the regulated hydroelectric stations.

Contracted Generation Portfolio Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**143**	145
Fuel expense	**14**	12
Gross margin	**129**	133
Operations, maintenance and administration	**39**	40
Depreciation and amortization	**19**	19
Accretion on fixed asset removal liabilities	**2**	2
Property taxes	**2**	2
Income from investments subject to significant influence	**(10)**	(8)
Income before interest and income taxes	**77**	78

Income before interest and income taxes decreased by $1 million during the first quarter of 2017, compared to the same period in 2016. The decrease primarily resulted from lower revenues from the Lower Mattagami River generating stations. The decrease was partially offset by higher gross margin from the Lennox GS, which was primarily due to increased market demand.

The Hydroelectric Availability and the Thermal Equivalent Forced Outage Rate (EFOR) for the Contracted Generation Portfolio segment were as follows:

	Three Months Ended March 31 2017	2016
Hydroelectric Availability *(%)*	**83.6**	83.9
Thermal EFOR *(%)*	**12.6**	0.9

The Hydroelectric Availability in the first quarter of 2017, was comparable to the same period in 2016. The higher thermal EFOR in the first quarter of 2017, compared to the same period in 2016, was primarily due to a higher number of unplanned outage days at a Lennox GS unit as a result of a transmission outage.

Services, Trading, and Other Non-Generation Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**17**	21
Gross margin	**17**	21
Operations, maintenance and administration	**1**	4
Depreciation and amortization	**7**	7
Accretion on fixed asset removal liabilities	**2**	2
Property taxes	**3**	3
Loss before other losses, interest, and income taxes	**4**	5
Other gains	**(3)**	-
Income before interest and income taxes	**7**	5

Segment earnings increased by $2 million during the first quarter of 2017, compared to the same quarter in 2016, due to lower OM&A expenses reflecting the decision, in the fourth quarter of 2016, to proceed with the decommissioning of the Lambton GS, and dividend income from OPG's investment in Hydro One Limited (Hydro One) shares acquired in April 2016. OPG acquired the shares for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union and The

Society of Energy Professionals. The increase in segment earnings was partially offset by lower revenues from the Company's electricity trading activities in the first quarter of 2017.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies, to undertake major projects, to fund long-term obligations such as contributions to the pension fund and the Nuclear Segregated Funds, to make payments under the OPEB plans, to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, and to service and repay long-term debt.

Changes in cash and cash equivalents for the three months ended March 31, 2017 and 2016 were as follows:

	Three Months Ended March 31	
(millions of dollars) (unaudited)	**2017**	**2016**
Cash and cash equivalents, beginning of period	**186**	464
Cash flow provided by operating activities	**118**	366
Cash flow used in investing activities	**(363)**	(310)
Cash flow used in financing activities	**279**	20
Net increase	**34**	76
Cash and cash equivalents, end of period	**220**	540

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details in the section, *Highlights* under the heading, *Overview of Results*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities during the first quarter of 2017 increased by $53 million compared to the same quarter in 2016. The increase was primarily due to higher expenditures on the Darlington Refurbishment project, offset by the staggered maturity of a structured deposit note entered in 2015 in support of the Peter Sutherland Sr. GS project. The principal amount of the deposit note that matured in the first quarter of 2017 was higher than in the same quarter in 2016. The final maturity date of the deposit note was in April 2017.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG expects to renew and extend the expiry date of both tranches from May 2021 to May 2022. There were no amounts outstanding under the bank credit facility as at March 31, 2017.

There was $133 million of commercial paper outstanding under OPG's commercial paper program as at March 31, 2017.

As at March 31, 2017, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at March 31, 2017, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust, expiring on November 30, 2018. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. As at March 31, 2017, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

As at March 31, 2017, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at March 31, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at March 31, 2017. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. As at March 31, 2017, there were outstanding long-term borrowings of $200 million under this credit facility.

As at March 31, 2017, OPG's long-term debt outstanding was $5,684 million, including $1,328 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent.

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's unaudited interim consolidated financial position using selected balance sheet data:

(millions of dollars) (unaudited)	As At March 31 2017	As At December 31 2016
Property, plant and equipment – net	**20,248**	19,998
The increase was primarily due to capital expenditures on the Darlington Refurbishment project, partially offset by depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**16,157**	15,984
The increase was primarily due to earnings on the Nuclear Segregated Funds, partially offset by reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Short-term debt	**135**	2
The increase was due to commercial paper issued under OPG's commercial paper program.		
Long-term debt *(current and non-current portions)*	**5,670**	5,520
The increase was primarily due to the issuance of senior notes payable to the OEFC totalling $200 million in February 2017.		
Fixed asset removal and nuclear waste management liabilities	**19,683**	19,484
The increase was primarily as a result of accretion expense representing the increase in the present value liabilities due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		

Pension & OPEB Cash Versus Accrual Differential Deferral Account

In setting OPG's regulated prices effective November 1, 2014, the OEB limited the recovery of the regulated portion of OPG's pension and OPEB costs to the Company's cash expenditures for its pension and OPEB plans. Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account, which records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and OPG's corresponding actual cash expenditures for these plans. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The Company has recognized the amount set aside in the Pension & OPEB Cash Versus Accrual Differential Deferral account as a regulatory asset. As at March 31, 2017, the regulatory asset balance was $517 million, which represents the excess of pension and OPEB costs calculated using the accrual basis in accordance with US GAAP over the corresponding cash expenditures for the period from November 1, 2014 to March 31, 2017.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and OPG's corresponding cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the OEB's consultation process. If, as part of the above consultation process or another proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory asset for the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's interim consolidated financial statements or are recorded in the Company's interim consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies are outlined in Note 3 to the audited consolidated financial statements as at and for the year ended December 31, 2016. A discussion of recent accounting pronouncements is included in Note 2 to OPG's unaudited interim consolidated financial statements as at and for the three months ended March 31, 2017 under the heading, *Significant Accounting Policies and Estimates*. Disclosure regarding OPG's critical accounting policies is included in OPG's 2016 annual MD&A.

RISK MANAGEMENT

The following provides an update to the discussion of the Company's risks and risk management activities included in OPG's 2016 annual MD&A. As such, the disclosure in this section should be read in conjunction with the *Risk Management* section included in the annual MD&A.

Financial Risks

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017 [1]	2018	2019
Estimated fuel requirements hedged [2]	75%	74%	63%

[1] Based on actual fuel requirements hedged for the three months ended March 31, 2017 and forecast for the remainder of the year.

[2] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to, US dollars. To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at March 31, 2017, OPG had no foreign exchange contracts outstanding.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. For the first quarter of 2017, the VaR utilization ranged between $0.1 million and $0.3 million.

Credit

Deterioration in energy markets counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

OPG manages its exposure to suppliers or counterparties by evaluating their financial condition and negotiating appropriate collateral or other forms of security. OPG's credit exposure relating to energy markets transactions as at March 31, 2017 was $361 million, including $348 million to the IESO. Management considers the Company's risk exposure relating to electricity sales through the IESO-administered spot market to be low as the IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market. Of the $13 million remaining exposure as at March 31, 2017, over 95 percent was related to investment grade counterparties.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The

transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions are summarized below:

	Three Months Ended March 31			
	2017		2016	
(millions of dollars) (unaudited)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**4**	**-**	2	-
Services	**1**	**5**	1	5
Dividends	**2**			
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**163**	-	(177)
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**217**	-	(159)
Hydroelectric gross revenue charge	**-**	**28**	-	31
ONFA guarantee fee	**-**	**2**	-	2
OEFC				
Gross revenue charge	**-**	**38**	-	37
Interest expense on long-term notes	**-**	**41**	-	42
Income taxes, net of investment tax credits	**-**	**12**	-	32
IESO				
Electricity related revenue	**1,073**	**6**	1,364	10
	1,080	**512**	1,367	(177)

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at March 31, 2017 and December 31, 2016, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,795 million and $3,415 million, respectively. The details of accounting for the Nuclear Funds are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars) (unaudited)	**March 31 2017**	**December 31 2016**
Receivables from related parties		
Hydro One	**1**	1
IESO	**348**	421
OEFC	**5**	1
PEC	**4**	4
Province of Ontario	**4**	2
Available-for-sale securities		
Hydro One shares	**218**	212
Accounts payable and accrued charges		
Hydro One	**-**	-
OEFC	**45**	61
Province of Ontario	**7**	2
IESO	**2**	2
Long-term debt (including current portion)		
Notes payable to OEFC	**3,445**	3,295

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at March 31, 2017, the Nuclear Segregated Funds and the registered pension fund held $1,650 million and $237 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

The Company maintains a comprehensive system of policies, procedures, and processes that represents its framework for internal controls over financial reporting and for its disclosure controls and procedures (together, ICOFR). There were no changes in the Company's internal control system during the current interim period that has or is reasonably likely to have a material impact to the ICOFR.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected financial information from OPG's unaudited interim consolidated financial statements for each of the eight most recently completed quarters.

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**March 31 2017**	**December 31 2016**	**September 30 2016**	**June 30 2016**
Revenue	**1,176**	**1,388**	**1,400**	**1,387**
Net income (loss)	**68**	**(8)**	**198**	**135**
Less: Net income attributable to non-controlling interest	**4**	**5**	**4**	**3**
Net income (loss) attributable to the Shareholder	**64**	**(13)**	**194**	**132**
Per common share, attributable to the Shareholder *(dollars)*	**$0.25**	**($0.05)**	**$0.76**	**$0.51**

(millions of dollars – except where noted) *(unaudited)*	**March 31 2016**	**December 31 2015**	**September 30 2015**	**June 30 2015**
Revenue	1,478	1,312	1,426	1,383
Net income (loss)	128	(100)	85	193
Less: Net income attributable to non-controlling interest	5	1	5	4
Net income (loss) attributable to the Shareholder	123	(101)	80	189
Per common share, attributable to the Shareholder *(dollars)*	$0.48	($0.39)	$0.31	$0.74

Trends

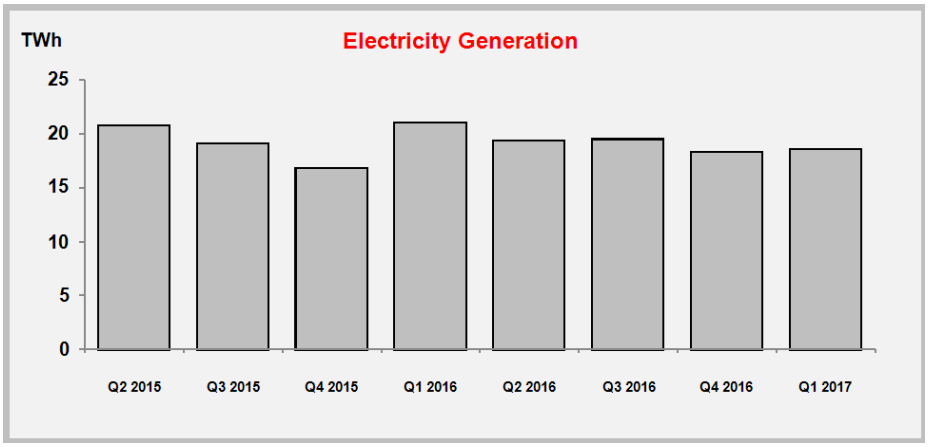
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues have been higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of forgone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

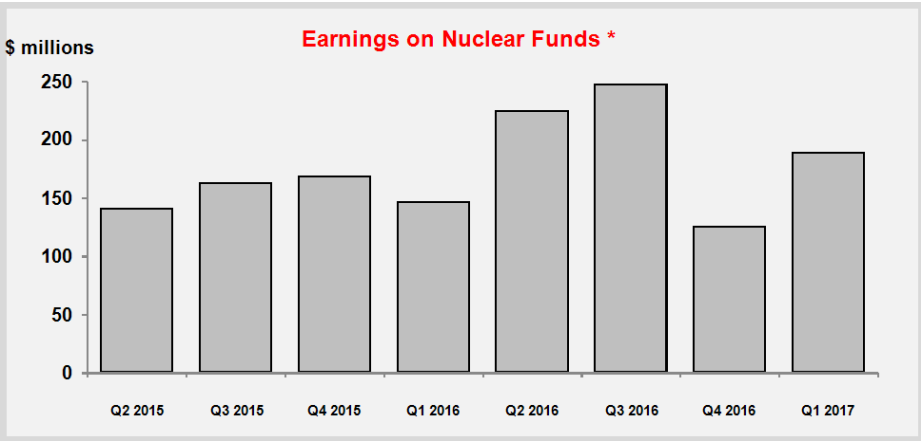
The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington Vacuum Building Outage (VBO), which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

During the fourth quarter of 2016 and the first quarter of 2017, OPG's electricity generation was reduced as a result of the Unit 2 refurbishment outage at the Darlington GS, which began in October 2016 and is expected to continue until early 2020.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items that affected net income in certain quarters above are described in OPG's 2016 annual MD&A in the section, *Quarterly Financial Highlights*.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder, improve cost performance, and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow provided by operating activities, or any other measure in accordance with US GAAP, but as indicators of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE Excluding AOCI is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended March 31 2017	December 31 2016
ROE Excluding AOCI		
Net income attributable to the Shareholder	**377**	436
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,834**	10,442
ROE Excluding AOCI *(percent)*	**3.5**	4.2

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended March 31 2017	December 31 2016
FFO before interest		
Cash flow provided by operating activities	**1,457**	1,705
Add: Interest paid	**268**	269
Less: Interest capitalized to fixed and intangible assets	**(152)**	(141)
Add: Changes to non-cash working capital balances	**(22)**	(68)
FFO before interest	**1,551**	1,765
Adjusted interest expense		
Net interest expense	**106**	120
Add: Interest income	**5**	7
Add: Interest capitalized to fixed and intangible assets	**152**	141
Add: Interest related to regulatory assets and liabilities	**32**	30
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**10**	45
Adjusted interest expense	**305**	343
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.1

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding the Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation from OPG-operated generating stations plus electricity generation forgone due to SBG conditions during the period.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Enterprise TGC		
Total OM&A expenses	**708**	686
Total fuel expense	**155**	172
Total capital expenditures	**408**	320
Less: Darlington Refurbishment capital and OM&A costs	**(309)**	(205)
Less: Other generation development project capital and OM&A costs	**(17)**	(38)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(11)**	18
Less: Nuclear fuel expense for non OPG-operated stations	**(13)**	(17)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**11**	18
Less: OM&A expenses ancillary to electricity generation business	**(5)**	(5)
Other adjustments	**(2)**	(5)
	925	944
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**18.6**	21.0
Adjust for electricity generation forgone due to SBG conditions and OPG's share of electricity generation from co-owned facilities	**0.7**	1.6
	19.3	22.6
Enterprise TGC per MWh *($/MWh)* [1]	**47.86**	**41.82**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**589**	563
Regulated – Nuclear Generation fuel expense	**68**	81
Regulated – Nuclear Generation capital expenditures	**366**	249
Less: Darlington Refurbishment capital and OM&A costs	**(309)**	(205)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(2)**	24
Less: Nuclear fuel expense for non OPG-operated stations	**(13)**	(17)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(1)**	(1)
Other adjustments	**-**	(1)
	698	693
Nuclear electricity generation *(TWh)*	**10.0**	12.3
Nuclear TGC per MWh *($/MWh)* [1]	**69.87**	56.37

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation forgone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**76**	76
Regulated – Hydroelectric Generation fuel expense	**73**	79
Contracted Generation Portfolio OM&A expenses	**39**	40
Contracted Generation Portfolio fuel expense	**14**	12
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**37**	59
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(16)**	(37)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(39)**	(37)
Less: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(9)**	(7)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**11**	18
Other adjustments	**(1)**	2
	185	205
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**8.0**	7.9
Contracted Generation Portfolio electricity generation	**0.6**	0.8
Adjust for hydroelectric electricity generation forgone due to SBG conditions and non-hydroelectric electricity generation of the Contracted Generation Portfolio	**0.7**	1.6
	9.3	10.3
Hydroelectric TGC per MWh *($/MWh)*[1]	**19.79**	19.94

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

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From:	Ronald Kwan
To:	John Kim; Francisco Chinchon; Emily Kerr
Cc:	Gavin He
Subject:	FW: OPG Q2 2017 Submission to Province
Date:	Friday, July 28, 2017 5:30:34 PM
Attachments:	Q2 2017 DRAFT MDA - VP MAILING.docx 2017 Q2 DRAFT PR - VP MAILING.docx Q2 2017 DRAFT OPG FS - VP MAILING.docx

Hi All,

Please review, and note the timeline.

John, does FTD need to review any particular sections?

Ron

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: July-28-17 17:13
To: 'Shruti.Talwar@ontario.ca' <Shruti.Talwar@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>; DYKXHOORN Sandra -STAKEREL <sandra.dykxhoorn@opg.com>
Subject: OPG Q2 2017 Submission to Province

Hi All,

Please find attached OPG's draft Q2 2017 Financial Results Press Release, Management's Discussion and Analysis (MD&A), and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, Aug 1st**.

These documents will be filed with the Ontario Securities Commission on **Friday, August 11th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q2 2017 MD&A:

Highlights	
Recent Developments	MD&A p.10-12
Darlington Refurbishment	MD&A p.14-15
Ontario's Fair Hydro Plan	MD&A p.11
Sale of Head Office Premises	MD&A p.11

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation

700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

2017 SECOND QUARTER REPORT

[DRAFT]

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ONTARIO POWER GENERATION

ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the unaudited interim consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the three and six months ended June 30, 2017. OPG's unaudited interim consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

For a complete description of OPG's corporate strategies, risk management, corporate governance, and the effect of critical accounting policies and estimates on OPG's results of operations and financial condition, this MD&A should also be read in conjunction with OPG's audited consolidated financial statements, accompanying notes, the Annual Information Form, and the MD&A as at and for the year ended December 31, 2016.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Exemptive Relief for Reporting under US GAAP,* in OPG's 2016 annual MD&A. This MD&A is dated August 11, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out in the section, *Risk Management,* and forecasts discussed in the section, *Core Business, Strategy, and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), Total Generating Cost (TGC) and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at June 30, 2017, OPG's electricity generation portfolio had an in-service capacity of 16,210 megawatts (MW). OPG operates two nuclear generating stations, 66 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report. A description of OPG's segments is provided in OPG's 2016 annual MD&A in the section, *Business Segments*.

All of OPG's owned and co-owned generating facilities are located in Ontario. OPG does not operate PEC, Brighton Beach, the Bruce A GS and the Bruce B GS.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as at June 30, 2017 and December 31, 2016 was as follows:

	As at	
(MW)	**June 30 2017**	**December 31 2016**
Regulated – Nuclear Generation [1]	**5,728**	5,728
Regulated – Hydroelectric	**6,426**	6,421
Contracted Generation Portfolio [2]	**4,056**	4,028
Total	**16,210**	16,177

[1] The in-service generating capacity as of June 30, 2017 and December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

During the six months ended June 30, 2017, the total in-service capacity increased by 33 MW. The increase was primarily due to the completion of the Peter Sutherland Sr. hydroelectric GS, which was placed in-service at the end of the first quarter of 2017, and the upgrade of Unit 10 of the Sir Adam Beck 1 hydroelectric GS, which was completed in June 2017.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's unaudited interim consolidated operating results. Significant factors which contributed to OPG's results during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, are discussed below.

(millions of dollars – except where noted) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue	**1,146**	1,387	**2,322**	2,865
Fuel expense	**178**	182	**333**	354
Gross margin	**968**	1,205	**1,989**	2,511
Operations, maintenance and administration	**711**	709	**1,419**	1,395
Depreciation and amortization	**172**	316	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**236**	232	**474**	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(194)**	(225)	**(383)**	(372)
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
Property taxes	**11**	11	**22**	23
	928	1,034	**1,853**	2,121
Income before other gains, interest and income taxes	**40**	171	**136**	390
Other gains	**(380)**	(1)	**(383)**	(24)
Income before interest and income taxes	**420**	172	**519**	414
Net interest expense	**16**	31	**35**	64
Income before income taxes	**404**	141	**484**	350
Income tax expense	**97**	6	**109**	87
Net income	**307**	135	**375**	263
Net income attributable to the Shareholder	**303**	132	**367**	255
Net income attributable to non-controlling interest [1]	**4**	3	**8**	8
Electricity production (TWh) [2]	**18.0**	19.4	**36.6**	40.4
Cash flow provided by operating activities	**143**	348	**261**	714

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership, the 33 percent interest of Coral Rapids Power Corporation (CRP), a corporation wholly owned by the Taykwa Tagamou Nation, in the PSS Generating Station Limited Partnership (PSS), and the 10 percent interest of a corporation wholly owned by the Six Nations of Grand River Development Corporation in the Nanticoke Solar LP.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Second Quarter

Net income attributable to the Shareholder was $303 million for the second quarter of 2017, an increase of $171 million compared to the same quarter in 2016. Income before interest and income taxes for the second quarter of 2017 was $420 million, an increase of $248 million compared to the same quarter in 2016.

Significant factor that increased income before interest and income taxes:

- Higher earnings of $381 million from the Services, Trading, and Other Non-Generation segment, primarily as a result of the gain on sale of OPG's head office premises and associated parking facility, a non-core asset

of the business. A gain on sale of $283 million, which is net of tax effects of $95 million, was recognized in net income upon completion of the transaction in the second quarter of 2017. The sale was undertaken pursuant a Shareholder Declaration and a Shareholder Resolution. Further details can be found under the heading, *Recent Developments – Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties*.

Significant factors that reduced income before interest and income taxes:

- Lower earnings from the nuclear base regulated price of approximately $72 million, partially offset by a decrease in nuclear fuel expense of $11 million, reflecting lower electricity generation of 1.3 terawatt hours (TWh) from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. The lower nuclear generation was primarily due to the ongoing refurbishment of Unit 2 at the Darlington GS since October 2016. The base regulated prices set in 2014 continue to be in effect pending the OEB's decision on OPG's current application for new regulated prices, expected later in 2017. The existing nuclear base regulated price was set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. OPG has requested January 1, 2017 as the effective date of the new regulated prices.
- Lower earnings on the nuclear fixed asset removal and nuclear waste management funds (Nuclear Segregated Funds) of $31 million, primarily due to lower earnings on the Used Fuel Segregated Fund.
- Higher depreciation and amortization expense of $11 million, excluding amortization expense related to balances in OEB-authorized regulatory variance and deferral accounts (regulatory accounts), primarily due to new assets in service in the Regulated – Nuclear Generation segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory accounts on December 31, 2016 contributed to the decrease in revenue for the three months ended June 30, 2017, compared to the same period in 2016, but was largely offset by a decrease in the amortization expense related to these balances. OPG has requested new rate riders in its current application to the OEB for new regulated prices, with a proposed effective date of January 1, 2017.

Net interest expense decreased by $15 million during the second quarter of 2017, compared to the same quarter in 2016, primarily due to a higher amount of interest costs deferred in OEB-authorized regulatory accounts and a higher amount of interest costs capitalized for the Darlington Refurbishment project expenditures.

Income tax expense for the three months ended June 30, 2017 was $97 million, compared to $6 million for the same period in 2016. The increase in income tax expense was primarily due to higher income before taxes, a lower change in reserves from the resolution of uncertainties, and a higher amount of tax expense deferred in regulatory assets in 2017.

Year-To-Date

Net income attributable to the Shareholder was $367 million for the first six months of 2017, an increase of $112 million compared to the same period in 2016. Income before interest and income taxes for the six months ended of 2017 was $519 million, an increase of $105 million compared to the same period in 2016.

Significant factors that increased income before interest and income taxes:

- Higher earnings of $383 million from the Services, Trading, and Other Non-Generation segment, primarily as a result of the gain on sale of OPG's head office premises and associated parking facility recognized in the second quarter of 2017.

Significant factors that reduced income before interest and income taxes:

- Lower earnings from the nuclear base regulated price of approximately $206 million, partially offset by a decrease in nuclear fuel expense of $24 million, reflecting lower electricity generation of 3.6 TWh from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. The lower nuclear generation was primarily due to the ongoing refurbishment of Unit 2 at the Darlington GS since October 2016.
- Higher OM&A expenses of $24 million, mainly in the Regulated – Nuclear Generation segment, reflecting planned expenditures related to major maintenance expenditures occurring at the nuclear stations.
- A gain of $22 million recorded in the first quarter of 2016 to reflect the OEB's decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices.
- Higher depreciation and amortization expense of $20 million, excluding amortization expense related to regulatory account balances, primarily due to new assets in service in the Regulated – Nuclear Generation segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory accounts on December 31, 2016 contributed to the decrease in revenue in the first half of 2017, compared to the same period in 2016, but was primarily offset by a decrease in the amortization expense related to these balances.

Net interest expense decreased by $29 million for the six months ended June 30, 2017, compared to the same period in 2016, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project expenditures and a higher amount of interest costs deferred in OEB-authorized regulatory accounts.

Income tax expense for the six months ended June 30, 2017 was $109 million, compared to $87 million for the same period in 2016. The increase in income tax expense was primarily due to higher income before income taxes and a lower change in reserves from the resolution of uncertainties, partly offset by a lower amount of tax expense deferred in regulatory assets in 2017.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars)	**2017**	**2016**	**2017**	**2016**
(Loss) income before interest and income taxes				
Regulated – Nuclear Generation	**(169)**	(76)	**(287)**	(30)
Regulated – Hydroelectric	**172**	187	**352**	383
Contracted Generation Portfolio	**77**	67	**154**	145
Total electricity generation business segments	**80**	178	**219**	498
Regulated – Nuclear Waste Management	**(40)**	(5)	**(87)**	(88)
Services, Trading, and Other Non-Generation	**380**	(1)	**387**	4
	420	172	**519**	414

Electricity Generation

Electricity generation for the three and six month periods ended June 30, 2017 and 2016 was as follows:

(TWh)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Regulated – Nuclear Generation	**9.3**	10.6	**19.3**	22.9
Regulated – Hydroelectric	**8.2**	8.0	**16.2**	15.9
Contracted Generation Portfolio [1]	**0.5**	0.8	**1.1**	1.6
Total OPG electricity generation	**18.0**	19.4	**36.6**	40.4
Total electricity generation by all other generators in Ontario [2]	**16.5**	15.5	**35.1**	34.4

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.
[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the Independent Electricity System Operator (IESO), minus OPG electricity generation.

Total OPG electricity generation decreased by 1.4 TWh during the second quarter of 2017, compared to the same quarter in 2016, and by 3.8 TWh during the six months ended June 30, 2017, compared to the same period in 2016. As expected, the lower electricity generation from the Regulated – Nuclear Generation segment was primarily the result of the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment, which began in October 2016. This decrease in electricity generation was partially offset by an increase in generation from the Pickering GS, primarily due to favourable unit conditions and execution of planned outage work resulting in a lower number of planned outage days at the station.

The higher electricity generation of 0.2 TWh and 0.3 TWh from the Regulated – Hydroelectric segment for the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, was largely due to higher water flows primarily on the eastern Ontario river systems, net of water spilled as a result of SBG conditions, discussed below.

The lower electricity generation of 0.3 TWh and 0.5 TWh from the Contracted Generation Portfolio segment for the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, was primarily due to a higher volume of water spilled as a result of SBG conditions.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. For the three and six month periods ended June 30, 2017, Ontario's electricity demand as reported by the IESO was 30.6 TWh and 64.9 TWh, respectively, compared to 31.9 TWh and 67.1 TWh for the same periods in 2016, respectively, excluding electricity exports out of the province.

Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric, other grid-connected renewable resources and nuclear stations. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. Baseload generation supply surplus in Ontario continued to be prevalent in 2017, resulting in forgone hydroelectric generation for OPG of 2.6 TWh and 3.4 TWh due to SBG conditions in the three and six month periods ended June 30, 2017, respectively, compared to 1.7 TWh and 3.4 TWh of forgone hydroelectric generation for OPG due to SBG conditions during the same periods in 2016, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions during these periods was offset by the impact of a regulatory variance account authorized by the OEB. OPG did not forgo any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The same base regulated prices for electricity generated by these segments, authorized by the OEB effective November 1, 2014, were in effect during the first six months of 2017 as in 2016. These prices will remain in effect until such time as the OEB approves new regulated prices based on OPG's current application. The base regulated prices established in 2014 are discussed in OPG's 2016 annual MD&A in the section, *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment was 5.7 and 5.8 cents per kilowatt hour (¢/kWh) during the three and six month periods ended June 30, 2017 respectively, compared to 6.9 ¢/kWh during the same periods in 2016. The decrease was primarily due to the expiry, on December 31, 2016, of an OEB-authorized nuclear rate rider of $10.84 per megawatt hour (MWh) for the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment was 4.0 ¢/kWh and 4.1 ¢/kWh during the three and six month periods ended June 30, 2017, respectively, compared to 4.4 ¢/kWh during the same periods in 2016. The decrease in the average sales price was primarily due to the expiry, on December 31, 2016, of an OEB-authorized regulated hydroelectric rate rider of $3.19/MWh for the recovery of variance and deferral account balances. The rate riders were established to recover approved balances recorded in the variance and deferral accounts in prior years. As such, the year-over-year changes in revenue from the rate riders were largely offset by changes in amortization expense related to these balances. There were no rate riders in effect during the first half of 2017 for either nuclear or regulated hydroelectric generation, pending the outcome of OPG's current application with the OEB for new regulated prices.

Cash Flow from Operations

Cash flow provided by operating activities was $143 million for the three months ended June 30, 2017 and $261 million for the six months ended June 30, 2017, compared to $348 million and $714 million for the same periods in 2016, respectively. The decrease in cash flow provided by operating activities was expected and primarily due to lower generation revenue receipts reflecting lower generation from the Regulated – Nuclear Generation segment as a result of the ongoing refurbishment of Unit 2 at the Darlington GS and the expiry, on December 31, 2016, of the OEB-authorized rate riders for nuclear and regulated hydroelectric generation. The decrease in cash flow in the first half of 2017 was also due to higher income tax instalments, compared to the same period in 2016.

The decrease in cash flow provided by operating activities for the three and six month periods ended June 30, 2017 was partially offset by lower pension plan contributions in 2017 reflecting an updated actuarial valuation of the OPG registered pension plan filed with the Financial Services Commission of Ontario in September 2016, and lower contributions to the Used Fuel Segregated Fund and the Decommissioning Segregated Fund in 2017. Both the Used Fuel Segregated Fund and the Decommissioning Segregated Fund were determined to be fully funded based on an updated estimate of OPG's nuclear waste management and nuclear facilities decommissioning obligations pursuant to a reference plan approved by the Province, for years 2017 to 2021, under the Ontario Nuclear Funds Agreement (ONFA), effective January 1, 2017. Pursuant to the ONFA, the reference plan is required to be updated at least once every five years. Contributions to either or both of the Nuclear Segregated Funds may be required in the future should the funds be in an underfunded position at the time of the next ONFA reference plan update. The year-over-year decrease in cash flow also was partially offset by the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to a period in 2015. The lease agreement for the Bruce nuclear generating stations giving rise to this rebate was amended in late 2015 to eliminate this provision going forward.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with the Company's strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period.

ROE Excluding AOCI was 5.0 percent for the 12 months ended June 30, 2017, compared to 4.2 percent for the 12 months ended December 31, 2016. The increase was primarily due to higher net income attributable to the Shareholder for the 12 months ended June 30, 2017, which reflected the gain on sale of OPG's head office premises and associated parking facility recorded in the second quarter of 2017, partly offset by the lower earnings from the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS without a corresponding increase in the nuclear base regulated price, as expected. The lower nuclear generation as a result of the refurbishment outage will continue to negatively affect OPG's ROE Excluding AOCI until such time as new regulated prices are approved by the OEB later in 2017.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flows. The indicator is measured over a 12-month period. FFO Adjusted Interest Coverage for the 12 months ended June 30, 2017 was 4.5 times, compared to 5.1 times for the 12 months ended December 31, 2016. FFO Adjusted Interest Coverage in 2017 reflected a year-over-year decrease in FFO before interest due to lower cash flow provided by operating activities, partially offset by the impact of a lower adjusted interest expense due to a decrease in the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets.

The decrease in the excess of interest on pension and OPEB benefit obligations over expected return on pension plan assets in the first half of 2017 was primarily due to the change in the method used to estimate the interest cost and service cost component of pension and OPEB costs. Effective January 1, 2017, OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs for the three and six month periods ended June 30, 2017 did not have a material impact on net income as it was largely offset by the impact of OEB-authorized variance and deferral accounts in the regulated business segments. Further details on the full yield curve approach can be found in the 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Pension and Other Post-Employment Benefits*.

Enterprise Total Generating Cost per MWh

The Enterprise TGC per MWh increased to $48.72 for the three months ended June 30, 2017, compared to $48.48 for the same quarter in 2016. The increase was mainly due to reduction in nuclear electricity generation due to the Unit 2 refurbishment outage at the Darlington GS and higher capital expenditures, largely offset by higher SBG-adjusted hydroelectric electricity generation reflecting higher water flows and lower OM&A expenses before the impact of regulatory accounts.

The Enterprise TGC per MWh was $48.35 for the six months ended June 30, 2017, an increase compared to $45.01 for the same period in 2016. The increase was expected and mainly a result of lower electricity generation due to the Unit 2 refurbishment outage at the Darlington GS and higher capital expenditures, partially offset by lower OM&A expenses before the impact of regulatory accounts.

If Unit 2 at the Darlington GS was not currently undergoing refurbishment and had continued to operate in a manner consistent with the performance of the remaining units at the Darlington GS and adjusting for generation constraints on the remaining units related to the transition of the station toward refurbishment, the Enterprise TGC would have been approximately $3 to $4 per MWh lower for the three and six months ended June 30, 2017. This sensitivity was calculated using the estimated incremental electricity that would have been generated under these circumstances and the associated estimated fuel cost that would have been incurred.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $76.87 for the three months ended June 30, 2017, compared to $69.25 for the same quarter in 2016. The Nuclear TGC per MWh was $73.24 for the six months ended June 30, 2017, compared to $62.44 for the same period in 2016. The increase in the Nuclear TGC per MWh for these periods was expected and primarily due to the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $19.83 for the three months ended June 30, 2017, compared to $22.14 for the same quarter in 2016. The decrease was primarily due to higher SBG-adjusted hydroelectric electricity production reflecting higher water flows and lower capital expenditures. The Hydroelectric TGC per MWh was $19.81 for the six months ended June 30, 2017, compared to $21.08 for the same period in 2016. The decrease was primarily due to lower capital expenditures.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow provided by operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

OEB's Report on Regulatory Treatment of Pension and OPEB Costs

On May 18, 2017, the OEB issued a report on the regulatory treatment of pension and OPEB costs based on a consultation process aimed at developing standard principles to guide the OEB's future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including OPG, that began in May 2015. The report establishes the accrual basis of accounting as the method of determining pension and OPEB amounts for rate-setting purposes, unless the OEB finds that this method does not result in just and reasonable rates in the circumstances of a particular utility. The report also provides for the establishment of a generic variance account to record asymmetric carrying charges in favour of ratepayers on the differences between the forecast pension and OPEB accrual costs recovered by a utility through regulated rates and the actual cash payments made by it for pension and OPEB plans. Carrying charges on this differential are to be assessed at the OEB's prescribed interest rate, on a prospective basis from the effective date of the new variance account. The prescribed interest rate is set quarterly by the OEB based on the quarterly return of a mid-term corporate bond index yield. Certain implementation matters related to the report's requirements remain to be finalized by the OEB. This includes the effective date of the new variance account, the application of carrying charges, and the timing of disposition of both the new and previously established variance and deferral accounts related to pension and OPEB costs.

The report requires utilities, such as OPG, that have been previously directed to record differences between pension and OPEB accrual costs and cash payments in a separate variance or deferral account to continue to defer such differences in that account, until such time as the OEB approves the utility to resume the accrual basis of recovery. The future recovery of amounts recorded in such an account will be subject to this approval. In setting OPG's existing regulated prices effective November 1, 2014, the OEB limited the recovery of pension and OPEB costs to the regulated portion of the Company's cash expenditures for the pension and OPEB plans. It also required OPG to defer, effective November 1, 2014, the difference between its actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and the Company's actual cash payments for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of an

OEB generic proceeding on the regulatory treatment of pension and OPEB costs. Similarly, in its current application for new regulated prices filed with the OEB in May 2016, OPG has proposed to continue recording the difference between actual pension and OPEB accrual costs and actual cash payments for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the OEB's consultation process. The Company recognizes the amount set aside in the Pension & OPEB Cash Versus Accrual Differential Deferral account as a regulatory asset, which has a balance of $533 million as at June 30, 2017.

As currently outlined in the report, OPG does not expect that it would be subject to carrying charges on the differences between pension and OPEB accrual costs and cash payments until either it begins to recover, through future rate riders, amounts deferred in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, or the OEB establishes OPG's base regulated prices to reflect pension and OPEB amounts on an accrual basis. As such, the OEB's report did not impact OPG's financial results for the three and six month periods ended June 30, 2017.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Fair Hydro Plan) aimed at reducing electricity bills for all residential consumers in the province on average by 25 percent. As part of the Fair Hydro Plan, the Province has proposed refinancing a portion of the Global Adjustment costs over a longer time period for Regulated Price Plan and other eligible customers (e.g., residential, farm, small businesses). On June 1, 2017, the Province enacted *Bill 132 – An Act to enact the Ontario Fair Hydro Plan Act, 2017, and to make amendments to the Electricity Act, 1998 and the Ontario Energy Board Act, 1998* (Bill 132). Bill 132 establishes a framework under which the costs and benefits associated with the Government of Ontario's clean energy initiative are to be allocated among present and future consumers of electricity, appoints OPG as the Financial Services Manager of the Fair Hydro Plan, unless OPG is not in a position to do so, and provides for a financing entity to be established by the Financial Services Manager for the purpose of funding a portion of the Global Adjustment. Bill 132 also made certain amendments to other legislation, which will enable the IESO and OPG to work together to implement this financing.

OPG's Board of Directors, which had established a Special Committee to provide oversight on behalf of the Board of Directors, has conditionally approved OPG's involvement with the Fair Hydro Plan on commercial terms. The form of the financing entity to be established by OPG is being determined, and the specific operating protocol between the IESO, OPG and the financing entity and the requirements for financing the Fair Hydro Plan are being negotiated. OPG continues to prepare for financing activities of the financing entity that are expected to commence later in 2017. **[MONITOR]**

Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution requiring the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. A purchase and sale agreement was executed in December 2016, and the sale was completed in April 2017. A gain on sale of $283 million, which is net of tax effects of $95 million, was recognized in net income upon completion of the transaction in the second quarter of 2017. The pre-tax gain on sale was recorded as Other gain in the interim consolidated statement of income in the Service, Trading and Other Non-Generation segment. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the Act, into the Province's Consolidated Revenue Fund. OPG expects that the amount of designated proceeds to be transferred into the Consolidated Revenue Fund will be largely consistent with the after-tax gain, and is working with the Ontario Ministry of Finance to finalize the amount. The transfer is expected to take place later in 2017. **[MONITOR]**

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. An active program to locate a buyer for the property was initiated in June 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed

deductions under the Act, into the Province's Consolidated Revenue Fund. In accordance with the Shareholder Resolution, approximately one-third of the site is to be transferred to the City of Mississauga, by the purchaser, for parkland, institutional, and cultural uses.

CORE BUSINESS, STRATEGY, AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

The following sections provide an update to OPG's disclosures in the 2016 annual MD&A related to its four key strategic imperatives – operational excellence, project excellence, financial strength, and social licence. A detailed discussion of these strategic imperatives is included in the 2016 annual MD&A in the section, *Core Business, Strategy, and Outlook*.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Electricity Generation Production and Reliability

- As part of the plan to extend Pickering operations, OPG is continuing to undertake the required technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will remain fit for service for operation to 2024. OPG is also nearing completion of component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently set at the end of 2020, will be reassessed based on the fuel channel analysis and safety case consistent with submissions for the Canadian Nuclear Safety Commission's (CNSC) approval, discussed below. OPG's current application with the OEB for new base regulated prices, currently pending the OEB's decision, reflects OPG's plans to extend Pickering operations to 2024 and requests inclusion of the corresponding cost and generation impacts in the determination of the nuclear regulated price.
- OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. On June 28, 2017, OPG confirmed to the CNSC that it intends to cease commercial operation of all Pickering units on December 31, 2024. Work on the Pickering licence renewal application is proceeding and the application is expected to be filed by August 31, 2017 for the CNSC's approval in 2018. The requested licence renewal will span the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe storage state in 2028. Through an extensive Periodic Safety Review, OPG will submit a Global Assessment Report and Integrated Implementation Plan (IIP) for the station to the CNSC as part of the licence renewal.
- In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications were presented to the CNSC at public hearings in April 2017. On May 30, 2017, the CNSC announced that the WWMF licence was renewed for a period of ten years and is now valid

from June 1, 2017 to May 31, 2027. A renewal decision on the PWMF licence is expected to be issued prior to the expiry of the current licence on March 31, 2018.

- During the second quarter of 2017, OPG completed the upgrade of Unit 10 of the Sir Adam Beck 1 hydroelectric GS, increasing the capacity of the station by 6 MW.
- Work continues on the rehabilitation of Unit 1 of the Sir Adam Beck Pump hydroelectric GS and the overhaul and upgrade of the following hydroelectric units: Unit 1 of the Harmon GS, Unit 2 of the DeCew Falls GS, and Unit 2 of the Lower Notch GS.
- OPG commenced definition phase activities for the Water Conveyance System project to rehabilitate the Sir Adam Beck 1 GS canal and associated structures, ensuring their continued safe and reliable operations for approximately the next 50 years.
- As part of the process to decommission the Nanticoke and Lambton generating stations, OPG is continuing to develop a demolition plan that will ensure that the stations are closed safely, securely and in an environmentally responsible manner. Project milestones in 2017 include the elimination of coal yard equipment and structures, removal of ash silos, and the selection of a contractor to remove the stacks, powerhouse, interior equipment and supporting site structures for the Nanticoke GS. An update of the associated asset retirement obligations related to these stations is expected to be finalized later in 2017. A demolition contract for the removal of the Nanticoke powerhouse was awarded in July 2017. A demolition contract for the removal of the Lambton powerhouse is expected to be awarded in 2018.

Environmental Performance

There were no significant changes to environmental legislation affecting the Company during the second quarter of 2017. Disclosures related to the Company's environmental policy and environmental risks can be found in OPG's 2016 annual MD&A.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. OPG remains focused on delivering projects safely, on time, on budget and with high quality. The status updates for OPG's major projects as at June 30, 2017 are outlined in the following table, with further details below.

Project	Capital expenditures		Approved budget	Expected in-service date	Current status
(millions of dollars)	Year-to-date	Life-to-date			
Darlington Refurbishment	608	3,793	12,800 [1]	First unit - 2020 Last unit - 2026	Islanding of Unit 2 was completed in April 2017. Preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening of the reactor air lock doors and installation of shielding, was completed in the second quarter of 2017. The setup of specialized tooling and equipment needed for the removal and replacement of the reactor components is in progress. The project is tracking on schedule and budget.
Peter Sutherland Sr. Hydroelectric GS	32	268	300	2017	The station was placed in-service on March 31, 2017, ahead of the originally planned schedule, and is expected to close below the approved budget. Project close-out activities are in progress. In April 2017, CRP exercised its right under the partnership agreement to increase its interest in PSS to 33 percent.
Ranney Falls Hydroelectric GS	9	12	77	2019	Civil engineering design work and site clearing and mobilization have been completed. Work is progressing to expand forebay and tailrace channels. The project is tracking on schedule and budget.
Nanticoke Solar Facility	1	2		2019	Project definition work is continuing, with construction planned to commence as early as in the fourth quarter of 2017.
Deep Geologic Repository for low and intermediate level radioactive waste (L&ILW)	5 [2]	200 [2]			On June 26, 2017, the Canadian Environmental Assessment Agency (CEAA) advised that it was satisfied with the additional information submitted by OPG on May 26, 2017, and that a draft report was being prepared for public review. The Environmental Assessment (EA) Decision Statement by the federal Minister of Environment and Climate Change is expected in the fourth quarter of 2017.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities).

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017 with a total of 480 fuel channels de-fuelled. Islanding of Unit 2, the physical separation of the refurbishment unit from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second major segment, which includes preparatory work and the removal of reactor components, commenced immediately following the islanding of Unit 2. Preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening of the reactor air lock doors and installation of shielding, was completed in the second quarter of 2017. The setup of specialized tooling and equipment needed for the removal and replacement of the reactor components is in progress. The Re-tube Tooling Platform, which will host the tooling for the removal, inspection, and installation activities, was completed in July 2017, and the disassembly of reactor components commenced immediately thereafter. **[MONITOR]** Other key project activities completed during the second segment include the drain and vacuum dry of the primary heat transport system, commencement of the major turbine generator overhaul and continuation of the major electrical scope. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the overall project. The project is tracking on schedule and budget.

A number of pre-requisite projects in support of the execution phase of the project, including construction of facilities, infrastructure upgrades and installation of safety enhancements, have been completed. Completion of the Heavy Water Storage and Drum Handling Facility has been delayed due to challenges with construction. OPG suspended the project in the second quarter of 2017 to evaluate the best approach to optimize cost and schedule and complete the project. Remediation measures are in progress. This delay will not impact the overall Darlington Refurbishment project schedule, as the Heavy Water Storage and Drum Handling Facility is not on the project's critical path. The remaining projects are tracking for completion in line with the refurbishment execution schedule.

In addition to the refurbishment activities on Unit 2 completed to date, other key project activities in 2017 are as follows:

- Completion of preparation activities to support Retube and Feeder Replacement work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Re-tube Waste Processing Building.
- Commencement of the fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG is continuing planning activities for the refurbishment of the second unit, Unit 3, and is entering into associated commitments to procure major components that require long lead times. As of June 30, 2017, $51 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Ranney Falls Hydroelectric GS

During the second quarter of 2017, OPG continued construction work of a 10 MW single-unit powerhouse on the existing Ranney Falls GS site, as part of the Regulated – Hydroelectric segment. The new unit will replace an existing unit that reached its end of life in 2014. Civil engineering design work and site clearing and mobilization have been completed. Construction is progressing to expand the existing forebay and tailrace channels to accommodate the new powerhouse. The project's expected in-service date is in the fourth quarter of 2019, with a budget of $77 million. The project is tracking on schedule and budget.

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands under a Large Renewable Procurement contract with the IESO, through Nanticoke Solar LP, a partnership between OPG and a subsidiary of the Six Nations of Grand River Development Corporation, is planned to commence as early as in the fourth quarter of 2017. During the second quarter of 2017, the partnership continued work to obtain approvals and permits required to enable the commencement of construction, and progressed procurement activities for equipment and for engineering and construction services. The facility is expected to be completed in the first quarter of 2019.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project. OPG completed the requested studies and submitted the requested information in December 2016, as planned. Following the CEAA's review of OPG's submission and a period of public comment, the CEAA requested additional information from OPG. OPG provided the additional information on May 26, 2017 and, on June 26, 2017, the CEAA notified OPG that it had sufficient and adequate information to proceed with the next step of the environmental assessment process and advised that a draft report and updated terms and conditions will be prepared for public review. An EA Decision Statement by the Minister is expected in the fourth quarter of 2017. Based on the additional information submitted, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW. Alternative locations reviewed in the Canadian Shield or Southwest Ontario, while technically feasible, would result in greater negative environmental impacts and higher costs, as well as a project delay of 15 years or more, while offering no additional benefits in safety.

If the EA Decision Statement supports licensing, a number of conditions will need to be met before construction begins. In addition, OPG continues its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. Consistent with the requirements of *Ontario Regulation 53/05*, the application incorporates a rate smoothing proposal that would defer, for future collection, a portion of the approved annual nuclear revenue requirement for the period from January 1, 2017 to the end of the Darlington Refurbishment project, with a view to making more stable year-over-year changes in OPG's regulated prices. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impacts on customers. OPG expects to recognize amounts deferred under rate smoothing as income in the periods to which the underlying approved revenue requirements relate.

The application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of nuclear and hydroelectric regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework, which forms the basis for the ratemaking methodologies reflected in the application.

The application seeks an increase in the nuclear rate base, effective in early 2020, to reflect the planned placement in service of approximately $4.8 billion of capital expenditures upon the scheduled return to service of Unit 2 at the Darlington GS as part of the Darlington Refurbishment project and, effective in 2017, an increase in the deemed capital structure applied to the total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt reflected in the existing regulated prices. If approved, this would improve OPG's return on Shareholder's investment. The application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the portion of these balances approved for recovery or repayment through rate riders previously in effect.

A public oral hearing on the application took place between February 2017 and April 2017, with the final arguments completed on June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected later in 2017.

For generation assets that do not form part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements. In line with this strategy, virtually all of OPG's non-regulated operating facilities and assets under construction are subject to long-term Energy Supply Agreements (ESAs) or other long-term contracts with the IESO. This includes the Peter Sutherland Sr. GS, which began receiving contracted revenue under its hydroelectric ESA following IESO's confirmation, in June 2017, of commercial operation of the station effective as of March 31, 2017. The ESA expires in 2067.

Ensure Availability of Cost Effective Funding

In April 2017, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2017, S&P Global Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

Social Licence

As the largest electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish these relationships based on a foundation of respect for the languages, customs, and political, social and cultural organizations of the Indigenous communities.

In June 2017, OPG launched an Indigenous Business Engagement (IBE) Initiative. The purpose of this initiative is to increase access to procurement opportunities for Indigenous businesses interested in supplying materials and services to OPG. The IBE Initiative is based on a strategy that will identify opportunities in contracts, scopes of work and business plans for potential Indigenous business engagement; include criteria in procurement proposals relating to supplier's ability to engage or partner with Indigenous people or businesses; and invest in relationships with Indigenous communities by increasing outreach efforts to enhance understanding of how to do business with OPG.

As part of its commitment to help de-carbonize Ontario's transportation sector, OPG is a founding sponsor of Plug'n Drive, a non-profit organization working to accelerate the adoption of electric vehicles and to maximize their environmental and economic benefits. In May 2017, Plug'n Drive announced the opening of the world's first experiential learning facility dedicated to electric vehicle education and awareness, with OPG sponsoring the Centre's training facility. Ontario's climate change plan aims for electric and hydrogen passenger vehicles to represent five percent of new vehicle sales in the province by 2020.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of costs and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's current application for new regulated prices, currently pending the OEB's decision, is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. Considering the timing of OPG's application and OPG's procedural adherence throughout the proceeding, the Company believes that the OEB could make the new regulated prices effective January 1, 2017. This would allow OPG to recover the difference between the approved new regulated prices and the existing regulated prices for the period between January 1, 2017 and the implementation date of the new prices based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected later in 2017. The continuation of existing regulated prices until the issuance of the OEB's decision is expected to continue to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and, excluding the gain on sale of the Company's head office premises and associated parking facility recorded in the second quarter of 2017, lower ROE Excluding AOCI during 2017, compared to 2016. In large part, this is due to the year-over-year reduction in nuclear electricity generation resulting from the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined in 2014 based on a higher production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision issuance, could have a significant impact on OPG's financial results during 2017.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues to future periods. Combined with the expiry of rate riders in effect to the end of 2016 and a year-over-year reduction in nuclear generation due to the Unit 2 refurbishment outage at the Darlington GS, as expected, this will result in lower cash flow from operations and a lower FFO Adjusted Interest Coverage ratio in 2017, compared to 2016. The continuation of existing base regulated prices until such time as the new prices are determined and implemented by the OEB also is contributing to lower cash flow from operations in 2017. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements.

Lower nuclear generation due to the Darlington Refurbishment outages will continue, as planned, to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Variability in sustaining capital investment expenditures, including major sustaining projects for the hydroelectric operations, also will impact the Enterprise TGC in future periods.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, the variance accounts include those related to the revenue impact of variability in water flows and forgone production due to SBG conditions at the regulated hydroelectric stations. As there are no variance or deferral accounts in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings. OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to ESAs with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow from operations going forward.

OPG's total forecast capital expenditures for the 2017 year are approximately $1.9 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric and other development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major projects are discussed in the section, *Project Excellence*.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and, for the portion of the Used Fuel Segregated Fund guaranteed by the Province under the ONFA, changes in the Ontario consumer price index (CPI). In the near term, these factors can be volatile and cause fluctuations in the Company's income. This volatility is partially mitigated by the impact of the OEB-authorized Bruce Lease Net Revenues Variance Account and, as discussed below, the funded status of the two segregated funds.

As OPG does not have the right to withdraw surplus amounts from the Nuclear Segregated Funds when the segregated funds are overfunded relative to the life cycle funding liability per the most recently approved ONFA Reference Plan, OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value of such life cycle funding liability. This reduces the volatility of earnings on the Nuclear Segregated Funds reflected in net income when the funds are in a fully funded or overfunded position. As at June 30, 2017, the Decommissioning Segregated Fund was overfunded by approximately 24 percent, and the Used Fuel Segregated Fund was marginally overfunded, by less than one percent, based on the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue	**609**	820	**1,261**	1,746
Fuel expense	**68**	79	**136**	160
Gross margin	**541**	741	**1,125**	1,586
Operations, maintenance and administration	**593**	581	**1,182**	1,144
Depreciation and amortization	**110**	231	**217**	461
Property taxes	**7**	6	**13**	13
Loss before other gains, interest, and income taxes	**(169)**	(77)	**(287)**	(32)
Other gains	**-**	(1)	**-**	(2)
Loss before interest and income taxes	**(169)**	(76)	**(287)**	(30)

For the three and six month periods ended June 30, 2017, segment losses before interest and income taxes increased by $93 million and $257 million, respectively, compared to the same periods in 2016. The decrease in earnings was expected and primarily due to reduced revenue from the nuclear base regulated price of approximately $72 million and $206 million, partly offset by a decrease in fuel expense of $11 million and $24 million, respectively. The decrease in revenue during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, reflected lower electricity generation of 1.3 TWh and 3.6 TWh, respectively, primarily due to the ongoing Unit 2 refurbishment outage at the Darlington GS that began in October 2016, without a corresponding increase in the base regulated price. The existing nuclear base regulated price set by the OEB in 2014 continues to be in effect pending the OEB's decision on OPG's application for new regulated prices, proposed to be effective on January 1, 2017. The existing price does not reflect the lower generation as a result of the refurbishment outage, as it was set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. The reduction in nuclear electricity generation for the three and six month periods ended June 30, 2017 was partially offset by the higher electricity generation from the Pickering GS.

The increases in OM&A expenses of $12 million and $38 million during the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, also contributed to a year-over-year reduction in segment earnings. The higher OM&A expenses reflected planned expenditures related to major maintenance expenditures occurring at the nuclear stations.

Depreciation and amortization expense, excluding amortization expense related to regulatory account balances, increased by $11 million and $20 million during the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, primarily due to new assets in service.

The expiry of an OEB-authorized nuclear rate rider on December 31, 2016 contributed to the decrease in segment revenue for the three and six month periods ended June 30, 2017, compared to the same periods in 2016. As rate riders allow for recovery of approved balances in OEB-authorized regulatory accounts, this decrease in revenue was largely offset by a decrease in amortization expense related to these balances. There was no rate rider in effect during the first half of 2017 pending the outcome of OPG's current application to the OEB for new regulated prices.

The Unit Capability Factors for the Darlington and Pickering generating stations were as follows:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Unit Capability Factor *(%)* [1]				
Darlington GS	**64.6**	75.9	**74.9**	86.6
Pickering GS	**84.2**	71.4	**81.4**	72.1

[1] The nuclear Unit Capability Factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS decreased in the second quarter of 2017, compared to the same quarter in 2016, primarily due to the higher number of planned and unplanned outage days during the second quarter of 2017. The lower Unit Capability Factor at the Darlington GS for the six months ended June 30, 2017, compared to the same period in 2016, reflected the higher number of planned outage days, largely driven by constraints related to the transition of the station toward refurbishment.

The increase in Unit Capability Factor at the Pickering GS for the three and six month periods ended June 30, 2017 was primarily due to favourable unit conditions and execution of planned outage work resulting in a lower number of planned outage days at the station compared to 2016.

Regulated – Nuclear Waste Management Segment

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars) (unaudited)	**2017**	**2016**	**2017**	**2016**
Revenue	**30**	32	**57**	66
Operations, maintenance and administration	**32**	34	**61**	70
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**232**	228	**466**	456
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(194)**	(225)	**(383)**	(372)
Loss before interest and income taxes	**(40)**	(5)	**(87)**	(88)

The segment loss before interest and income taxes increased by $35 million in the second quarter of 2017 compared to the same quarter in 2016. The decline in earnings was primarily due to lower earnings from the Nuclear Segregated Funds. The segment loss before interest and income taxes for the six months ended June 30, 2017 was comparable to the same period in 2016.

Lower earnings on the Used Fuel Segregated Fund, net of the impact of the Bruce Lease Net Revenue Variance Account, were the primary reason for the lower Nuclear Segregated Funds earnings during the second quarter of 2017. As the Used Fuel Segregated Fund was overfunded as at March 31, 2017 and June 30, 2017, the earnings on the fund recorded in income during the second quarter of 2017 reflected the growth in the present value of the used fuel life cycle funding liability per the 2017 ONFA Reference Plan. During the second quarter of 2016, the Used Fuel Segregated Fund was underfunded based on the ONFA reference plan then in effect, and therefore earnings on the fund reflected the CPI-adjusted rate of return guaranteed by the Province under the ONFA for funding related to the initial 2.23 million used fuel bundles and market returns for the portion of the fund not guaranteed by the Province.

As of December 31, 2016, OPG recorded a decrease of approximately $1,570 million to the Nuclear Liabilities and associated asset retirement costs capitalized as part of the carrying value of the nuclear generating stations. The resulting year-over-year decreases in accretion on fixed asset removal and nuclear waste management liabilities recorded in the Regulated – Nuclear Waste Management segment, and depreciation and fuel expenses recorded in

the Regulated – Nuclear Generation segment during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, were offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account authorized by the OEB.

Under the current OEB-approved cost recovery methodology, these changes in expenses are not expected to materially affect OPG's income during the rest of 2017, as they are expected to continue to be largely offset by the impact of the regulatory accounts until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of such new regulated prices. Further details on the change in the estimate of the Nuclear Liabilities as of December 31, 2016 are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Asset Retirement Obligation*.

Regulated – Hydroelectric Segment

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue [1]	**379**	413	**742**	798
Fuel expense	**97**	92	**170**	171
Gross margin	**282**	321	**572**	627
Operations, maintenance and administration	**75**	75	**151**	151
Depreciation and amortization	**35**	57	**69**	113
Income before other losses (gains), interest and income taxes	**172**	189	**352**	363
Other losses (gains)	**-**	2	**-**	(20)
Income before interest and income taxes	**172**	187	**352**	383

[1] During the three and six month periods ended June 30, 2017, the Regulated – Hydroelectric segment revenue reflected incentive payment reductions of $3 million and incentive payments of $5 million, respectively, related to the OEB-approved hydroelectric incentive mechanism (three and six month periods ended June 30, 2016 – incentive payments of $1 million and $2 million, respectively). The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers. The incentive payments are reduced to remove incentive revenues arising in connection with SBG conditions.

The decrease in income before interest and income taxes of $15 million during the second quarter of 2017, compared to the same quarter in 2016, was primarily the result of the income impact of OEB-approved variance accounts and lower hydroelectric incentive mechanism payments.

The decrease in income before interest and income taxes of $31 million during the six months ended June 30, 2017, compared to the same period in 2016, was primarily due to a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to a motion by OPG. The income impact of OEB-approved variance accounts also contributed to the year-over-year decrease in income for the period.

The decrease in revenue for the three and six month periods ended June 30, 2017, compared to the same periods in 2016, was largely due to the expiry of an OEB-authorized rate rider on December 31, 2016. As the rider allowed for the recovery of approved balances in OEB-authorized regulatory accounts, the resulting reduction in revenue was largely offset by lower amortization expense related to these balances. There was no rate rider in effect during the first half of 2017 pending the outcome of OPG's current application to the OEB for new regulated prices.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Hydroelectric Availability *(%)*	**90.1**	90.4	**89.8**	92.6

The Hydroelectric Availability in the second quarter of 2017 was comparable to the same period in 2016. The decrease in Hydroelectric Availability during the six months ended June 30, 2017, compared to the same period in 2016, was primarily due to a higher number of unplanned outage days at the regulated hydroelectric stations.

Contracted Generation Portfolio Segment

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars) (unaudited)	**2017**	**2016**	**2017**	**2016**
Revenue	**147**	137	**290**	282
Fuel expense	**13**	11	**27**	23
Gross margin	**134**	126	**263**	259
Operations, maintenance and administration	**40**	45	**79**	85
Depreciation and amortization	**20**	18	**39**	37
Accretion on fixed asset removal liabilities	**2**	2	**4**	4
Property taxes	**3**	3	**5**	5
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
Income before interest and income taxes	**77**	67	**154**	145

Income before interest and income taxes increased by $10 million and $9 million during the three and six month periods June 30, 2017, compared to the same periods in 2016, respectively. The increase in earnings for the three months ended June 30, 2017 mainly resulted from revenues from the Peter Sutherland Sr. GS that was placed in-service at the end of the first quarter of 2017, higher revenues from the Lennox GS primarily due to increased production to support electricity system requirements, and lower OM&A expenses. For the six months ended June 30, 2017, the increase in earnings was primarily due to higher revenues from Lennox GS primarily due to increased production to support electricity system requirements, and lower OM&A expenses, partially offset by lower revenues from the Lower Mattagami River hydroelectric generating stations.

The Hydroelectric Availability and the Thermal Equivalent Forced Outage Rate (EFOR) for the Contracted Generation Portfolio segment were as follows:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Hydroelectric Availability *(%)*	**81.4**	87.0	**82.5**	85.5
Thermal EFOR *(%)*	**2.7**	1.0	**7.8**	1.0

Lower Hydroelectric Availability during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, was primarily due to an increase in the number of unplanned outage days at the Lower Mattagami River hydroelectric generating stations.

The higher Thermal EFOR during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, was primarily due to a higher number of unplanned outage days at the Lennox GS unit as a result of a transmission outage in 2017.

Services, Trading, and Other Non-Generation Segment

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue	**10**	16	**27**	37
Gross margin	**10**	16	**27**	37
Operations, maintenance and administration	**-**	5	**1**	9
Depreciation and amortization	**7**	10	**14**	17
Accretion on fixed asset removal liabilities	**2**	2	**4**	4
Property taxes	**1**	2	**4**	5
Income (loss) before other gains, interest, and income taxes	**-**	(3)	**4**	2
Other gains	**(380)**	(2)	**(383)**	(2)
Income (loss) before interest and income taxes	**380**	(1)	**387**	4

Segment earnings increased by $381 million and $383 million for the three and six month periods ended June 30, 2017, compared to the same periods in 2016, respectively. The increase in earnings mainly reflected the gain on sale of OPG's head office premises and associated parking facility recorded during the second quarter of 2017, as further discussed in the section, *Highlights* under the heading, *Recent Developments – Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties*.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies, to undertake major projects, to fund long-term obligations such as contributions to the pension fund and the Nuclear Segregated Funds, to make payments under the OPEB plans, to fund expenditures on Nuclear Liabilities not reimbursable from the Nuclear Segregated Funds, and to service and repay long-term debt.

Changes in cash and cash equivalents for the three and six month periods ended June 30 are as follows:

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Cash and cash equivalents, beginning of period	**220**	540	**186**	464
Cash flow provided by operating activities	**143**	348	**261**	714
Cash flow provided by (used in) investing activities	**58**	(586)	**(305)**	(896)
Cash flow (used in) provided by financing activities	**(179)**	(7)	**100**	13
Net increase (decrease)	**22**	(245)	**56**	(169)
Cash and cash equivalents, end of period	**242**	295	**242**	295

For a discussion of cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details in the section, *Highlights* under the heading, *Overview of Results*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to

increase the generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow provided by investing activities during the second quarter of 2017 was $58 million, compared to cash flow used of $586 million for the same period in 2016. Cash flow used in investing activities decreased by $591 million for the six months ended June 30, 2017, compared to the same period in 2016. The decrease in cash flow used in investing activities during these periods was primarily due to the receipt of proceeds from the sale of OPG's head office premises and associated parking facility in the second quarter of 2017 and the acquisition of nine million common shares of Hydro One Limited (Hydro One) in the second quarter of 2016, partially offset by higher expenditures on the Darlington Refurbishment project in 2017. OPG acquired the Hydro One shares for investment purposes, to mitigate the risk of future price volatility related to the Company's future share delivery obligations under the collective agreements with the Power Workers' Union and The Society of Energy Professionals.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG renewed and extended the expiry date of both tranches from May 2021 to May 2022. There were no amounts outstanding under the bank credit facility as at June 30, 2017.

There was no commercial paper outstanding under OPG's commercial paper program as at June 30, 2017.

As at June 30, 2017, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $462 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at June 30, 2017, a total of $387 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $37 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust, expiring on November 30, 2018. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. As at June 30, 2017, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

As at June 30, 2017, Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. In the third quarter of 2017, OPG expects to extend the maturity of the $300 million tranche to August 2022, and to reduce the $200 million tranche to $100 million while extending its maturity date to August 2018. As at June 30, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at June 30, 2017.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. As at June 30, 2017, there were outstanding long-term borrowings of $300 million under this credit facility. In August 2017, the credit facility was increased to $2,350 million, which expires in December 2018. [**CONFIRM**]

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent. In June 2017, OPG issued senior notes payable to the OEFC totalling $100 million and maturing in June 2047. The effective interest rate and coupon interest rate of these notes was 3.65 percent.

As at June 30, 2017, OPG's long-term debt outstanding was $5,622 million, including $1,218 million due within one year.

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's unaudited interim consolidated financial position using selected balance sheet data:

(millions of dollars) (unaudited)	As At June 30 2017	As At December 31 2016
Property, plant and equipment - net	**20,510**	19,998
The increase was primarily due to capital expenditures on the Darlington Refurbishment project, partially offset by depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**16,343**	15,984
The increase was primarily due to earnings on the Nuclear Segregated Funds, partially offset by reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Fixed asset removal and nuclear waste management liabilities	**19,876**	19,484
The increase was primarily a result of accretion expense representing the increase in the liabilities due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's interim consolidated financial statements or are recorded in the Company's interim consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies are outlined in Note 3 to the audited consolidated financial statements as at and for the year ended December 31, 2016. A discussion of recent accounting pronouncements and change in accounting estimate are included in Note 2 to OPG's unaudited interim consolidated financial statements as at and for the three and six month periods ended June 30, 2017 under the heading, *Significant Accounting Policies and Estimates*. Disclosure regarding OPG's critical accounting policies is included in OPG's 2016 annual MD&A.

RISK MANAGEMENT

The following provides an update to the discussion of the Company's risks and risk management activities included in OPG's 2016 annual MD&A. As such, the disclosure in this section should be read in conjunction with the *Risk Management* section included in the annual MD&A.

Risks to Achieving Project Excellence

Darlington Refurbishment

During the second quarter of 2017, OPG continued to mitigate and manage risks related to the Darlington Refurbishment project portfolio. Further risk treatment and remediation measures are being developed or implemented for the projects and their upcoming work windows. Several initiatives and plans are also being developed to manage risks associated with reintegration of the refurbished Unit 2 with the other units, which involves coordination between vendors, project teams and station operations.

Risks to Maintaining Financial Strength

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix, and as such, are subject to change as these forecasts are updated.

	2017 [1]	2018	2019
Estimated fuel requirements hedged [2]	75%	74%	70%

[1] Based on actual fuel requirements hedged for the six months ended June 30, 2017 and forecast for the remainder of the year.

[2] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar (USD) relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are denominated in, or tied to, US dollars. To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at June 30, 2017, OPG had one foreign exchange contract outstanding with a notional value of USD $5 million.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio

based on normal market conditions over a set period of time. For the second quarter of 2017, the VaR utilization ranged between $0.1 million and $0.3 million.

Credit

Deterioration in energy markets counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

OPG manages its exposure to suppliers or counterparties by evaluating their financial condition and negotiating appropriate collateral or other forms of security. OPG's credit exposure relating to energy markets transactions as at June 30, 2017 was $362 million, including $347 million with the IESO. Management considers the Company's risk exposure relating to electricity sales through the IESO-administered spot market to be low as the IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market. Of the $15 million remaining exposure as at June 30, 2017, over 95 percent was related to investment grade counterparties.

Ontario's Fair Hydro Plan

OPG's involvement with Ontario's Fair Hydro Plan could have significant financial and reputational impacts on the Company.

The *Ontario Fair Hydro Plan Act, 2017* received Royal Assent on June 1, 2017 and regulations under this Act came into force in June and early July. The regulations clarify aspects of the structure and programs that are required for OPG, appointed as the Financial Services Manager of the Fair Hydro Plan, to refinance a portion of the Global Adjustment through a financing entity. OPG's credit rating and reputation could potentially be adversely impacted by the Fair Hydro Plan, through financial implications to the Company from its involvement with the Fair Hydro Plan and through stakeholder opinions related to this involvement.

Recovery of Pension and OPEB Costs

On May 18, 2017, the OEB issued its report on the guiding principles and the policy for recovery mechanisms of pension and OPEB costs. This report established accrual basis as the default rate-setting method. This outcome reduces OPG's risk related to the recovery of actual pension and OPEB accrual costs and the recovery of the balance in the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Further details can be found in the section, *Highlights* under the heading, *Recent Developments*.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions are summarized below:

	Three Months Ended June 30			
	2017		2016	
(millions of dollars) (unaudited)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**1**	**-**	1	-
Services	**-**	**-**	-	4
Dividends	**2**	**-**	2	-
Province of Ontario				
Decommissioning Fund excess funding [1]	**-**	**45**	-	113
Used Fuel Fund rate of return guarantee and excess funding [1]	**-**	**39**	-	54
Gross revenue charges	**-**	**29**	-	32
ONFA guarantee fee	**-**	**2**	-	2
Other	**-**	**1**	-	-
OEFC				
Gross revenue charges	**-**	**56**	-	53
Interest expense on long-term notes	**-**	**41**	-	43
Income taxes, net of investment tax credits	**-**	**97**	-	52
IESO				
Electricity related revenue	**1,029**	**1**	1,239	5
	1,032	**311**	1,242	358

(millions of dollars) (unaudited)	Six Months Ended June 30			
	2017		2016	
	Revenue	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**5**	**-**	3	-
Services	**1**	**5**	1	9
Dividends	**4**	**-**	2	-
Province of Ontario				
Decommissioning Fund excess funding [1]	**-**	**208**	-	(64)
Used Fuel Fund rate of return guarantee and excess funding [1]	**-**	**256**	-	(105)
Gross revenue charges	**-**	**57**	-	63
ONFA guarantee fee	**-**	**4**	-	4
Other	**-**	**1**	-	-
OEFC				
Gross revenue charges	**-**	**94**	-	90
Interest expense on long-term notes	**-**	**82**	-	85
Income taxes, net of investment tax credits	**-**	**109**	-	84
IESO				
Electricity related revenue	**2,102**	**7**	2,601	15
	2,112	**823**	2,607	181

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at June 30, 2017 and December 31, 2016, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,879 million and $3,415 million, respectively. The details of accounting for the Nuclear Segregated Funds are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars) (unaudited)	June 30 2017	December 31 2016
Receivables from related parties		
Hydro One	**-**	1
IESO	**347**	421
OEFC	**8**	1
PEC	**4**	4
Province of Ontario	**8**	2
Available-for-sale securities		
Hydro One shares	**195**	212
Accounts payable and accrued charges		
OEFC	**66**	61
Province of Ontario	**7**	2
IESO	**2**	2
Long-term debt (including current portion)		
Notes payable to OEFC	**3,385**	3,295

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at June 30, 2017, the Nuclear Segregated Funds held $1,663 million of interest-bearing Province of Ontario bonds, while the registered pension fund had no such holdings. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

There have been no related party transactions related to the Fair Hydro Plan and associated financing activities.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

The Company maintains a comprehensive system of policies, procedures, and processes that represents its framework for internal controls over financial reporting and for its disclosure controls and procedures (together, ICOFR). There were no changes in the Company's internal control system during the current interim period that has or is reasonably likely to have a material impact to the ICOFR.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected financial information from OPG's unaudited interim consolidated financial statements for each of the eight most recently completed quarters.

(millions of dollars - except where noted) *(unaudited)*	**June 30 2017**	**March 31 2017**	**December 31 2016**	**September 30 2016**
Revenue	**1,146**	1,176	1,388	1,400
Net income (loss)	**307**	68	(8)	198
Less: Net income attributable to non-controlling interest	**4**	4	5	4
Net income (loss) attributable to the Shareholder	**303**	64	(13)	194
Per common share, attributable to the Shareholder *(dollars)*	**$1.18**	$0.25	($0.05)	$0.76

(millions of dollars - except where noted) *(unaudited)*	**June 30 2016**	**March 31 2016**	**December 31 2015**	**September 30 2015**
Revenue	1,387	1,478	1,312	1,426
Net income (loss)	135	128	(100)	85
Less: Net income attribute to the non-controlling interest	3	5	1	5
Net income (loss) attributable to the Shareholder	132	123	(101)	80
Per common share, attributable to the Shareholder *(dollars)*	$0.51	$0.48	($0.39)	$0.31

Trends

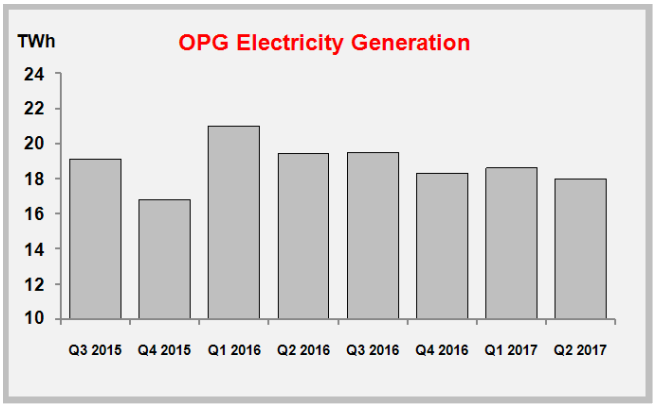
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues have been higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and

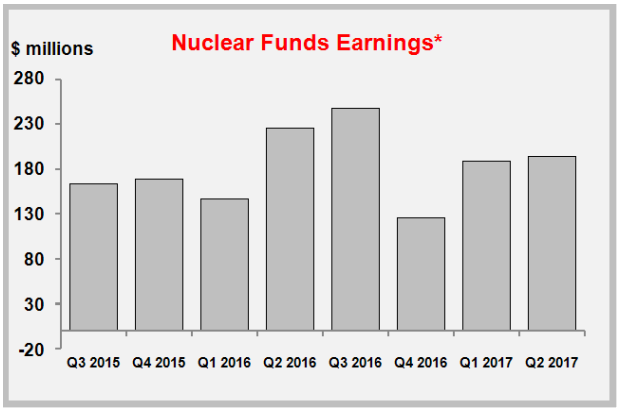
cooling demands. The financial impact of forgone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are mitigated by regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the fourth quarter of 2016 and the first half of 2017, OPG's electricity generation was reduced as a result of the Unit 2 refurbishment outage at the Darlington GS, which began in October 2016 and is expected to continue until early 2020.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items that affected net income in certain quarters above are described in OPG's 2016 annual MD&A under the section, *Quarterly Financial Highlights*.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder, improve cost performance, and ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow provided by operating activities, or any other measure in accordance with US GAAP, but as indicators of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) **ROE Excluding AOCI** is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE Excluding AOCI is measured over a 12-month period and is calculated as follows:

	Twelve Months Ended	
(millions of dollars – except where noted) (unaudited)	**June 30 2017**	**December 31 2016**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**548**	436
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,894**	10,442
ROE Excluding AOCI *(percent)*	**5.0**	4.2

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended June 30 2017	Twelve Months Ended December 31 2016
FFO before interest		
Cash flow provided by operating activities	**1,252**	1,705
Add: Interest paid	**267**	269
Less: Interest capitalized to fixed and intangible assets	**(158)**	(141)
Less: Changes to non-cash working capital balances	**(36)**	(68)
FFO before interest	**1,325**	1,765
Adjusted interest expense		
Net interest expense	**91**	120
Add: Interest income	**5**	7
Add: Interest capitalized to fixed and intangible assets	**158**	141
Add: Interest related to regulatory assets and liabilities	**41**	30
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets [1]	**-**	45
Adjusted interest expense	**295**	343
FFO Adjusted Interest Coverage *(times)*	**4.5**	5.1

[1] A value of nil is used in the calculation when interest on pension and OPEB projected benefit obligations is lower than expected return on pension plan assets.

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding the Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation from OPG-operated generating stations plus electricity generation forgone due to SBG conditions during the period.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**	**2017**	**2016**
Enterprise TGC				
Total OM&A expenses	**711**	709	**1,419**	1,395
Total fuel expense	**178**	182	**333**	354
Total capital expenditures	**451**	398	**859**	718
Less: Darlington Refurbishment capital and OM&A costs	**(306)**	(243)	**(615)**	(448)
Less: Other generation development project capital and OM&A costs	**(19)**	(41)	**(36)**	(79)
(Less) Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(12)**	23	**(23)**	41
Less: Nuclear fuel expense for non OPG-operated stations	**(16)**	(15)	**(29)**	(32)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**23**	15	**34**	33
Less: OM&A expenses ancillary to electricity generation business	**(4)**	(7)	**(9)**	(12)
Other adjustments	**(2)**	2	**(4)**	(3)
	1,004	1,023	**1,929**	1,967
Adjusted electricity generation *(TWh)*				
Total OPG electricity generation	**18.0**	19.4	**36.6**	40.4
Adjust for electricity generation forgone due to SBG conditions and OPG's share of electricity generation from co-owned facilities	**2.6**	1.7	**3.3**	3.3
	20.6	21.1	**39.9**	43.7
Enterprise TGC per MWh *($/MWh)* [1]	**48.72**	48.48	**48.35**	45.01

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

(millions of dollars – except where noted) (unaudited)	**Three Months Ended June 30**		**Six Months Ended June 30**	
	2017	**2016**	**2017**	**2016**
Nuclear TGC				
Regulated – Nuclear Generation OM&A expenses	**593**	581	**1,182**	1,144
Regulated – Nuclear Generation fuel expense	**68**	79	**136**	160
Regulated – Nuclear Generation capital expenditures	**375**	308	**741**	557
Less: Darlington Refurbishment capital and OM&A costs	**(306)**	(243)	**(615)**	(448)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**3**	29	**1**	53
Less: Nuclear fuel expense for non OPG-operated stations	**(16)**	(15)	**(29)**	(32)
Less: Regulated - Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(1)**	(2)	**(2)**	(3)
Other adjustments	**(2)**	(3)	**(2)**	(4)
	714	734	**1,412**	1,427
Nuclear electricity generation (TWh)	**9.3**	10.6	**19.3**	22.9
Nuclear TGC per MWh (*$/MWh*) [1]	**76.87**	69.25	**73.24**	62.44

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation forgone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**	**2017**	**2016**
Hydroelectric TGC				
Regulated – Hydroelectric OM&A expenses	**75**	75	**151**	151
Regulated – Hydroelectric fuel expense	**97**	92	**170**	171
Contracted Generation Portfolio OM&A expenses	**40**	45	**79**	85
Contracted Generation Portfolio fuel expense	**13**	11	**27**	23
Regulated – Hydroelectric and Contracted Generation Portfolio capital expenditures	**48**	80	**85**	139
Less: Regulated – Hydroelectric and Contracted Generation Portfolio generation development project capital and OM&A costs	**(19)**	(39)	**(35)**	(76)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(41)**	(38)	**(80)**	(75)
Less: Regulated – Hydroelectric OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(15)**	(5)	**(24)**	(12)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**23**	15	**34**	33
Other adjustments	**2**	(2)	**1**	-
	223	234	**408**	439
Adjusted hydroelectric electricity generation *(TWh)*				
Regulated – Hydroelectric electricity generation	**8.2**	8.0	**16.2**	15.9
Contracted Generation Portfolio electricity generation	**0.5**	0.8	**1.1**	1.6
Adjust for hydroelectric electricity generation forgone due to SBG conditions and non-hydroelectric electricity generation of the Contracted Generation Portfolio, including OPG's share of electricity generation from co-owned facilities	**2.6**	1.7	**3.3**	3.3
	11.3	10.5	**20.6**	20.8
Hydroelectric TGC per MWh *($/MWh)* [1]	**19.83**	22.14	**19.81**	21.08

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense.

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ONTARIO POWER GENERATION

News
from Ontario Power Generation

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[DRAFT]

Aug. 11, 2017

OPG REPORTS 2017 SECOND QUARTER FINANCIAL RESULTS

Company Reports Strong Performance at Pickering Nuclear Plant While Continuing to Safely Execute Darlington Refurbishment Project

Toronto: – Ontario Power Generation Inc. (OPG or Company) today reported net income attributable to the Shareholder of $303 million for the second quarter of 2017, compared to $132 million for the same period in 2016.

"Our Pickering Nuclear plant continues to demonstrate strong performance this year," said Jeff Lyash, OPG President and CEO. "We're executing outages as planned and generating units are producing the clean electricity Ontario homes and businesses rely on. So far this year, our Pickering plant has produced 1.2 terawatt hours more than last year."

Lyash went on to say, "We're also having strong success with the Darlington Refurbishment Project, which continues to progress on schedule and on budget."

The second quarter's results, year-over-year, were impacted by the expected decline in generation revenue, reflecting lower nuclear electricity generation due to the refurbishment outage for Unit 2 at the Darlington Generating Station (GS) without the resetting of base regulated prices. The sale of OPG's head office premises and associated parking facility, and the associated one-time gain, offset the earnings impact of the refurbishment outage and was the main driver of the increase in net income for the second quarter of 2017.

OPG provides electricity at a price that is 40 per cent less than other generators and is the only electricity generator in Ontario that has its prices set through a public hearing process by the Ontario Energy Board (OEB). In April 2017, OPG completed the public hearing for its current application with the OEB that will set prices for the Company's nuclear and most of its hydroelectric generation for the next five years, with a proposed effective date of January 1, 2017. Final arguments on the application were completed in June 2017, and the OEB is expected to make a decision on the rate application later in the year. In the meantime, OPG is operating under base regulated prices that were set in 2014 and do not reflect reduced nuclear electricity generation, which is primarily due to the Darlington Refurbishment. The continuation of these prices has negatively affected revenue and net income in the second quarter of 2017. The outcome of the current rate application and the effective date of the new regulated prices are expected to affect OPG's revenue and net income in the second half of 2017.

Generating and Operating Performance

Electricity generated during the three months ended June 30, 2017 was 18.0 terawatt hours (TWh) compared to 19.4 TWh for the same quarter in 2016. Total electricity generated during the six months ended June 30, 2017 decreased to 36.6 TWh from 40.4 TWh for the same period in 2016.

Regulated – Nuclear Generation Segment

Lower nuclear generation was primarily due to the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment that began in October 2016 and is expected to continue until early 2020. Partially offsetting the reduction in generation from the Darlington GS was an increase in generation of 0.9 TWh and 1.2 TWh from the strong performance of the Pickering GS during the three and six month periods ended June 30, 2017, respectively.

For the three months ended June 30, 2017, the unit capability factor at the Darlington GS was 64.6 per cent compared to 75.9 per cent for the same quarter in 2016. For the six months ended June 30, 2017, the unit capability factor at the Darlington GS for operating units was 74.9 per cent, compared to 86.6 per cent for the same period in 2016. The decrease was primarily a result of a higher number of planned and unplanned outage days at the station in the second quarter of 2017, and a higher number of planned outage days in the first half of 2017 largely driven by constraints related to the transition of the station toward refurbishment.

At the Pickering GS, the unit capability factor increased to 84.2 per cent and 81.4 per cent for the three and six month periods ended June 30, 2017, compared to 71.4 and 72.1 per cent for the same periods in 2016, respectively, primarily due to favourable unit conditions and execution of planned outage work resulting in a lower number of planned outage days at the station in 2017.

Regulated – Hydroelectric Segment

Higher regulated hydroelectric generation due to higher water flows, primarily on the eastern Ontario river systems, partially offset the reduction in nuclear electricity generation. The availability of 90.1 per cent at OPG's regulated hydroelectric generating stations in the second quarter of 2017 was comparable to 90.4 per cent for the same quarter in 2016. For the six months ended June 30, 2017, the availability of the regulated hydroelectric generating stations decreased to 89.8 per cent, from 92.6 per cent for the same period in 2016. The decrease in the availability was primarily due to a higher number of unplanned outage days.

Contracted Generation Portfolio Segment

Lower generation from the Contracted Generation Portfolio contributed to the decrease in total electricity generation, mainly due to lower generation from the segment's hydroelectric plants.

For the contracted hydroelectric stations, the availability for the three months ended June 30, 2017 was 81.4 per cent compared to 87.0 per cent for the same quarter in 2017. The availability for the six months ended June 30, 2017 was 82.5 per cent

compared to 85.5 per cent for the same period in 2016. The decrease in the availability was primarily due to an increase in the number of unplanned outage days.

Total Generating Cost

The Enterprise Total Generating Cost per megawatt hour (MWh) for the three months ended June 30, 2017 was $48.72, compared to $48.48 for the same quarter in 2016. The marginal increase was mainly due to the expected reduction in nuclear electricity generation due to the Unit 2 refurbishment outage at the Darlington GS and higher sustaining capital expenditures, largely offset by higher adjusted hydroelectric electricity generation, adjusted for surplus baseload generation, reflecting higher water flows and lower OM&A expenses before the impact of regulatory variance and deferral accounts. The Enterprise Total Generating Cost per MWh for the six months ended June 30, 2017 was $48.35, compared to $45.01 for the same period in 2016. The increase was expected and mainly a result of lower electricity generation due to the Unit 2 refurbishment outage at the Darlington GS and higher sustaining capital expenditures, partially offset by lower OM&A expenses before the impact of regulatory variance and deferral accounts.

If Unit 2 at the Darlington GS was not currently undergoing refurbishment and had continued to operate in a manner consistent with the performance of the remaining units at the Darlington GS and adjusting for generation constraints on the remaining units related to the transition of the station toward refurbishment, the Enterprise TGC would have been approximately $3 to $4 per MWh lower for the three and six months ended June 30, 2017. This sensitivity was calculated using the estimated incremental electricity that would have been generated under these circumstances and the associated estimated fuel cost that would have been incurred.

Generation Development

OPG is undertaking a number of generation development and life extension projects in support of Ontario's electricity planning initiatives. Significant developments during the second quarter of 2017 were as follows:

Darlington Refurbishment

The Darlington Refurbishment project is expected to extend the operating life of the station by approximately 30 years. In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016 and de-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017. Islanding of Unit 2, the physical separation of the unit under refurbishment from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project.

Preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening of the reactor air lock doors and installation of shielding, was completed in the second quarter of 2017 as part of the second segment of the project. The setup of specialized tooling and equipment needed for the removal and replacement of the reactor components is in progress. The Re-tube Tooling Platform, which will host the tooling for the removal, inspection, and installation activities, was

completed in July 2017, and the disassembly of reactor components commenced immediately thereafter. **[MONITOR]** The overall project continues to track on schedule and budget. Unit 2 is scheduled to be returned to service, after a 40-month refurbishment outage, in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the overall project. Life-to-date capital expenditures were approximately $3.8 billion as at June 30, 2017.

In addition to the execution of refurbishment activities for Unit 2, OPG is continuing planning activities for the refurbishment of the second unit, Unit 3, and is entering into associated commitments to procure major components that require long lead times. As of June 30, 2017, $51 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Ranney Falls Hydroelectric GS

In the second quarter of 2017, OPG continued construction work of a 10 MW single-unit powerhouse on the existing Ranney Falls GS site, as part of the Regulated – Hydroelectric segment. The new unit will replace an existing unit that reached its end of life in 2014. Civil engineering design work and site clearing and mobilization have been completed. Construction is progressing to expand the existing forebay and tailrace channels to accommodate the new powerhouse. The project's expected in-service date is in the fourth quarter of 2019, with a budget of $77 million. The project is tracking on schedule and budget.

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands through a partnership between OPG and a subsidiary of the Six Nations of Grand River Development Corporation is planned to commence as early as in the fourth quarter of 2017. During the second quarter of 2017, the partnership continued work to obtain approvals and permits required to enable the commencement of construction, and progressed procurement activities for equipment and for engineering and construction services. The facility is expected to be completed in the first quarter of 2019.

FINANCIAL AND OPERATIONAL HIGHLIGHTS

(millions of dollars – except where noted)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue	**1,146**	1,387	**2,322**	2,865
Fuel expense	**178**	182	**333**	354
Gross margin	**968**	1,205	**1,989**	2,511
Operations, maintenance and administration	**711**	709	**1,419**	1,395
Depreciation and amortization	**172**	316	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**236**	232	**474**	464
Earnings on Nuclear Segregated Funds - (a reduction to expenses)	**(194)**	(225)	**(383)**	(372)
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
Other net (gains) expenses	**(369)**	10	**(361)**	(1)
Income before interest and income taxes	**420**	172	**519**	414
Net interest expense	**16**	31	**35**	64
Income tax expense	**97**	6	**109**	87
Net income	**307**	135	**375**	263
Net income attributable to the Shareholder	**303**	132	**367**	255
Net income attributable to non-controlling interest [1]	**4**	3	**8**	8
Income before interest and income taxes				
Electricity generation business segments	**80**	178	**219**	498
Regulated – Nuclear Waste Management	**(40)**	(5)	**(87)**	(88)
Services, Trading, and Other Non-Generation	**380**	(1)	**387**	4
Total income before interest and income taxes	**420**	172	**519**	414
Cash flow				
Cash flow provided by operating activities	**143**	348	**261**	714
Electricity generation (TWh)				
Regulated – Nuclear Generation	**9.3**	10.6	**19.3**	22.9
Regulated – Hydroelectric	**8.2**	8.0	**16.2**	15.9
Contracted Generation Portfolio [2]	**0.5**	0.8	**1.1**	1.6
Total electricity generation	**18.0**	19.4	**36.6**	40.4
Nuclear unit capability factor (per cent)				
Darlington Nuclear GS	**64.6**	75.9	**74.9**	86.6
Pickering Nuclear GS	**84.2**	71.4	**81.4**	72.1
Availability (per cent)				
Regulated – Hydroelectric	**90.1**	90.4	**89.8**	92.6
Contracted Generation Portfolio – hydroelectric stations	**81.4**	87.0	**82.5**	85.5
Equivalent forced outage rate				
Contracted Generation Portfolio – thermal stations	**2.7**	1.0	**7.8**	1.0
Enterprise Total Generating Cost (TGC) per MWh for the three and six month periods ended June 30, 2017 and June 30, 2016 ($/MWh) [4]	**48.72**	48.48	**48.35**	45.01
Return on Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI) for the twelve months ended June 30, 2017 and December 31, 2016 (%) [4]			**5.0**	4.2
Funds from Operations (FFO) Adjusted Interest Coverage for the twelve months ended June 30, 2017 and December 31, 2016 (times) [4]			**4.5**	5.1

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership, the 33 percent interest of Coral Rapids Power Corporation, a corporation wholly owned by the Taykwa Tagamou Nation, in the PSS Generating Station Limited Partnership, and the 10 percent interest of a corporation wholly owned by the Six Nations of Grand River Development Corporation in the Nanticoke Solar LP.

[2] Includes OPG's share of generation volume from its 50 per cent ownership interests in the Portlands Energy Centre and Brighton Beach GS.

[3] Nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Unit 2 of the Darlington GS is excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

[4] Enterprise TGC per MWh, ROE Excluding AOCI, and FFO Adjusted Interest Coverage are non-GAAP financial measures and do not have any standardized meaning prescribed by US GAAP. Additional information about the non-GAAP measures is provided in OPG's Management's Discussion and Analysis for the three and six months ended June 30, 2017, in the sections *Highlights – FFO Adjusted Interest Coverage*, *Highlights – Return on Common Equity Excluding Accumulated Other Comprehensive Income*, and *Highlights – Enterprise Total Generating Cost per MWh*, as well as *Supplementary Non-GAAP Financial Measures.*

Ontario Power Generation Inc. is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. Our mission is providing low cost power in a safe, clean, reliable and sustainable manner for the benefit of our customers and shareholder.

Ontario Power Generation Inc.'s unaudited interim consolidated financial statements and Management's Discussion and Analysis as at and for the three and six month periods ended June 30, 2017 can be accessed on OPG's web site (www.opg.com), the Canadian Securities Administrators' web site (www.sedar.com), or can be requested from the Company.

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ONTARIO POWER GENERATION INC.

INTERIM CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

JUNE 30, 2017

[DRAFT]

ONTARIO POWER GENERATION

INTERIM CONSOLIDATED STATEMENTS OF INCOME (UNAUDITED)

(millions of dollars except where noted)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue *(Note 12)*	**1,146**	1,387	**2,322**	2,865
Fuel expense *(Note 12)*	**178**	182	**333**	354
Gross margin	**968**	1,205	**1,989**	2,511
Expenses *(Note 12)*				
Operations, maintenance and administration	**711**	709	**1,419**	1,395
Depreciation and amortization	**172**	316	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**236**	232	**474**	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(194)**	(225)	**(383)**	(372)
Property taxes	**11**	11	**22**	23
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
	928	1,034	**1,853**	2,121
Income before other gains, interest and income taxes	**40**	171	**136**	390
Other gains *(Note 12)*	**(380)**	(1)	**(383)**	(24)
Income before interest and income taxes	**420**	172	**519**	414
Net interest expense *(Note 5)*	**16**	31	**35**	64
Income before income taxes	**404**	141	**484**	350
Income tax expense	**97**	6	**109**	87
Net income	**307**	135	**375**	263
Net income attributable to the Shareholder	**303**	132	**367**	255
Net income attributable to non-controlling interest	**4**	3	**8**	8
Basic and diluted net income per common share *(dollars)*	**1.18**	0.51	**1.43**	0.99
Common shares outstanding *(millions)*	**256.3**	256.3	**256.3**	256.3

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (UNAUDITED)

(millions of dollars)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Net income	**307**	135	**375**	263
Other comprehensive income, net of income taxes *(Note 7)*				
Reclassification to income of amounts related to pension and other post-employment benefits [1]	**2**	3	**5**	6
Reclassification to income of losses on derivatives designated as cash flow hedges [2]	**5**	6	**9**	10
Unrealized (loss) gain on available-for-sale securities [3]	**(7)**	15	**(2)**	15
Other comprehensive income for the period	**-**	24	**12**	31
Comprehensive income	**307**	159	**387**	294
Comprehensive income attributable to the Shareholder	**303**	156	**379**	286
Comprehensive income attributable to non-controlling interest	**4**	3	**8**	8

[1] Net of income tax expenses of $1 million for the three months ended June 30, 2017 and 2016. Net of income tax expenses of $2 million for the six months ended June 30, 2017 and 2016.

[2] Net of income tax expense of nil for the three months ended June 30, 2017 and 2016. Net of income tax expenses of $1 million for the six months ended June 30, 2017 and 2016.

[3] Net of income tax recovery of $2 million and income tax expense of $5 million for the three months ended June 30, 2017 and 2016, respectively. Net of income tax recovery of $1 million and income tax expense of $5 million for the six months ended June 30, 2017 and 2016, respectively.

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

Six Months Ended June 30 *(millions of dollars)*	**2017**	**2016**
Operating activities		
Net income	**375**	263
Adjust for non-cash items:		
Depreciation and amortization	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**474**	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(383)**	(372)
Pension and other post-employment benefit costs *(Note 8)*	**226**	233
Deferred income taxes	**16**	(11)
Mark-to-market on derivative instruments	**(3)**	2
Provision for used nuclear fuel and low and intermediate level nuclear waste	**53**	62
Regulatory assets and liabilities	**(73)**	(68)
Provision for materials and supplies	**9**	9
Other gains	**(379)**	(24)
Other	**(9)**	(16)
	645	1,170
Contributions to nuclear fixed asset removal and nuclear waste management funds	**-**	(74)
Expenditures on fixed asset removal and nuclear waste management	**(157)**	(125)
Reimbursement of expenditures on nuclear fixed asset removal and nuclear waste management	**41**	30
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans	**(180)**	(237)
Expenditures on restructuring	**(2)**	(3)
Distributions received from investments subject to significant influence	**23**	30
Net changes to other long-term assets and liabilities	**16**	16
Net changes in non-cash working capital balances *(Note 13)*	**(125)**	(93)
Cash flow provided by operating activities	**261**	714
Investing activities		
Net proceeds from sale of property, plant and equipment	**484**	-
Purchase of available-for-sale securities	**-**	(213)
Proceeds from deposit note *(Note 4)*	**70**	35
Investment in property, plant and equipment and intangible assets	**(859)**	(718)
Cash flow used in investing activities	**(305)**	(896)
Financing activities		
Issuance of long-term debt *(Note 4)*	**300**	-
Repayment of long-term debt	**(212)**	(2)
Contribution from non-controlling interest	**19**	-
Distribution to non-controlling interest	**(7)**	(7)
Issuance of short-term notes	**864**	1,985
Repayment of short-term notes	**(864)**	(1,963)
Cash flow provided by financing activities	**100**	13
Net increase (decrease) in cash and cash equivalents	**56**	(169)
Cash and cash equivalents, beginning of period	**186**	464
Cash and cash equivalents, end of period	**242**	295

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at *(millions of dollars)*	June 30 2017	December 31 2016
Assets		
Current assets		
Cash and cash equivalents	**242**	186
Available-for-sale securities	**195**	212
Receivables from related parties	**367**	429
Nuclear fixed asset removal and nuclear waste management funds	**18**	24
Fuel inventory	**306**	310
Materials and supplies	**94**	100
Prepaid expenses	**218**	198
Other current assets	**102**	298
	1,542	1,757
Property, plant and equipment	**30,049**	29,315
Less: accumulated depreciation	**9,539**	9,317
	20,510	19,998
Intangible assets	**534**	503
Less: accumulated amortization	**418**	404
	116	99
Other assets		
Nuclear fixed asset removal and nuclear waste management funds	**16,325**	15,960
Long-term materials and supplies	**353**	345
Regulatory assets *(Note 3)*	**5,961**	5,855
Investments subject to significant influence *(Note 14)*	**316**	321
Other long-term assets	**32**	37
	22,987	22,518
	45,155	44,372

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at *(millions of dollars)*	June 30 2017	December 31 2016
Liabilities		
Current liabilities		
Accounts payable and accrued charges	**1,021**	1,164
Deferred revenue due within one year	**12**	12
Short-term debt	**-**	2
Long-term debt due within one year *(Note 4)*	**1,218**	1,103
Income taxes payable	**-**	123
	2,251	2,404
Long-term debt *(Note 4)*	**4,390**	4,417
Other liabilities		
Fixed asset removal and nuclear waste management liabilities *(Note 6)*	**19,876**	19,484
Pension liabilities	**2,914**	3,012
Other post-employment benefit liabilities	**2,939**	2,897
Long-term accounts payable and accrued charges	**260**	213
Deferred revenue	**325**	298
Deferred income taxes	**845**	829
Regulatory liabilities *(Note 3)*	**446**	310
	27,605	27,043
Equity		
Common shares [1]	**5,126**	5,126
Retained earnings	**5,903**	5,534
Accumulated other comprehensive loss *(Note 7)*	**(280)**	(295)
Equity attributable to the Shareholder	**10,749**	10,365
Equity attributable to non-controlling interest	**160**	143
Total equity	**10,909**	10,508
	45,155	44,372

[1] 256,300,010 common shares outstanding at a stated value of $5,126 million as at June 30, 2017 and December 31, 2016.

Commitments and Contingencies *(Notes 4, 10 and 11)*

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (UNAUDITED)

Six Months Ended June 30 *(millions of dollars)*	**2017**	**2016**
Common shares	**5,126**	5,126
Retained earnings		
Balance at beginning of period	**5,534**	5,098
Net income attributable to the Shareholder	**367**	255
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**2**	-
Balance at end of period	**5,903**	5,353
Accumulated other comprehensive loss, net of income taxes		
Balance at beginning of period	**(295)**	(319)
Other comprehensive income	**12**	31
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**3**	-
Balance at end of period	**(280)**	(288)
Equity attributable to the Shareholder	**10,749**	10,191
Equity attributable to non-controlling interest		
Balance at beginning of period	**143**	140
Equity contribution from non-controlling interest	**21**	-
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**(5)**	-
Distribution to non-controlling interest	**(7)**	(7)
Income attributable to non-controlling interest	**8**	8
Balance at end of period	**160**	141
Total equity	**10,909**	10,332

See accompanying notes to the interim consolidated financial statements

NOTES TO THE INTERIM CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

For the three and six months ended June 30, 2017 and 2016

1. BASIS OF PRESENTATION

These interim consolidated financial statements for the three and six months ended June 30, 2017 and 2016 include the accounts of Ontario Power Generation Inc. (OPG or the Company) and its subsidiaries. The Company consolidates its interest in entities over which it is able to exercise control and attributes the results to its sole shareholder, the Province of Ontario (Province). Interests owned by other parties are reflected as non-controlling interest. These interim consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP). These interim consolidated financial statements do not contain all of the disclosures required by US GAAP for annual financial statements. Accordingly, they should be read in conjunction with the annual consolidated financial statements of the Company as at and for the year ended December 31, 2016. All dollar amounts are presented in Canadian dollars.

Certain of the 2016 comparative amounts have been reclassified from financial statements previously presented to conform to the 2017 interim consolidated financial statement presentation.

Use of Management Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the interim consolidated financial statements, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefit (OPEB) balances, asset retirement obligations and associated asset retirement costs capitalized as part of property, plant and equipment, income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments and investments in segregated funds, depreciation and amortization expenses, and inventories. Actual results may differ significantly from these estimates.

2. SIGNIFICANT ACCOUNTING POLICIES AND ESTIMATES

Change in Accounting Estimate

Pension and Other Post-Employment Benefits

Effective January 1, 2017, OPG changed the method used to estimate the service and interest cost components of pension and OPEB costs. OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs is estimated at approximately $35 million and $70 million for the three and six month ended June 30, 2017, respectively. Approximately 90 percent of this reduction in pension and OPEB costs was attributed to the Company's regulated business segments and therefore was offset by the impact of regulatory variance and deferral accounts authorized by the Ontario Energy Board (OEB).

Recent Accounting Pronouncements Not Yet Adopted

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

As part of the project to implement the new revenue standard, OPG is continuing to assess the impact of the standard on accounting for the Company's revenue streams and consolidated financial statements. OPG's major revenue streams include regulated generation revenue from base regulated prices and rate riders established by the OEB, as well as revenue from generation assets under long-term contractual arrangements with the Independent Electricity System Operator (IESO). In March 2017, the American Institute of Certified Public Accountants (AICPA) issued Revenue Recognition Implementation Issue #13-1*, Scope Clarification Regarding Tariff Sales to Regulated Customers*. The draft implementation guidance was developed by the AICPA Power & Utilities task force. This draft guidance concludes that tariff-based revenue from the provision of regulated utility service to a utility's customers is within the scope of Topic 606. OPG has completed its analysis of the impact of Topic 606 on its accounting for generation revenue from base regulated prices and has not identified any material differences. The Company continues to work on its assessment of the impact of Topic 606 on its other revenue streams.

The Company currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements and is in the process of concluding on the method of adoption.

Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost

In March 2017, the FASB issued ASU No. 2017-07, *Compensation – Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. Under the new guidance, employers that sponsor defined benefit plans for pensions and/or other postretirement benefits are required to present the service cost component of net periodic benefit cost in the same statement of income line item as other employee compensation costs arising from services rendered during the period. The other components of the net periodic benefit cost are to be presented separately from the line item that includes the service cost and outside of any subtotal of income from operations, if such a subtotal is presented. In addition, the new guidance requires that only the service cost component of net benefit cost be eligible for capitalization.

This guidance is effective for fiscal years beginning after December 15, 2017, including interim periods of those years. The guidance is not expected to have a material impact on OPG's consolidated financial statements, as OPG currently capitalizes only the service cost component of post-retirement benefits costs. Additionally, OPG already includes the service cost component of post-retirement benefit costs with other compensation costs, within the operations, maintenance and administration expenses line item in the consolidated statements of income, and does not show a subtotal of income from operations. As such, the new guidance is not expected to affect the presentation of OPG's consolidated financial statements.

3. REGULATORY ASSETS AND LIABILITIES

The regulatory assets and liabilities recorded as at June 30, 2017 and December 31, 2016 are as follows:

(millions of dollars)	**June 30 2017**	**December 31 2016**
Regulatory assets		
Variance and deferral accounts authorized by the Ontario Energy Board		
Pension and OPEB Cost Variance Account	**716**	716
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 8)*	**533**	497
Hydroelectric Surplus Baseload Generation Variance Account	**299**	210
Bruce Lease Net Revenues Variance Account	**123**	95
Other variance and deferral accounts	**128**	107
	1,799	1,625
Pension and OPEB Regulatory Asset *(Note 8)*	**3,304**	3,392
Deferred Income Taxes	**858**	838
Total regulatory assets	**5,961**	5,855
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Hydroelectric Water Conditions Variance Account	**119**	51
Impact Resulting from Changes in Station End-of-Life Dates Deferral Account	**106**	71
Other variance and deferral accounts	**221**	188
Total regulatory liabilities	**446**	310

OPG's May 2016 application with the OEB for new regulated prices included a request for new rate riders to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, and the portion of these balances previously approved for recovery or repayment for through rate riders previously in effect. The application also requested the continuation of all applicable existing variance and deferral accounts. In March 2017, the OEB approved a settlement agreement reached by OPG and intervenors on a limited set of issues in the application (Settlement Agreement). Among the settled issues, the agreement provided for the continuation of all applicable existing variance and deferral accounts and accepted a number of variance and deferral account balances for recovery, as requested in OPG's application. The periods of recovery or repayment for the accepted variance and deferral account balances are excluded from the scope of the Settlement Agreement. The Settlement Agreement did not impact OPG's financial results for the three and six months ended June 30, 2017. The OEB's decision on OPG's application will be issued following final arguments, which were completed in the second quarter of 2017.

As at June 30, 2017 and December 31, 2016, regulatory assets for other variance and deferral accounts included amounts for the Nuclear Deferral and Variance Over/Under Recovery Variance Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Liability Deferral Account, the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account, and the Nuclear Development Variance Account. As at June 30, 2017 and December 31, 2016, regulatory liabilities for other variance and deferral accounts included the amounts for the Pension & OPEB Cash Payment Variance Account, the Capacity Refurbishment Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account.

4. LONG-TERM DEBT

Long-term debt consists of the following:

(millions of dollars)	**June 30 2017**	**December 31 2016**
Notes payable to the Ontario Electricity Financial Corporation	**3,385**	3,295
UMH Energy Partnership	**182**	184
PSS Generating Station Limited Partnership	**245**	245
Lower Mattagami Energy Limited Partnership	**1,795**	1,795
Other	**15**	15
	5,622	5,534
Less: bond issuance fees	**(14)**	(14)
Less: due within one year	**(1,218)**	(1,103)
Long-term debt	**4,390**	4,417

In the fourth quarter of 2015, PSS Generating Station Limited Partnership (PSS), a subsidiary of OPG, issued long-term debt totalling $245 million in support of the Peter Sutherland Sr. Generating Station (GS) project. The majority of the debt proceeds, totalling $180 million, were invested in a structured deposit note with staggered maturity dates ranging from January 2016 to April 2017. As at June 2017, the deposit note balance of nil (December 31, 2016 - $70 million) was reported in Other current assets on the consolidated balance sheets.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the Ontario Electricity Financial Corporation (OEFC), which expires on December 31, 2017. In August 2017, the credit facility was increased to $2,350 million, which expires in December 2018.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent. In June 2017, OPG issued senior notes payable to the OEFC totalling $100 million and maturing in June 2047. The effective interest rate and coupon interest rate of these notes was 3.65 percent.

5. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG renewed and extended the expiry date of both tranches from May 2021 to May 2022. As at June 30, 2017, there were no amounts outstanding under the bank credit facility. There was no commercial paper outstanding under OPG's commercial paper program as at June 30, 2017.

As at June 30, 2017, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at June 30, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at June 30, 2017.

As at June 30, 2017, OPG maintained $25 million of short-term, uncommitted overdraft facilities and $462 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at June 30, 2017, a total of $387 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $37 million for general corporate purposes, and $1 million related to the operation of the Portlands Energy Centre (PEC).

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million, expiring on November 30, 2018. As at June 30, 2017, there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

UMH Energy Partnership has entered into an $8 million short-term, uncommitted overdraft facility and $16 million of irrevocable, standby Letters of Credit facilities in support of its operations. As at June 30, 2017, total Letters of Credit of $14 million had been issued under these facilities.

The following table summarizes the net interest expense:

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars)	**2017**	**2016**	**2017**	**2016**
Interest on long-term debt	**71**	72	**141**	144
Interest on short-term debt	**2**	1	**2**	2
Interest income	**(2)**	(2)	**(2)**	(4)
Interest capitalized to property, plant and equipment and intangible assets	**(40)**	(34)	**(82)**	(65)
Interest related to regulatory assets and liabilities [1]	**(15)**	(6)	**(24)**	(13)
Net interest expense	**16**	31	**35**	64

[1] Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Bruce Lease Net Revenues Variance Account, the Capacity Refurbishment Variance Account, and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

6. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES

The liabilities for fixed asset removal and nuclear waste management on a present value basis as at June 30, 2017 and December 31, 2016 consist of the following:

(millions of dollars)	**June 30 2017**	**December 31 2016**
Liability for nuclear used fuel management	**11,554**	11,292
Liability for nuclear decommissioning and nuclear low and intermediate level waste management	**7,944**	7,811
Liability for non-nuclear fixed asset removal	**378**	381
Fixed asset removal and nuclear waste management liabilities	**19,876**	19,484

7. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of accumulated other comprehensive loss (AOCL), are as follows:

	Six Months Ended June 30, 2017			
(millions of dollars)	**Unrealized Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities [1]**	**Total [1]**
AOCL, beginning of period	**(87)**	**(207)**	**(1)**	**(295)**
Unrealized loss on available-for-sale securities	**-**	**-**	**(2)**	**(2)**
Amounts reclassified from AOCL	**9**	**5**	**-**	**14**
Other comprehensive income for the period	**9**	**5**	**(2)**	**12**
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**3**	**-**	**-**	**3**
AOCL, end of period	**(75)**	**(202)**	**(3)**	**(280)**

[1] All amounts are net of income taxes.

	Six Months Ended June 30, 2016			
(millions of dollars)	**Unrealized Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities [1]**	**Total [1]**
AOCL, beginning of period	(106)	(213)	-	(319)
Unrealized gain on available-for-sale securities	-	-	15	15
Amounts reclassified from AOCL	10	6	-	16
Other comprehensive income for the period	10	6	15	31
AOCL, end of period	(96)	(207)	15	(288)

[1] All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the three and six months ended June 30, 2017 are as follows:

	Amount Reclassified from AOCL		
(millions of dollars)	**Three Months Ended June 30, 2017**	**Six Months Ended June 30, 2017**	**Statement of Income Line Item**
Amortization of losses from cash flow hedges			
Losses	**5**	**10**	Net interest expense
Income tax recovery	**-**	**(1)**	Income tax expense
	5	**9**	
Amortization of amounts related to pension and OPEB			
Actuarial losses	**3**	**7**	See (1) below
Income tax recovery	**(1)**	**(2)**	Income tax expense
	2	**5**	
Total reclassifications for the period	**7**	**14**	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 8 for additional details).

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the three and six months ended June 30, 2016 are as follows:

(millions of dollars)	Amount Reclassified from AOCL Three Months Ended June 30, 2016	Six Months Ended June 30, 2016	Statement of Income Line Item
Amortization of losses from cash flow hedges			
Losses	6	11	Net interest expense
Income tax recovery	-	(1)	Income tax expense
	6	10	
Amortization of amounts related to pension and OPEB			
Actuarial losses	4	8	See (1) below
Income tax recovery	(1)	(2)	Income tax expense
	3	6	
Total reclassifications for the period	9	16	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 8 for additional details).

8. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

OPG's pension and OPEB costs for the three months ended June 30, 2017 and 2016 are as follows:

(millions of dollars)	Registered Pension Plans 2017	Registered Pension Plans 2016	Supplementary Pension Plans 2017	Supplementary Pension Plans 2016	OPEB 2017	OPEB 2016
Components of Cost Recognized for the period						
Current service costs	**69**	69	**2**	1	**17**	17
Interest on projected benefit obligation	**136**	159	**3**	3	**27**	33
Expected return on plan assets, net of expenses	**(192)**	(184)	**-**	-	**-**	-
Amortization of net actuarial loss [1]	**46**	48	**1**	1	**-**	5
Cost recognized [2]	**59**	92	**6**	5	**44**	55

[1] The amortization of net actuarial loss is recognized as an increase to other comprehensive income. This increase for the three months ended June 30, 2017 was partially offset by a decrease in the Pension and OPEB Regulatory Asset of $44 million (three months ended June 30, 2016 – $50 million).

[2] These pension and OPEB costs for the three months ended June 30, 2017 exclude the net addition of costs of $4 million from the recognition of changes in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account (three months ended June 30, 2016 – net reduction of costs of $36 million).

OPG's pension and OPEB costs for the six months ended June 30, 2017 and 2016 are as follows:

(millions of dollars)	Registered Pension Plans 2017	Registered Pension Plans 2016	Supplementary Pension Plans 2017	Supplementary Pension Plans 2016	OPEB 2017	OPEB 2016
Components of Cost Recognized						
Current service costs	**137**	138	**3**	3	**34**	34
Interest on projected benefit obligation	**273**	317	**6**	6	**54**	66
Expected return on plan assets, net of expenses	**(383)**	(367)	**-**	-	**-**	-
Amortization of net actuarial loss [1]	**92**	96	**3**	2	**-**	10
Cost recognized [2]	**119**	184	**12**	11	**88**	110

[1] The amortization of net actuarial loss is recognized as an increase to other comprehensive income. This increase for the six months ended June 30, 2017 was partially offset by a decrease in the Pension and OPEB Regulatory Asset of $88 million (six months ended June 30, 2016 – $100 million).

[2] These pension and OPEB costs for the six months ended June 30, 2017 exclude the net addition of costs of $7 million from the recognition of changes in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account (six months ended June 30, 2016 - net reduction of costs of $72 million).

9. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect the Company's assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/United States (US) foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are denominated in, or tied to, US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the IESO administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at June 30, 2017 was less than $1 million. OPG's fair value derivatives totalled a net liability of $13 million as at June 30, 2017 (December 31, 2016 – $24 million).

Existing pre-tax net losses of $20 million deferred in AOCL as at June 30, 2017 are expected to be reclassified to net income within the next 12 months.

10. FAIR VALUE MEASUREMENTS

The fair value of financial instruments traded in active markets is based on quoted market prices at the interim consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments. The fair value hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the interim consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Certain alternative investments are measured at fair value by their investment managers using net asset value (NAV). Investments measured at NAV as a practical expedient for determining their fair value are excluded from the fair value hierarchy.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The following is a summary of OPG's financial instruments and their fair value as at June 30, 2017 and December 31, 2016:

	Fair Value		Carrying Value [1]		
(millions of dollars)	**2017**	**2016**	**2017**	**2016**	**Balance Sheet Line Item**
Nuclear Segregated Funds (includes current portion) [2]	**16,343**	15,984	**16,343**	15,984	Nuclear fixed asset removal and nuclear waste management funds
Investment in Hydro One shares	**195**	212	**195**	212	Available-for-sale securities
Payable related to cash flow hedges	**(44)**	(48)	**(44)**	(48)	Long-term accounts payable and accrued charges
Long-term debt (includes current portion)	**(6,194)**	(6,033)	**(5,608)**	(5,520)	Long-term debt
Other financial instruments	**(8)**	(18)	**(8)**	(18)	Various

[1] The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other current assets, short-term debt, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

[2] The Nuclear Segregated Funds are comprised of the Decommissioning Segregated Fund and the Used Fuel Segregated Fund.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs.

The following tables present financial assets and financial liabilities measured at fair value in accordance with the fair value hierarchy as at June 30, 2017 and December 31, 2016:

	June 30, 2017			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**5,704**	**4,612**	**-**	**10,316**
Investments measured at NAV [1]				**1,223**
				11,539
Due to Province				**(2,194)**
Used Fuel Segregated Fund, net				**9,345**
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**4,264**	**3,407**	**-**	**7,671**
Investments measured at NAV [1]				**1,012**
				8,683
Due to Province				**(1,685)**
Decommissioning Segregated Fund, net				**6,998**
Investment in available-for-sale securities [2]	**195**	**-**	**-**	**195**
Other financial assets	**6**	**6**	**9**	**21**
Liabilities				
Other financial liabilities	**(21)**	**(8)**	**-**	**(29)**

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

[2] In the second quarter of 2017, approximately 622,000 of Hydro One Inc. shares held as available-for-sale securities were distributed to eligible employees represented by the Power Workers' Union under the terms of the of the collective bargaining agreement reached in 2015. On the day of transfer, the closing price was $24.25 per share.

(millions of dollars)	Level 1	December 31, 2016 Level 2	Level 3	Total
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	5,602	4,394	-	9,996
Investments measured at NAV [1]				1,086
				11,082
Due to Province				(1,938)
Used Fuel Segregated Fund, net				9,144
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	4,171	3,243	-	7,414
Investments measured at NAV [1]				903
				8,317
Due to Province				(1,477)
Decommissioning Segregated Fund, net				6,840
Investment in available-for-sale securities	212	-	-	212
Other financial assets	6	2	9	17
Liabilities				
Other financial liabilities	(29)	(6)	-	(35)

1 Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

During the six months ended June 30, 2017, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3 for the three months ended June 30, 2017:

(millions of dollars)	Other financial instruments
Opening balance, April 1, 2017	**7**
Realized losses included in revenue	**(2)**
Purchases	**4**
Closing balance, June 30, 2017	**9**

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3 for the six months ended June 30, 2017:

(millions of dollars)	Other financial instruments
Opening balance, January 1, 2017	**9**
Unrealized losses included in revenue	**(2)**
Realized losses included in revenue	**(3)**
Purchases	**5**
Closing balance, June 30, 2017	**9**

Nuclear Segregated Funds

The fair value of the investments within the Nuclear Segregated Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value. Alternative investments are measured at fair value using NAV as a practical expedient.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Segregated Funds that are reported on the basis of NAV as at June 30, 2017:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Alternative Investments				
Infrastructure	**1,275**	**806**	**n/a**	**n/a**
Real Estate	**882**	**478**	**n/a**	**n/a**
Agriculture	**78**	**115**	**n/a**	**n/a**
Pooled Funds				
Short-term Investments	**17**	**n/a**	**Daily**	**1 - 5 Days**
Fixed Income	**540**	**n/a**	**Daily**	**1 - 5 Days**
Equity	**850**	**n/a**	**Daily**	**1 - 5 Days**
Total	**3,642**	**1,399**		

The fair value of the pooled funds is classified as Level 2. Infrastructure, real estate and agriculture investments are measured using NAV as a practical expedient for determining their fair value.

Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

Real Estate

This class includes investments in institutional-grade real estate property. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests to another party, as stipulated in the partnership agreement. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements.

Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations, and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally managed portfolios. The fair value of the investments in this class has been estimated using NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

11. COMMITMENTS AND CONTINGENCIES

Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power L.P. (Bruce Power) by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered in accordance with an extension of the original June 30, 2017 delivery deadline set out in the timetable.

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at June 30, 2017, the total amount of guarantees OPG provided to these entities was $83 million (December 31, 2016 − $83 million). OPG may terminate some of these guarantees

within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at June 30, 2017, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at June 30, 2017 are as follows:

(millions of dollars)	**2017** [1]	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Fuel supply agreements	99	169	96	76	62	103	605
Contributions to the OPG registered pension plan [2]	122	251	-	-	-	-	373
Long-term debt repayment	891	398	368	663	413	2,889	5,622
Interest on long-term debt	124	207	189	167	138	2,545	3,370
Commitments related to Darlington Refurbishment [3]	506	-	-	-	-	-	506
Commitments related to Peter Sutherland Sr. GS project	29	-	-	-	-	-	29
Commitments related to Ranney Falls GS project	14	21	4	-	-	-	39
Operating licences	20	40	41	24	28	115	268
Operating lease obligations	14	27	25	25	23	93	207
Unconditional purchase obligations	31	59	58	56	5	-	209
Accounts payable and accrued charges	730	8	8	-	-	17	763
Other	44	38	26	2	1	65	176
Total	2,624	1,218	815	1,013	670	5,827	12,167

[1] Represents amounts for the remainder of the year.

[2] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[3] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

12. BUSINESS SEGMENTS

Segment (Loss) Income for the Three Months Ended June 30, 2017 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	**609**	**30**	**379**	**147**	**10**	**(29)**	**1,146**
Fuel expense	**68**	**-**	**97**	**13**	**-**	**-**	**178**
Gross margin	**541**	**30**	**282**	**134**	**10**	**(29)**	**968**
Operations, maintenance and administration	**593**	**32**	**75**	**40**	**-**	**(29)**	**711**
Depreciation and amortization	**110**	**-**	**35**	**20**	**7**	**-**	**172**
Accretion on fixed asset removal and nuclear waste management liabilities	**-**	**232**	**-**	**2**	**2**	**-**	**236**
Earnings on nuclear fixed asset removal and nuclear waste management funds	**-**	**(194)**	**-**	**-**	**-**	**-**	**(194)**
Property taxes	**7**	**-**	**-**	**3**	**1**	**-**	**11**
Income from investments subject to significant influence	**-**	**-**	**-**	**(8)**	**-**	**-**	**(8)**
Other gains	**-**	**-**	**-**	**-**	**(380)**	**-**	**(380)**
(Loss) income before interest and income taxes	**(169)**	**(40)**	**172**	**77**	**380**	**-**	**420**

Segment (Loss) Income for the Three Months Ended June 30, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	820	32	413	137	16	(31)	1,387
Fuel expense	79	-	92	11	-	-	182
Gross margin	741	32	321	126	16	(31)	1,205
Operations, maintenance and administration	581	34	75	45	5	(31)	709
Depreciation and amortization	231	-	57	18	10	-	316
Accretion on fixed asset removal and nuclear waste management liabilities	-	228	-	2	2	-	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(225)	-	-	-	-	(225)
Property taxes	6	-	-	3	2	-	11
Income from investments subject to significant influence	-	-	-	(9)	-	-	(9)
Other (gains) losses	(1)	-	2	-	(2)	-	(1)
(Loss) income before interest and income taxes	(76)	(5)	187	67	(1)	-	172

Segment (Loss) Income for the Six Months Ended June 30, 2017 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	**1,261**	**57**	**742**	**290**	**27**	**(55)**	**2,322**
Fuel expense	**136**	**-**	**170**	**27**	**-**	**-**	**333**
Gross margin	**1,125**	**57**	**572**	**263**	**27**	**(55)**	**1,989**
Operations, maintenance and administration	**1,182**	**61**	**151**	**79**	**1**	**(55)**	**1,419**
Depreciation and amortization	**217**	**-**	**69**	**39**	**14**	**-**	**339**
Accretion on fixed asset removal and nuclear waste management liabilities	**-**	**466**	**-**	**4**	**4**	**-**	**474**
Earnings on nuclear fixed asset removal and nuclear waste management funds	**-**	**(383)**	**-**	**-**	**-**	**-**	**(383)**
Property taxes	**13**	**-**	**-**	**5**	**4**	**-**	**22**
Income from investments subject to significant influence	**-**	**-**	**-**	**(18)**	**-**	**-**	**(18)**
Other gains	**-**	**-**	**-**	**-**	**(383)**	**-**	**(383)**
(Loss) income before interest and income taxes	**(287)**	**(87)**	**352**	**154**	**387**	**-**	**519**

Segment (Loss) Income for the Six Months Ended June 30, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	1,746	66	798	282	37	(64)	2,865
Fuel expense	160	-	171	23	-	-	354
Gross margin	1,586	66	627	259	37	(64)	2,511
Operations, maintenance and administration	1,144	70	151	85	9	(64)	1,395
Depreciation and amortization	461	-	113	37	17	-	628
Accretion on fixed asset removal and nuclear waste management liabilities	-	456	-	4	4	-	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(372)	-	-	-	-	(372)
Property taxes	13	-	-	5	5	-	23
Income from investments subject to significant influence	-	-	-	(17)	-	-	(17)
Other gains	(2)	-	(20)	-	(2)	-	(24)
(Loss) income before interest and income taxes	(30)	(88)	383	145	4	-	414

Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. In December 2016, a purchase and sale agreement was executed, and the sale was completed in April 2017. A gain on sale of $283 million, which is net of tax effects of $95 million, was recognized in net income upon completion of the transaction in the second quarter of 2017. The pre-tax gain on sale was recorded as Other gains in the interim consolidated statement of income in the Services, Trading and Other Non-Generation segment. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the Act, into the Province's Consolidated Revenue Fund. OPG is working with the Ontario Ministry of Finance to finalize the prescribed costs incurred in connection with the disposition and the designated proceeds to be transferred into the Province's Consolidated Revenue Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. An active program to locate a buyer for the property was initiated in June 2017. The Lakeview GS site assets were fully depreciated prior to June 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds, net of prescribed deductions under the Act, from this disposition into the Province's Consolidated Revenue Fund.

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility represent core assets of OPG's business. They have been reported under the Services, Trading, and Other Non-Generation segment.

13. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	Six Months Ended June 30 2017	2016
Receivables from related parties	**62**	52
Prepaid expenses	**(20)**	(22)
Other current assets [1]	**22**	14
Fuel inventory	**4**	11
Income taxes payable	**(74)**	(1)
Materials and supplies	**6**	1
Accounts payable and accrued charges	**(125)**	(148)
	(125)	(93)

[1] Includes other accounts receivable.

14. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of the PEC gas-fired combined cycle generating station and the Brighton Beach gas-fired combined cycle generating station (Brighton Beach), which are accounted for using the equity method. Details of the balances as at June 30, 2017 and December 31, 2016 are as follows:

(millions of dollars)	June 30 2017	December 31 2016
PEC		
Current assets	**15**	18
Long-term assets	**248**	256
Current liabilities	**(6)**	(8)
Long-term liabilities	**(5)**	(5)
Brighton Beach		
Current assets	**6**	5
Long-term assets	**164**	168
Current liabilities	**(16)**	(16)
Long-term liabilities	**(8)**	(7)
Long-term debt	**(82)**	(90)
Investments subject to significant influence	**316**	321

15. NON-CONTROLLING INTEREST

Nanticoke Solar LP

In March 2016, Nanticoke Solar LP (NSLP), then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation, was selected through IESO's Large Renewal Procurement program to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. In the first quarter of 2017, OPG acquired all of SECCLP's interests in NSLP, which represented 25 percent of the equity interest in NSLP. Subsequent to the acquisition, OPG owns 90 percent of the equity interest in NSLP, with an approximate value of $2 million. OPG consolidates the results of the NSLP in its consolidated financial statements and reports the equity interest of the other partner as non-controlling interest.

PSS Generating Station LP

PSS is a limited partnership between OPG, Coral Rapids Power Corporation (CRP), and PSS Generating Station Inc. (PSS GS Inc.). The principal business of the partnership is the development, construction, ownership, operation and maintenance of the 28 megawatt Peter Sutherland Sr. hydroelectric GS on the New Post Creek. OPG and PSS GS Inc. are general partners and CRP is a limited partner in the partnership. CRP is a wholly owned subsidiary of the Taykwa Tagamou Nation.

The Peter Sutherland Sr. GS was placed in-service in March 2017 and, in April 2017, CRP increased its interest in the PSS to 33 percent under the partnership agreement, by making contributions of $21 million, reducing OPG's interest to 67 percent. As a result of the contributions made by OPG and CRP, PSS has met the criteria of having sufficient equity at risk to finance its activities, and ceased being classified as a variable interest entity during the second quarter of 2017. OPG continues to consolidate the results of the PSS in its consolidated financial statements. CRP's 33 percent interest in the PSS is reported as non-controlling interest. As a result of CRP increasing its interest in the partnership, PSS' AOCL and partner's deficit were proportionately allocated to CRP as a reduction to its non-controlling interest during the second quarter of 2017.

From:	Gavin He
To:	Ronald Kwan
Cc:	John Kim; Bruno Amara; Shajee Kathirgamanathan; Emily Kerr; Karim Javeri
Subject:	FW: OPG Q2 2017 Submission to Province
Date:	Tuesday, August 01, 2017 1:28:06 PM
Attachments:	Q2 2017 DRAFT OPG FS - VP MAILING_CEFD_v1.docx Q2 2017 DRAFT MDA - VP MAILING_EFB_v2.docx

Hi Ron,

Please find attached the proposed edits from EFB and SPFB.

SPFB only has one comment on the FS on page 27, and below is the additional details on their comment.

Please note that comments are due back to OPG today.

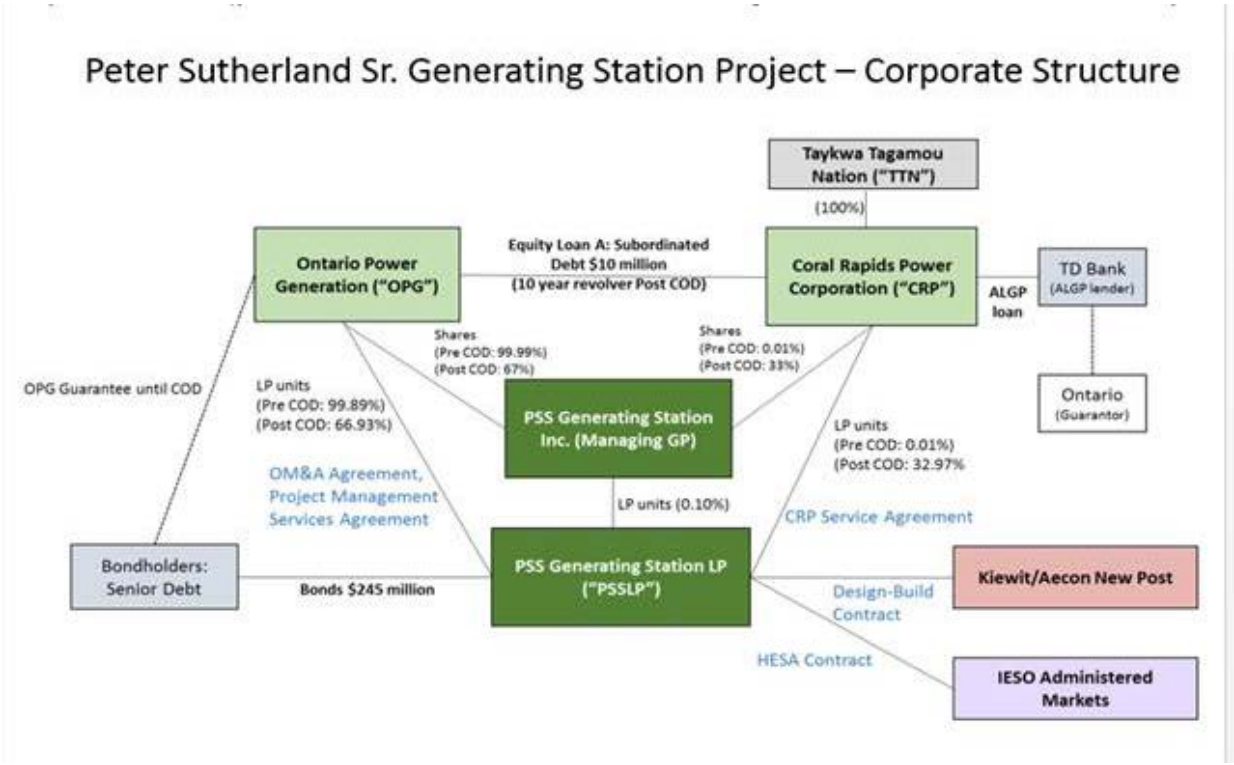
Regards,
Gavin He

From: Karim Javeri
Sent: Tuesday, August 01, 2017 11:48 AM
To: Gavin He <Gavin.He@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>
Subject: Re: OPG Q2 2017 Submission to Province

Hi Gavin,

The documents look fine except for a description regarding PSS in the F/S on page 27, to which we've added a comment in the attached markup. The document states that OPG is a general partner and CRP is only a limited partner when they are in fact both part of the GP and LP. We have alluded to the need to verify the structure in the comment but since our knowledge of this project comes from our engagement with PSS as stakeholders in ALGP, we do not want to propose any direct edits without Ron's consent. We were hoping you could share this context with Ron along with your consolidated edits on the documents.

Thanks



Regards,

Karim

From: Ronald Kwan
Sent: Friday, July 28, 2017 5:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: FW: OPG Q2 2017 Submission to Province

Hi All,

Please review, and note the timeline.

John, does FTD need to review any particular sections?

Ron

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: July-28-17 17:13
To: 'Shruti.Talwar@ontario.ca' <Shruti.Talwar@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>; DYKXHOORN Sandra -STAKEREL <sandra.dykxhoorn@opg.com>

Subject: OPG Q2 2017 Submission to Province

Hi All,

Please find attached OPG's draft Q2 2017 Financial Results Press Release, Management's Discussion and Analysis (MD&A), and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, Aug 1st**.

These documents will be filed with the Ontario Securities Commission on **Friday, August 11th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q2 2017 MD&A:

Highlights	
Recent Developments	MD&A p.10-12
Darlington Refurbishment	MD&A p.14-15
Ontario's Fair Hydro Plan	MD&A p.11
Sale of Head Office Premises	MD&A p.11

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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ONTARIO POWER GENERATION INC.

INTERIM CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

JUNE 30, 2017

[DRAFT]

ONTARIO POWER GENERATION

INTERIM CONSOLIDATED STATEMENTS OF INCOME (UNAUDITED)

(millions of dollars except where noted)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue *(Note 12)*	**1,146**	1,387	**2,322**	2,865
Fuel expense *(Note 12)*	**178**	182	**333**	354
Gross margin	**968**	1,205	**1,989**	2,511
Expenses *(Note 12)*				
Operations, maintenance and administration	**711**	709	**1,419**	1,395
Depreciation and amortization	**172**	316	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**236**	232	**474**	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(194)**	(225)	**(383)**	(372)
Property taxes	**11**	11	**22**	23
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
	928	1,034	**1,853**	2,121
Income before other gains, interest and income taxes	**40**	171	**136**	390
Other gains *(Note 12)*	**(380)**	(1)	**(383)**	(24)
Income before interest and income taxes	**420**	172	**519**	414
Net interest expense *(Note 5)*	**16**	31	**35**	64
Income before income taxes	**404**	141	**484**	350
Income tax expense	**97**	6	**109**	87
Net income	**307**	135	**375**	263
Net income attributable to the Shareholder	**303**	132	**367**	255
Net income attributable to non-controlling interest	**4**	3	**8**	8
Basic and diluted net income per common share *(dollars)*	**1.18**	0.51	**1.43**	0.99
Common shares outstanding *(millions)*	**256.3**	256.3	**256.3**	256.3

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (UNAUDITED)

(millions of dollars)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Net income	**307**	135	**375**	263
Other comprehensive income, net of income taxes *(Note 7)*				
Reclassification to income of amounts related to pension and other post-employment benefits [1]	**2**	3	**5**	6
Reclassification to income of losses on derivatives designated as cash flow hedges [2]	**5**	6	**9**	10
Unrealized (loss) gain on available-for-sale securities [3]	**(7)**	15	**(2)**	15
Other comprehensive income for the period	**-**	24	**12**	31
Comprehensive income	**307**	159	**387**	294
Comprehensive income attributable to the Shareholder	**303**	156	**379**	286
Comprehensive income attributable to non-controlling interest	**4**	3	**8**	8

[1] Net of income tax expenses of $1 million for the three months ended June 30, 2017 and 2016. Net of income tax expenses of $2 million for the six months ended June 30, 2017 and 2016.

[2] Net of income tax expense of nil for the three months ended June 30, 2017 and 2016. Net of income tax expenses of $1 million for the six months ended June 30, 2017 and 2016.

[3] Net of income tax recovery of $2 million and income tax expense of $5 million for the three months ended June 30, 2017 and 2016, respectively. Net of income tax recovery of $1 million and income tax expense of $5 million for the six months ended June 30, 2017 and 2016, respectively.

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

Six Months Ended June 30 *(millions of dollars)*	**2017**	**2016**
Operating activities		
Net income	**375**	263
Adjust for non-cash items:		
Depreciation and amortization	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**474**	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(383)**	(372)
Pension and other post-employment benefit costs *(Note 8)*	**226**	233
Deferred income taxes	**16**	(11)
Mark-to-market on derivative instruments	**(3)**	2
Provision for used nuclear fuel and low and intermediate level nuclear waste	**53**	62
Regulatory assets and liabilities	**(73)**	(68)
Provision for materials and supplies	**9**	9
Other gains	**(379)**	(24)
Other	**(9)**	(16)
	645	1,170
Contributions to nuclear fixed asset removal and nuclear waste management funds	**-**	(74)
Expenditures on fixed asset removal and nuclear waste management	**(157)**	(125)
Reimbursement of expenditures on nuclear fixed asset removal and nuclear waste management	**41**	30
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans	**(180)**	(237)
Expenditures on restructuring	**(2)**	(3)
Distributions received from investments subject to significant influence	**23**	30
Net changes to other long-term assets and liabilities	**16**	16
Net changes in non-cash working capital balances *(Note 13)*	**(125)**	(93)
Cash flow provided by operating activities	**261**	714
Investing activities		
Net proceeds from sale of property, plant and equipment	**484**	-
Purchase of available-for-sale securities	**-**	(213)
Proceeds from deposit note *(Note 4)*	**70**	35
Investment in property, plant and equipment and intangible assets	**(859)**	(718)
Cash flow used in investing activities	**(305)**	(896)
Financing activities		
Issuance of long-term debt *(Note 4)*	**300**	-
Repayment of long-term debt	**(212)**	(2)
Contribution from non-controlling interest	**19**	-
Distribution to non-controlling interest	**(7)**	(7)
Issuance of short-term notes	**864**	1,985
Repayment of short-term notes	**(864)**	(1,963)
Cash flow provided by financing activities	**100**	13
Net increase (decrease) in cash and cash equivalents	**56**	(169)
Cash and cash equivalents, beginning of period	**186**	464
Cash and cash equivalents, end of period	**242**	295

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at *(millions of dollars)*	June 30 2017	December 31 2016
Assets		
Current assets		
Cash and cash equivalents	**242**	186
Available-for-sale securities	**195**	212
Receivables from related parties	**367**	429
Nuclear fixed asset removal and nuclear waste management funds	**18**	24
Fuel inventory	**306**	310
Materials and supplies	**94**	100
Prepaid expenses	**218**	198
Other current assets	**102**	298
	1,542	1,757
Property, plant and equipment	**30,049**	29,315
Less: accumulated depreciation	**9,539**	9,317
	20,510	19,998
Intangible assets	**534**	503
Less: accumulated amortization	**418**	404
	116	99
Other assets		
Nuclear fixed asset removal and nuclear waste management funds	**16,325**	15,960
Long-term materials and supplies	**353**	345
Regulatory assets *(Note 3)*	**5,961**	5,855
Investments subject to significant influence *(Note 14)*	**316**	321
Other long-term assets	**32**	37
	22,987	22,518
	45,155	44,372

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at *(millions of dollars)*	June 30 2017	December 31 2016
Liabilities		
Current liabilities		
Accounts payable and accrued charges	**1,021**	1,164
Deferred revenue due within one year	**12**	12
Short-term debt	**-**	2
Long-term debt due within one year *(Note 4)*	**1,218**	1,103
Income taxes payable	**-**	123
	2,251	2,404
Long-term debt *(Note 4)*	**4,390**	4,417
Other liabilities		
Fixed asset removal and nuclear waste management liabilities *(Note 6)*	**19,876**	19,484
Pension liabilities	**2,914**	3,012
Other post-employment benefit liabilities	**2,939**	2,897
Long-term accounts payable and accrued charges	**260**	213
Deferred revenue	**325**	298
Deferred income taxes	**845**	829
Regulatory liabilities *(Note 3)*	**446**	310
	27,605	27,043
Equity		
Common shares [1]	**5,126**	5,126
Retained earnings	**5,903**	5,534
Accumulated other comprehensive loss *(Note 7)*	**(280)**	(295)
Equity attributable to the Shareholder	**10,749**	10,365
Equity attributable to non-controlling interest	**160**	143
Total equity	**10,909**	10,508
	45,155	44,372

[1] 256,300,010 common shares outstanding at a stated value of $5,126 million as at June 30, 2017 and December 31, 2016.

Commitments and Contingencies *(Notes 4, 10 and 11)*

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (UNAUDITED)

Six Months Ended June 30 *(millions of dollars)*	**2017**	**2016**
Common shares	**5,126**	5,126
Retained earnings		
Balance at beginning of period	**5,534**	5,098
Net income attributable to the Shareholder	**367**	255
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**2**	-
Balance at end of period	**5,903**	5,353
Accumulated other comprehensive loss, net of income taxes		
Balance at beginning of period	**(295)**	(319)
Other comprehensive income	**12**	31
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**3**	-
Balance at end of period	**(280)**	(288)
Equity attributable to the Shareholder	**10,749**	10,191
Equity attributable to non-controlling interest		
Balance at beginning of period	**143**	140
Equity contribution from non-controlling interest	**21**	-
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**(5)**	-
Distribution to non-controlling interest	**(7)**	(7)
Income attributable to non-controlling interest	**8**	8
Balance at end of period	**160**	141
Total equity	**10,909**	10,332

See accompanying notes to the interim consolidated financial statements

NOTES TO THE INTERIM CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

For the three and six months ended June 30, 2017 and 2016

1. BASIS OF PRESENTATION

These interim consolidated financial statements for the three and six months ended June 30, 2017 and 2016 include the accounts of Ontario Power Generation Inc. (OPG or the Company) and its subsidiaries. The Company consolidates its interest in entities over which it is able to exercise control and attributes the results to its sole shareholder, the Province of Ontario (Province). Interests owned by other parties are reflected as non-controlling interest. These interim consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP). These interim consolidated financial statements do not contain all of the disclosures required by US GAAP for annual financial statements. Accordingly, they should be read in conjunction with the annual consolidated financial statements of the Company as at and for the year ended December 31, 2016. All dollar amounts are presented in Canadian dollars.

Certain of the 2016 comparative amounts have been reclassified from financial statements previously presented to conform to the 2017 interim consolidated financial statement presentation.

Use of Management Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the interim consolidated financial statements, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefit (OPEB) balances, asset retirement obligations and associated asset retirement costs capitalized as part of property, plant and equipment, income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments and investments in segregated funds, depreciation and amortization expenses, and inventories. Actual results may differ significantly from these estimates.

2. SIGNIFICANT ACCOUNTING POLICIES AND ESTIMATES

Change in Accounting Estimate

Pension and Other Post-Employment Benefits

Effective January 1, 2017, OPG changed the method used to estimate the service and interest cost components of pension and OPEB costs. OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs is estimated at approximately $35 million and $70 million for the three and six month ended June 30, 2017, respectively. Approximately 90 percent of this reduction in pension and OPEB costs was attributed to the Company's regulated business segments and therefore was offset by the impact of regulatory variance and deferral accounts authorized by the Ontario Energy Board (OEB).

Recent Accounting Pronouncements Not Yet Adopted

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

As part of the project to implement the new revenue standard, OPG is continuing to assess the impact of the standard on accounting for the Company's revenue streams and consolidated financial statements. OPG's major revenue streams include regulated generation revenue from base regulated prices and rate riders established by the OEB, as well as revenue from generation assets under long-term contractual arrangements with the Independent Electricity System Operator (IESO). In March 2017, the American Institute of Certified Public Accountants (AICPA) issued Revenue Recognition Implementation Issue #13-1*, Scope Clarification Regarding Tariff Sales to Regulated Customers*. The draft implementation guidance was developed by the AICPA Power & Utilities task force. This draft guidance concludes that tariff-based revenue from the provision of regulated utility service to a utility's customers is within the scope of Topic 606. OPG has completed its analysis of the impact of Topic 606 on its accounting for generation revenue from base regulated prices and has not identified any material differences. The Company continues to work on its assessment of the impact of Topic 606 on its other revenue streams.

The Company currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements and is in the process of concluding on the method of adoption.

Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost

In March 2017, the FASB issued ASU No. 2017-07, *Compensation – Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. Under the new guidance, employers that sponsor defined benefit plans for pensions and/or other postretirement benefits are required to present the service cost component of net periodic benefit cost in the same statement of income line item as other employee compensation costs arising from services rendered during the period. The other components of the net periodic benefit cost are to be presented separately from the line item that includes the service cost and outside of any subtotal of income from operations, if such a subtotal is presented. In addition, the new guidance requires that only the service cost component of net benefit cost be eligible for capitalization.

This guidance is effective for fiscal years beginning after December 15, 2017, including interim periods of those years. The guidance is not expected to have a material impact on OPG's consolidated financial statements, as OPG currently capitalizes only the service cost component of post-retirement benefits costs. Additionally, OPG already includes the service cost component of post-retirement benefit costs with other compensation costs, within the operations, maintenance and administration expenses line item in the consolidated statements of income, and does not show a subtotal of income from operations. As such, the new guidance is not expected to affect the presentation of OPG's consolidated financial statements.

3. REGULATORY ASSETS AND LIABILITIES

The regulatory assets and liabilities recorded as at June 30, 2017 and December 31, 2016 are as follows:

(millions of dollars)	**June 30 2017**	**December 31 2016**
Regulatory assets		
Variance and deferral accounts authorized by the Ontario Energy Board		
Pension and OPEB Cost Variance Account	**716**	716
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 8)*	**533**	497
Hydroelectric Surplus Baseload Generation Variance Account	**299**	210
Bruce Lease Net Revenues Variance Account	**123**	95
Other variance and deferral accounts	**128**	107
	1,799	1,625
Pension and OPEB Regulatory Asset *(Note 8)*	**3,304**	3,392
Deferred Income Taxes	**858**	838
Total regulatory assets	**5,961**	5,855
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Hydroelectric Water Conditions Variance Account	**119**	51
Impact Resulting from Changes in Station End-of-Life Dates Deferral Account	**106**	71
Other variance and deferral accounts	**221**	188
Total regulatory liabilities	**446**	310

OPG's May 2016 application with the OEB for new regulated prices included a request for new rate riders to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, and the portion of these balances previously approved for recovery or repayment for through rate riders previously in effect. The application also requested the continuation of all applicable existing variance and deferral accounts. In March 2017, the OEB approved a settlement agreement reached by OPG and intervenors on a limited set of issues in the application (Settlement Agreement). Among the settled issues, the agreement provided for the continuation of all applicable existing variance and deferral accounts and accepted a number of variance and deferral account balances for recovery, as requested in OPG's application. The periods of recovery or repayment for the accepted variance and deferral account balances are excluded from the scope of the Settlement Agreement. The Settlement Agreement did not impact OPG's financial results for the three and six months ended June 30, 2017. The OEB's decision on OPG's application will be issued following final arguments, which were completed in the second quarter of 2017.

As at June 30, 2017 and December 31, 2016, regulatory assets for other variance and deferral accounts included amounts for the Nuclear Deferral and Variance Over/Under Recovery Variance Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Liability Deferral Account, the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account, and the Nuclear Development Variance Account. As at June 30, 2017 and December 31, 2016, regulatory liabilities for other variance and deferral accounts included the amounts for the Pension & OPEB Cash Payment Variance Account, the Capacity Refurbishment Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account.

4. LONG-TERM DEBT

Long-term debt consists of the following:

(millions of dollars)	June 30 2017	December 31 2016
Notes payable to the Ontario Electricity Financial Corporation	**3,385**	3,295
UMH Energy Partnership	**182**	184
PSS Generating Station Limited Partnership	**245**	245
Lower Mattagami Energy Limited Partnership	**1,795**	1,795
Other	**15**	15
	5,622	5,534
Less: bond issuance fees	**(14)**	(14)
Less: due within one year	**(1,218)**	(1,103)
Long-term debt	**4,390**	4,417

In the fourth quarter of 2015, PSS Generating Station Limited Partnership (PSS), a subsidiary of OPG, issued long-term debt totalling $245 million in support of the Peter Sutherland Sr. Generating Station (GS) project. The majority of the debt proceeds, totalling $180 million, were invested in a structured deposit note with staggered maturity dates ranging from January 2016 to April 2017. As at June 2017, the deposit note balance of nil (December 31, 2016 - $70 million) was reported in Other current assets on the consolidated balance sheets.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the Ontario Electricity Financial Corporation (OEFC), which expires on December 31, 2017. ~~In August 2017, the credit facility was increased to $2,350 million, which expires in December 2018.~~

Commented [A1]: EFB staff suggest deleting this sentence

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent. In June 2017, OPG issued senior notes payable to the OEFC totalling $100 million and maturing in June 2047. The effective interest rate and coupon interest rate of these notes was 3.65 percent.

5. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG renewed and extended the expiry date of both tranches from May 2021 to May 2022. As at June 30, 2017, there were no amounts outstanding under the bank credit facility. There was no commercial paper outstanding under OPG's commercial paper program as at June 30, 2017.

As at June 30, 2017, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at June 30, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at June 30, 2017.

As at June 30, 2017, OPG maintained $25 million of short-term, uncommitted overdraft facilities and $462 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at June 30, 2017, a total of $387 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $37 million for general corporate purposes, and $1 million related to the operation of the Portlands Energy Centre (PEC).

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million, expiring on November 30, 2018. As at June 30, 2017, there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

UMH Energy Partnership has entered into an $8 million short-term, uncommitted overdraft facility and $16 million of irrevocable, standby Letters of Credit facilities in support of its operations. As at June 30, 2017, total Letters of Credit of $14 million had been issued under these facilities.

The following table summarizes the net interest expense:

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars)	**2017**	**2016**	**2017**	**2016**
Interest on long-term debt	**71**	72	**141**	144
Interest on short-term debt	**2**	1	**2**	2
Interest income	**(2)**	(2)	**(2)**	(4)
Interest capitalized to property, plant and equipment and intangible assets	**(40)**	(34)	**(82)**	(65)
Interest related to regulatory assets and liabilities [1]	**(15)**	(6)	**(24)**	(13)
Net interest expense	**16**	31	**35**	64

[1] Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Bruce Lease Net Revenues Variance Account, the Capacity Refurbishment Variance Account, and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

6. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES

The liabilities for fixed asset removal and nuclear waste management on a present value basis as at June 30, 2017 and December 31, 2016 consist of the following:

(millions of dollars)	June 30 2017	December 31 2016
Liability for nuclear used fuel management	**11,554**	11,292
Liability for nuclear decommissioning and nuclear low and intermediate level waste management	**7,944**	7,811
Liability for non-nuclear fixed asset removal	**378**	381
Fixed asset removal and nuclear waste management liabilities	**19,876**	19,484

7. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of accumulated other comprehensive loss (AOCL), are as follows:

	Six Months Ended June 30, 2017			
(millions of dollars)	**Unrealized Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities [1]**	**Total [1]**
AOCL, beginning of period	**(87)**	**(207)**	**(1)**	**(295)**
Unrealized loss on available-for-sale securities	**-**	**-**	**(2)**	**(2)**
Amounts reclassified from AOCL	**9**	**5**	**-**	**14**
Other comprehensive income for the period	**9**	**5**	**(2)**	**12**
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**3**	**-**	**-**	**3**
AOCL, end of period	**(75)**	**(202)**	**(3)**	**(280)**

[1] All amounts are net of income taxes.

	Six Months Ended June 30, 2016			
(millions of dollars)	**Unrealized Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities [1]**	**Total [1]**
AOCL, beginning of period	(106)	(213)	-	(319)
Unrealized gain on available-for-sale securities	-	-	15	15
Amounts reclassified from AOCL	10	6	-	16
Other comprehensive income for the period	10	6	15	31
AOCL, end of period	(96)	(207)	15	(288)

[1] All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the three and six months ended June 30, 2017 are as follows:

	Amount Reclassified from AOCL		
(millions of dollars)	**Three Months Ended June 30, 2017**	**Six Months Ended June 30, 2017**	**Statement of Income Line Item**
Amortization of losses from cash flow hedges			
Losses	**5**	**10**	Net interest expense
Income tax recovery	**-**	**(1)**	Income tax expense
	5	**9**	
Amortization of amounts related to pension and OPEB			
Actuarial losses	**3**	**7**	See (1) below
Income tax recovery	**(1)**	**(2)**	Income tax expense
	2	**5**	
Total reclassifications for the period	**7**	**14**	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 8 for additional details).

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the three and six months ended June 30, 2016 are as follows:

	Amount Reclassified from AOCL		
(millions of dollars)	Three Months Ended June 30, 2016	Six Months Ended June 30, 2016	Statement of Income Line Item
Amortization of losses from cash flow hedges			
Losses	6	11	Net interest expense
Income tax recovery	-	(1)	Income tax expense
	6	10	
Amortization of amounts related to pension and OPEB			
Actuarial losses	4	8	See (1) below
Income tax recovery	(1)	(2)	Income tax expense
	3	6	
Total reclassifications for the period	9	16	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 8 for additional details).

8. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

OPG's pension and OPEB costs for the three months ended June 30, 2017 and 2016 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		OPEB	
(millions of dollars)	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**
Components of Cost Recognized for the period						
Current service costs	**69**	69	**2**	1	**17**	17
Interest on projected benefit obligation	**136**	159	**3**	3	**27**	33
Expected return on plan assets, net of expenses	**(192)**	(184)	**-**	-	**-**	-
Amortization of net actuarial loss [1]	**46**	48	**1**	1	**-**	5
Cost recognized [2]	**59**	92	**6**	5	**44**	55

[1] The amortization of net actuarial loss is recognized as an increase to other comprehensive income. This increase for the three months ended June 30, 2017 was partially offset by a decrease in the Pension and OPEB Regulatory Asset of $44 million (three months ended June 30, 2016 – $50 million).

[2] These pension and OPEB costs for the three months ended June 30, 2017 exclude the net addition of costs of $4 million from the recognition of changes in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account (three months ended June 30, 2016 – net reduction of costs of $36 million).

OPG's pension and OPEB costs for the six months ended June 30, 2017 and 2016 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		OPEB	
(millions of dollars)	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**
Components of Cost Recognized						
Current service costs	**137**	138	**3**	3	**34**	34
Interest on projected benefit obligation	**273**	317	**6**	6	**54**	66
Expected return on plan assets, net of expenses	**(383)**	(367)	**-**	-	**-**	-
Amortization of net actuarial loss [1]	**92**	96	**3**	2	**-**	10
Cost recognized [2]	**119**	184	**12**	11	**88**	110

[1] The amortization of net actuarial loss is recognized as an increase to other comprehensive income. This increase for the six months ended June 30, 2017 was partially offset by a decrease in the Pension and OPEB Regulatory Asset of $88 million (six months ended June 30, 2016 – $100 million).

[2] These pension and OPEB costs for the six months ended June 30, 2017 exclude the net addition of costs of $7 million from the recognition of changes in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account (six months ended June 30, 2016 - net reduction of costs of $72 million).

9. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect the Company's assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/United States (US) foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are denominated in, or tied to, US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the IESO administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at June 30, 2017 was less than $1 million. OPG's fair value derivatives totalled a net liability of $13 million as at June 30, 2017 (December 31, 2016 – $24 million).

Existing pre-tax net losses of $20 million deferred in AOCL as at June 30, 2017 are expected to be reclassified to net income within the next 12 months.

10. FAIR VALUE MEASUREMENTS

The fair value of financial instruments traded in active markets is based on quoted market prices at the interim consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments. The fair value hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the interim consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Certain alternative investments are measured at fair value by their investment managers using net asset value (NAV). Investments measured at NAV as a practical expedient for determining their fair value are excluded from the fair value hierarchy.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The following is a summary of OPG's financial instruments and their fair value as at June 30, 2017 and December 31, 2016:

	Fair Value		Carrying Value [1]		
(millions of dollars)	**2017**	**2016**	**2017**	**2016**	**Balance Sheet Line Item**
Nuclear Segregated Funds (includes current portion) [2]	**16,343**	15,984	**16,343**	15,984	Nuclear fixed asset removal and nuclear waste management funds
Investment in Hydro One shares	**195**	212	**195**	212	Available-for-sale securities
Payable related to cash flow hedges	**(44)**	(48)	**(44)**	(48)	Long-term accounts payable and accrued charges
Long-term debt (includes current portion)	**(6,194)**	(6,033)	**(5,608)**	(5,520)	Long-term debt
Other financial instruments	**(8)**	(18)	**(8)**	(18)	Various

[1] The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other current assets, short-term debt, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

[2] The Nuclear Segregated Funds are comprised of the Decommissioning Segregated Fund and the Used Fuel Segregated Fund.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs.

The following tables present financial assets and financial liabilities measured at fair value in accordance with the fair value hierarchy as at June 30, 2017 and December 31, 2016:

	June 30, 2017			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**5,704**	**4,612**	**-**	**10,316**
Investments measured at NAV [1]				**1,223**
				11,539
Due to Province				**(2,194)**
Used Fuel Segregated Fund, net				**9,345**
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**4,264**	**3,407**	**-**	**7,671**
Investments measured at NAV [1]				**1,012**
				8,683
Due to Province				**(1,685)**
Decommissioning Segregated Fund, net				**6,998**
Investment in available-for-sale securities [2]	**195**	**-**	**-**	**195**
Other financial assets	**6**	**6**	**9**	**21**
Liabilities				
Other financial liabilities	**(21)**	**(8)**	**-**	**(29)**

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

[2] In the second quarter of 2017, approximately 622,000 of Hydro One Inc. shares held as available-for-sale securities were distributed to eligible employees represented by the Power Workers' Union under the terms of the of the collective bargaining agreement reached in 2015. On the day of transfer, the closing price was $24.25 per share.

(millions of dollars)	December 31, 2016 Level 1	Level 2	Level 3	Total
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	5,602	4,394	-	9,996
Investments measured at NAV [1]				1,086
				11,082
Due to Province				(1,938)
Used Fuel Segregated Fund, net				9,144
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	4,171	3,243	-	7,414
Investments measured at NAV [1]				903
				8,317
Due to Province				(1,477)
Decommissioning Segregated Fund, net				6,840
Investment in available-for-sale securities	212	-	-	212
Other financial assets	6	2	9	17
Liabilities				
Other financial liabilities	(29)	(6)	-	(35)

1 Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

During the six months ended June 30, 2017, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3 for the three months ended June 30, 2017:

(millions of dollars)	Other financial instruments
Opening balance, April 1, 2017	**7**
Realized losses included in revenue	**(2)**
Purchases	**4**
Closing balance, June 30, 2017	**9**

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3 for the six months ended June 30, 2017:

(millions of dollars)	Other financial instruments
Opening balance, January 1, 2017	**9**
Unrealized losses included in revenue	**(2)**
Realized losses included in revenue	**(3)**
Purchases	**5**
Closing balance, June 30, 2017	**9**

Nuclear Segregated Funds

The fair value of the investments within the Nuclear Segregated Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value. Alternative investments are measured at fair value using NAV as a practical expedient.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Segregated Funds that are reported on the basis of NAV as at June 30, 2017:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Alternative Investments				
Infrastructure	**1,275**	**806**	**n/a**	**n/a**
Real Estate	**882**	**478**	**n/a**	**n/a**
Agriculture	**78**	**115**	**n/a**	**n/a**
Pooled Funds				
Short-term Investments	**17**	**n/a**	**Daily**	**1 - 5 Days**
Fixed Income	**540**	**n/a**	**Daily**	**1 - 5 Days**
Equity	**850**	**n/a**	**Daily**	**1 - 5 Days**
Total	**3,642**	**1,399**		

The fair value of the pooled funds is classified as Level 2. Infrastructure, real estate and agriculture investments are measured using NAV as a practical expedient for determining their fair value.

Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

Real Estate

This class includes investments in institutional-grade real estate property. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests to another party, as stipulated in the partnership agreement. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements.

Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations, and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally managed portfolios. The fair value of the investments in this class has been estimated using NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

11. COMMITMENTS AND CONTINGENCIES

Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power L.P. (Bruce Power) by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered in accordance with an extension of the original June 30, 2017 delivery deadline set out in the timetable.

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at June 30, 2017, the total amount of guarantees OPG provided to these entities was $83 million (December 31, 2016 − $83 million). OPG may terminate some of these guarantees

within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at June 30, 2017, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at June 30, 2017 are as follows:

(millions of dollars)	**2017** [1]	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Fuel supply agreements	99	169	96	76	62	103	605
Contributions to the OPG registered pension plan [2]	122	251	-	-	-	-	373
Long-term debt repayment	891	398	368	663	413	2,889	5,622
Interest on long-term debt	124	207	189	167	138	2,545	3,370
Commitments related to Darlington Refurbishment [3]	506	-	-	-	-	-	506
Commitments related to Peter Sutherland Sr. GS project	29	-	-	-	-	-	29
Commitments related to Ranney Falls GS project	14	21	4	-	-	-	39
Operating licences	20	40	41	24	28	115	268
Operating lease obligations	14	27	25	25	23	93	207
Unconditional purchase obligations	31	59	58	56	5	-	209
Accounts payable and accrued charges	730	8	8	-	-	17	763
Other	44	38	26	2	1	65	176
Total	2,624	1,218	815	1,013	670	5,827	12,167

[1] Represents amounts for the remainder of the year.

[2] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[3] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

12. BUSINESS SEGMENTS

Segment (Loss) Income for the Three Months Ended June 30, 2017 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	609	30	379	147	10	(29)	1,146
Fuel expense	68	-	97	13	-	-	178
Gross margin	541	30	282	134	10	(29)	968
Operations, maintenance and administration	593	32	75	40	-	(29)	711
Depreciation and amortization	110	-	35	20	7	-	172
Accretion on fixed asset removal and nuclear waste management liabilities	-	232	-	2	2	-	236
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(194)	-	-	-	-	(194)
Property taxes	7	-	-	3	1	-	11
Income from investments subject to significant influence	-	-	-	(8)	-	-	(8)
Other gains	-	-	-	-	(380)	-	(380)
(Loss) income before interest and income taxes	(169)	(40)	172	77	380	-	420

Segment (Loss) Income for the Three Months Ended June 30, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	820	32	413	137	16	(31)	1,387
Fuel expense	79	-	92	11	-	-	182
Gross margin	741	32	321	126	16	(31)	1,205
Operations, maintenance and administration	581	34	75	45	5	(31)	709
Depreciation and amortization	231	-	57	18	10	-	316
Accretion on fixed asset removal and nuclear waste management liabilities	-	228	-	2	2	-	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(225)	-	-	-	-	(225)
Property taxes	6	-	-	3	2	-	11
Income from investments subject to significant influence	-	-	-	(9)	-	-	(9)
Other (gains) losses	(1)	-	2	-	(2)	-	(1)
(Loss) income before interest and income taxes	(76)	(5)	187	67	(1)	-	172

Segment (Loss) Income for the Six Months Ended June 30, 2017 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	**1,261**	**57**	**742**	**290**	**27**	**(55)**	**2,322**
Fuel expense	**136**	**-**	**170**	**27**	**-**	**-**	**333**
Gross margin	**1,125**	**57**	**572**	**263**	**27**	**(55)**	**1,989**
Operations, maintenance and administration	**1,182**	**61**	**151**	**79**	**1**	**(55)**	**1,419**
Depreciation and amortization	**217**	**-**	**69**	**39**	**14**	**-**	**339**
Accretion on fixed asset removal and nuclear waste management liabilities	**-**	**466**	**-**	**4**	**4**	**-**	**474**
Earnings on nuclear fixed asset removal and nuclear waste management funds	**-**	**(383)**	**-**	**-**	**-**	**-**	**(383)**
Property taxes	**13**	**-**	**-**	**5**	**4**	**-**	**22**
Income from investments subject to significant influence	**-**	**-**	**-**	**(18)**	**-**	**-**	**(18)**
Other gains	**-**	**-**	**-**	**-**	**(383)**	**-**	**(383)**
(Loss) income before interest and income taxes	**(287)**	**(87)**	**352**	**154**	**387**	**-**	**519**

Segment (Loss) Income for the Six Months Ended June 30, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	1,746	66	798	282	37	(64)	2,865
Fuel expense	160	-	171	23	-	-	354
Gross margin	1,586	66	627	259	37	(64)	2,511
Operations, maintenance and administration	1,144	70	151	85	9	(64)	1,395
Depreciation and amortization	461	-	113	37	17	-	628
Accretion on fixed asset removal and nuclear waste management liabilities	-	456	-	4	4	-	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(372)	-	-	-	-	(372)
Property taxes	13	-	-	5	5	-	23
Income from investments subject to significant influence	-	-	-	(17)	-	-	(17)
Other gains	(2)	-	(20)	-	(2)	-	(24)
(Loss) income before interest and income taxes	(30)	(88)	383	145	4	-	414

Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. In December 2016, a purchase and sale agreement was executed, and the sale was completed in April 2017. A gain on sale of $283 million, which is net of tax effects of $95 million, was recognized in net income upon completion of the transaction in the second quarter of 2017. The pre-tax gain on sale was recorded as Other gains in the interim consolidated statement of income in the Services, Trading and Other Non-Generation segment. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the Act, into the Province's Consolidated Revenue Fund. OPG is working with the Ontario Ministry of Finance to finalize the prescribed costs incurred in connection with the disposition and the designated proceeds to be transferred into the Province's Consolidated Revenue Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. An active program to locate a buyer for the property was initiated in June 2017. The Lakeview GS site assets were fully depreciated prior to June 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds, net of prescribed deductions under the Act, from this disposition into the Province's Consolidated Revenue Fund.

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility represent core assets of OPG's business. They have been reported under the Services, Trading, and Other Non-Generation segment.

13. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	Six Months Ended June 30 2017	2016
Receivables from related parties	**62**	52
Prepaid expenses	**(20)**	(22)
Other current assets [1]	**22**	14
Fuel inventory	**4**	11
Income taxes payable	**(74)**	(1)
Materials and supplies	**6**	1
Accounts payable and accrued charges	**(125)**	(148)
	(125)	(93)

[1] Includes other accounts receivable.

14. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of the PEC gas-fired combined cycle generating station and the Brighton Beach gas-fired combined cycle generating station (Brighton Beach), which are accounted for using the equity method. Details of the balances as at June 30, 2017 and December 31, 2016 are as follows:

(millions of dollars)	June 30 2017	December 31 2016
PEC		
Current assets	**15**	18
Long-term assets	**248**	256
Current liabilities	**(6)**	(8)
Long-term liabilities	**(5)**	(5)
Brighton Beach		
Current assets	**6**	5
Long-term assets	**164**	168
Current liabilities	**(16)**	(16)
Long-term liabilities	**(8)**	(7)
Long-term debt	**(82)**	(90)
Investments subject to significant influence	**316**	321

15. NON-CONTROLLING INTEREST

Nanticoke Solar LP

In March 2016, Nanticoke Solar LP (NSLP), then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation, was selected through IESO's Large Renewal Procurement program to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. In the first quarter of 2017, OPG acquired all of SECCLP's interests in NSLP, which represented 25 percent of the equity interest in NSLP. Subsequent to the acquisition, OPG owns 90 percent of the equity interest in NSLP, with an approximate value of $2 million. OPG consolidates the results of the NSLP in its consolidated financial statements and reports the equity interest of the other partner as non-controlling interest.

PSS Generating Station LP

PSS is a limited partnership between OPG, Coral Rapids Power Corporation (CRP), and PSS Generating Station Inc. (PSS GS Inc.). The principal business of the partnership is the development, construction, ownership, operation and maintenance of the 28 megawatt Peter Sutherland Sr. hydroelectric GS on the New Post Creek. OPG and PSS GS Inc. are general partners and CRP is a limited partner in the partnership. CRP is a wholly owned subsidiary of the Taykwa Tagamou Nation.

The Peter Sutherland Sr. GS was placed in-service in March 2017 and, in April 2017, CRP increased its interest in the PSS to 33 percent under the partnership agreement, by making contributions of $21 million, reducing OPG's interest to 67 percent. As a result of the contributions made by OPG and CRP, PSS has met the criteria of having sufficient equity at risk to finance its activities, and ceased being classified as a variable interest entity during the second quarter of 2017. OPG continues to consolidate the results of the PSS in its consolidated financial statements. CRP's 33 percent interest in the PSS is reported as non-controlling interest. As a result of CRP increasing its interest in the partnership, PSS' AOCL and partner's deficit were proportionately allocated to CRP as a reduction to its non-controlling interest during the second quarter of 2017.

Commented [GH2]: From SPFB:
Suggest review of the structure of the general partnership and limited partnership to confirm accuracy of parties mentioned.

ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

2017 SECOND QUARTER REPORT

[DRAFT]

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ONTARIO POWER GENERATION

ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the unaudited interim consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the three and six months ended June 30, 2017. OPG's unaudited interim consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

For a complete description of OPG's corporate strategies, risk management, corporate governance, and the effect of critical accounting policies and estimates on OPG's results of operations and financial condition, this MD&A should also be read in conjunction with OPG's audited consolidated financial statements, accompanying notes, the Annual Information Form, and the MD&A as at and for the year ended December 31, 2016.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Exemptive Relief for Reporting under US GAAP,* in OPG's 2016 annual MD&A. This MD&A is dated August 11, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out in the section, *Risk Management,* and forecasts discussed in the section, *Core Business, Strategy, and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), Total Generating Cost (TGC) and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at June 30, 2017, OPG's electricity generation portfolio had an in-service capacity of 16,210 megawatts (MW). OPG operates two nuclear generating stations, 66 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report. A description of OPG's segments is provided in OPG's 2016 annual MD&A in the section, *Business Segments*.

All of OPG's owned and co-owned generating facilities are located in Ontario. OPG does not operate PEC, Brighton Beach, the Bruce A GS and the Bruce B GS.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as at June 30, 2017 and December 31, 2016 was as follows:

(MW)	As at June 30 2017	As at December 31 2016
Regulated – Nuclear Generation [1]	**5,728**	5,728
Regulated – Hydroelectric	**6,426**	6,421
Contracted Generation Portfolio [2]	**4,056**	4,028
Total	**16,210**	16,177

[1] The in-service generating capacity as of June 30, 2017 and December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

During the six months ended June 30, 2017, the total in-service capacity increased by 33 MW. The increase was primarily due to the completion of the Peter Sutherland Sr. hydroelectric GS, which was placed in-service at the end of the first quarter of 2017, and the upgrade of Unit 10 of the Sir Adam Beck 1 hydroelectric GS, which was completed in June 2017.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's unaudited interim consolidated operating results. Significant factors which contributed to OPG's results during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, are discussed below.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**	**2017**	**2016**
Revenue	**1,146**	1,387	**2,322**	2,865
Fuel expense	**178**	182	**333**	354
Gross margin	**968**	1,205	**1,989**	2,511
Operations, maintenance and administration	**711**	709	**1,419**	1,395
Depreciation and amortization	**172**	316	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**236**	232	**474**	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(194)**	(225)	**(383)**	(372)
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
Property taxes	**11**	11	**22**	23
	928	1,034	**1,853**	2,121
Income before other gains, interest and income taxes	**40**	171	**136**	390
Other gains	**(380)**	(1)	**(383)**	(24)
Income before interest and income taxes	**420**	172	**519**	414
Net interest expense	**16**	31	**35**	64
Income before income taxes	**404**	141	**484**	350
Income tax expense	**97**	6	**109**	87
Net income	**307**	135	**375**	263
Net income attributable to the Shareholder	**303**	132	**367**	255
Net income attributable to non-controlling interest [1]	**4**	3	**8**	8
Electricity production (TWh) [2]	**18.0**	19.4	**36.6**	40.4
Cash flow provided by operating activities	**143**	348	**261**	714

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership, the 33 percent interest of Coral Rapids Power Corporation (CRP), a corporation wholly owned by the Taykwa Tagamou Nation, in the PSS Generating Station Limited Partnership (PSS), and the 10 percent interest of a corporation wholly owned by the Six Nations of Grand River Development Corporation in the Nanticoke Solar LP.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Second Quarter

Net income attributable to the Shareholder was $303 million for the second quarter of 2017, an increase of $171 million compared to the same quarter in 2016. Income before interest and income taxes for the second quarter of 2017 was $420 million, an increase of $248 million compared to the same quarter in 2016.

Significant factor that increased income before interest and income taxes:

- Higher earnings of $381 million from the Services, Trading, and Other Non-Generation segment, primarily as a result of the gain on sale of OPG's head office premises and associated parking facility, a non-core asset

of the business. A gain on sale of $283 million, which is net of tax effects of $95 million, was recognized in net income upon completion of the transaction in the second quarter of 2017. The sale was undertaken pursuant a Shareholder Declaration and a Shareholder Resolution. Further details can be found under the heading, *Recent Developments – Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties*.

Significant factors that reduced income before interest and income taxes:

- Lower earnings from the nuclear base regulated price of approximately $72 million, partially offset by a decrease in nuclear fuel expense of $11 million, reflecting lower electricity generation of 1.3 terawatt hours (TWh) from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. The lower nuclear generation was primarily due to the ongoing refurbishment of Unit 2 at the Darlington GS since October 2016. The base regulated prices set in 2014 continue to be in effect pending the OEB's decision on OPG's current application for new regulated prices, expected later in 2017. The existing nuclear base regulated price was set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. OPG has requested January 1, 2017 as the effective date of the new regulated prices.
- Lower earnings on the nuclear fixed asset removal and nuclear waste management funds (Nuclear Segregated Funds) of $31 million, primarily due to lower earnings on the Used Fuel Segregated Fund.
- Higher depreciation and amortization expense of $11 million, excluding amortization expense related to balances in OEB-authorized regulatory variance and deferral accounts (regulatory accounts), primarily due to new assets in service in the Regulated – Nuclear Generation segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory accounts on December 31, 2016 contributed to the decrease in revenue for the three months ended June 30, 2017, compared to the same period in 2016, but was largely offset by a decrease in the amortization expense related to these balances. OPG has requested new rate riders in its current application to the OEB for new regulated prices, with a proposed effective date of January 1, 2017.

Net interest expense decreased by $15 million during the second quarter of 2017, compared to the same quarter in 2016, primarily due to a higher amount of interest costs deferred in OEB-authorized regulatory accounts and a higher amount of interest costs capitalized for the Darlington Refurbishment project expenditures.

Income tax expense for the three months ended June 30, 2017 was $97 million, compared to $6 million for the same period in 2016. The increase in income tax expense was primarily due to higher income before taxes, a lower change in reserves from the resolution of uncertainties, and a higher amount of tax expense deferred in regulatory assets in 2017.

Year-To-Date

Net income attributable to the Shareholder was $367 million for the first six months of 2017, an increase of $112 million compared to the same period in 2016. Income before interest and income taxes for the six months ended of 2017 was $519 million, an increase of $105 million compared to the same period in 2016.

Significant factors that increased income before interest and income taxes:

- Higher earnings of $383 million from the Services, Trading, and Other Non-Generation segment, primarily as a result of the gain on sale of OPG's head office premises and associated parking facility recognized in the second quarter of 2017.

Significant factors that reduced income before interest and income taxes:

- Lower earnings from the nuclear base regulated price of approximately $206 million, partially offset by a decrease in nuclear fuel expense of $24 million, reflecting lower electricity generation of 3.6 TWh from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. The lower nuclear generation was primarily due to the ongoing refurbishment of Unit 2 at the Darlington GS since October 2016.
- Higher OM&A expenses of $24 million, mainly in the Regulated – Nuclear Generation segment, reflecting planned expenditures related to major maintenance expenditures occurring at the nuclear stations.
- A gain of $22 million recorded in the first quarter of 2016 to reflect the OEB's decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices.
- Higher depreciation and amortization expense of $20 million, excluding amortization expense related to regulatory account balances, primarily due to new assets in service in the Regulated – Nuclear Generation segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory accounts on December 31, 2016 contributed to the decrease in revenue in the first half of 2017, compared to the same period in 2016, but was primarily offset by a decrease in the amortization expense related to these balances.

Net interest expense decreased by $29 million for the six months ended June 30, 2017, compared to the same period in 2016, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project expenditures and a higher amount of interest costs deferred in OEB-authorized regulatory accounts.

Income tax expense for the six months ended June 30, 2017 was $109 million, compared to $87 million for the same period in 2016. The increase in income tax expense was primarily due to higher income before income taxes and a lower change in reserves from the resolution of uncertainties, partly offset by a lower amount of tax expense deferred in regulatory assets in 2017.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars)	**2017**	**2016**	**2017**	**2016**
(Loss) income before interest and income taxes				
Regulated – Nuclear Generation	**(169)**	(76)	**(287)**	(30)
Regulated – Hydroelectric	**172**	187	**352**	383
Contracted Generation Portfolio	**77**	67	**154**	145
Total electricity generation business segments	**80**	178	**219**	498
Regulated – Nuclear Waste Management	**(40)**	(5)	**(87)**	(88)
Services, Trading, and Other Non-Generation	**380**	(1)	**387**	4
	420	172	**519**	414

Electricity Generation

Electricity generation for the three and six month periods ended June 30, 2017 and 2016 was as follows:

(TWh)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Regulated – Nuclear Generation	**9.3**	10.6	**19.3**	22.9
Regulated – Hydroelectric	**8.2**	8.0	**16.2**	15.9
Contracted Generation Portfolio [1]	**0.5**	0.8	**1.1**	1.6
Total OPG electricity generation	**18.0**	19.4	**36.6**	40.4
Total electricity generation by all other generators in Ontario [2]	**16.5**	15.5	**35.1**	34.4

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.
[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the Independent Electricity System Operator (IESO), minus OPG electricity generation.

Total OPG electricity generation decreased by 1.4 TWh during the second quarter of 2017, compared to the same quarter in 2016, and by 3.8 TWh during the six months ended June 30, 2017, compared to the same period in 2016. As expected, the lower electricity generation from the Regulated – Nuclear Generation segment was primarily the result of the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment, which began in October 2016. This decrease in electricity generation was partially offset by an increase in generation from the Pickering GS, primarily due to favourable unit conditions and execution of planned outage work resulting in a lower number of planned outage days at the station.

The higher electricity generation of 0.2 TWh and 0.3 TWh from the Regulated – Hydroelectric segment for the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, was largely due to higher water flows primarily on the eastern Ontario river systems, net of water spilled as a result of SBG conditions, discussed below.

The lower electricity generation of 0.3 TWh and 0.5 TWh from the Contracted Generation Portfolio segment for the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, was primarily due to a higher volume of water spilled as a result of SBG conditions.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. For the three and six month periods ended June 30, 2017, Ontario's electricity demand as reported by the IESO was 30.6 TWh and 64.9 TWh, respectively, compared to 31.9 TWh and 67.1 TWh for the same periods in 2016, respectively, excluding electricity exports out of the province.

Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric, other grid-connected renewable resources and nuclear stations. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. Baseload generation supply surplus in Ontario continued to be prevalent in 2017, resulting in forgone hydroelectric generation for OPG of 2.6 TWh and 3.4 TWh due to SBG conditions in the three and six month periods ended June 30, 2017, respectively, compared to 1.7 TWh and 3.4 TWh of forgone hydroelectric generation for OPG due to SBG conditions during the same periods in 2016, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions during these periods was offset by the impact of a regulatory variance account authorized by the OEB. OPG did not forgo any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The same base regulated prices for electricity generated by these segments, authorized by the OEB effective November 1, 2014, were in effect during the first six months of 2017 as in 2016. These prices will remain in effect until such time as the OEB approves new regulated prices based on OPG's current application. The base regulated prices established in 2014 are discussed in OPG's 2016 annual MD&A in the section, *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment was 5.7 and 5.8 cents per kilowatt hour (¢/kWh) during the three and six month periods ended June 30, 2017 respectively, compared to 6.9 ¢/kWh during the same periods in 2016. The decrease was primarily due to the expiry, on December 31, 2016, of an OEB-authorized nuclear rate rider of $10.84 per megawatt hour (MWh) for the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment was 4.0 ¢/kWh and 4.1 ¢/kWh during the three and six month periods ended June 30, 2017, respectively, compared to 4.4 ¢/kWh during the same periods in 2016. The decrease in the average sales price was primarily due to the expiry, on December 31, 2016, of an OEB-authorized regulated hydroelectric rate rider of $3.19/MWh for the recovery of variance and deferral account balances. The rate riders were established to recover approved balances recorded in the variance and deferral accounts in prior years. As such, the year-over-year changes in revenue from the rate riders were largely offset by changes in amortization expense related to these balances. There were no rate riders in effect during the first half of 2017 for either nuclear or regulated hydroelectric generation, pending the outcome of OPG's current application with the OEB for new regulated prices.

Cash Flow from Operations

Cash flow provided by operating activities was $143 million for the three months ended June 30, 2017 and $261 million for the six months ended June 30, 2017, compared to $348 million and $714 million for the same periods in 2016, respectively. The decrease in cash flow provided by operating activities was expected and primarily due to lower generation revenue receipts reflecting lower generation from the Regulated – Nuclear Generation segment as a result of the ongoing refurbishment of Unit 2 at the Darlington GS and the expiry, on December 31, 2016, of the OEB-authorized rate riders for nuclear and regulated hydroelectric generation. The decrease in cash flow in the first half of 2017 was also due to higher income tax instalments, compared to the same period in 2016.

The decrease in cash flow provided by operating activities for the three and six month periods ended June 30, 2017 was partially offset by lower pension plan contributions in 2017 reflecting an updated actuarial valuation of the OPG registered pension plan filed with the Financial Services Commission of Ontario in September 2016, and lower contributions to the Used Fuel Segregated Fund and the Decommissioning Segregated Fund in 2017. Both the Used Fuel Segregated Fund and the Decommissioning Segregated Fund were determined to be fully funded based on an updated estimate of OPG's nuclear waste management and nuclear facilities decommissioning obligations pursuant to a reference plan approved by the Province, for years 2017 to 2021, under the Ontario Nuclear Funds Agreement (ONFA), effective January 1, 2017. Pursuant to the ONFA, the reference plan is required to be updated at least once every five years. Contributions to either or both of the Nuclear Segregated Funds may be required in the future should the funds be in an underfunded position at the time of the next ONFA reference plan update. The year-over-year decrease in cash flow also was partially offset by the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to a period in 2015. The lease agreement for the Bruce nuclear generating stations giving rise to this rebate was amended in late 2015 to eliminate this provision going forward.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with the Company's strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period.

ROE Excluding AOCI was 5.0 percent for the 12 months ended June 30, 2017, compared to 4.2 percent for the 12 months ended December 31, 2016. The increase was primarily due to higher net income attributable to the Shareholder for the 12 months ended June 30, 2017, which reflected the gain on sale of OPG's head office premises and associated parking facility recorded in the second quarter of 2017, partly offset by the lower earnings from the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS without a corresponding increase in the nuclear base regulated price, as expected. The lower nuclear generation as a result of the refurbishment outage will continue to negatively affect OPG's ROE Excluding AOCI until such time as new regulated prices are approved by the OEB later in 2017.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flows. The indicator is measured over a 12-month period. FFO Adjusted Interest Coverage for the 12 months ended June 30, 2017 was 4.5 times, compared to 5.1 times for the 12 months ended December 31, 2016. FFO Adjusted Interest Coverage in 2017 reflected a year-over-year decrease in FFO before interest due to lower cash flow provided by operating activities, partially offset by the impact of a lower adjusted interest expense due to a decrease in the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets.

The decrease in the excess of interest on pension and OPEB benefit obligations over expected return on pension plan assets in the first half of 2017 was primarily due to the change in the method used to estimate the interest cost and service cost component of pension and OPEB costs. Effective January 1, 2017, OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs for the three and six month periods ended June 30, 2017 did not have a material impact on net income as it was largely offset by the impact of OEB-authorized variance and deferral accounts in the regulated business segments. Further details on the full yield curve approach can be found in the 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Pension and Other Post-Employment Benefits*.

Enterprise Total Generating Cost per MWh

The Enterprise TGC per MWh increased to $48.72 for the three months ended June 30, 2017, compared to $48.48 for the same quarter in 2016. The increase was mainly due to reduction in nuclear electricity generation due to the Unit 2 refurbishment outage at the Darlington GS and higher capital expenditures, largely offset by higher SBG-adjusted hydroelectric electricity generation reflecting higher water flows and lower OM&A expenses before the impact of regulatory accounts.

The Enterprise TGC per MWh was $48.35 for the six months ended June 30, 2017, an increase compared to $45.01 for the same period in 2016. The increase was expected and mainly a result of lower electricity generation due to the Unit 2 refurbishment outage at the Darlington GS and higher capital expenditures, partially offset by lower OM&A expenses before the impact of regulatory accounts.

If Unit 2 at the Darlington GS was not currently undergoing refurbishment and had continued to operate in a manner consistent with the performance of the remaining units at the Darlington GS and adjusting for generation constraints on the remaining units related to the transition of the station toward refurbishment, the Enterprise TGC would have been approximately $3 to $4 per MWh lower for the three and six months ended June 30, 2017. This sensitivity was calculated using the estimated incremental electricity that would have been generated under these circumstances and the associated estimated fuel cost that would have been incurred.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $76.87 for the three months ended June 30, 2017, compared to $69.25 for the same quarter in 2016. The Nuclear TGC per MWh was $73.24 for the six months ended June 30, 2017, compared to $62.44 for the same period in 2016. The increase in the Nuclear TGC per MWh for these periods was expected and primarily due to the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $19.83 for the three months ended June 30, 2017, compared to $22.14 for the same quarter in 2016. The decrease was primarily due to higher SBG-adjusted hydroelectric electricity production reflecting higher water flows and lower capital expenditures. The Hydroelectric TGC per MWh was $19.81 for the six months ended June 30, 2017, compared to $21.08 for the same period in 2016. The decrease was primarily due to lower capital expenditures.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow provided by operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

OEB's Report on Regulatory Treatment of Pension and OPEB Costs

On May 18, 2017, the OEB issued a report on the regulatory treatment of pension and OPEB costs based on a consultation process aimed at developing standard principles to guide the OEB's future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including OPG, that began in May 2015. The report establishes the accrual basis of accounting as the method of determining pension and OPEB amounts for rate-setting purposes, unless the OEB finds that this method does not result in just and reasonable rates in the circumstances of a particular utility. The report also provides for the establishment of a generic variance account to record asymmetric carrying charges in favour of ratepayers on the differences between the forecast pension and OPEB accrual costs recovered by a utility through regulated rates and the actual cash payments made by it for pension and OPEB plans. Carrying charges on this differential are to be assessed at the OEB's prescribed interest rate, on a prospective basis from the effective date of the new variance account. The prescribed interest rate is set quarterly by the OEB based on the quarterly return of a mid-term corporate bond index yield. Certain implementation matters related to the report's requirements remain to be finalized by the OEB. This includes the effective date of the new variance account, the application of carrying charges, and the timing of disposition of both the new and previously established variance and deferral accounts related to pension and OPEB costs.

The report requires utilities, such as OPG, that have been previously directed to record differences between pension and OPEB accrual costs and cash payments in a separate variance or deferral account to continue to defer such differences in that account, until such time as the OEB approves the utility to resume the accrual basis of recovery. The future recovery of amounts recorded in such an account will be subject to this approval. In setting OPG's existing regulated prices effective November 1, 2014, the OEB limited the recovery of pension and OPEB costs to the regulated portion of the Company's cash expenditures for the pension and OPEB plans. It also required OPG to defer, effective November 1, 2014, the difference between its actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and the Company's actual cash payments for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of an

OEB generic proceeding on the regulatory treatment of pension and OPEB costs. Similarly, in its current application for new regulated prices filed with the OEB in May 2016, OPG has proposed to continue recording the difference between actual pension and OPEB accrual costs and actual cash payments for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the OEB's consultation process. The Company recognizes the amount set aside in the Pension & OPEB Cash Versus Accrual Differential Deferral account as a regulatory asset, which has a balance of $533 million as at June 30, 2017.

As currently outlined in the report, OPG does not expect that it would be subject to carrying charges on the differences between pension and OPEB accrual costs and cash payments until either it begins to recover, through future rate riders, amounts deferred in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, or the OEB establishes OPG's base regulated prices to reflect pension and OPEB amounts on an accrual basis. As such, the OEB's report did not impact OPG's financial results for the three and six month periods ended June 30, 2017.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Fair Hydro Plan) aimed at reducing electricity bills for all residential consumers in the province on average by 25 percent. As part of the Fair Hydro Plan, the Province has proposed refinancing a portion of the Global Adjustment costs over a longer time period for Regulated Price Plan and other eligible customers (e.g., residential, farm, small businesses). On June 1, 2017, the Province enacted *Bill 132 – An Act to enact the Ontario Fair Hydro Plan Act, 2017, and to make amendments to the Electricity Act, 1998 and the Ontario Energy Board Act, 1998* (Bill 132). Bill 132 establishes a framework under which the costs and benefits associated with the Government of Ontario's clean energy initiative are to be allocated fairly among present and future consumers of electricity, appoints OPG as the Financial Services Manager of the Fair Hydro Plan, unless OPG is not in a position to do so, and provides for a financing entity to be established by the Financial Services Manager for the purpose of funding a portion of the Global Adjustment. Bill 132 also made certain amendments to other legislation, which ~~will~~ enables the IESO and OPG to work together to implement ~~this financing~~the Ontario Fair Hydro Plan.

OPG's Board of Directors, which had established a Special Committee to provide oversight on behalf of the Board of Directors, has conditionally approved OPG's involvement with the Fair Hydro Plan on commercial terms. The form of the financing entity to be established by OPG is being determined, and the specific operating protocol between the IESO, OPG and the financing entity and the requirements for financing the Fair Hydro Plan are being negotiated. OPG continues to prepare for financing activities of the financing entity that are expected to commence later in 2017. **[MONITOR]**

Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution requiring the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. A purchase and sale agreement was executed in December 2016, and the sale was completed in April 2017. A gain on sale of $283 million, which is net of tax effects of $95 million, was recognized in net income upon completion of the transaction in the second quarter of 2017. The pre-tax gain on sale was recorded as Other gain in the interim consolidated statement of income in the Service, Trading and Other Non-Generation segment. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the Act, into the Province's Consolidated Revenue Fund. OPG expects that the amount of designated proceeds to be transferred into the Consolidated Revenue Fund will be largely consistent with the after-tax gain, and is working with the Ontario Ministry of Finance to finalize the amount. The transfer is expected to take place later in 2017. **[MONITOR]**

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. An active program to locate a buyer for the property was initiated in June 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed

in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the Act, into the Province's Consolidated Revenue Fund. In accordance with the Shareholder Resolution, approximately one-third of the site is to be transferred to the City of Mississauga, by the purchaser, for parkland, institutional, and cultural uses.

CORE BUSINESS, STRATEGY, AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

The following sections provide an update to OPG's disclosures in the 2016 annual MD&A related to its four key strategic imperatives – operational excellence, project excellence, financial strength, and social licence. A detailed discussion of these strategic imperatives is included in the 2016 annual MD&A in the section, *Core Business, Strategy, and Outlook*.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Electricity Generation Production and Reliability

- As part of the plan to extend Pickering operations, OPG is continuing to undertake the required technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will remain fit for service for operation to 2024. OPG is also nearing completion of component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently set at the end of 2020, will be reassessed based on the fuel channel analysis and safety case consistent with submissions for the Canadian Nuclear Safety Commission's (CNSC) approval, discussed below. OPG's current application with the OEB for new base regulated prices, currently pending the OEB's decision, reflects OPG's plans to extend Pickering operations to 2024 and requests inclusion of the corresponding cost and generation impacts in the determination of the nuclear regulated price.
- OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. On June 28, 2017, OPG confirmed to the CNSC that it intends to cease commercial operation of all Pickering units on December 31, 2024. Work on the Pickering licence renewal application is proceeding and the application is expected to be filed by August 31, 2017 for the CNSC's approval in 2018. The requested licence renewal will span the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe storage state in 2028. Through an extensive Periodic Safety Review, OPG will submit a Global Assessment Report and Integrated Implementation Plan (IIP) for the station to the CNSC as part of the licence renewal.
- In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications were presented to the CNSC at public hearings in April 2017. On May 30,

2017, the CNSC announced that the WWMF licence was renewed for a period of ten years and is now valid from June 1, 2017 to May 31, 2027. A renewal decision on the PWMF licence is expected to be issued prior to the expiry of the current licence on March 31, 2018.

- During the second quarter of 2017, OPG completed the upgrade of Unit 10 of the Sir Adam Beck 1 hydroelectric GS, increasing the capacity of the station by 6 MW.
- Work continues on the rehabilitation of Unit 1 of the Sir Adam Beck Pump hydroelectric GS and the overhaul and upgrade of the following hydroelectric units: Unit 1 of the Harmon GS, Unit 2 of the DeCew Falls GS, and Unit 2 of the Lower Notch GS.
- OPG commenced definition phase activities for the Water Conveyance System project to rehabilitate the Sir Adam Beck 1 GS canal and associated structures, ensuring their continued safe and reliable operations for approximately the next 50 years.
- As part of the process to decommission the Nanticoke and Lambton generating stations, OPG is continuing to develop a demolition plan that will ensure that the stations are closed safely, securely and in an environmentally responsible manner. Project milestones in 2017 include the elimination of coal yard equipment and structures, removal of ash silos, and the selection of a contractor to remove the stacks, powerhouse, interior equipment and supporting site structures for the Nanticoke GS. An update of the associated asset retirement obligations related to these stations is expected to be finalized later in 2017. A demolition contract for the removal of the Nanticoke powerhouse was awarded in July 2017. A demolition contract for the removal of the Lambton powerhouse is expected to be awarded in 2018.

Environmental Performance

There were no significant changes to environmental legislation affecting the Company during the second quarter of 2017. Disclosures related to the Company's environmental policy and environmental risks can be found in OPG's 2016 annual MD&A.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. OPG remains focused on delivering projects safely, on time, on budget and with high quality. The status updates for OPG's major projects as at June 30, 2017 are outlined in the following table, with further details below.

Project	Capital expenditures		Approved budget	Expected in-service date	Current status
(millions of dollars)	Year-to-date	Life-to-date			
Darlington Refurbishment	608	3,793	12,800[1]	First unit - 2020 Last unit - 2026	Islanding of Unit 2 was completed in April 2017. Preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening of the reactor air lock doors and installation of shielding, was completed in the second quarter of 2017. The setup of specialized tooling and equipment needed for the removal and replacement of the reactor components is in progress. The project is tracking on schedule and budget.
Peter Sutherland Sr. Hydroelectric GS	32	268	300	2017	The station was placed in-service on March 31, 2017, ahead of the originally planned schedule, and is expected to close below the approved budget. Project close-out activities are in progress. In April 2017, CRP exercised its right under the partnership agreement to increase its interest in PSS to 33 percent.
Ranney Falls Hydroelectric GS	9	12	77	2019	Civil engineering design work and site clearing and mobilization have been completed. Work is progressing to expand forebay and tailrace channels. The project is tracking on schedule and budget.
Nanticoke Solar Facility	1	2		2019	Project definition work is continuing, with construction planned to commence as early as in the fourth quarter of 2017.
Deep Geologic Repository for low and intermediate level radioactive waste (L&ILW)	5[2]	200[2]			On June 26, 2017, the Canadian Environmental Assessment Agency (CEAA) advised that it was satisfied with the additional information submitted by OPG on May 26, 2017, and that a draft report was being prepared for public review. The Environmental Assessment (EA) Decision Statement by the federal Minister of Environment and Climate Change is expected in the fourth quarter of 2017.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities).

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017 with a total of 480 fuel channels de-fuelled. Islanding of Unit 2, the physical separation of the refurbishment unit from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second major segment, which includes preparatory work and the removal of reactor components, commenced immediately following the islanding of Unit 2. Preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening of the reactor air lock doors and installation of shielding, was completed in the second quarter of 2017. The setup of specialized tooling and equipment needed for the removal and replacement of the reactor components is in progress. The Re-tube Tooling Platform, which will host the tooling for the removal, inspection, and installation activities, was completed in July 2017, and the disassembly of reactor components commenced immediately thereafter. **[MONITOR]** Other key project activities completed during the second segment include the drain and vacuum dry of the primary heat transport system, commencement of the major turbine generator overhaul and continuation of the major electrical scope. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the overall project. The project is tracking on schedule and budget.

A number of pre-requisite projects in support of the execution phase of the project, including construction of facilities, infrastructure upgrades and installation of safety enhancements, have been completed. Completion of the Heavy Water Storage and Drum Handling Facility has been delayed due to challenges with construction. OPG suspended the project in the second quarter of 2017 to evaluate the best approach to optimize cost and schedule and complete the project. Remediation measures are in progress. This delay will not impact the overall Darlington Refurbishment project schedule, as the Heavy Water Storage and Drum Handling Facility is not on the project's critical path. The remaining projects are tracking for completion in line with the refurbishment execution schedule.

In addition to the refurbishment activities on Unit 2 completed to date, other key project activities in 2017 are as follows:

- Completion of preparation activities to support Retube and Feeder Replacement work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Re-tube Waste Processing Building.
- Commencement of the fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG is continuing planning activities for the refurbishment of the second unit, Unit 3, and is entering into associated commitments to procure major components that require long lead times. As of June 30, 2017, $51 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Ranney Falls Hydroelectric GS

During the second quarter of 2017, OPG continued construction work of a 10 MW single-unit powerhouse on the existing Ranney Falls GS site, as part of the Regulated – Hydroelectric segment. The new unit will replace an existing unit that reached its end of life in 2014. Civil engineering design work and site clearing and mobilization have been completed. Construction is progressing to expand the existing forebay and tailrace channels to accommodate the new powerhouse. The project's expected in-service date is in the fourth quarter of 2019, with a budget of $77 million. The project is tracking on schedule and budget.

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands under a Large Renewable Procurement contract with the IESO, through Nanticoke Solar LP, a partnership between OPG and a subsidiary of the Six Nations of Grand River Development Corporation, is planned to commence as early as in the fourth quarter of 2017. During the second quarter of 2017, the partnership continued work to obtain approvals and permits required to enable the commencement of construction, and progressed procurement activities for equipment and for engineering and construction services. The facility is expected to be completed in the first quarter of 2019.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project. OPG completed the requested studies and submitted the requested information in December 2016, as planned. Following the CEAA's review of OPG's submission and a period of public comment, the CEAA requested additional information from OPG. OPG provided the additional information on May 26, 2017 and, on June 26, 2017, the CEAA notified OPG that it had sufficient and adequate information to proceed with the next step of the environmental assessment process and advised that a draft report and updated terms and conditions will be prepared for public review. An EA Decision Statement by the Minister is expected in the fourth quarter of 2017. Based on the additional information submitted, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW. Alternative locations reviewed in the Canadian Shield or Southwest Ontario, while technically feasible, would result in greater negative environmental impacts and higher costs, as well as a project delay of 15 years or more, while offering no additional benefits in safety.

If the EA Decision Statement supports licensing, a number of conditions will need to be met before construction begins. In addition, OPG continues its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. Consistent with the requirements of *Ontario Regulation 53/05*, the application incorporates a rate smoothing proposal that would defer, for future collection, a portion of the approved annual nuclear revenue requirement for the period from January 1, 2017 to the end of the Darlington Refurbishment project, with a view to making more stable year-over-year changes in OPG's regulated prices. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impacts on customers. OPG expects to recognize amounts deferred under rate smoothing as income in the periods to which the underlying approved revenue requirements relate.

The application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of nuclear and hydroelectric regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework, which forms the basis for the ratemaking methodologies reflected in the application.

The application seeks an increase in the nuclear rate base, effective in early 2020, to reflect the planned placement in service of approximately $4.8 billion of capital expenditures upon the scheduled return to service of Unit 2 at the Darlington GS as part of the Darlington Refurbishment project and, effective in 2017, an increase in the deemed capital structure applied to the total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt reflected in the existing regulated prices. If approved, this would improve OPG's return on Shareholder's investment. The application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the portion of these balances approved for recovery or repayment through rate riders previously in effect.

A public oral hearing on the application took place between February 2017 and April 2017, with the final arguments completed on June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected later in 2017.

For generation assets that do not form part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements. In line with this strategy, virtually all of OPG's non-regulated operating facilities and assets under construction are subject to long-term Energy Supply Agreements (ESAs) or other long-term contracts with the IESO. This includes the Peter Sutherland Sr. GS, which began receiving contracted revenue under its hydroelectric ESA following IESO's confirmation, in June 2017, of commercial operation of the station effective as of March 31, 2017. The ESA expires in 2067.

Ensure Availability of Cost Effective Funding

In April 2017, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2017, S&P Global Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

Social Licence

As the largest electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish these relationships based on a foundation of respect for the languages, customs, and political, social and cultural organizations of the Indigenous communities.

In June 2017, OPG launched an Indigenous Business Engagement (IBE) Initiative. The purpose of this initiative is to increase access to procurement opportunities for Indigenous businesses interested in supplying materials and services to OPG. The IBE Initiative is based on a strategy that will identify opportunities in contracts, scopes of work and business plans for potential Indigenous business engagement; include criteria in procurement proposals relating to supplier's ability to engage or partner with Indigenous people or businesses; and invest in relationships with Indigenous communities by increasing outreach efforts to enhance understanding of how to do business with OPG.

As part of its commitment to help de-carbonize Ontario's transportation sector, OPG is a founding sponsor of Plug'n Drive, a non-profit organization working to accelerate the adoption of electric vehicles and to maximize their environmental and economic benefits. In May 2017, Plug'n Drive announced the opening of the world's first experiential learning facility dedicated to electric vehicle education and awareness, with OPG sponsoring the Centre's training facility. Ontario's climate change plan aims for electric and hydrogen passenger vehicles to represent five percent of new vehicle sales in the province by 2020.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of costs and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's current application for new regulated prices, currently pending the OEB's decision, is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. Considering the timing of OPG's application and OPG's procedural adherence throughout the proceeding, the Company believes that the OEB could make the new regulated prices effective January 1, 2017. This would allow OPG to recover the difference between the approved new regulated prices and the existing regulated prices for the period between January 1, 2017 and the implementation date of the new prices based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected later in 2017. The continuation of existing regulated prices until the issuance of the OEB's decision is expected to continue to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and, excluding the gain on sale of the Company's head office premises and associated parking facility recorded in the second quarter of 2017, lower ROE Excluding AOCI during 2017, compared to 2016. In large part, this is due to the year-over-year reduction in nuclear electricity generation resulting from the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined in 2014 based on a higher production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision issuance, could have a significant impact on OPG's financial results during 2017.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues to future periods. Combined with the expiry of rate riders in effect to the end of 2016 and a year-over-year reduction in nuclear generation due to the Unit 2 refurbishment outage at the Darlington GS, as expected, this will result in lower cash flow from operations and a lower FFO Adjusted Interest Coverage ratio in 2017, compared to 2016. The continuation of existing base regulated prices until such time as the new prices are determined and implemented by the OEB also is contributing to lower cash flow from operations in 2017. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements.

Lower nuclear generation due to the Darlington Refurbishment outages will continue, as planned, to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Variability in sustaining capital investment expenditures, including major sustaining projects for the hydroelectric operations, also will impact the Enterprise TGC in future periods.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, the variance accounts include those related to the revenue impact of variability in water flows and forgone production due to SBG conditions at the regulated hydroelectric stations. As there are no variance or deferral accounts in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings. OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to ESAs with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow from operations going forward.

OPG's total forecast capital expenditures for the 2017 year are approximately $1.9 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric and other development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major projects are discussed in the section, *Project Excellence*.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and, for the portion of the Used Fuel Segregated Fund guaranteed by the Province under the ONFA, changes in the Ontario consumer price index (CPI). In the near term, these factors can be volatile and cause fluctuations in the Company's income. This volatility is partially mitigated by the impact of the OEB-authorized Bruce Lease Net Revenues Variance Account and, as discussed below, the funded status of the two segregated funds.

As OPG does not have the right to withdraw surplus amounts from the Nuclear Segregated Funds when the segregated funds are overfunded relative to the life cycle funding liability per the most recently approved ONFA Reference Plan, OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value of such life cycle funding liability. This reduces the volatility of earnings on the Nuclear Segregated Funds reflected in net income when the funds are in a fully funded or overfunded position. As at June 30, 2017, the Decommissioning Segregated Fund was overfunded by approximately 24 percent, and the Used Fuel Segregated Fund was marginally overfunded, by less than one percent, based on the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars) (unaudited)	**2017**	**2016**	**2017**	**2016**
Revenue	**609**	820	**1,261**	1,746
Fuel expense	**68**	79	**136**	160
Gross margin	**541**	741	**1,125**	1,586
Operations, maintenance and administration	**593**	581	**1,182**	1,144
Depreciation and amortization	**110**	231	**217**	461
Property taxes	**7**	6	**13**	13
Loss before other gains, interest, and income taxes	**(169)**	(77)	**(287)**	(32)
Other gains	**-**	(1)	**-**	(2)
Loss before interest and income taxes	**(169)**	(76)	**(287)**	(30)

For the three and six month periods ended June 30, 2017, segment losses before interest and income taxes increased by $93 million and $257 million, respectively, compared to the same periods in 2016. The decrease in earnings was expected and primarily due to reduced revenue from the nuclear base regulated price of approximately $72 million and $206 million, partly offset by a decrease in fuel expense of $11 million and $24 million, respectively. The decrease in revenue during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, reflected lower electricity generation of 1.3 TWh and 3.6 TWh, respectively, primarily due to the ongoing Unit 2 refurbishment outage at the Darlington GS that began in October 2016, without a corresponding increase in the base regulated price. The existing nuclear base regulated price set by the OEB in 2014 continues to be in effect pending the OEB's decision on OPG's application for new regulated prices, proposed to be effective on January 1, 2017. The existing price does not reflect the lower generation as a result of the refurbishment outage, as it was set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. The reduction in nuclear electricity generation for the three and six month periods ended June 30, 2017 was partially offset by the higher electricity generation from the Pickering GS.

The increases in OM&A expenses of $12 million and $38 million during the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, also contributed to a year-over-year reduction in segment earnings. The higher OM&A expenses reflected planned expenditures related to major maintenance expenditures occurring at the nuclear stations.

Depreciation and amortization expense, excluding amortization expense related to regulatory account balances, increased by $11 million and $20 million during the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, primarily due to new assets in service.

The expiry of an OEB-authorized nuclear rate rider on December 31, 2016 contributed to the decrease in segment revenue for the three and six month periods ended June 30, 2017, compared to the same periods in 2016. As rate riders allow for recovery of approved balances in OEB-authorized regulatory accounts, this decrease in revenue was largely offset by a decrease in amortization expense related to these balances. There was no rate rider in effect during the first half of 2017 pending the outcome of OPG's current application to the OEB for new regulated prices.

The Unit Capability Factors for the Darlington and Pickering generating stations were as follows:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Unit Capability Factor *(%)* [1]				
Darlington GS	**64.6**	75.9	**74.9**	86.6
Pickering GS	**84.2**	71.4	**81.4**	72.1

[1] The nuclear Unit Capability Factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS decreased in the second quarter of 2017, compared to the same quarter in 2016, primarily due to the higher number of planned and unplanned outage days during the second quarter of 2017. The lower Unit Capability Factor at the Darlington GS for the six months ended June 30, 2017, compared to the same period in 2016, reflected the higher number of planned outage days, largely driven by constraints related to the transition of the station toward refurbishment.

The increase in Unit Capability Factor at the Pickering GS for the three and six month periods ended June 30, 2017 was primarily due to favourable unit conditions and execution of planned outage work resulting in a lower number of planned outage days at the station compared to 2016.

Regulated – Nuclear Waste Management Segment

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars) (unaudited)	**2017**	**2016**	**2017**	**2016**
Revenue	**30**	32	**57**	66
Operations, maintenance and administration	**32**	34	**61**	70
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**232**	228	**466**	456
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(194)**	(225)	**(383)**	(372)
Loss before interest and income taxes	**(40)**	(5)	**(87)**	(88)

The segment loss before interest and income taxes increased by $35 million in the second quarter of 2017 compared to the same quarter in 2016. The decline in earnings was primarily due to lower earnings from the Nuclear Segregated Funds. The segment loss before interest and income taxes for the six months ended June 30, 2017 was comparable to the same period in 2016.

Lower earnings on the Used Fuel Segregated Fund, net of the impact of the Bruce Lease Net Revenue Variance Account, were the primary reason for the lower Nuclear Segregated Funds earnings during the second quarter of 2017. As the Used Fuel Segregated Fund was overfunded as at March 31, 2017 and June 30, 2017, the earnings on the fund recorded in income during the second quarter of 2017 reflected the growth in the present value of the used fuel life cycle funding liability per the 2017 ONFA Reference Plan. During the second quarter of 2016, the Used Fuel Segregated Fund was underfunded based on the ONFA reference plan then in effect, and therefore earnings on the fund reflected the CPI-adjusted rate of return guaranteed by the Province under the ONFA for funding related to the initial 2.23 million used fuel bundles and market returns for the portion of the fund not guaranteed by the Province.

As of December 31, 2016, OPG recorded a decrease of approximately $1,570 million to the Nuclear Liabilities and associated asset retirement costs capitalized as part of the carrying value of the nuclear generating stations. The resulting year-over-year decreases in accretion on fixed asset removal and nuclear waste management liabilities recorded in the Regulated – Nuclear Waste Management segment, and depreciation and fuel expenses recorded in

the Regulated – Nuclear Generation segment during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, were offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account authorized by the OEB.

Under the current OEB-approved cost recovery methodology, these changes in expenses are not expected to materially affect OPG's income during the rest of 2017, as they are expected to continue to be largely offset by the impact of the regulatory accounts until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of such new regulated prices. Further details on the change in the estimate of the Nuclear Liabilities as of December 31, 2016 are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Asset Retirement Obligation*.

Regulated – Hydroelectric Segment

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue [1]	**379**	413	**742**	798
Fuel expense	**97**	92	**170**	171
Gross margin	**282**	321	**572**	627
Operations, maintenance and administration	**75**	75	**151**	151
Depreciation and amortization	**35**	57	**69**	113
Income before other losses (gains), interest and income taxes	**172**	189	**352**	363
Other losses (gains)	**-**	2	**-**	(20)
Income before interest and income taxes	**172**	187	**352**	383

[1] During the three and six month periods ended June 30, 2017, the Regulated – Hydroelectric segment revenue reflected incentive payment reductions of $3 million and incentive payments of $5 million, respectively, related to the OEB-approved hydroelectric incentive mechanism (three and six month periods ended June 30, 2016 – incentive payments of $1 million and $2 million, respectively). The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers. The incentive payments are reduced to remove incentive revenues arising in connection with SBG conditions.

The decrease in income before interest and income taxes of $15 million during the second quarter of 2017, compared to the same quarter in 2016, was primarily the result of the income impact of OEB-approved variance accounts and lower hydroelectric incentive mechanism payments.

The decrease in income before interest and income taxes of $31 million during the six months ended June 30, 2017, compared to the same period in 2016, was primarily due to a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to a motion by OPG. The income impact of OEB-approved variance accounts also contributed to the year-over-year decrease in income for the period.

The decrease in revenue for the three and six month periods ended June 30, 2017, compared to the same periods in 2016, was largely due to the expiry of an OEB-authorized rate rider on December 31, 2016. As the rider allowed for the recovery of approved balances in OEB-authorized regulatory accounts, the resulting reduction in revenue was largely offset by lower amortization expense related to these balances. There was no rate rider in effect during the first half of 2017 pending the outcome of OPG's current application to the OEB for new regulated prices.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Hydroelectric Availability *(%)*	**90.1**	90.4	**89.8**	92.6

The Hydroelectric Availability in the second quarter of 2017 was comparable to the same period in 2016. The decrease in Hydroelectric Availability during the six months ended June 30, 2017, compared to the same period in 2016, was primarily due to a higher number of unplanned outage days at the regulated hydroelectric stations.

Contracted Generation Portfolio Segment

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars) (unaudited)	**2017**	**2016**	**2017**	**2016**
Revenue	**147**	137	**290**	282
Fuel expense	**13**	11	**27**	23
Gross margin	**134**	126	**263**	259
Operations, maintenance and administration	**40**	45	**79**	85
Depreciation and amortization	**20**	18	**39**	37
Accretion on fixed asset removal liabilities	**2**	2	**4**	4
Property taxes	**3**	3	**5**	5
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
Income before interest and income taxes	**77**	67	**154**	145

Income before interest and income taxes increased by $10 million and $9 million during the three and six month periods June 30, 2017, compared to the same periods in 2016, respectively. The increase in earnings for the three months ended June 30, 2017 mainly resulted from revenues from the Peter Sutherland Sr. GS that was placed in-service at the end of the first quarter of 2017, higher revenues from the Lennox GS primarily due to increased production to support electricity system requirements, and lower OM&A expenses. For the six months ended June 30, 2017, the increase in earnings was primarily due to higher revenues from Lennox GS primarily due to increased production to support electricity system requirements, and lower OM&A expenses, partially offset by lower revenues from the Lower Mattagami River hydroelectric generating stations.

The Hydroelectric Availability and the Thermal Equivalent Forced Outage Rate (EFOR) for the Contracted Generation Portfolio segment were as follows:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Hydroelectric Availability *(%)*	**81.4**	87.0	**82.5**	85.5
Thermal EFOR *(%)*	**2.7**	1.0	**7.8**	1.0

Lower Hydroelectric Availability during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, was primarily due to an increase in the number of unplanned outage days at the Lower Mattagami River hydroelectric generating stations.

The higher Thermal EFOR during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, was primarily due to a higher number of unplanned outage days at the Lennox GS unit as a result of a transmission outage in 2017.

Services, Trading, and Other Non-Generation Segment

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue	**10**	16	**27**	37
Gross margin	**10**	16	**27**	37
Operations, maintenance and administration	**-**	5	**1**	9
Depreciation and amortization	**7**	10	**14**	17
Accretion on fixed asset removal liabilities	**2**	2	**4**	4
Property taxes	**1**	2	**4**	5
Income (loss) before other gains, interest, and income taxes	**-**	(3)	**4**	2
Other gains	**(380)**	(2)	**(383)**	(2)
Income (loss) before interest and income taxes	**380**	(1)	**387**	4

Segment earnings increased by $381 million and $383 million for the three and six month periods ended June 30, 2017, compared to the same periods in 2016, respectively. The increase in earnings mainly reflected the gain on sale of OPG's head office premises and associated parking facility recorded during the second quarter of 2017, as further discussed in the section, *Highlights* under the heading, *Recent Developments – Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties*.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies, to undertake major projects, to fund long-term obligations such as contributions to the pension fund and the Nuclear Segregated Funds, to make payments under the OPEB plans, to fund expenditures on Nuclear Liabilities not reimbursable from the Nuclear Segregated Funds, and to service and repay long-term debt.

Changes in cash and cash equivalents for the three and six month periods ended June 30 are as follows:

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Cash and cash equivalents, beginning of period	**220**	540	**186**	464
Cash flow provided by operating activities	**143**	348	**261**	714
Cash flow provided by (used in) investing activities	**58**	(586)	**(305)**	(896)
Cash flow (used in) provided by financing activities	**(179)**	(7)	**100**	13
Net increase (decrease)	**22**	(245)	**56**	(169)
Cash and cash equivalents, end of period	**242**	295	**242**	295

For a discussion of cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details in the section, *Highlights* under the heading, *Overview of Results*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to

increase the generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow provided by investing activities during the second quarter of 2017 was $58 million, compared to cash flow used of $586 million for the same period in 2016. Cash flow used in investing activities decreased by $591 million for the six months ended June 30, 2017, compared to the same period in 2016. The decrease in cash flow used in investing activities during these periods was primarily due to the receipt of proceeds from the sale of OPG's head office premises and associated parking facility in the second quarter of 2017 and the acquisition of nine million common shares of Hydro One Limited (Hydro One) in the second quarter of 2016, partially offset by higher expenditures on the Darlington Refurbishment project in 2017. OPG acquired the Hydro One shares for investment purposes, to mitigate the risk of future price volatility related to the Company's future share delivery obligations under the collective agreements with the Power Workers' Union and The Society of Energy Professionals.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG renewed and extended the expiry date of both tranches from May 2021 to May 2022. There were no amounts outstanding under the bank credit facility as at June 30, 2017.

There was no commercial paper outstanding under OPG's commercial paper program as at June 30, 2017.

As at June 30, 2017, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $462 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at June 30, 2017, a total of $387 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $37 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust, expiring on November 30, 2018. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. As at June 30, 2017, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

As at June 30, 2017, Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. In the third quarter of 2017, OPG expects to extend the maturity of the $300 million tranche to August 2022, and to reduce the $200 million tranche to $100 million while extending its maturity date to August 2018. As at June 30, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at June 30, 2017.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. As at June 30, 2017, there were outstanding long-term borrowings of $300 million under this credit facility. ~~In August 2017, the credit facility was increased to $2,350 million, which expires in December 2018. [CONFIRM]~~

Commented [A1]: EFB staff suggest deleting this sentence.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent. In June 2017, OPG issued senior notes payable to the OEFC totalling $100 million and maturing in June 2047. The effective interest rate and coupon interest rate of these notes was 3.65 percent.

As at June 30, 2017, OPG's long-term debt outstanding was $5,622 million, including $1,218 million due within one year.

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's unaudited interim consolidated financial position using selected balance sheet data:

(millions of dollars) (unaudited)	As At June 30 2017	As At December 31 2016
Property, plant and equipment - net	**20,510**	19,998
The increase was primarily due to capital expenditures on the Darlington Refurbishment project, partially offset by depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**16,343**	15,984
The increase was primarily due to earnings on the Nuclear Segregated Funds, partially offset by reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Fixed asset removal and nuclear waste management liabilities	**19,876**	19,484
The increase was primarily a result of accretion expense representing the increase in the liabilities due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's interim consolidated financial statements or are recorded in the Company's interim consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies are outlined in Note 3 to the audited consolidated financial statements as at and for the year ended December 31, 2016. A discussion of recent accounting pronouncements and change in accounting estimate are included in Note 2 to OPG's unaudited interim consolidated financial statements as at and for the three and six month periods ended June 30, 2017 under the heading, *Significant Accounting Policies and Estimates*. Disclosure regarding OPG's critical accounting policies is included in OPG's 2016 annual MD&A.

RISK MANAGEMENT

The following provides an update to the discussion of the Company's risks and risk management activities included in OPG's 2016 annual MD&A. As such, the disclosure in this section should be read in conjunction with the *Risk Management* section included in the annual MD&A.

Risks to Achieving Project Excellence

Darlington Refurbishment

During the second quarter of 2017, OPG continued to mitigate and manage risks related to the Darlington Refurbishment project portfolio. Further risk treatment and remediation measures are being developed or implemented for the projects and their upcoming work windows. Several initiatives and plans are also being developed to manage risks associated with reintegration of the refurbished Unit 2 with the other units, which involves coordination between vendors, project teams and station operations.

Risks to Maintaining Financial Strength

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix, and as such, are subject to change as these forecasts are updated.

	2017 [1]	2018	2019
Estimated fuel requirements hedged [2]	75%	74%	70%

[1] Based on actual fuel requirements hedged for the six months ended June 30, 2017 and forecast for the remainder of the year.

[2] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar (USD) relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are denominated in, or tied to, US dollars. To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at June 30, 2017, OPG had one foreign exchange contract outstanding with a notional value of USD $5 million.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio

based on normal market conditions over a set period of time. For the second quarter of 2017, the VaR utilization ranged between $0.1 million and $0.3 million.

Credit

Deterioration in energy markets counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

OPG manages its exposure to suppliers or counterparties by evaluating their financial condition and negotiating appropriate collateral or other forms of security. OPG's credit exposure relating to energy markets transactions as at June 30, 2017 was $362 million, including $347 million with the IESO. Management considers the Company's risk exposure relating to electricity sales through the IESO-administered spot market to be low as the IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market. Of the $15 million remaining exposure as at June 30, 2017, over 95 percent was related to investment grade counterparties.

Ontario's Fair Hydro Plan

OPG's involvement with Ontario's Fair Hydro Plan could have significant financial and reputational impacts on the Company.

The *Ontario Fair Hydro Plan Act, 2017* received Royal Assent on June 1, 2017 and regulations under this Act came into force in June and early July. The regulations clarify aspects of the structure and programs that are required for OPG, appointed as the Financial Services Manager of the Fair Hydro Plan, to refinance a portion of the Global Adjustment through a financing entity. OPG's credit rating and reputation could potentially be adversely impacted by the Fair Hydro Plan, through financial implications to the Company from its involvement with the Fair Hydro Plan and through stakeholder opinions related to this involvement.

Recovery of Pension and OPEB Costs

On May 18, 2017, the OEB issued its report on the guiding principles and the policy for recovery mechanisms of pension and OPEB costs. This report established accrual basis as the default rate-setting method. This outcome reduces OPG's risk related to the recovery of actual pension and OPEB accrual costs and the recovery of the balance in the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Further details can be found in the section, *Highlights* under the heading, *Recent Developments*.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions are summarized below:

	Three Months Ended June 30			
	2017		2016	
(millions of dollars) (unaudited)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**1**	**-**	1	-
Services	**-**	**-**	-	4
Dividends	**2**	**-**	2	-
Province of Ontario				
Decommissioning Fund excess funding [1]	**-**	**45**	-	113
Used Fuel Fund rate of return guarantee and excess funding [1]	**-**	**39**	-	54
Gross revenue charges	**-**	**29**	-	32
ONFA guarantee fee	**-**	**2**	-	2
Other	**-**	**1**	-	-
OEFC				
Gross revenue charges	**-**	**56**	-	53
Interest expense on long-term notes	**-**	**41**	-	43
Income taxes, net of investment tax credits	**-**	**97**	-	52
IESO				
Electricity related revenue	**1,029**	**1**	1,239	5
	1,032	**311**	1,242	358

	Six Months Ended June 30			
	2017		2016	
(millions of dollars) (unaudited)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**5**	**-**	3	-
Services	**1**	**5**	1	9
Dividends	**4**	**-**	2	-
Province of Ontario				
Decommissioning Fund excess funding [1]	**-**	**208**	-	(64)
Used Fuel Fund rate of return guarantee and excess funding [1]	**-**	**256**	-	(105)
Gross revenue charges	**-**	**57**	-	63
ONFA guarantee fee	**-**	**4**	-	4
Other	**-**	**1**	-	-
OEFC				
Gross revenue charges	**-**	**94**	-	90
Interest expense on long-term notes	**-**	**82**	-	85
Income taxes, net of investment tax credits	**-**	**109**	-	84
IESO				
Electricity related revenue	**2,102**	**7**	2,601	15
	2,112	**823**	2,607	181

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at June 30, 2017 and December 31, 2016, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,879 million and $3,415 million, respectively. The details of accounting for the Nuclear Segregated Funds are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars) (unaudited)	**June 30 2017**	**December 31 2016**
Receivables from related parties		
Hydro One	**-**	1
IESO	**347**	421
OEFC	**8**	1
PEC	**4**	4
Province of Ontario	**8**	2
Available-for-sale securities		
Hydro One shares	**195**	212
Accounts payable and accrued charges		
OEFC	**66**	61
Province of Ontario	**7**	2
IESO	**2**	2
Long-term debt (including current portion)		
Notes payable to OEFC	**3,385**	3,295

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at June 30, 2017, the Nuclear Segregated Funds held $1,663 million of interest-bearing Province of Ontario bonds, while the registered pension fund had no such holdings. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

There have been no related party transactions related to the Fair Hydro Plan and associated financing activities.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

The Company maintains a comprehensive system of policies, procedures, and processes that represents its framework for internal controls over financial reporting and for its disclosure controls and procedures (together, ICOFR). There were no changes in the Company's internal control system during the current interim period that has or is reasonably likely to have a material impact to the ICOFR.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected financial information from OPG's unaudited interim consolidated financial statements for each of the eight most recently completed quarters.

(millions of dollars - except where noted) *(unaudited)*	**June 30 2017**	**March 31 2017**	**December 31 2016**	**September 30 2016**
Revenue	**1,146**	1,176	1,388	1,400
Net income (loss)	**307**	68	(8)	198
Less: Net income attributable to non-controlling interest	**4**	4	5	4
Net income (loss) attributable to the Shareholder	**303**	64	(13)	194
Per common share, attributable to the Shareholder *(dollars)*	**$1.18**	$0.25	($0.05)	$0.76

(millions of dollars - except where noted) *(unaudited)*	**June 30 2016**	**March 31 2016**	**December 31 2015**	**September 30 2015**
Revenue	1,387	1,478	1,312	1,426
Net income (loss)	135	128	(100)	85
Less: Net income attribute to the non-controlling interest	3	5	1	5
Net income (loss) attributable to the Shareholder	132	123	(101)	80
Per common share, attributable to the Shareholder *(dollars)*	$0.51	$0.48	($0.39)	$0.31

Trends

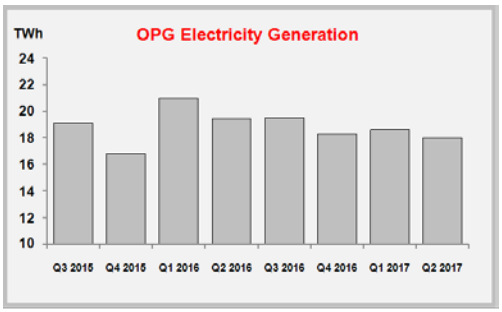
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues have been higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and

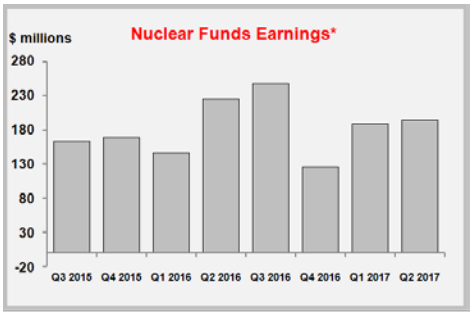
cooling demands. The financial impact of forgone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are mitigated by regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the fourth quarter of 2016 and the first half of 2017, OPG's electricity generation was reduced as a result of the Unit 2 refurbishment outage at the Darlington GS, which began in October 2016 and is expected to continue until early 2020.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items that affected net income in certain quarters above are described in OPG's 2016 annual MD&A under the section, *Quarterly Financial Highlights*.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder, improve cost performance, and ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow provided by operating activities, or any other measure in accordance with US GAAP, but as indicators of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) **ROE Excluding AOCI** is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE Excluding AOCI is measured over a 12-month period and is calculated as follows:

	Twelve Months Ended	
(millions of dollars – except where noted) (unaudited)	**June 30 2017**	**December 31 2016**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**548**	436
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,894**	10,442
ROE Excluding AOCI *(percent)*	**5.0**	4.2

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended June 30 2017	Twelve Months Ended December 31 2016
FFO before interest		
Cash flow provided by operating activities	**1,252**	1,705
Add: Interest paid	**267**	269
Less: Interest capitalized to fixed and intangible assets	**(158)**	(141)
Less: Changes to non-cash working capital balances	**(36)**	(68)
FFO before interest	**1,325**	1,765
Adjusted interest expense		
Net interest expense	**91**	120
Add: Interest income	**5**	7
Add: Interest capitalized to fixed and intangible assets	**158**	141
Add: Interest related to regulatory assets and liabilities	**41**	30
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets [1]	**-**	45
Adjusted interest expense	**295**	343
FFO Adjusted Interest Coverage *(times)*	**4.5**	5.1

[1] A value of nil is used in the calculation when interest on pension and OPEB projected benefit obligations is lower than expected return on pension plan assets.

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding the Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation from OPG-operated generating stations plus electricity generation forgone due to SBG conditions during the period.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**	**2017**	**2016**
Enterprise TGC				
Total OM&A expenses	**711**	709	**1,419**	1,395
Total fuel expense	**178**	182	**333**	354
Total capital expenditures	**451**	398	**859**	718
Less: Darlington Refurbishment capital and OM&A costs	**(306)**	(243)	**(615)**	(448)
Less: Other generation development project capital and OM&A costs	**(19)**	(41)	**(36)**	(79)
(Less) Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(12)**	23	**(23)**	41
Less: Nuclear fuel expense for non OPG-operated stations	**(16)**	(15)	**(29)**	(32)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**23**	15	**34**	33
Less: OM&A expenses ancillary to electricity generation business	**(4)**	(7)	**(9)**	(12)
Other adjustments	**(2)**	2	**(4)**	(3)
	1,004	1,023	**1,929**	1,967
Adjusted electricity generation *(TWh)*				
Total OPG electricity generation	**18.0**	19.4	**36.6**	40.4
Adjust for electricity generation forgone due to SBG conditions and OPG's share of electricity generation from co-owned facilities	**2.6**	1.7	**3.3**	3.3
	20.6	21.1	**39.9**	43.7
Enterprise TGC per MWh *($/MWh)* [1]	**48.72**	48.48	**48.35**	45.01

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

(millions of dollars – except where noted) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Nuclear TGC				
Regulated – Nuclear Generation OM&A expenses	**593**	581	**1,182**	1,144
Regulated – Nuclear Generation fuel expense	**68**	79	**136**	160
Regulated – Nuclear Generation capital expenditures	**375**	308	**741**	557
Less: Darlington Refurbishment capital and OM&A costs	**(306)**	(243)	**(615)**	(448)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**3**	29	**1**	53
Less: Nuclear fuel expense for non OPG-operated stations	**(16)**	(15)	**(29)**	(32)
Less: Regulated - Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(1)**	(2)	**(2)**	(3)
Other adjustments	**(2)**	(3)	**(2)**	(4)
	714	734	**1,412**	1,427
Nuclear electricity generation (TWh)	**9.3**	10.6	**19.3**	22.9
Nuclear TGC per MWh (*$/MWh*) [1]	**76.87**	69.25	**73.24**	62.44

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation forgone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**	**2017**	**2016**
Hydroelectric TGC				
Regulated – Hydroelectric OM&A expenses	**75**	75	**151**	151
Regulated – Hydroelectric fuel expense	**97**	92	**170**	171
Contracted Generation Portfolio OM&A expenses	**40**	45	**79**	85
Contracted Generation Portfolio fuel expense	**13**	11	**27**	23
Regulated – Hydroelectric and Contracted Generation Portfolio capital expenditures	**48**	80	**85**	139
Less: Regulated – Hydroelectric and Contracted Generation Portfolio generation development project capital and OM&A costs	**(19)**	(39)	**(35)**	(76)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(41)**	(38)	**(80)**	(75)
Less: Regulated – Hydroelectric OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(15)**	(5)	**(24)**	(12)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**23**	15	**34**	33
Other adjustments	**2**	(2)	**1**	-
	223	234	**408**	439
Adjusted hydroelectric electricity generation *(TWh)*				
Regulated – Hydroelectric electricity generation	**8.2**	8.0	**16.2**	15.9
Contracted Generation Portfolio electricity generation	**0.5**	0.8	**1.1**	1.6
Adjust for hydroelectric electricity generation forgone due to SBG conditions and non-hydroelectric electricity generation of the Contracted Generation Portfolio, including OPG's share of electricity generation from co-owned facilities	**2.6**	1.7	**3.3**	3.3
	11.3	10.5	**20.6**	20.8
Hydroelectric TGC per MWh *($/MWh)* [1]	**19.83**	22.14	**19.81**	21.08

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense.

For further information, please contact:

Investor Relations 416-592-6700

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Media Relations 416-592-4008

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From:	Ronald Kwan
To:	Ronald Kwan
Subject:	FW: OPG Q4 2016 submission to Province
Date:	Wednesday, March 01, 2017 9:46:48 AM
Attachments:	Q4 2016 MDA_DRAFT_PROVINCE MAILINGajcomment.docx Q4 2016 FS DRAFT_PROVINCE MAILING aj comment.docx

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From: Gavin He
Sent: February-27-17 18:31
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Subject: FW: OPG Q4 2016 submission to Province

Hi Ron,

Please see below comments from SIFB. Also, SIFB noted that:

OPG seems to be carrying the H1 shares as "available for sale securities". If I am reading things correctly, they are carrying the shares at FMV, with changes recognized in AOCL. However, they also note the following future changes in accounting:

"In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements."

Please note that comments are due back to OPG today.

Thanks,
Gavin He

From: Ronald Kwan
Sent: Thursday, February 16, 2017 2:05 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Subject: Fw: OPG Q4 2016 submission to Province

Hi,

Note the disclosure on the head office building sale on p. 14 of the MD&A and similarly in the F/S. And note the planned filing date of March 10.

Please review that and the ONFA and Hydro one shares related materials.

Thanks,
Ron

From: DYKXHOORN Sandra -CORPRELCOMM <sandra.dykxhoorn@opg.com>
Sent: February 15, 2017 9:14 AM
To: John Kim; Ronald Kwan; 'Talwar, Shruti (ENERGY)'; Sunita Chander (ENERGY)
Cc: CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
Subject: OPG Q4 2016 submission to Province

Good morning,

Please find attached OPG's draft Q4 2016 News Release, Management's Discussion and Analysis (MD&A), Annual Information Form (AIF) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Monday, February 27th**.

These documents will be filed with the Ontario Securities Commission on **Friday, March 10th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Sandra Dykxhoorn (copy to Alec Cheng – alec.cheng@opg.com and Philip Ho – philip.ho@opg.com).

To assist the review process, the following are the key items in the Q4 2016 MD&A:

Highlights Recent Developments	MD&A p.11-16
Darlington Refurbishment	MD&A p.11-12; 24-25
Peter Sutherland Sr. GS project	MD&A p.25
Outlook – OEB application on OPG's results, impact of ONFA update on Nuclear Segregated Funds earnings, and the expected income and cash flow trends for 2017	MD&A p.30-31

Sandra Dykxhoorn | Acting Director, Provincial Relations | Ontario Power Generation
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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

DECEMBER 31, 2016

[DRAFT]

2016 YEAR-END REPORT

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ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the audited consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the year ended December 31, 2016. OPG's consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. The Ontario Securities Commission (OSC) approved an exemption that allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the heading, *Exemptive Relief for Reporting under US GAAP,* in the section *Critical Accounting Policies and Estimates.* This MD&A is dated March 10, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act (Ontario)* (OBCA) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at December 31, 2016, OPG's electricity generation portfolio had an in-service capacity of 16,177 megawatts (MW). OPG operates two nuclear generating stations, 65 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report.

All of OPG's owned and co-owned generating facilities are located in Ontario.

OPG's Reporting Structure

The composition of OPG's reportable business segments is as follows:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

OPG receives regulated prices for electricity generated from most of its hydroelectric facilities and all of the nuclear facilities that it operates (collectively, prescribed facilities or regulated facilities). This includes the following facilities:

- the six hydroelectric generating stations prescribed for rate regulation prior to 2014, as follows:
    - Sir Adam Beck 1, 2 and Pump hydroelectric generating stations
    - DeCew Falls 1 and 2 hydroelectric generating stations
    - R.H. Saunders hydroelectric GS
- the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014
- Pickering Nuclear GS (Pickering GS)
- Darlington Nuclear GS (Darlington GS).

The operating results related to these regulated facilities are described under the Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, and Regulated – Hydroelectric segments. For the remainder of OPG's operating generating facilities, the operating results are described under the Contracted Generation Portfolio segment. A description of all OPG's segments is provided under the section, *Business Segments*.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of December 31 was as follows:

(MW)	**2016**	**2015**
Regulated – Nuclear Generation [1]	**5,728**	6,606
Regulated – Hydroelectric	**6,421**	6,428
Contracted Generation Portfolio [2]	**4,028**	4,021
Total	**16,177**	17,055

[1] The in-service generating capacity as of December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

The total in-service capacity as at December 31, 2016 decreased by 878 MW compared to 2015. The decrease was primarily due to the commencement of the refurbishment of the first Darlington GS unit, Unit 2, which was taken offline in mid-October 2016. In addition, during 2016, the capacity of the regulated hydroelectric units at the Abitibi Canyon GS and the Sir Adam Beck 1 GS was reduced to reflect unit limit capability. This decrease in in-service capacity was partially offset by an increase in capacity of the Contracted Generation Portfolio segment, reflecting the completion of an upgrade and rehabilitation of Unit 2 of the Harmon hydroelectric GS during 2016.

REVENUE MECHANISMS FOR REGULATED AND NON-REGULATED GENERATION

Regulated Generation

The OEB sets the prices for electricity generated from OPG's regulated nuclear and regulated hydroelectric facilities. The following are the OEB-authorized regulated prices for electricity generated from these facilities:

	2016	**2015**	
($/MWh)		**January 1 to June 30**	**July 1 to December 31**
Regulated – Nuclear Generation			
Base regulated price	**59.29**	59.29	59.29
Rate riders	**10.84** [1]	1.33	12.17 [1]
	70.13	60.62	71.46
Regulated – Hydroelectric			
Hydroelectric generating stations prescribed for rate regulation prior to 2014			
Base regulated price	**40.20**	40.20	40.20
Rate riders	**3.19** [1]	6.04	9.23 [1]
	43.39	46.24	49.43
Hydroelectric generating stations prescribed for rate regulation effective in 2014			
Base regulated price	**41.93**	41.93	41.93
Rate rider	**3.19** [1]	-	3.19 [1]
	45.12	41.93	45.12

[1] The increase in the 2015 rate riders effective July 1, 2015 was implemented by the OEB effective October 1, 2015. As such, the OEB authorized interim period rate riders for the period from October 1, 2015 to December 31, 2016 to allow for the recovery of the increase in the riders for the period from July 1, 2015 to September 30, 2015. The revenue from the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The nuclear interim period rate rider was $2.17 per megawatt hour (MWh) and the regulated hydroelectric interim period rate rider was $0.64/MWh. These interim period rate riders have not been included in the above table. All rate riders in effect during 2016 expired on December 31, 2016.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements for the 2014 to 2015 period, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base for OPG represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital.

In accordance with *Ontario Regulation 53/05* under the *Ontario Energy Board Act, 1998*, OPG's nuclear regulated prices are reduced by the amount of OPG's revenues, net of costs, from leasing the Bruce nuclear generating stations to Bruce Power. As directed by the OEB, OPG's revenues and costs related to the Bruce nuclear generating stations are determined in accordance with US GAAP for the purposes of establishing OPG's nuclear regulated prices and are subject to the Bruce Lease Net Revenues Variance Account in accordance with *Ontario Regulation 53/05*. This includes OPG's costs related to its obligations for nuclear waste management and nuclear facilities decommissioning associated with the Bruce nuclear generating stations and the corresponding portion of earnings on the nuclear fixed asset removal and nuclear waste management segregated funds (Nuclear Segregated Funds) established pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province.

Rate riders for OPG are established to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts. Variance and deferral accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The rate riders in effect during 2015 included those established by the OEB's December 2014 order for the period from January 1, 2015 to December 31, 2015, as well as those authorized by the OEB's October 2015 order on OPG's 2014 application to recover the December 31, 2014 variance and deferral account balances, for the period from July 1, 2015 December 31, 2016. The rate riders in effect during 2016 were those authorized by the October 2015 order.

Non-Regulated Generation

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements (ESAs) with the Independent Electricity System Operator (IESO). Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO was substituted as the counterparty of ESAs and other agreements that were previously executed with the OPA.

During 2016, ESAs were in effect for the following thermal generating facilities:

- Lennox GS: Capacity provided by, and production from, the station are subject to an ESA for the period from January 1, 2013 to September 30, 2022
- Atikokan GS: Capacity provided by, and production from, the station are subject to a 10-year ESA expiring in July 2024
- Thunder Bay GS: Capacity provided by, and production from, the station are subject to a 5-year ESA expiring in January 2020.

In addition, long-term hydroelectric ESAs are in place for the following facilities, with expiry dates for currently operating stations ranging from 2059 to 2064:

- Lac Seul and Ear Falls generating stations
- Healey Falls GS
- Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations
- Little Long, Harmon, Smoky Falls, and Kipling generating stations (collectively the Lower Mattagami River generating stations)

- Peter Sutherland Sr. GS which is being commissioned. **[MONITOR]** Payments under this ESA will commence when the station achieves commercial operation. Further details on the Peter Sutherland Sr. GS project are found under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's operating results for 2016 and 2015.

(millions of dollars – except where noted)	**2016**	**2015**
Revenue	**5,653**	5,476
Fuel expense	**727**	687
Gross margin	**4,926**	4,789
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (income) loss, interest, and income taxes	**724**	703
Other (income) loss	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense	**120**	180
Income before income taxes	**621**	509
Income tax expense	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest [1]	**17**	15
Electricity production (TWh) [2]	**78.2**	78.0
Cash flow		
Cash flow provided by operating activities	**1,705**	1,465

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $436 million for 2016, an increase of $34 million compared to 2015. Income before interest and income taxes was $741 million for 2016, an increase of $52 million compared to 2015.

The following summarizes the significant factors which contributed to the variance:

Significant factors that increased income before interest and income taxes:

- Higher generation of 1.1 terawatt hours (TWh) from the Regulated – Nuclear generation segment, resulting in an increase in revenue of $65 million from the nuclear base regulated price. The year-over-year increase

in revenue from the higher nuclear rate riders in effect during the first half of 2016, compared to the same period in 2015, was primarily offset by an increase in the amortization expense related to regulatory balances.

- Higher earnings on the Nuclear Segregated Funds of $42 million, primarily due to a higher rate of return on the portion of the Used Fuel Segregated Fund that is subject to a consumer price index (CPI) adjusted rate of return guarantee by the Province pursuant to the ONFA. This increase in Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the updated ONFA reference plan, approved by the Province in December 2016
- Increase in earnings from the Services, Trading, and Other Non-Generation segment of $24 million, primarily due to lower operations, maintenance and administration (OM&A) expenses
- A gain of $22 million recorded during the first quarter of 2016, reflecting the OEB's January 2016 decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices
- Increase in earnings of $20 million from the Contracted Generation Portfolio segment, mainly as a result of an increase in the gross margin due to higher revenues from the Lower Mattagami River generating stations, the Lennox GS and the Atikokan GS.

Significant factors that reduced income before interest and income taxes:

- Higher financing expense of $32 million, which represents an increase in the present value of the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities). The financing expense, known as accretion expense, is added to the Nuclear Liabilities balance over time
- A decrease in nuclear non-electricity revenue of $21 million, primarily due to a decrease in nuclear detritiation services revenue and lower isotope sales
- Higher OM&A expenses, fuel expense and depreciation expense for the Regulated – Nuclear Generation segment. The increase in OM&A expenses of $14 million reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium costs and higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million, primarily due to new assets in service in 2016. The increase in amortization expense related to regulatory balances was largely offset by the increase in nuclear revenue related to rate riders
- Lower earnings before other gains from the Regulated – Hydroelectric segment of $28 million, primarily due to lower hydroelectric incentive mechanism revenue and the income impact of OEB-approved variance accounts.

Net interest expense decreased by $60 million in 2016, compared to 2015, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project and a higher amount of interest costs deferred in regulatory variance and deferral accounts.

Income tax expense increased by $76 million in 2016, compared to 2015, primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. Significant factors which contributed to the higher income during 2016, compared to 2015, are discussed above. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	**2016**	**2015**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**4**	2
Regulated – Hydroelectric	**642**	648
Contracted Generation Portfolio	**282**	262
Total electricity generation business segments	**928**	912
Regulated – Nuclear Waste Management	**(174)**	(186)
Services, Trading, and Other Non-Generation	**(13)**	(37)
	741	689

Electricity Generation

Electricity generation for 2016 and 2015 was as follows:

(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**45.6**	44.5
Regulated – Hydroelectric	**29.5**	30.4
Contracted Generation Portfolio [1]	**3.1**	3.1
Total OPG electricity generation	**78.2**	78.0
Total electricity generation by other generators in Ontario [2]	**72.7**	76.1

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The higher electricity generation from the Regulated – Nuclear Generation segment in 2016 was primarily a result of a lower number of non-refurbishment outage days at the Darlington GS due to the planned Vacuum Building Outage (VBO) in 2015 and a decrease in unplanned outages at the station in 2016. The VBO is a unique outage to inspect and maintain specific safety and other systems common to all four units of the station. The 2015 VBO required the shutdown of the four units for 47 days. Vacuum building outages are currently required every 12 years at the Darlington GS. The year-over-year increase in electricity generation was partially offset by a decrease in generation from the Pickering GS, primarily due to an increase in the number of unplanned outage days, and the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment beginning on October 15, 2016.

Lower electricity generation from the Regulated – Hydroelectric generating segment was primarily due to a higher volume of water spilled as a result of higher SBG conditions during 2016.

Electricity generation from the Contracted Generation Portfolio segment was 3.1 TWh for each of 2016 and 2015. Electricity generation in 2016 reflected higher production from the Lennox and Atikokan generating stations, primarily due to increased market demand. The increase was offset by a higher volume of water spilled at the contracted hydroelectric stations as a result of higher SBG conditions during 2016, and transmission system constraints in northeastern Ontario in 2016. **[CONFIRM]**

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Ontario's electricity demand as reported by the IESO was 137.0 TWh in each of 2016 and 2015, which excludes electricity exports out of the province.

Baseload generation supply surplus in Ontario was more prevalent in 2016 than in 2015, mainly due to higher water flows in the province during 2016 and limitations on the export of surplus power out of the province, primarily due to transmission constraints in the state of New York. Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric and nuclear stations and other grid-connected renewable resources. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. During 2016 and 2015, OPG lost 4.7 TWh and 3.2 TWh of hydroelectric generation due to SBG conditions, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions in 2016 and 2015 was offset by a regulatory variance account authorized by the OEB. OPG did not forego any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The regulated prices authorized by the OEB for electricity generated from OPG's nuclear and regulated hydroelectric generating stations are discussed in the section *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment during 2016 was 6.9 cents per kilowatt hour (¢/kWh), compared to 6.5 ¢/kWh during 2015. The average sales price in 2016 reflected the higher OEB-authorized nuclear rate rider of $10.84/MWh for recovery of variance and deferral account balances in effect during the year. The average sales price for the Regulated – Hydroelectric segment was 4.4 ¢/kWh, compared to 4.7 ¢/kWh during 2015. The decrease was primarily due to a lower rate rider in effect during 2016 related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years.

As such, the year-over-year changes in revenue from rate riders were largely offset by changes in amortization expense related to regulatory balances.

Cash Flow from Operations

Cash flow provided by operating activities for 2016 was $1,705 million, compared to $1,465 million for 2015. The increase in cash flow provided by operating activities for 2016, compared to 2015, was primarily due to higher generation revenue receipts reflecting higher nuclear rate riders and higher nuclear generation in 2016. The increase in cash flow was also due to lower pension plan contributions in 2016 reflecting an updated actuarial valuation of the OPG registered pension plan. The increase in cash flow was partially offset by higher OM&A expenditures during 2016, compared to 2015, and the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to the period from January 1, 2015 to December 4, 2015. The rebate was made pursuant to a provision under the lease agreement for the Bruce nuclear generating stations. This provision was eliminated effective December 4, 2015 as part of the 2015 amendments to the lease agreement.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. The FFO Adjusted Interest Coverage was 5.1 times for 2016, compared to 5.0 times for 2015. The modest increase in the FFO Adjusted Interest Coverage in 2016 reflected an increase in FFO before interest for 2016, compared to 2015, as a result of the year-over-year increase in cash flow provided by operating activities.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for 2016 was 4.2 percent, compared to 4.0 percent for 2015. ROE Excluding AOCI increased for 2016, compared to 2015, primarily due to higher net income attributable to the Shareholder. OPG's ROE Excluding AOCI reflects regulated prices established by the OEB in 2014. These prices were lower than requested by OPG based on submitted forecast cost and production levels, which has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

ROE Excluding AOCI also reflects the relatively higher equity component in the Company's capital structure, compared to the deemed capital structure used by the OEB in determining OPG's regulated prices. The OEB establishes the allowed return on OPG's investment in regulated assets, which represent the majority of the Company's operations, using the OEB's generic prescribed rate of return and an OPG-specific deemed capital structure. In setting the regulated prices in 2014, the OEB applied a deemed capital structure of 45 percent equity and 55 percent debt. OPG's actual capital structure (excluding AOCI) contains approximately 65 percent equity. The higher equity component in OPG's actual capital structure, compared to the deemed capital structure applied by the OEB, results in a reduced actual ROE Excluding AOCI. In its application for new regulated prices filed with the OEB in May 2016, OPG is seeking an increase in the deemed capital structure to 49 percent equity and 51 percent debt. For further discussion on OPG's application, refer to the heading *Recent Developments* in the section *Highlights*.

Enterprise Total Generating Cost per MWh

The Enterprise Total Generating Cost (TGC) per MWh was $48.10 for the year ended December 31, 2016, compared to $50.46 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses, excluding the impact of regulatory variance and deferral accounts, and higher electricity generation as adjusted for foregone generation due to SBG conditions during 2016.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $62.30 for the year ended December 31, 2016, compared to $66.20 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses excluding the impact of regulatory variance and deferral accounts, and higher electricity generation during 2016.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $25.57 for the year ended December 31, 2016, which was comparable to $25.26 for the same period in 2015.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow from operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in

January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The unit is scheduled to be returned to service in the first quarter of 2020. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

In April 2016, the Federal Court of Appeal unanimously dismissed the request by certain intervenors for a judicial review of the 2013 Environmental Assessment (EA) decision for the Darlington Refurbishment project by the Canadian Nuclear Safety Commission (CNSC) and Fisheries and Oceans Canada. The EA decision had confirmed that, taking into account identified mitigation measures, the project was not likely to cause significant adverse environmental effects. In dismissing the appeal, the Federal Court of Appeal determined that there were no gaps in the EA, that there was nothing unreasonable about the discretionary determinations made by the responsible authorities, and that the intervenors' arguments were not borne out by the evidence. OPG was also awarded its costs of the appeal, as the successful party.

The Darlington Refurbishment project is discussed further under the heading, *Project Excellence* in the *Core Business, Strategy and Outlook* section.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. For the first time since OPG's prescribed assets became subject to rate regulation, the new prices are expected to be determined on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. Rate-setting under incentive regulation is typically more formulaic and involves greater de-coupling of a regulated entity's allowed revenues or prices from its costs than under a cost-of-service rate-setting methodology.

For the hydroelectric facilities, OPG's May 2016 application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021 based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production.

The proposed nuclear revenue requirements reflect OPG's plans to pursue Pickering extended operations until 2024, as well as the projected impact of the scheduled return to service of the first refurbished Darlington unit in the first quarter of 2020. OPG is also seeking an increase in the deemed capital structure applied to its total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt applied by the OEB in setting the existing regulated prices.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG's application incorporates a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved nuclear revenue requirements in a deferral account for future collection, with a view of making more stable year-over-year changes in OPG's nuclear regulated prices for the period from January 1, 2017 to the end of the Darlington Refurbishment project. The regulation stipulates that the deferral account will record interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually, and that the OEB shall authorize recovery of the balance in the account on a straight line basis over a period not to exceed 10 years following the end of the Darlington Refurbishment project. OPG expects to recognize the deferred amounts as income in the period to which the approved revenue requirements relate.

OPG's application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the

Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment in 2016 through rate riders in effect to December 31, 2016. The application also requests the continuation of all applicable existing variance and deferral accounts. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed in the section *Critical Accounting Policies and Estimates,* under the heading, *Rate Regulated Accounting.*

In December 2016, the OEB issued an order granting OPG's request to declare the existing base regulated prices interim, effective January 1, 2017. This preserves the OEB's ability to make new regulated prices effective as early as January 1, 2017, which would allow OPG to recover the difference between the approved new regulated prices and the existing prices for the period between the effective date of the new regulated prices and their implementation date based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017, following a public proceeding. The public proceeding is in progress, with the oral hearing portion having commenced in February 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

In February 2017, the OEB approved a settlement agreement reached by OPG and intervenors on certain limited elements of OPG's application (Settlement Agreement). Among other elements, the Settlement Agreement accepts a number of year-end 2015 variance and deferral account balances totaling $419 million, allows for continuation of all applicable existing variance and deferral accounts, and confirms methodologies for calculating amounts to be recorded in most of the continuing accounts once new regulated prices take effect, as proposed by OPG. The balances of, and methodologies for recording future amounts in the Nuclear Liability Deferral Account, the Bruce Lease Net Revenues Variance Account and the Capacity Refurbishment Variance Account are excluded from the Settlement Agreement. The agreement also results in approval of OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017-2021 period. The Settlement Agreement does not impact OPG's 2016 financial results. **[MONITOR]**

OEB's Decision on OPG's December 2014 Motion

In January 2016, the OEB issued its decision on OPG's December 2014 motion asking the OEB to review and vary the parts of its November 2014 decision related to the disallowance of the Niagara Tunnel project expenditures, and the application of the 2013 regulatory tax loss to reduce the 2014/2015 revenue requirement. In its decision, the OEB reversed a portion of the original disallowance of the Niagara Tunnel project expenditures, and upheld the original tax loss decision. In the first quarter of 2016, OPG recorded a gain of $22 million to recognize the expected future recovery from customers of the portion of the disallowance reversed by the OEB's motion decision.

The original disallowance of the Niagara Tunnel project expenditures resulted in a write-off of $77 million that was charged to operations in 2014. The original tax loss decision resulted in a reduction of the 2014/2015 revenue requirement by approximately $70 million. As OPG's financial results have previously reflected the effect of the OEB's original tax loss decision, the motion decision on the tax loss did not impact OPG's 2016 financial results.

Ontario Nuclear Funds Agreement Reference Plan Update

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for nuclear waste management and nuclear facilities decommissioning as at December 31, 2016 was finalized as part of the required process to update the reference plan under the ONFA. As at December 31, 2016, the update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities with a corresponding decrease to the asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear facilities decommissioning at least once every five years, in line with the required ONFA reference plan update process.

The updated estimate of the obligations was reflected in a new ONFA reference plan, for years 2017 to 2021, which was approved by the Province in December 2016, effective January 1, 2017 (the 2017 ONFA Reference Plan). Based on the lower life cycle liability estimates per the 2017 ONFA Reference Plan, starting in 2017, OPG is not currently required to make overall contributions to the Used Fuel Segregated Fund or the Decommissioning Segregated Fund established under the ONFA. Prior to 2017, OPG made contributions to the Used Fuel Segregated Fund every year, including a one-time special payment in earlier years, as required by the ONFA. These contributions reflected ONFA requirements to fund the majority of the underlying used fuel liability by the end of the estimated useful lives of the nuclear stations in effect at OPG's inception in 1999, resulting in significantly higher contributions to the Used Fuel Segregated Fund in the earlier years of OPG's existence. OPG has not been required to make contributions to the Decommissioning Segregated Fund, which was fully funded at its inception and at the time of every subsequent approved ONFA reference plan. Contributions to either or both funds may be required in the future should the funds be in an underfunded position when a new reference plan is prepared. Such may be the case as a result of variability in asset performance due to volatility inherent in financial markets and Ontario CPI changes. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the underlying obligations in subsequent ONFA reference plans.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of the new regulated prices. In accordance with *Ontario Regulation 53/05*, the OEB is required to ensure that OPG recovers the revenue requirement impact of its nuclear waste management and nuclear decommissioning liabilities arising from the current approved ONFA reference plan. For further discussion on the accounting for Nuclear Liabilities, refer to the section, *Critical Accounting Policies* under the heading, *Asset Retirement Obligation*.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the amount due to the Province. This accounting adjustment represented the overfunded position of Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 relative to the value of the corresponding present value life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province as OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and as any excess funding in the Nuclear Segregated Funds upon termination of the ONFA accrues to the Province. Of the $88 million reduction in Nuclear Segregated Funds earnings, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

For further discussion of the accounting for the Nuclear Segregated Funds, refer to the section, *Critical Accounting Policies* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*. For further discussion of OPG's risks with respect to nuclear waste management and nuclear decommissioning obligations and Nuclear Segregated Funds, refer to the section, *Risk Management* under the headings, *Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds* and *Financial Markets*.

Shareholder Declaration and Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that required the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. The assets are reported under the Services, Trading and Other Non-Generation segment. An active program to locate a buyer for these real estate assets was initiated in October 2016, and a purchase and sale agreement was executed in December 2016. The sale is expected to be completed during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be

recognized upon completion of the transaction. Pursuant to the December 2015 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer a portion of the proceeds from this disposition into the Province's Consolidated Revenue Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario, an asset reported under the Services, Trading and Other Non-Generation segment. OPG is currently in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer a portion of the proceeds from this disposition into the Province's Consolidated Revenue Fund.

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business.

Contract Award for Nanticoke Solar Facility

In March 2016, Nanticoke Solar LP, then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation, was selected through the first phase of the IESO's Large Renewable Procurement (LRP) program to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands in Haldimand County, Ontario. The LRP program was a competitive bidding process for procuring large renewable energy projects in Ontario. In March 2016, Nanticoke Solar LP and the IESO executed a 20-year LRP contract, which formalized the terms and conditions for the development and operation of the new solar facility. In the first quarter of 2017 **[MONITOR]**, OPG purchased SECCLP's interests in Nanticoke Solar LP and is working to obtain approvals and permits required to enable the commencement of construction planned for the first half of 2018.

The 20-year term of the LRP contract takes effect once the station achieves commercial operation, which is expected in the first quarter of 2019. For further discussion, refer to the section, *Core Business, Strategy and Outlook* under the heading, *Project Excellence*.

Decommissioning of the Lambton GS

In November 2016, the Company announced the decommissioning of the Lambton GS, which ceased coal-fired generation in 2013, as it was determined that continuing to preserve the station beyond 2016 for future conversion was no longer economically feasible. OPG is currently developing a decommissioning plan for the Lambton GS, which will ensure that the station is closed safely, securely, and in an environmentally responsible manner.

Canadian Nuclear Safety Commission Safety Rating for the Pickering GS and the Darlington GS

The CNSC publishes an annual report on the safety performance of Canada's nuclear power plants. The report assesses how well plant operators are meeting regulatory requirements and program expectations in the areas of operational performance, safety analysis, radiation protection, waste management and conventional health and safety. In its 2015 annual report, the CNSC gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". The Pickering GS received this rating for the first time, while the Darlington GS achieved the rating for the seventh year in a row.

Acquisition of Hydro One Limited Shares

In April 2016, OPG acquired nine million common shares of Hydro One Limited (Hydro One) at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. OPG paid the same price as other investors in the offering. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union (PWU) and The Society of Energy Professional (The Society) renewed in 2015. Changes to these agreements included increases to employee pension plan contributions and provisions for existing employees represented by the PWU and The Society with eligibility to annually receive common shares of Hydro One for up to 15 years starting in

the third year of the respective agreements, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service. The shares acquired in the April 2016 transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

CORE BUSINESS, STRATEGY AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

OPG's four key strategic imperatives are as follows:

- Operational Excellence
- Project Excellence
- Financial Strength
- Social Licence.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Workplace Safety and Public Safety

Workplace safety and public safety are fundamental core values at OPG. OPG is committed to operating all of its facilities in a safe, secure, and reliable manner that minimizes risks to a reasonably achievable level. Safety is an overriding priority in all activities performed at OPG's generating and other facilities, and all employees and contractors are expected to conduct themselves in manner that ensures workplace safety and public safety in line with the Company's safety culture.

In the area of workplace safety, OPG is committed to achieving excellent safety performance through continuous improvement and a strong safety culture, with the ultimate goal of zero injuries. OPG utilizes an integrated health and safety management system and set of operational risk control procedures to ensure continued monitoring of health and safety performance and to support continuous learning and improvement in this area. Overall, OPG's workplace safety performance has been one of the best amongst its comparator Canadian electrical utilities. In 2016, OPG received the Canadian Electricity Association (CEA) President's Gold Award recognizing three consecutive years, 2013 to 2015, of sustained top quartile safety performance within the comparator group.

Workplace safety performance is measured using two primary indicators at OPG, All Injury Rate (AIR) and Accident Severity Rate (ASR). OPG's AIR and ASR results for employee workplace safety were as follows for the year ended December 31:

	2016	2015
AIR *(injuries per 200,000 hours worked)*	**0.56**	0.39
ASR *(days lost per 200,000 hours)*	**2.59**	0.50

In 2016, OPG's AIR and ASR safety performance was worse than in 2015. OPG's analysis of the underlying events indicated that major contributors to the injuries and near misses included inadequate situational awareness and attention to detail, and suboptimal risk-based decisions, rather than missing or inadequate standards or programs.

OPG is implementing a number of initiatives to target the injury trends based on the analysis of the safety events, with a focus on the use of human performance tools including increased field supervisory oversight, situational awareness, communication, and procedural use and adherence.

In 2016, OPG launched an organization-wide "iCare Enough to Act" initiative aimed at renewing employees' commitment to their own and each other's safety and well-being. Plans to further strengthen safety as a foundational element of the Company's values-based culture are being developed through leadership forums and other engagement activities.

Contractors are required to conduct work safely at OPG sites. In support of this requirement, OPG utilizes an independent contractor pre-qualification process, provides on-site safety support for many of OPG's major projects, and works with contract partners to improve their health and safety programs to meet OPG's requirements. To further strengthen contractors' safety performance, in 2016, OPG updated its contractor's safety requirements and related governance, and implemented additional oversight and field monitoring to ensure ongoing compliance. In the past eight years, OPG has consistently shown a better than average Construction Contractor AIR as compared to the Health and Safety Association Contractor AIR, a metric of construction contractor safety performance across Ontario.

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for those individuals who live or work near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), which is an international unit of radiation dose measurement. For 2015, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.5 μSv and 1.2 μSv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000 μSv. While the public doses from OPG's nuclear operations for the 2016 operating year will not be finalized until the second quarter of 2017, they are not expected to differ significantly from the 2015 levels.

In June 2016 and August 2016, the CNSC released sampling results from its independent environmental monitoring program, which confirmed that the public and the environment around OPG's nuclear generating stations continued to be safe. Also in 2016, the CNSC published its 2015 annual report on the safety performance of Canada's nuclear power plants, which gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". For further details, refer to the CNSC safety rating discussion under the heading, *Recent Developments* in the *Highlights* section.

OPG remains committed to high standards of public safety on waterways around hydroelectric dams and generating stations. A Dam Safety Review Panel comprised of internationally recognized experts has previously concluded that OPG's dam and public safety program is comparable with international best practices in a number of areas related to maintaining safe dam operations. OPG continues to develop a new risk-informed approach on behalf of the Ontario Ministry of Natural Resources and Forestry (MNRF) to prioritize and manage risks identified through dam safety assessments. In 2016, OPG continued its water safety campaign with a series of public service announcements illustrating the danger of water near hydroelectric dams and hydroelectric generating stations.

Electricity Generation Production and Reliability

Key strategic initiatives in support of operational excellence, specific to each of OPG's core generating operations, are discussed below. Generation and reliability performance for 2016 is discussed by operating segment in the section, *Discussion of Operating Results by Business Segment*.

Nuclear Operations

OPG is pursuing a number of strategic initiatives aimed at the continued safe and reliable operation of the Pickering GS and targeting top performance at the Darlington GS.

OPG's nuclear operations are regularly benchmarked against top performing nuclear facilities around the world. This allows OPG to identify, develop and implement initiatives to further improve performance. During 2016, OPG participated in two World Association of Nuclear Operators (WANO) peer evaluations to compare its stations against standards of excellence through an in-depth, objective review by an international panel of industry experts. In May 2016, OPG hosted a WANO peer evaluation for the Darlington GS. The review maintained Darlington's excellent standing as one of the top performing nuclear plants in the world. In September 2016, OPG hosted a team of experts from the International Atomic Energy Agency at the Pickering GS to conduct a standard Operational Safety Review Team mission. The team conducted an in-depth review of performance and adherence to international safety standards. A report on the mission is expected to be released in the second quarter of 2017.

In January 2016, OPG announced its plan to pursue continued safe and reliable operation of the Pickering GS beyond 2020. OPG's objective is to maximize the operating life of the Pickering units. Under OPG's current plan, all six operating units at the station would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The Province announced its approval of OPG's plan to pursue continued operation of the Pickering GS beyond 2020 up to 2024 in January 2016. Extending operations at the Pickering GS will provide continued employment to approximately 3,000 regular employees at OPG, and will help reduce approximately 17 million tonnes of carbon dioxide emissions, which is the equivalent to removing 3.4 million cars from Ontario's roads.

As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will achieve the additional life necessary to operate to 2024. OPG is also conducting component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently established as the end of 2020, are expected to be reassessed when OPG's further technical work confirms the longer fuel channel life and the units' fitness to operate beyond 2020, taking into account the requirement for the CNSC's approval, discussed below.

OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. OPG has started work on the Pickering licence renewal application, which is expected to be filed in mid-2017 for the CNSC's approval in 2018. The requested licence renewal spans the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. A Periodic Safety Review and an Integrated Implementation Plan (IIP) for the station will be submitted to the CNSC as part of the application.

OPG strives to operate and maintain its nuclear facilities to optimize equipment, performance, availability and electricity generation, while improving the reliability and predictability of the fleet. Improved equipment reliability generally results in fewer generation interruptions. OPG continues to make investments in the performance of the Pickering GS, with a focus on improving plant reliability and maximizing the value of the asset through implementing equipment modifications and fuel handling reliability improvements, reducing equipment maintenance backlogs, and completing critical and high priority work.

Nuclear inspection and testing programs are largely driven by maintenance and regulatory requirements, and are designed to ensure that equipment is performing safely and reliably. Execution of this and other outage work continues to be a high priority. As part of its commitment to operational excellence, OPG continues to focus on improving the planning, execution, monitoring, and reporting of outage work.

Work continues to ensure the integration of life cycle management and refurbishment programs at the Darlington GS. This includes developing staffing strategies to support both ongoing station operations and the refurbishment project, planning and incorporating pre-requisite work for the refurbishment into the station's work schedule, and identifying life cycle and aging management work to sustain safe and reliable station operations for the next three decades.

OPG's longer-term efforts are aimed at positioning the Darlington GS for industry leading operating and cost performance.

Delivering solutions that provide the best combination of safety, cost and effectiveness, as well as establishing challenging financial targets based on comprehensive benchmarking continues to be a vital part of OPG's strategy to improve performance of the nuclear business unit. Financial and staffing targets continue to be reviewed and adjusted where necessary to reduce operating costs, while ensuring safety is not compromised.

In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications will be presented to the CNSC at a public hearing in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018.

Hydroelectric Operations

The objectives of OPG's hydroelectric operations include operating and maintaining the generating facilities in an efficient and cost-effective manner, while enhancing their reliability and availability. OPG continues to evaluate and implement plans to increase capacity, maintain and improve performance, and extend the operating life of its hydroelectric generating assets.

OPG's plans for its existing hydroelectric generating stations are accomplished through multi-year capital investment and other programs, including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers, and controls. The aim of OPG's runner replacement and upgrade program is to increase hydroelectric station capacity by leveraging efficiency enhancements in runner design. Where economical and practical, OPG pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations. Over the next three years, OPG plans to increase the total capacity of its hydroelectric generating fleet by approximately 135 MW, which, in addition to the runner replacement and upgrade program, includes the Peter Sutherland Sr. GS project and the Ranney Falls GS projects. Both of these projects are discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Project Excellence*. OPG is also planning to repair, rehabilitate, or replace a number of aging civil hydroelectric structures.

As part of its commitment to operational excellence, OPG continues to make investments in its existing hydroelectric generating fleet. During 2016, OPG continued to execute a number of projects, including:

- Completion of major equipment overhauls and rehabilitation work on Unit 5 of the Sir Adam Beck Pump GS, and Unit 2 of the Whitedog Falls GS
- Completion of a runner upgrade, headgate replacement and rehabilitation of Unit 2 of the Harmon GS
- Completion of headgate replacement at Units 1 and 2 of the Kipling GS
- Completion of concrete rehabilitation of the main dam at Chats Falls GS
- Continued work on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 5 of the DeCew Falls 1 GS, Unit 1 of the Harmon GS, and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.

OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS. **[MONITOR]**

Thermal Operations

OPG's thermal operations consist of biomass-fuelled generating units at each of Atikokan GS and Thunder Bay GS, and the oil/gas dual-fuelled Lennox GS.

These stations, which operate as peaking facilities, provide Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements and enable the system to accommodate the expansion of Ontario's renewable generation portfolio. The continued operation of these stations during the initial years of the refurbishment of the Darlington GS and Bruce nuclear facilities is expected to provide Ontario with over 2,000 MW of peaking generation.

During the third quarter of 2016, the Atikokan and Thunder Bay generating stations provided renewable generation when called upon to meet system requirements while utility maintenance was being conducted on a local transformer station. As a result of utility maintenance, the Atikokan GS operated continuously from late July 2016 to early September 2016, while the Thunder Bay GS operated as needed. To meet the increased demand for biomass fuels at Atikokan GS, OPG coordinated the acceleration of biomass fuel deliveries with suppliers while continuing to operate the plant safely.

As part of OPG's ongoing strategy to reduce costs and increase efficiency, the operations of the Company's hydroelectric and thermal assets have been combined into one organization. OPG continues to evaluate opportunities to consolidate departments within the stations and across regions.

Thermal stations that are no longer available to generate electricity are included in the Services, Trading and Other Non-Generation segment once they are removed from service. This includes the Lambton GS and Nanticoke GS sites, which ceased coal-fired generation in 2013. In 2015, OPG announced the decommissioning of the Nanticoke GS, as it could not commercially support continued preservation costs.

In November 2016, OPG announced the decommissioning of the Lambton GS, as further discussed in the section, *Highlights* under the heading, *Recent Developments*. OPG is currently developing decommissioning plans for the Lambton and Nanticoke generating stations, which will ensure that they are closed safely, securely and in an environmentally responsible manner. The decommissioning plan for the Nanticoke GS will accommodate the construction and operation of the Nanticoke solar facility. The costs of decommissioning the stations will be charged to a previously established decommissioning provision. OPG expects to review the decommissioning provision estimates for these sites in 2017.

Environmental Performance

OPG's Environmental Policy states that "OPG shall meet all legal requirements and any environmental commitments that it makes, with the objective of exceeding these legal requirements where it makes business sense". This policy commits OPG to:

- establish and maintain an environmental management system (EMS)
- work to prevent or mitigate adverse effects on the environment with a long-term objective of continual improvement
- manage sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern.

In 2016, OPG maintained the ISO 14001 registration of its company-wide EMS. Within the EMS, OPG has planning, operational control, and monitoring programs to manage the Company's positive and negative impacts on the environment. Significant environmental aspects of OPG's operations include: spills, chemical and thermal emissions to water, water flow and level changes, radioactive emissions, low and intermediate level radioactive waste (L&ILW), wildlife habitat, displacement of fossil fuels, and fish impingement and entrainment. Further details regarding OPG's environmental risks can be found in the section, *Risk Management* under the heading, *Environmental Risk*.

Environmental performance targets are set as part of the annual business planning process. OPG met or outperformed its 2016 targets for spills, environmental infractions, and carbon-14 emissions to air. An increase in the volume of waste generated from work activities at the Darlington GS and preparation for the Darlington Refurbishment project led to a higher than expected volume of L&ILW produced in 2016. Performance for tritium

emissions to air and water during 2016 remained less than one percent of the regulatory limit. There were no significant environmental events during 2016.

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. The program requirements are expected to result in increased fuel costs for some OPG-owned and co-owned generating facilities. Fuel costs for these stations are generally recovered from the electricity market. With OPG's low GHG emitting fleet, the program is not expected to have a material adverse financial impact on the Company. OPG has established the necessary processes to comply with the cap and trade program requirements.

OPG is monitoring actions being taken by the Government of Ontario and the Government of Canada to reduce GHG emission levels and transition to a low-carbon economy. In support of efforts to mitigate climate change, the Company continues to evaluate and implement plans to increase the generation capacity of its hydroelectric generating fleet, where economic, and invest in other low-carbon technologies.

OPG communicates its environmental performance internally to employees and to external stakeholders, including the Ontario Ministry of the Environment and Climate Change, Environment and Climate Change Canada, the CNSC, and local communities. Details of OPG's environmental performance and initiatives to fulfill the Company's Environmental Policy can be found in OPG's 2015 Sustainability Report, available on the Company's website at www.opg.com.

Improving Efficiency and Reducing Costs

As part of its commitment to operational excellence, OPG remains focused on reducing costs by pursuing efficiency and productivity improvements across operating business units and support functions, while ensuring that there is no adverse impact on the safety, reliability and environmental sustainability of the Company's operations. This includes streamlining of processes, simplifying governance, upgrading information technology, optimizing service delivery models, and, where appropriate, leveraging attrition to achieve human resource targets aligned with business requirements. Initiatives to improve cost performance and organizational capability are being implemented at the enterprise and business unit level.

To drive efficiency and performance improvement, the Company continues to leverage a more scalable, centre-led organizational model. In 2016, the reduction in OPG's regular headcount from ongoing operations, since the beginning of 2011, reached over 2,800. Improving organizational performance and building on these efficiency gains remains a key priority for the Company. OPG continues to review its cost structure, identify cost improvement strategies and embed an outcomes-driven culture that reinforces low cost, efficiency, and organizational agility as part of business decision-making. In order to enhance the overall focus on productivity, in 2016 OPG adopted Enterprise TGC per MWh as a measure of OPG's overall organizational cost performance and Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets, in addition to the existing Nuclear TGC per MWh measure. Further details regarding these measures are included in the sections, *Highlights, Key Operating and Financial Performance Indicators* and *Supplemental Non-GAAP Measures*.

People and Culture

A well trained and engaged workforce is fundamental to the achievement of OPG's strategic imperatives. To succeed in a demanding business environment, OPG is focused on building a diverse, healthy, engaged workforce and fostering a culture of collaboration, accountability and innovation. OPG also continues to communicate and

implement the values and behaviours expected from its employees in order to maintain a strong focus on safety, performance excellence, continuous improvement, and corporate citizenship.

The Company continues to focus on improving the capability of its workforce through leadership development, knowledge management, diversity and inclusion programs, and hiring in key areas. Ability to secure the right talent mix in order to effectively meet the Company's immediate and longer term business needs on a timely basis is supported through workforce planning, resourcing and on-boarding strategies, both to acquire external talent into the organization and to develop existing employees. The goal of workforce planning and resourcing strategies is to ensure that the Company's workforce is diverse and has the right skill set and capability for the safe and effective operation of the generating facilities and successful delivery of major projects, including the refurbishment of the Darlington GS. These strategies are being designed to take into account anticipated staffing requirements to the end of planned commercial operations of the Pickering GS, through to the end of the planned period to de-fuel, de-water and place the station in a safe state condition.

As part of the strategy to develop and engage employees and to build leadership talent, the Company has an active succession planning program with a focus on accelerating development. OPG also has a talent management monitoring process to proactively assess staffing risks, challenges and opportunities. Since 2015, OPG offers a company-wide high-potential leadership development program to qualified internal candidates. This 18-month cross-functional, competitive-entry program is designed to identify and develop candidates for future leadership positions while they are still relatively early in their career.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification. In addition to maintaining its internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners and educational institutions to meet the required level of qualification. Training delivery models are evaluated for effectiveness and efficiency.

Effective January 1, 2017, OPG implemented a new Executive Compensation Program that is compliant with *Ontario Regulation 304/16: Executive Compensation Framework*, introduced in September 2016. The regulation sets out how all employers designated under the *Broader Public Sector Executive Compensation Act, 2014*, including OPG, must establish and post compensation programs for executives. The program must include the compensation philosophy, salary and performance-related pay caps, comparative analysis details, and a description of other elements of compensation. OPG's new Executive Compensation Program, which applies to employees at the Vice President level and higher, is designed to provide compensation that is at the 50th percentile of the market and focused on at-risk, performance based pay. The program will better enable OPG to attract, align and retain the executive talent critical to delivering Shareholder and customer value, while ensuring continued safe and reliable operations.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. OPG also continues to plan and execute maintenance and capital improvement projects related to its existing assets. OPG strives for excellence in the planning and delivery of all projects across the Company.

OPG's vision for project excellence is to be an industry leader in project management capability and performance. As part of its commitment to project excellence, OPG continues to enhance and streamline its approach to project planning and execution, with the goal of delivering all projects safely, on time, on budget, and with high quality. Achieving project excellence at OPG involves, among other things, putting in place a common, scalable project delivery model across all business units, establishing qualified project management teams, optimizing contracting strategies, engaging qualified and experienced vendors, and effectively monitoring and controlling performance. The status updates for OPG's major projects as of December 31, 2016 are outlined below.

Project	Capital	Approved	Expected

(millions of dollars)	expenditures Year-to-date	Life-to-date	budget	in-service date	Current status
Darlington Refurbishment	1,019	3,185	12,800 [1]	First unit - 2020 Last unit - 2026	The refurbishment of Unit 2 commenced in October 2016, as planned. De-fueling of Unit 2, the first critical path activity, was completed in January 2017, ahead of schedule. The project is tracking on budget. See update below.
Peter Sutherland Sr. Hydroelectric GS	141	236	300	2017	Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, ahead of the originally planned schedule. **[MONITOR]** See update below.
Sir Adam Beck Pump GS Reservoir Refurbishment	39	46	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget. See update below.
Ranney Falls Hydroelectric GS	2	3	77 **[MONITOR]**	2019	Project design work was completed in 2016 and construction is expected to commence in 2017. See update below. **[MONITOR]**
Nanticoke Solar Facility	1	1			Project definition work is in progress and construction is planned to commence in the first half of 2018. See update below.
Deep Geologic Repository for L&ILW	9 [2]	195 [2]			OPG has completed the additional studies required by the Canadian Environmental Assessment Agency (CEAA) and the federal Minister of Environment and Climate Change and submitted this information in December 2016. See update below.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the Darlington GS by approximately 30 years. The Darlington Refurbishment project is a multi-phase program comprising the following five major sub-projects:

- **Retube and Feeder Replacement (RFR)**, which includes the removal and replacement of fuel channel assemblies and feeder tubes in each reactor

- **Turbines and Generators**, which consists of inspections and repairs of turbine generator sets and the replacement of analog control systems with digital control systems
- **De-fuelling and Fuel Handling**, which involves the de-fuelling of the reactors and the refurbishment of the fuel handling equipment
- **Steam Generators**, which includes mechanical cleaning, water lancing, and inspection and maintenance work on the generators
- **Balance of Plant**, which consists of work on smaller projects to replace or repair certain other station components.

In January 2016, the Government of Ontario's support for the Darlington Refurbishment project was affirmed through the Ontario Minister of Energy's announcement endorsing OPG's plan to refurbish the four Darlington units at a total project budget of $12.8 billion, including capitalized interest and escalation. The Province's announcement followed the approval of the project budget and schedule by OPG's Board of Directors in November 2015. The refurbishment of the last unit is scheduled to be completed by 2026. OPG's current operating licence for the Darlington GS spans most of the planned duration of the Darlington Refurbishment project, expiring in November 2025.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. *Ontario Regulation 53/05* requires the OEB to accept the need for the Darlington Refurbishment project in light of Ontario's 2013 Long-Term Energy Plan (LTEP) and the related policy of the Province endorsing the need for nuclear refurbishment. It also requires the OEB to ensure that OPG recovers capital and non-capital costs and firm financial commitments in respect of the Darlington Refurbishment project, if the OEB is satisfied that the costs were prudently incurred and that the firm financial commitments were prudently made.

A number of pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, in support of the execution phase of the project have been completed, with the remaining projects continuing to track for completion in line with the refurbishment execution schedule.

All major contracts for the Darlington Refurbishment project that OPG expected to award were in place prior to proceeding with the Unit 2 refurbishment. This included the RFR execution phase contract awarded in January 2016 and valued at approximately $2.75 billion for work to be executed on all four units. All of the major contracts contain suspension and termination provisions.

Other key activities related to the project in 2016 included the following:

- Fabrication of the major reactor components including fuel channels and feeder tubes is in progress, with the first set of feeder tubes delivered in the fourth quarter of 2016. The remaining components have planned deliveries tracking in line with the project schedule.
- The specialized tooling for removal and replacement of feeder tubes and fuel channel assemblies in each reactor was delivered to OPG's reactor training and mock-up facility in the second quarter of 2016, as planned, and testing of the tooling has been completed.

- All 28 storage tanks have been installed in the Heavy Water Storage and Drum Handling Facility, which will provide storage and processing capability for the removal of heavy water from the units during refurbishment, as well as for continued station operations.
- The RFR Island Support Annex was completed in February 2016. The facility houses RFR field preparatory, contractor management, and project oversight activities.

In addition to the de-fuelling of the Unit 2 reactor completed in January 2017, milestones for the Darlington Refurbishment project in 2017 include:

- Completion of reactor vault preparation activities to support RFR work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Third Emergency Power Generator and Containment Filtered Venting System safety enhancement projects, which were originally scheduled to be placed in-service in 2016. Remediation measures are in progress and OPG expects both projects to be placed in-service during the first quarter of 2017. These delays will not impact the overall Darlington Refurbishment project schedule, as neither of the two projects is on the critical path.
- Completion of the Re-tube Waste Processing Building and the Heavy Water Storage and Drum Handling Facility.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of the second unit, Unit 3, at the Darlington GS and is entering into associated commitments to procure major components that require long-lead times. As of December 31, 2016, $31 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Peter Sutherland Sr. Hydroelectric GS

The project to construct the 28 MW Peter Sutherland Sr. hydroelectric GS is in the process of testing and commissioning the turbine and generator units, as well as operator training and document turnover. Work also continues on demobilization efforts, as well as site reclamation. Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. **[MONITOR]** The project is tracking within the approved budget of $300 million.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The construction work on the project included installation of a partial new liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

During 2016, OPG completed project design work for the construction of an additional 10 MW single-unit powerhouse on the existing Ranney Falls GS site. The new unit will replace an existing unit that reached its end of life in 2014. Capital expenditures for project definition work completed as of December 31, 2016 were $3 million. OPG plans to commence construction work in 2017, with an expected in-service date in the fourth quarter of 2019 and a budget of $77 million. **[MONITOR]**

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS and adjacent lands is planned to commence in the first half of 2018. It is expected to be completed in early 2019. Capital expenditures for project definition work completed as of December 31, 2016 were $1 million.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In August 2015, OPG responded to the CEAA's list of potential environmental conditions relating to the JRP report. In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and the impact on environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization (NWMO) were located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following a review by the CEAA and a period of public comment, an EA Decision Statement by the Minister is expected by the third quarter of 2017. Based on the information submitted to the Minister, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

In 2013, OPG suspended design activities on the project pending receipt of a site preparation and construction licence. If the decision on the EA is positive, the licensing process will resume. Upon receipt of the site preparation and construction licence, OPG will complete detailed design and development of a project schedule and a budget. In parallel, OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The approval of OPG's Board of Directors must also be obtained in order to proceed with construction. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

New Nuclear Units

The 2013 LTEP also indicated that the Ontario Ministry of Energy would work with OPG to maintain the site preparation licence granted by the CNSC in relation to the potential construction of these reactors. As such, OPG has been undertaking activities required to support the CNSC Power Reactor Site Preparation Licence and the

Darlington New Nuclear Project EA. The JRP Report on the EA had concluded that the project was not likely to cause significant adverse environmental effects, given mitigation. In April 2016, the Supreme Court of Canada dismissed the application for leave to appeal filed by the parties that had challenged the Darlington New Nuclear Project EA through a judicial review, concluding the litigation on the matter. The CNSC site preparation licence expires in 2022.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth. Inherent in this priority are three objectives:

- Increase revenue, reduce costs and achieve appropriate return
- Ensure availability of cost effective funding for operational needs, generation development projects and long-term obligations
- Pursue opportunities to expand the existing core business and capitalize on new growth paths.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In line with its commercial mandate, OPG is focused on increasing revenue and achieving an appropriate rate of return on the Shareholder's investment, while taking into account the impact on Ontario electricity customers.

In order to achieve the above objectives with respect to the regulated operations, OPG is focused on clearly demonstrating in its rate applications to the OEB that the costs required to operate and invest in the assets are reasonable and being prudently incurred, and should be fully recovered, and that the Shareholder's investment in these assets should earn an appropriate rate of return. OPG's existing base regulated prices, which came into effect in November 2014, were lower than requested by OPG based on its forecast costs. This has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

To improve the financial strength of the regulated operations going forward, OPG has been focused on providing appropriate, transparent evidence in support of its OEB rate requests, aligning organizational resources to support an effective rate application process, and continuing to identify opportunities for further efficiencies in the Company's cost structure. To date, OPG's focus on cost reduction and efficiency improvement initiatives has resulted in significant changes across the Company. This includes over $1 billion in cumulative savings realized across the Company since the beginning of 2011 from reductions in ongoing operations regular headcount through Business Transformation and other initiatives. OPG's cost and productivity improvement efforts are discussed further under the heading, *Operational Excellence*.

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. The OEB's decision on the application, including the effective date of the approved new regulated prices, is expected in the second half of 2017. Consistent with *Ontario Regulation 53/05*, OPG incorporated a nuclear rate smoothing proposal into its application, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impact on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the deemed capital structure applied to the regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent

debt. If approved, this would improve OPG's return on Shareholder's investment. Further details on OPG's rate application can be found under the heading, *Recent Developments* in the *Highlights* section.

For generation development projects that do not form a part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements prior to proceeding with the project. In line with this strategy, most of OPG's non-regulated operating facilities and assets under construction are subject to ESAs with the IESO. Based on these agreements, OPG expects its non-regulated generation operations, reported under the Contracted Generation Portfolio segment, to continue to provide a generally stable level of earnings and cash flow going forward.

OPG's capital structure currently reflects lower levels of debt than the deemed capital structure reflected in the Company's existing or proposed regulated prices. OPG is evaluating strategies to enhance Shareholder returns by optimizing the Company's capital structure through better alignment with the deemed capital structure, taking into account the overall financial strength of the Company and the potential impact on the Company's investment grade credit rating.

Ensure Availability of Cost Effective Funding

OPG actively monitors its funding requirements and forecasts availability of funds to ensure that it can meet the Company's operational needs, project commitments and long-term obligations. OPG utilizes multiple sources of funds, including funds from operations, commercial paper, securitization of assets, letters of credit, credit facilities, long-term corporate debt, and private placement project financing. The Company's financing strategy leverages the strength of its balance sheet to obtain cost effective long-term corporate debt. OPG also accesses the capital markets for private placement project financing, secured by the assets of the project, where the characteristics of the project support such financing. Maintaining an investment grade credit rating is critical to OPG's ability to access cost effective financing.

In April 2016, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2016, S&P Global Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

OPG intends to continue to access the capital markets, where appropriate, to obtain cost effective financing for future generation development projects. The Company also continues to evaluate arrangements that would appropriately support its financing needs and capital expenditure programs. OPG's liquidity and capital resources are discussed under the section, *Liquidity and Capital Resources.*

Pursue Business Growth Opportunities

OPG pursues commercially-based business growth opportunities through investments in its core generation portfolio, as well as emerging renewable energy project opportunities. OPG's growth strategy considers the Company's financial position and anticipated future changes in the generating fleet, including the eventual end of Pickering commercial operations. The growth strategy is also informed by industry, technological, environmental, social, and economic external factors. Growth opportunities are evaluated using financial and risk-based analyses as well as strategic considerations.

OPG's core business growth strategy focuses on the renewal and expansion of the Company's generation portfolio of nuclear, hydroelectric and thermal generating assets in Ontario, including the redevelopment and expansion of existing sites and potential new developments. The strategy leverages OPG's operating and project development expertise as well as the Company's existing diverse physical asset base. OPG considers acquisition opportunities as they arise, taking into account operating synergies, strategic benefits, financial returns and risk profile. OPG's current major generation development projects and asset life extension initiatives are discussed under the headings, *Operational Excellence* and *Project Excellence* in the *Core Business and Strategy* section.

OPG seeks to continue to expand beyond its core generation business through investments in innovation and emergent low-carbon technologies, including selective solar generation, energy storage, micro-grid, electric vehicle infrastructure and other development. OPG is also considering longer-term growth paths that include broader electricity sector opportunities, within and outside Ontario. Growth opportunities may be pursued in partnership with other commercial entities where appropriate synergies exist and are aligned with OPG's business objectives.

In March 2016, Nanticoke Solar LP was selected, through the first phase of the IESO's LRP program, to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. The partnership and the IESO executed a 20-year LRP contract in March 2016, which formalized the terms and conditions for the development and operation of the new solar facility. In September 2016, the Government of Ontario suspended the second phase of the LRP program, which does not impact the project.

From October 2016 to December 2016, the Government of Ontario conducted a consultation process to update its LTEP. OPG made a formal submission as part of the consultation as it relates to OPG's core generation business and growth opportunities. The Ontario Ministry of Energy has indicated that the development of the updated LTEP, scheduled to be published in 2017, will balance the principles of affordability, reliability, clean energy, community and Indigenous engagement, as well as conservation and demand management. OPG's business growth opportunities may be affected by the results of the 2017 LTEP.

Social Licence

As the largest, publicly-owned electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations. OPG's commitment to safety is discussed under the heading, *Workplace and Public Safety* in the *Core Business and Strategy* section.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish relationships with Indigenous communities based on a foundation of respect for their languages, customs, and political, social and cultural organizations. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, and other joint projects. Recent examples of partnerships include the Peter Sutherland Sr. GS in partnership with the Taykwa Tagamou Nation, the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River, and two recently completed shoreline remediation projects. The Whitesand First Nation, working closely with OPG, completed a project to remediate nearly two kilometers of shoreline in 2016, while the Long Lake #58 First Nation undertook the management of a five-year shoreline remediation project. OPG also has been engaging proactively with Indigenous communities regarding the Company's nuclear operations, including both regularly scheduled meetings and an outreach effort in connection with OPG's proposed L&ILW DGR and the re-licensing of the PWMF and the WWMF. In November 2016, OPG was recognized for its ongoing commitment to engaging local Indigenous communities with the CEA's 2016 Sustainable Electricity award for Leadership in External Collaboration and Partnerships.

OPG is committed to being an open, transparent, and accountable company. With operations across Ontario, OPG works to maintain public trust with stakeholders by engaging site communities, sharing information, and being transparent about performance. In addition, OPG's operations are subject to extensive regulatory oversight, with public participation, by the CNSC, the OEB, and other bodies.

As part of its commitment to environmental sustainability, OPG works with community partners to support regional ecosystems and biodiversity. In 2016, OPG continued efforts to protect and restore habitat, promote biodiversity education and awareness, and help the recovery of species at risk. In addition, OPG helps contributes to the well-being of its host communities through the Company's Corporate Citizenship Program (CCP), which supports

charitable and non-profit grassroots initiatives in the areas of environment, education, and community, which includes support for including Indigenous initiatives. In 2016, OPG's CCP provided support to over 850 initiatives, of which 87 were Indigenous.

Further details regarding OPG's commitment to sustainable development, including information regarding the Company's environmental, social and economic performance and initiatives, are provided in OPG's 2015 Sustainability Report available on the Company's website at www.opg.com.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of revenue requirement and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's application for new base regulated prices submitted to the OEB in May 2016 is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its May 2016 application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

Until the OEB's decision on OPG's application is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In large part, this is due to the expected year-over-year reduction in nuclear electricity generation resulting from the full year effect of the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined based on a production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision's issuance could have a significant impact on OPG's financial results during 2017. The application for new regulated prices is further discussed in the *Highlights* section under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. Combined with the expiry of rate riders in effect during 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment, as expected, OPG anticipates this to result in lower cash flow from operations and lower Adjusted FFO Interest Coverage ratio in 2017, compared to 2016. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements. In addition, the expected reduction in nuclear generation as a result of the planned outages at Darlington GS is expected to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Other factors that may impact the Enterprise TGC include potential hydroelectric generation losses due to surplus baseload generation conditions and planned capital expenditures.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, variance accounts include those related to the revenue impact of variability in water flows and SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Pursuant to the Settlement Agreement, these and all other applicable existing variance and deferral accounts have been approved to continue once new regulated prices take effect. Considering the impacts of these accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. **[MONITOR]**

OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to ESAs with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major development projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI, which, in the short term, can be volatile and cause fluctuations in the Company's income. This volatility has been partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account. OPG is exposed to rate of return risk for the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodologies for the Nuclear Liabilities.

As OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle liabilities per the most recently approved ONFA reference plan, the volatility of earnings on the Nuclear Segregated Funds reflected in net income is reduced when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at December 31, 2016, the Decommissioning Segregated Fund was overfunded by 21 percent, and the Used Fuel Segregated Fund was marginally overfunded by less than one percent, relative to the liabilities per the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future, which would increase earnings volatility. The 2017 ONFA Reference Plan is discussed in the *Highlights* section, under the heading *Recent Developments.* The accounting for the Nuclear Segregated Funds is discussed in the section *Critical Accounting Policies*, under the heading *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

KEY OPERATING AND FINANCIAL PERFORMANCE INDICATORS

OPG evaluates the performance of its generating stations using a number of key indicators. Key operating performance indicators aligned with corporate strategic imperatives are measures of production reliability, cost effectiveness, environmental performance, and safety performance. Certain of the measures used vary depending on the generating technology. The key financial performance indicators evaluate the Company's financial performance at the enterprise level.

In 2016, OPG adopted Enterprise TGC per MWh as an enterprise-wide measure of operational cost effectiveness. Concurrently, OPG adopted Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets and no longer reports Hydroelectric OM&A expense per MWh. The new performance measures, together with Nuclear TGC per MWh, provide the Company with a single, consistent method of evaluating cost effectiveness across the organization.

Enterprise TGC, Nuclear TGC, Hydroelectric TGC, ROE Excluding AOCI, and the FFO Adjusted Interest Coverage ratio discussed below are not measurements in accordance with US GAAP. They should not be considered as alternative measures to net income or any other measure of performance under US GAAP. However, OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the

Company's strategic imperatives and related objectives. The definition and calculation of Enterprise TGC per MWh, Nuclear TGC per MWh, Hydroelectric TGC per MWh, ROE Excluding AOCI and FFO Adjusted Interest Coverage are found in the section, *Supplementary Non-GAAP Financial Measures*.

Enterprise Total Generating Cost per MWh

Enterprise TGC per MWh is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Nuclear Total Generating Cost per MWh

Nuclear TGC per MWh is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts and expenses ancillary to OPG's nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Hydroelectric Total Generating Cost per MWh

Hydroelectric TGC per MWh is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Nuclear Unit Capability Factor

OPG's nuclear stations are baseload facilities and are not designed for fluctuating production levels to meet peaking demand. The nuclear Unit Capability Factor is a key measure of nuclear station performance. It measures the amount of energy that the unit(s) generated over a period of time, adjusted for externally imposed constraints such as transmission or demand limitations, as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. Capability factors are primarily affected by planned and unplanned outages. By industry definition, capability factors exclude production losses beyond plant management's control, such as grid-related unavailability. The nuclear Unit Capability Factor also excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS is excluded from the measure effective October 15, 2016, when the unit was taken offline as part of the Darlington Refurbishment project.

Hydroelectric Availability

OPG's hydroelectric stations operate as baseload, intermediate, or peaking stations. Hydroelectric Availability is a measure of the reliability of a hydroelectric generating unit. It represents the percentage of time the generating unit is capable of providing service, whether or not it is actually generating electricity, compared to the total time for the respective period.

Thermal Equivalent Forced Outage Rate

Equivalent Forced Outage Rate (EFOR) is an index of the reliability of a generating unit at OPG's thermal stations. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its objective to deliver value to the Shareholder. ROE Excluding AOCI is defined as net income attributable to the Shareholder for the period divided by average equity attributable to the Shareholder excluding AOCI for that period, and is measured over a period of 12 months.

Funds from Operations Adjusted Interest Coverage

The FFO Adjusted Interest Coverage ratio is an indicator of OPG's ability to meet interest obligations from operating cash flow and is consistent with the Company's objective of ensuring availability of cost effective funding. The FFO Adjusted Interest Coverage ratio is defined as FFO before interest divided by adjusted interest expense, and is measured over a period of 12 months.

Other Key Indicators

In addition to production reliability, cost effectiveness, and financial performance indicators, OPG has identified certain environmental and safety performance measures. These measures are discussed under the section, *Core Business, Strategy and Outlook*.

BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary

services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power and other facilities, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to the passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel L&ILW, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Power lease arrangement and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because OPG's costs associated with the Nuclear Liabilities have been included by the OEB in the determination of regulated prices for production from the Pickering and Darlington nuclear generating stations, in accordance with the methodologies applied since the OEB's 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. Brighton Beach operates under an energy conversion agreement between Brighton Beach and Shell Energy North America (Canada) Inc, and the PEC station is operated under the terms of an Accelerated Clean Energy Supply contract with the IESO. OPG's share of the in-service

generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of trading activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the United States (US) market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets, with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and Nanticoke generating stations' sites.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**3,481**	3,245
Fuel expense	**315**	301
Gross margin	**3,166**	2,944
Operations, maintenance and administration	**2,210**	2,196
Depreciation and amortization	**925**	717
Property taxes	**26**	26
Income before other loss, interest, and income taxes	**5**	5
Other loss	**1**	3
Income before interest and income taxes	**4**	2

Income before interest and income taxes from the segment increased to $4 million in 2016, compared to $2 million in 2015. The improvement in earnings of $2 million was primarily due to higher electricity generation in 2016, compared to 2015, which increased revenue from the nuclear base regulated price. The increase in revenue was largely offset by higher OM&A expenses, higher fuel expense, and higher depreciation and amortization expense, excluding amortization expense related to regulatory balances, in 2016, compared to 2015.

Higher nuclear production of 1.1 TWh in 2016, compared to 2015, was primarily due to the planned four-unit VBO in 2015 and a decrease in the number of unplanned outages at the Darlington GS in 2016. This was partially offset by the impact of the increased number of unplanned outage days at the Pickering GS in 2016, and the removal from service of Unit 2 of the Darlington GS in October 2016 as part of the Darlington Refurbishment project.

The increase in OM&A expenses of $14 million in 2016 reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium prices and

higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million primarily due to new assets in service in 2016.

A decrease in non-electricity generation revenue in 2016, compared to 2015, also partially offset the increase in segment earnings. The lower non-electricity generation revenue was mainly attributable to lower detritiation services revenue and lower isotope sales in 2016 and an insurance recovery recognized in 2015.

A higher OEB-authorized rate rider of $10.84/MWh effective from July 1, 2015 to the end of 2016 contributed to the increase in segment revenue in 2016, compared to 2015. In the first half of 2015, OPG received a rate rider of $1.33/MWh. As the rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this increase in revenue was largely offset by an increase in amortization expense related to the regulatory balances.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2016 and 2015 were as follows:

	2016	2015
Unit Capability Factor *(%)* [1]		
Darlington GS	**89.5**	76.9
Pickering GS	**75.2**	79.4

[1] The nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS increased in 2016, compared to 2015, primarily due to the four-unit VBO completed during 2015. In addition, a lower number of unplanned outage days at the Darlington GS during 2016, compared to 2015, also contributed to the improvement in the Unit Capability Factor.

The decrease in the Unit Capability Factor at the Pickering GS in 2016, compared to 2015, was primarily due to a higher number of unplanned outage days at the station in 2016, as a result of emergent discovery work during planned outages.

The definition of the nuclear Unit Capability Factor is found under the heading, *Key Operating and Financial Performance Indicators.*

Regulated – Nuclear Waste Management Segment

	2016	2015
Revenue	**138**	122
Operations, maintenance and administration	**146**	132
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**912**	880
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Loss before interest and income taxes	**(174)**	(186)

Earnings from the segment improved by $12 million in 2016 compared to 2015. The improvement was primarily due to higher earnings from the Nuclear Segregated Funds, partially offset by an increase in accretion expense on the Nuclear Liabilities.

The improvement in Nuclear Segregated Funds earnings was primarily due to an increase in the Used Fuel Segregated Fund earnings due to higher CPI-adjusted rate of return guaranteed by the Province for funding related to the initial 2.23 million used fuel bundles. Pursuant to the ONFA, the guaranteed annual rate of return for that portion of the Used Fuel Segregated Fund is set at 3.25 percent plus the change in the Ontario CPI. This increase in

Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the 2017 ONFA Reference Plan. The 2017 ONFA Reference Plan was approved by the Province in December 2016, and is discussed in the section, *Highlights* under the heading, *Recent Developments*. The accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section. The Nuclear Segregated Funds earnings are reported net of the impact of the Bruce Lease Net Revenue Variance Account.

The higher accretion expense on the Nuclear Liabilities during 2016, compared to 2015, reflected an upward adjustment in the liabilities recognized in December 2015 related to the revised accounting assumptions for the estimated useful lives of OPG's nuclear generating stations. The increased accretion expense was partially offset by the impact of the Bruce Lease Net Revenues Variance Account. The changes in the assumed estimated useful lives of the nuclear stations and the related adjustment to Nuclear Liabilities are discussed further in the section, *Balance Sheet Highlights* under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account*.

Regulated – Hydroelectric Segment

(millions of dollars)	**2016**	**2015**
Revenue [1]	**1,527**	1,619
Fuel expense	**353**	345
Gross margin	**1,174**	1,274
Operations, maintenance and administration	**325**	340
Depreciation and amortization	**225**	282
Property tax	**1**	1
Income before other (income) loss, interest and income taxes	**623**	651
Other (income) loss	**(19)**	3
Income before interest and income taxes	**642**	648

[1] During 2016 and 2015, the Regulated – Hydroelectric segment revenue included incentive payments of $14 million and $26 million, respectively, related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $6 million in 2016, compared to 2015, was primarily due to lower hydroelectric incentive mechanism payments and the income impact of OEB-approved variance accounts. The lower payments under the hydroelectric incentive mechanism were primarily due to the reservoir refurbishment outage at the Sir Adam Beck Pump GS during 2016. The decrease in segment income was partially offset by a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to OPG's December 2014 motion. The decrease in segment income also was partially offset by a year-over-year decrease in OM&A expenses, primarily due to higher costs incurred in 2015 for shoreline remediation work.

The decrease in segment revenues due to the lower OEB-authorized rate rider in 2016, compared to 2015, was largely offset by a corresponding decrease in amortization expense related to the regulatory balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	2016	**2015**
Hydroelectric Availability *(%)*	**89.0**	91.2

The Hydroelectric Availability decreased during 2016, compared to 2015, primarily due to the planned reservoir refurbishment project at the Sir Adam Beck Pump GS. The project was completed in February 2017.

The definition of Hydroelectric Availability is found under the heading, *Key Operating and Financial Performance Indicators*.

Contracted Generation Portfolio Segment

(millions of dollars)	2016	2015
Revenue	**573**	535
Fuel expense	**58**	39
Gross margin	**515**	496
Operations, maintenance and administration	**178**	185
Depreciation and amortization	**75**	72
Accretion on fixed asset removal liabilities	**9**	8
Property taxes	**7**	7
Income from investments subject to significant influence	**(37)**	(39)
Income before other loss, interest, and income taxes	**283**	263
Other loss	**1**	1
Income before interest and income taxes	**282**	262

Income before interest and income taxes increased by $20 million during 2016, compared to 2015. The increase primarily resulted from the higher gross margin, due to increased revenues from the Lower Mattagami River generating stations, the Lennox GS, and the Atikokan GS. Higher revenue from the Lennox GS was primarily due to increased market demand. The increase in revenue from the Atikokan GS reflected the support provided to the electricity system in northwestern Ontario as a result of an outage at a local transformer station from late July 2016 to early September 2016. The year-over-year increase in segment revenue was also due to a provision made in 2015 related to an IESO audit.

The Hydroelectric Availability and the Thermal EFOR for the Contracted Generation Portfolio segment were as follows:

	2016	2015
Hydroelectric Availability *(%)*	**77.3**	88.6
Thermal EFOR *(%)*	**1.6**	11.2

Lower Hydroelectric Availability during 2016, compared to 2015, was primarily due to a higher number of planned outage days at the Kipling and Harmon generating stations on the Lower Mattagami River. During 2016, headgate replacements were made at certain units of the Kipling GS and Harmon GS. In addition, a runner upgrade and rehabilitation work was completed at Unit 2 of the Harmon GS. The lower thermal EFOR in 2016, compared to 2015, was primarily due to an outage in 2015 to perform repair work at the Lennox GS.

The definitions of Hydroelectric Availability and Thermal EFOR are found under the heading, *Key Operating and Financial Performance Indicators*.

Services, Trading, and Other Non-Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**68**	73
Fuel expense	**1**	2
Gross margin	**67**	71
Operations, maintenance and administration	**22**	48
Depreciation and amortization	**32**	29
Accretion on fixed asset removal liabilities	**8**	7
Property taxes	**12**	11
Restructuring	**6**	6
Loss before other loss, interest, and income taxes	**(13)**	(30)
Other loss	**-**	7
Loss before interest and income taxes	**(13)**	(37)

Segment earnings improved by $24 million in 2016 compared to 2015. The losses incurred by the segment in 2015 and 2016 largely reflect the costs associated with the Nanticoke and Lambton generating stations prior to OPG's decisions, in 2015 and November 2016, respectively, to proceed with the stations' decommissioning. These losses are partially offset by OPG's trading activities.

The improvement in earnings in 2016 primarily reflected higher OM&A expenses in 2015, including those incurred related to the Nanticoke GS prior to OPG's decision to proceed with the station's decommissioning, and a provision made in 2015 related to an IESO audit. The year-over-year decrease in OM&A expenses also reflected reduced work programs at the Lambton GS during 2016 due to lower staffing levels used to preserve the station. The preservation activities were discontinued after the announcement to decommission the station. Expenditures incurred in connection with decommissioning activities for the Nanticoke and Lambton generating stations are charged against a previously established decommissioning provision.

During each of 2016 and 2015, OPG recorded a charge against earnings to adjust the scrap value estimates for the Lambton GS. In 2016, this adjustment was offset by dividend income earned from OPG's investment in Hydro One shares, which contributed to the year-over-year improvement in earnings.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies; to undertake major projects; to fund long-term obligations such as contributions to the pension fund; to make payments under the OPEB plans; to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds; and to service and repay long-term debt.

Changes in cash and cash equivalents for 2016 and 2015 are as follows:

(millions of dollars)	**2016**	**2015**
Cash and cash equivalents, beginning of period	**464**	610
Cash flow provided by operating activities	**1,705**	1,465
Cash flow used in investing activities	**(1,807)**	(1,553)
Cash flow used in financing activities	**(176)**	(58)
Net decrease	**(278)**	(146)
Cash and cash equivalents, end of period	**186**	464

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details under the heading, *Overview of Results* in the section, *Highlights*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities in 2016 was $1,807 million, compared to $1,553 million in 2015. The increase was primarily due to higher expenditures on the Darlington Refurbishment project as it transitioned to execution phase, and the acquisition of nine million common shares of Hydro One in April 2016. The increase in cash flow used in investing activities in 2016, compared to 2015, was partially offset by the investment of proceeds from a long-term debt issuance in support of the Peter Sutherland Sr. GS project into a structured deposit note in 2015, and the subsequent receipt of proceeds from this investment on staggered maturity dates throughout 2016. The final maturity date of the deposit note is in April 2017. The acquisition of the Hydro One shares is discussed under the heading *Recent Developments* in the *Highlights* section, as well as in Note 3 of the Company's 2016 audited consolidated financial statements.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, sustaining capital investments across the generating fleet, and hydroelectric development projects including the expansion of the Ranney Falls GS and the completion of Peter Sutherland Sr. GS.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended the expiry date of both tranches from May 2020 to May 2021. As at December 31, 2016, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this

agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plan.

As at December 31, 2016, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As of December 31, 2016, there were outstanding borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

As at December 31, 2016, OPG's long-term debt outstanding was $5,534 million, including $1,103 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes is x.xx percent and x.xx percent, respectively. **[MONITOR]**

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, were as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Other Commitments

Collective Agreements

As of December 31, 2016, OPG had approximately 9,270 regular employees. Most of OPG's regular employees are represented by two unions:

- **The PWU** – This union represents approximately 5,070 OPG employees or approximately 55 percent of OPG's regular workforce as at December 31, 2016. Union membership includes operators, technicians, skilled trades, clerical, and security personnel. The current collective agreement between OPG and the PWU has a three-year term, expiring on March 31, 2018.
- **The Society** – This union represents approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce as at December 31, 2016. Union membership includes supervisors, professional engineers, scientists, and other professionals. The current collective agreement between OPG and The Society has a three-year term, expiring on December 31, 2018.

In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights at OPG facilities. These bargaining rights are established either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. All of these collective agreements currently have multi-year terms, expiring on April 30, 2020.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's audited consolidated financial position using selected balance sheet data as at December 31:

(millions of dollars)	**2016**	**2015**
Property, plant and equipment – net	**20,002**	20,595
The decrease was primarily due to a reduction in asset retirement costs of approximately $1,570 million in 2016 as a result of a reduction in the estimates for the Nuclear Liabilities to reflect the 2017 ONFA Reference Plan cost estimates. The decrease was partially offset by capital expenditures on the Darlington Refurbishment and other projects, net of depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**15,984**	15,136
The increase was primarily due to earnings on the Nuclear Segregated Funds and contributions to the Used Fuel Segregated Fund, partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded to the lower underlying obligations reflected in the updated ONFA reference plan and reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Available-for-sale securities	**212**	-
The balance as at December 31, 2016 represents the fair value of the nine million Hydro One shares acquired in April 2016, as discussed under the heading *Recent Developments* in the *Highlights* Section.		
Regulatory assets and liabilities – net *(current and non-current portions)*	**5,545**	5,808
The decrease was primarily due to the amortization of regulatory balances recovered through rate riders in effect during 2016 and an increase in regulatory liabilities resulting from a change in the estimated useful lives of OPG's nuclear stations at the end of 2015, as discussed under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account* below. This was partially offset by amounts deferred in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and other variance and deferral accounts during the year.		
Short-term debt	**2**	225
The decrease was due to the maturity of external commercial paper outstanding under LME's commercial paper program.		
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169
The decrease was primarily due to a reduction of approximately $1,570 million in the estimates for the Nuclear Liabilities at the end of 2016 to reflect the 2017 ONFA Reference Plan cost estimates, partially offset by accretion expense during the year.		
Pension liabilities	**3,012**	2,597
The increase was primarily due to the re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as discussed in the section, *Changes In Accounting Policies* under the heading, *Pension and Other Post-Employment Benefits.*		

Impact of Changes in Station End-of-Life Dates Deferral Account

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense arising from the changes in the estimated useful lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG has recognized a regulatory liability of $71 million related to the balance in the deferral account. Together with the Bruce Lease Net Revenues Variance Account discussed below, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account offset the decrease in depreciation expense in 2016, compared to 2015, as a result of the changes in estimated useful lives of OPG's nuclear stations effective December 31, 2015.

The changes to the estimated useful lives of OPG's nuclear generating station effective December 31, 2015, for accounting purposes, were as follows:

- the average service lives of the Bruce A GS and Bruce B GS were extended from 2048 to 2052 and from 2019 to 2061, respectively, to reflect the estimated end-of-life dates reflected in the updated refurbishment agreement between the IESO and Bruce Power, which was announced in December 2015
- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015
- the average service life of the Pickering GS was extended by less than one year.

To reflect the above changes, OPG recognized a total increase of $2,330 million in the Nuclear Liabilities and a corresponding increase in the related asset retirement costs, effective December 31, 2015. These increases were primarily due to the changes in the estimated useful life of the Bruce B GS. The nuclear asset retirement obligations (ARO) associated with the Pickering GS and Darlington GS was impacted by the changes to the Bruce nuclear generating stations' useful lives because the costs of the fleet-wide waste management programs are shared by all of OPG's nuclear stations based on used nuclear fuel and waste volumes. Consistent with the changes in the end-of-life dates for the Bruce nuclear generating stations and the December 2015 amendments to the Bruce Lease in connection with the Province's endorsement of Bruce Power's refurbishment plans, the term of the Bruce Lease for accounting purposes also was extended, in line with the refurbishment plans for these stations.

The impact of the above changes on OPG's revenues and costs related to the Bruce nuclear generating stations effective January 1, 2016 is recorded in the Bruce Lease Net Revenues Variance Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's consolidated financial statements or are recorded in the Company's consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

Guarantees

As part of normal business, OPG and certain of its subsidiaries and joint ventures enter into various agreements to provide financial or performance assurance to third parties. Such agreements include guarantees, standby Letters of Credit and surety bonds. For more details on OPG's guarantees, refer to Note 15 of OPG's audited consolidated financial statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies, including the impact of major recent accounting pronouncements, are outlined in Note 3 of the audited consolidated financial statements. Certain of these policies are recognized as critical accounting policies by virtue of the subjective and complex judgments and estimates required around matters that are inherently uncertain and could result in materially different amounts being reported under different conditions or assumptions. The critical accounting policies and estimates that affect OPG's US GAAP consolidated financial statements are highlighted below.

Exemptive Relief for Reporting under US GAAP

As required by *Ontario Regulation 395/11,* as amended, under the FAA, OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG has also received exemptive relief from the OSC from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board (IASB) for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

As a result of OPG's 2011 decision to adopt US GAAP, as required by the FAA regulation, OPG's earlier plan to convert to IFRS, effective January 1, 2012, was discontinued. OPG had substantively completed its IFRS conversion project, which included separate diagnostic, development, and implementation phases, when it suspended the project. If a future transition to IFRS for the purposes of OPG's consolidated financial statements is required, conversion work can be effectively restarted with sufficient lead time to evaluate and conclude on changes that occurred subsequent to the decision to suspend the project. OPG continues to monitor the IASB's current standard-setting project related to entities with rate-regulated activities and is evaluating alternatives with respect to the Company's future financial reporting.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the OEB.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998*, the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the

future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05.* The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures for its pension and OPEB plans. It is the Company's position that this decision by the OEB did not constitute a change in the basis of OPG's rate recovery of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices, or in an OEB-authorized deferral or variance account for future recovery, as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account to record the difference between OPG's actual pension and OPEB costs for the regulated business determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million, which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the above noted consultation process.

See Notes 3, 5, 8, 9, and 11 of OPG's 2016 audited consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or payable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its rate regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and in respect of investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

The Company has recognized net deferred income tax liabilities of $829 million as at December 31, 2016 (2015 – $880 million).

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset, based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

The accounting estimates related to end-of-life assumptions for PP&E and intangible assets require significant management judgment, including consideration of various operating, technological, and other factors. OPG reviews the estimated useful lives for its PP&E and intangible assets on a regular basis.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

Various assumptions and accounting estimates are required to determine whether an impairment loss should be recognized and, if so, the value of such loss. This includes factors such as short-term and long-term forecasts of prices for electricity generation under applicable revenue mechanisms, the demand for and supply of electricity, inflation, fuel prices, capital and operating expenditures, and estimated useful service lives of the assets.

The carrying value of investments accounted for under the equity method are reviewed for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Segregated Funds based on approved ONFA reference plans. Costs for L&ILW management and used fuel storage incurred during station operation are not funded by the Nuclear Segregated Funds. They are funded through the Company's operating cash flow or other sources of liquidity.

Decommissioning Segregated Fund

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the earnings it recognizes in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded.

The amount due to the Province in respect of the Decommissioning Segregated Fund could be reduced in subsequent periods in the event that the fund earns less than is target rate of return, a new ONFA reference plan is approved with a higher underlying liability, or the amount of the underfunding in the Used Fuel Segregated Fund increases.

When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets.

Used Fuel Segregated Fund

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined in the ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return on the Used Fuel Segregated Fund and the actual market return determined based on the fair value of the fund's assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount OPG would pay to, or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions attributed to the used fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province has the right at any time to access the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. Accordingly, when the Used Fuel Segregated Fund is overfunded, OPG limits the earnings it recognizes int he consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the underlying liability based on the most recently approved ONFA reference plan. In accordance with the ONFA, OPG does not have a right to direct any amounts from the Used Fuel Segregated Fund to the Decommissioning Segregated Fund.

Provincial Guarantee

In accordance with the *Nuclear Safety and Control Act* (Canada), the CNSC requires OPG to have sufficient funds available to discharge the current nuclear waste management and nuclear decommissioning liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the CNSC, on behalf of OPG, for any shortfall between the CNSC financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee equal to 0.5 percent of the amount of the Provincial Guarantee. The

current value of the Provincial Guarantee of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016. The CNSC process requires the CNSC financial guarantee requirement to be updated once every five years. OPG is currently updating the CNSC financial quarantee requirement for the 2018-2022 period and expects to file it with the CNSC in the first half of 2017. **[MONITOR]**

Pension and Other Post-Employment Benefits

The determination of OPG's pension and OPEB costs and obligations is based on accounting policies and assumptions, as discussed below.

Accounting Policy

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor) for each plan is amortized over the expected average remaining service life of the employees covered by the plan, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on its consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation, on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net

of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as amortization components of pension and OPRB costs as described above.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Accounting Assumptions

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost, and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses.

The discount rates, which are representative of the AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. In 2016 and prior years, benefit costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. A lower discount rate increases the benefit obligations and increases benefit costs. The weighted-average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

Starting in 2017, OPG expects to change the method used to estimate the current service and interest cost components of pension and OPEB costs. OPG expects to adopt a full yield curve approach in the estimation of these components of pension and OPEB cost by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Making this change will improve the correlation between projected benefit cash flows and the corresponding yield curve spot rates, and provide a more precise measurement of service and interest costs. This change does not affect the measurement of the total benefit obligations, as the change in the current service and interest components of the costs from the previous method will be offset by a corresponding change in the actuarial (gain) loss recorded in AOCI. OPG will account for this change as a change in estimate, prospectively starting in 2017. With an upward sloping yield curve and the pattern of OPG's estimated future benefit cash flows, the adoption of the full yield curve approach is expected to materially lower OPG's current service and interest cost components, reducing the overall pension and OPEB costs in the initial years following adoption.

The expected rate of return on plan assets is determined based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined under the heading, *Contractual and Commercial Commitments,* in the section *Liquidity and Capital Resources*. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation and assumptions as at December 31, 2016. As part of the valuation, the plans' demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The deficit for the registered pension plan, for accounting purposes, increased from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

Asset Retirement Obligation

OPG recognized ARO for fixed asset removal and nuclear waste management liabilities, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The ARO is comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating plant facilities and other facilities. Costs are expected to be incurred for activities such as preparation for safe storage and safe storage of nuclear stations, dismantlement, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel bundles and L&ILW material. The liabilities associated with the decommissioning of the nuclear generating stations and the long-term management of used nuclear fuel comprise the most significant amounts of the total obligation.

The nuclear decommissioning liability includes the estimated costs of closing the nuclear stations after the end of their service lives, which includes preparation and placement of the stations into a safe state condition followed by an assumed 30-year safe store period prior to station dismantlement and site restoration. Activities associated with the placement of stations into a safe state condition include de-fueling and de-watering of the nuclear reactors. Under the terms of the lease agreement with Bruce Power and as required by the CNSC, OPG is responsible for the nuclear waste management and nuclear decommissioning obligations associated with the Bruce nuclear generating stations. Pursuant to the lease agreement, Bruce Power must return the two Bruce stations to OPG together, in a de-fueled and de-watered state. These de-watering and de-fueling costs are not part of OPG's ARO.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the obligation for these costs include an L&ILW DGR facility to be constructed and operated by OPG, as discussed under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section. To estimate the liability for nuclear used fuel management, OPG has adopted an approach consistent with the Adaptive Phased Management concept approved by the Government of

Canada, which assumes a deep geologic repository or the long-term management of Canada's nuclear used fuel waste. The NWMO is responsible for the design and implementation of Canada's plan for the long-term management of used nuclear fuel.

The following costs are recognized as a liability on OPG's consolidated balance sheets:

- the present value of the costs of decommissioning the nuclear and thermal production facilities and other facilities after the end of their useful lives
- the present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed lives of the stations
- the present value of the variable cost portion of nuclear waste management programs taking into account waste volumes generated to date.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs including construction of assumed waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, decommissioning strategy, and the technology employed may result in significant changes to the value of the accrued liabilities. With programs of such long-term duration and the evolving technology to handle nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the costs for these programs. These costs may increase or decrease over time.

The estimates for the Nuclear Liabilities are reviewed on an ongoing basis as part of the overall nuclear waste management program. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically, at least once every five years, in line with the required ONFA reference plan update process. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of a net increase in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of a net decrease in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets.

The most recent comprehensive update of the baseline cost estimates for the Nuclear Liabilities is contained in the approved 2017 ONFA Reference Plan, and was completed in the fourth quarter of 2016. The update resulted in a decrease of approximately $1,570 million in the Nuclear Liabilities as at December 31, 2016, which was determined using a discount rate of 4.95 percent. The overall reduction in OPG's nuclear waste management and nuclear decommissioning obligations was due mainly to a decrease in cost estimates to reflect a proposed new, more cost effective container design and engineered barrier concept to house used nuclear fuel for disposal, updated cost escalation rates for all programs, and a later expected in-service date for the NWMO's planned deep geologic repository for the long-term permanent disposal of Canada's used nuclear fuel. These decreases were partly offset by higher cost estimates related to decommissioning activities, primarily due to an improved definition of work required during the preparation for safe storage after station shutdown and a higher volume of waste expected to be generated during decommissioning. Cost escalation rates used to estimate future undiscounted cash flows reflected in the December 31, 2016 adjustment to the Nuclear Liabilities ranged from 2.0 percent to 3.4 percent.

Commented [AJ1]: Was the discount rate not 5.15%

The December 31, 2016 adjustment to the Nuclear Liabilities and associated asset retirement costs did not impact OPG's income for 2016. The estimated impact of this adjustment on 2017 expenses, before the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account, includes a decrease to depreciation expense of approximately $8 million, a decrease to accretion expense of approximately $78 million, and a combined decrease in used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as they are expected to be largely offset by

the OEB approved variance and deferral accounts, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to Ontario Regulation 53/05. It records the revenue requirement impact associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years.

The liability for nuclear fixed asset removal and nuclear waste management on a present value basis as at December 31, 2016 was $19,103 million (2015 – $19,792 million). As at December 31, 2016, the undiscounted cash flows of expenditures for OPG's Nuclear Liabilities in 2016 dollars are as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Expenditures for nuclear fixed asset removal and nuclear waste management [1]	354	360	386	429	465	39,296	41,290

[1] The majority of the expenditures are expected to be reimbursed by the Nuclear Segregated Funds established by the ONFA. Any contributions required under the ONFA are not included in these undiscounted cash flows. Accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The liability for non-nuclear fixed asset removal was $381 million as at December 31, 2016 (2015 – $377 million). This liability primarily represents the present value of estimated costs of decommissioning OPG's thermal generating stations at the end of their service lives. The liability reflects third party cost estimates based on an in-depth review of plant sites and an assessment of required clean-up and restoration activities. For the purpose of measuring the liability, asset removal activities are assumed to take place approximately over the next one to 15 years. The amount of undiscounted estimated future cash flows associated with the thermal liabilities is approximately $500 million. With the decisions taken in 2015 and 2016 to decommission the Nanticoke and Lambton generating stations, respectively, OPG expects to review the decommissioning liability estimates for these sites. Any adjustments as a result of a change in the liability estimates for these stations will be recorded in net income in the period of change.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model.

The fair value of financial assets and liabilities for which quoted prices in an active market are available, including exchange traded derivatives and other financial instruments, are determined directly from those quoted market prices.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the

use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that may affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If the valuation technique or model is not based on observable market data, specific valuation techniques are used, primarily based on recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

OPG's use of financial instruments exposes the Company to certain risks, including credit risk, foreign currency risk and interest rate risk. A discussion of how OPG manages these and other risks is found under the section, *Risk Management*.

Variable Interest Entities

OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated. As at December 31, 2016, PSS Generating Station Limited Partnership was classified as a variable interest entity because it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership. Refer to Note 3 of OPG's 2016 audited consolidated financial statements for further details.

Recent Accounting Pronouncements

The recent US GAAP accounting pronouncements related to revenue recognition, leases, and financial instruments are described below. Other recent accounting pronouncements applicable to OPG are outlined in Note 3 of the audited consolidated financial statements.

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact that the new standard will have on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

RISK MANAGEMENT

Overview

OPG faces various risks that could significantly impact the achievement of its strategic imperatives. The objective of risk management is to identify and mitigate these risks, and to preserve and increase the value of the Shareholder's investment in the Company.

Risk Governance Structure

The Audit and Risk Committee of OPG's Board of Directors assists the Board of Directors in fulfilling its oversight responsibilities for matters relating to the identification and management of the Company's key business risks. An Executive Risk Committee (ERC), which is comprised of business unit leaders and the Chief Risk & Audit Executive (CRAE), assists the Audit and Risk Committee in fulfilling its governance and oversight responsibilities related to OPG's risk management activities.

Risk Management Activities

OPG faces a wide array of risks as a result of its business operations. OPG's Enterprise Risk Management (ERM) framework is designed to identify and evaluate risks on the basis of their potential impact on the Company's capacity to achieve specific strategic imperatives and business plan objectives.

A centralized ERM group led by the CRAE coordinates the quarterly risk management reporting activities. The activities begin with business units identifying, reviewing, and assessing risks that could prevent achievement of their objectives. The ERM group reviews, validates, and consolidates this information and prioritizes risks based on their potential to impact OPG's overall strategic imperatives. The ERM group also assesses external developments that may have implications on the corporate risk profile and facilitates the identification and assessment of emerging risks. The ERC then reviews and validates significant changes in the top risks that may impact OPG's ability to achieve its strategic imperatives, as well as any emerging risks that have been identified. The results of the ERC review and significant changes in the enterprise risk profile are reviewed by the Audit and Risk Committee.

In order to maintain an appropriate balance between risk and return, senior management sets limits for the market risk, credit risk and energy trading activities of the Company. Senior management also establishes risk management policies and processes to ensure compliance with such limits.

The key risks to OPG's strategic imperatives are briefly described below.

Risks to Achieving Operational Excellence

OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance.

Operational risks are the risks inherent in the operation of electricity generating facilities. These risks can lead to interruptions in the operations of generating stations affecting future production. The operational risks of a station are generally a function of its age, human performance, and the technology used.

Nuclear Generating Stations

Operating an aging nuclear fleet exposes OPG to unique risks such as unplanned outages, an increase in operating costs, and risks associated with nuclear waste management operations.

Operating nuclear stations exposes OPG to unique risks, such as greater-than-anticipated deterioration of station components and systems, risks associated with the nuclear industry, supply chain and vendor quality, risks related to the handling, storage and disposal of nuclear waste, and the risk of a nuclear accident. The primary implications of these risks include additional safety requirements, potentially lower than expected generation and revenues, and potentially higher operating costs.

The uncertainty associated with production by OPG's Canadian Deuterium Uranium nuclear generating units is primarily driven by the condition of station components and systems, which are all subject to the effects of aging. Fuel channels are expected to be the most life-limiting component affecting station end-of-life. Another significant factor identified to date includes degradation of primary heat transport pump motors at the Darlington GS. Additionally, there are fuel handling performance challenges at both the Darlington GS and Pickering GS. To respond to these risks, OPG continues to monitor performance, implement extensive inspection and maintenance programs, identify corrective actions and undertake projects required to operate reliably and within design parameters.

Deterioration of station components may progress in an unexpected manner, resulting in the need to increase monitoring, conduct extensive repairs, or undertake additional remedial measures. To maintain a safe operating margin, a nuclear unit could be derated resulting in reduced generation. When an unexpected condition first appears, a specific monitoring program is established. The primary impact of these conditions on OPG is an increase in the long-term cost of operations. The associated mitigation may create additional outage work, increasing the number of outages or extending planned outages.

Pickering Extended Operations to 2024

In January 2016, the Province of Ontario announced its approval of OPG's plan to pursue the continued safe and reliable operation of the Pickering GS to 2024. Under OPG's plan, all six operating units at the Pickering GS would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The current operating licence for the Pickering GS, which expires in August 2018, was issued in 2013 assuming that the station would shut down in 2020.

Inability to achieve Pickering extended operations as planned would result in a reduction of OPG's future generation revenue and cash flows and lead to the advancement of shutdown and station decommissioning expenditures.

Risk factors for continued operation of the Pickering units include the discovery of unexpected conditions, equipment failures, the state of critical plant components that are reaching end-of-life, and a requirement for significant plant modifications. To mitigate these risks, OPG continues to undertake a number of activities, including the following:

- work to confirm achievability of fuel channel life necessary to enable extended operations
- component condition assessments to identify the work required to support the extended operation of the station
- modification of the operating and maintenance strategy to support continued operation of the station.

Over the remaining lifespan of the station, risks such as performance of the fuel handling system, challenges with parts procurement, and a shortage of qualified human resources may challenge operational excellence at the Pickering GS. OPG is addressing these risks by taking appropriate actions, including undertaking fuel handling reliability improvements, equipment modifications and targeted investments in plant systems and components, supply chain initiatives, and developing workforce planning and resourcing strategies.

Nuclear Waste Management

The process of generating electricity by nuclear generating stations produces nuclear waste. As required by the CNSC, OPG is accountable for the management of used fuel and L&ILW, and decommissioning of its nuclear stations and waste management facilities, including the stations on lease to Bruce Power. Currently, there are no licenced facilities in Canada for the permanent disposal of nuclear used fuel or L&ILW. The risks to OPG's proposed L&ILW DGR for the safe long-term management of L&ILW are discussed below, under the heading, *Deep Geologic Repository for Low and Intermediate Level Waste* in the section *Risks to Achieving Project Excellence*.

The NWMO has developed a process for moving forward with Adaptive Phased Management as the long-term solution for Canada's nuclear fuel waste. The Adaptive Phased Management plan contemplates the eventual long-term permanent disposal of radioactive nuclear fuel waste in a deep geologic repository. The NWMO is in the process of undertaking a multi-year site selection process for the used fuel deep geologic repository.

In the interim, OPG is storing and managing L&ILW at the WWMF site and used fuel at its nuclear generating station sites.

Nuclear Regulatory Requirements

The uncertainty associated with nuclear regulatory requirements is primarily driven by plant aging, changes to technical codes, and challenges raised by the public at regulatory hearings, particularly in the areas of safety, environment and emergency preparedness. Addressing these requirements could add to the cost of operations, and in some instances, may result in a reduction or elimination of the productive capacity of a station, earlier than planned replacement of a station component or additional requirements for waste management. Additionally, the operations of nuclear stations are often directly impacted by circumstances or events that occur at other nuclear stations globally. These circumstances or events may lead to CNSC regulatory changes with a significant impact on the cost and future operation of OPG's nuclear fleet.

In December 2015, the CNSC granted the station a 10-year operating licence, valid until November 30, 2025. The new licence spans most of the planned duration of the Darlington Refurbishment project, which provides greater regulatory stability and reduces regulatory risk. As discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Nuclear Operations*, the plan to extend Pickering operations to 2024 is subject to the CNSC's approval of the Pickering licence renewal application and other regulatory requirements as set out by the CNSC.

In January 2014, the federal government introduced Bill C-22 which contains a new *Nuclear Liability and Compensation Act* (NLCA). This bill received Royal Assent in February 2015, and the NLCA came into effect on January 1, 2017. The NLCA requires all operators of nuclear generating stations in Canada to maintain specified amounts of nuclear liability insurance purchased from a federal government approved insurer or other equivalent forms of financial security approved by the federal government. The NLCA increases OPG's nuclear liability limit from $75 million to an initial $650 million, with successive annual increases to $750 million, $850 million, and $1 billion. OPG has met this requirement for the $650 million liability limit required by the NLCA for 2017 and is assessing the availability and premium cost of coverage for the $750 million liability limit required for 2018.

Hydroelectric Generating Stations

OPG's hydroelectric generation is exposed to risks associated with water flows, the age of plant and equipment,surplus baseload generation conditions, and dam safety requirements.

The extent to which OPG can operate its hydroelectric generation facilities depends upon the availability of water. Significant variability in weather, including impacts of climate change, could affect water flows. For OPG's regulated hydroelectric generation, the financial impact of variability in electricity production due to differences between the forecast water conditions underpinning the hydroelectric regulated prices and the actual water conditions are captured in an OEB-approved regulatory variance account.

OPG's hydroelectric generating stations have an average age of approximately 80 years, with the majority of the hydroelectric generating equipment being over 50 years old. The condition of the equipment and civil components resulting from the age of these components requires OPG to plan potentially significant work to mitigate risks to the reliability of some hydroelectric generating stations. OPG manages these risks by performing inspection and maintenance of critical components and by reviewing mitigating actions. In addition, OPG conducts detailed engineering reviews and station condition assessments on an ongoing basis. These reviews and assessments help to identify future work required to sustain and, as appropriate, upgrade a station.

SBG has, and will continue to be, an issue in Ontario when electricity supply exceeds demand. To manage SBG conditions, the IESO may require OPG to reduce hydroelectric generation and spill water. A regulatory variance account authorized by the OEB helps to mitigate the financial impact of spill due to SBG conditions for OPG's regulated hydroelectric generating stations. The Company anticipates a declining trend in SBG for its hydroelectric assets due to reduced nuclear availability resulting from the refurbishment of the Darlington GS, future refurbishment of the Bruce generating stations, and the eventual shutdown of the Pickering GS.

The hydroelectric business operates 238 dams across Ontario. Dam safety legislation does not currently exist in the province. Technical guidelines which were published by the MNRF represent the government standards for dam safety. In general, OPG's practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the MNRF technical guidelines. OPG continues to develop a new risk-informed approach in cooperation with the MNRF to prioritize the outcomes of dam safety assessments. OPG could eventually incur additional costs for certain dams that it operates in order to comply with any new requirements.

People and Culture

OPG's operations could be affected if skilled human resources are not available or aligned with its talent requirements.

The development of new leaders and retention of staff in critical roles across OPG is a key factor to OPG's success. Another success factor is related to the effective transfer of knowledge from those in critical positions throughout the organization to future leaders. The risk associated with the alignment and/or availability of skilled and experienced resources continues to exist for OPG in specific areas, including leadership and project management positions. To mitigate this risk, OPG continues to focus on succession planning, leadership development and knowledge management programs to improve the capability of its workforce. There is also a continued risk of a mismatch between attrition levels and the resource requirements to meet OPG's future business needs.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification, which requires a long-term outlook to workforce planning.

To mitigate the above risks, OPG is developing an organization-wide workforce planning and resourcing strategies and has established ongoing monitoring processes to reassess risks, challenges and opportunities related to staffing on a regular basis. OPG expects to meet the human resource needs of the business by developing existing employees and hiring in specific areas, while continuing to leverage attrition through realignment of work and streamlining of processes, where appropriate.

As of December 31, 2016, approximately 90 percent of OPG's regular labour force was represented by a union. OPG's current collective agreements with the PWU and The Society expire on March 31, 2018 and December 31, 2018, respectively, while all 19 collective agreements with craft unions expire on April 30, 2020. As a result of these agreements, OPG considers the likelihood of a labour disruption in the near future to be significantly reduced.

Health and Safety

OPG's operations involve inherent occupational safety risks and hazards.

OPG's operations involve inherent occupational safety risks and hazards that could impact the achievement of the Company's health and safety goals. OPG is committed to continuous improvement and achievement of its ultimate goal of zero injuries through a formal enterprise-wide safety management system, integrated at the operating site level, and by continuing to foster a strong health and safety culture among its employees and contractors. The safety management system serves to focus the Company on proactively managing safety risks and hazard exposures to employees and contractors. In 2016, OPG launched the organization-wide "iCare Enough to Act" initiative aimed at renewing employees' and contractors' commitments to their own and each other's safety and well-being.

Cyber Security

OPG's ability to operate effectively is, in part, dependent on the efficient operation and management of the Company's complex information technology and industrial control systems in a secure, vigilant, and resilient manner that minimizes cyber risks. Cyber security incidents may have an adverse impact on OPG's reputation, energy production, and public and employee safety.

Cyber security incidents have been on the rise for the past few years and this trend is only expected to intensify as organizations' reliance on technology increases. OPG has strategies in place to prepare for, respond to, and recover from cyber security incidents. OPG continuously monitors, assesses, and improves the effectiveness of its strategies and program considering leading industry practices and remains proactive in information and intelligence sharing to learn and adapt to the changing cyber environment.

As a registered Ontario market participant, OPG is accountable to comply with all applicable reliability obligations. Within the context of the Ontario regulatory framework, OPG is a registered generator, and is responsible for complying with the associated reliability standards. These standards apply to the relevant Bulk Electric System (BES) elements specified under North American Electric Reliability Corporation (NERC) and the relevant Bulk Power System (BPS) facilities as determined by the Northeast Power Coordinating Council. In addition, OPG's nuclear cyber assets are subject to CNSC licensing conditions and regulatory requirements. For other cyber assets not subject to applicable regulatory requirements, OPG has adopted a risk-based approach based on the National Institute of Standards and Technology Cybersecurity Framework to manage its cyber security.

To mitigate cyber risks, OPG's cyber security program focuses on educating employees, contractors, and vendors, improving processes, and upgrading technology infrastructure. In particular, OPG's program focuses on the following:

1. Complying with regulatory requirements and applicable laws
2. Improving its cyber security protection and detection capabilities to reduce known or potential exposures by engaging the services of external experts to evaluate the security of its information technology infrastructure and controls
3. Adopting industry leading practices to reduce third party cyber security risks through enhanced vendor risk assessments, introducing cyber security requirements into commercial agreements, and enhanced governance
4. Improving and exercising its incident response, recovery capability, and business continuity plans to minimize the business impact of an incident
5. Increasing the cyber security awareness and training level of its workforce through mandatory annual cyber security awareness training, specialized training for cyber specialists, social engineering tests, and periodic company-wide communications on relevant cyber security topics.

The oversight responsibility of the Audit and Risk Committee of OPG's Board of Directors over the Company's risk management activities includes the review of a semi-annual update from management on the Company's cyber security position and programs.

Suppliers

Non-performance by strategic suppliers or an inability to diversify the supplier base could adversely impact operating and project performance, financial results and reputation of OPG.

OPG's ability to operate effectively is in part dependent upon timely access to equipment, materials, and service suppliers. Loss of key equipment, materials, and service suppliers, particularly for the nuclear business, could affect OPG's ability to operate effectively and/or to execute major development projects or other capital investment programs. OPG mitigates this risk, to the extent possible, through contract negotiations, contract terms, vendor monitoring, diversification of supplier base, and business continuity plans.

Business Continuity and Emergency Management

Natural, technological or human-caused hazards may impact OPG's business continuity.

OPG is exposed to potential or actual incidents or developments resulting from extreme temperatures, precipitation, wind conditions or other natural disasters, and technological or human-caused hazards; to significant events against which it is not fully insured or indemnified; or to parties that fail to meet their indemnification obligations. These incidents have the potential to disrupt operations resulting in decreased generation revenue or additional costs to repair damages and restore operations.

OPG's business continuity program provides a framework to build resilience into critical business processes by facilitating development of risk response plans and business continuity exercises. OPG's emergency management

program is designed to ensure that the Company can manage an emergency in a timely and effective manner. OPG's plans and implementation procedures identify immediate response actions to be taken to protect the health and safety of employees and the public, and to limit the impact of the crisis on site security, production capability, and the environment. The program elements are designed to meet legal and regulatory requirements.

Risks to Achieving Project Excellence

The risks associated with the cost, schedule, technical and contractor performance aspects of the major projects could adversely impact OPG's financial performance and its corporate reputation.

OPG is undertaking several capital intensive projects with significant investments. There may be an adverse effect on the Company if it is unable to: obtain necessary approvals; raise the necessary funds; effectively manage the projects on time and on budget; or fully recover capital costs and earn an appropriate return on investment in a timely manner. These projects may also have a significant impact on OPG's borrowing capacity and credit rating. Some projects may be ultimately reassessed as being uneconomic. The risks associated with OPG's current major projects are described below.

Darlington Refurbishment

OPG is responsible for the management of the Darlington Refurbishment project, including the project's budget and schedule, and continues to systematically manage all of the risks associated with the project through robust risk management practices. There are financial and reputational risk exposures for OPG if actual costs exceed the budget or if OPG does not meet the project schedule. In addition, failure to achieve the objectives of the refurbishment project may result in future forced outages and more complex planned outages, potentially impacting the post-refurbishment performance or useful life of the station. Failure to carry out the refurbishment of the first unit as planned may result in not proceeding with the refurbishment of the remaining units, which, together with the end of commercial operations at the Pickering GS, could result in most of OPG's nuclear units shutting down by the early to mid 2020s.

There are a number of specific risks that OPG is managing and mitigating in relation to the Darlington Refurbishment project, which include OPG and vendor performance risks, delay or productivity risks, financial risks related to escalation of costs, technical risks such as equipment conditions resulting in additional scope, and execution risks such as failure to manage foreign material exclusion from the heat transport system that could lead to post refurbishment operational risks.

To mitigate the above risks and to build on major lessons learned from other nuclear refurbishments and large scale, complex projects, OPG engaged in an extensive five-year project planning phase in order to determine the project scope, rigorously estimate costs in keeping with best practices, and incorporate lessons learned from other nuclear refurbishments. In order to fully define the scope and material requirements for the project, the planning phase included the completion of detailed designs before proceeding with the execution of the unit refurbishments. Further risk mitigation has been implemented through the construction of a full scale model training reactor, which allows for simulations and training for unit refurbishment execution tasks.

A large portion of the costs for the Darlington Refurbishment project is being paid to contractors and suppliers, including vendors that will engineer, procure, and construct components of the project. There is a risk that, as the volume of work increases significantly, vendor capability, capacity, and performance shortfalls may impact project objectives and deliverables. OPG's risk management strategy aims to ensure that contractors are held accountable and appropriate off-ramps are in place. In mitigating its overall financial risk, OPG utilizes a contracting strategy that aims to share the risk with key vendors in a cost effective manner, where appropriate. There is also an increased risk of contractor initiated safety events, which may impact OPG's reputation. Mitigating actions include collaborative execution phase planning, an enhanced human performance program, active risk management, increased field presence by supervisory staff, and assisting vendors in removing barriers to work. OPG also is managing other

ongoing risks that could potentially impact the project, including those related to continuity of skilled leaders within OPG and its vendor partners, as well as the availability of technical resources to support the project through execution.

Independent, third-party oversight has been established for the execution phase of the project, for both the project executive team and OPG's Board of Directors. The Ontario Ministry of Energy has also retained an external advisor to provide oversight of the project, reporting to the Minister of Energy.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG, with the support of Bruce County municipalities, is proposing to construct and operate a deep geologic repository as the preferred solution for the safe long-term management of L&ILW. While broad local community support for the proposed L&ILW DGR is stable, there are pockets of opposition. OPG is currently awaiting a decision on the EA for the project by the federal Minister of Environment and Climate Change, before the issuance of the site preparation and construction licence may proceed. There is a risk of delay to the EA approval and/or the issuance of the site preparation and construction licence from potential political or legal challenges. OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR.

Other Development Projects

Projects that are in the initial development stages are subject to schedule delays or possible cancellation due to unforeseen delays in receiving permits or approvals, or establishing sufficient certainty regarding project cost recovery through revenue mechanisms, which may involve various external stakeholders. OPG attempts to mitigate these risks through early involvement and regular communication with applicable government agencies, close consultation with external stakeholders and ongoing monitoring of contractor compliance relative to permits. Projects in the execution phase are subject to inherent risks related to performance against approved budgets and schedules. Mitigating activities for the risks include performing detailed engineering designs before proceeding with execution, engaging qualified and experienced vendors, and effectively monitoring and controlling performance.

Development projects also could be faced with increasing costs for equipment and construction that could impact their economic viability. OPG continuously monitors such trends in costs in order to identify emerging issues and seeks to manage and limit cost increases through contracting strategies, where possible.

Risks to Maintaining Financial Strength

Risks related to rate regulation, financial markets, and long-term obligations could significantly impact OPG's financial performance. The Company is also exposed to risks such as weak electricity demand, displacement of generation by competitors and financial risk associated with energy trading.

There is a risk that future regulated prices will not allow OPG to consistently achieve financial performance that is commensurate with that of a commercial enterprise. OPG is exposed to a number of other significant financial risks, many of which arise due to decreasing demand for electricity, competing energy sources, OPG's exposure to volatility in commodity and equity markets and interest rate fluctuations. This includes the Company's pension and OPEB obligations and costs that are impacted by market and interest rate fluctuations. OPG manages this complex array of risks with a view to reduce the uncertainty and/or mitigate the potential unfavourable impact on the Company's financial results.

Rate Regulation

Significant uncertainties remain regarding the outcome of rate and generic proceedings impacting OPG's rate regulated operations.

There is an inherent risk that regulated prices established by the OEB may not provide for the recovery of all actual costs that will be incurred by OPG's regulated operations or allow the regulated operations to earn an appropriate

rate of return. This could occur if, in setting regulated prices, the OEB makes adjustments to forecasts submitted by OPG, if actual production and costs significantly differ from the forecasts approved by the OEB, or if OPG is unable to achieve additional efficiencies to meet the OEB-approved stretch factors included in regulated prices under incentive ratemaking. Differences between OPG's actual and forecast production and costs could be due to factors such as outages or project execution risks. In providing evidence in support of its applications for regulated prices, OPG aims to clearly demonstrate to the OEB that the costs for the regulated operations are reasonable, being prudently incurred and should be fully recovered.

Certain differences between elements of OEB-approved revenue requirements and OPG's actual results are recorded in OEB-approved variance and deferral accounts for future review by the OEB, including a number of the variance and deferral accounts that are subject to an OEB prudence review. There is inherent uncertainty associated with the outcomes of future proceedings for the clearance of these balances.

Proposed Incentive Regulation Ratemaking Methodologies

In May 2016, OPG submitted a 5-year application to the OEB for new regulated prices effective January 1, 2017, on the basis of an incentive regulation rate making methodology for the hydroelectric operations and a custom incentive regulation ratemaking framework for the nuclear operations. If accepted by the OEB, both approaches would result in greater decoupling of OPG's revenues for the regulated operations from their costs. The OEB's decision on OPG's application is expected in the second half of 2017.

Effective Date of New Regulated Prices

There are inherent uncertainties regarding the effective date that the OEB will establish for the new regulated prices. OPG has requested January 1, 2017 as the effective date. The OEB's decision on the effective date and the timing of the decision issuance could have a significant impact on OPG's 2017 results. Until the OEB's decision is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017.

Nuclear Rate Smoothing Proposal

Consistent with *Ontario Regulation 53/05*, OPG's May 2016 application includes a nuclear rate smoothing proposal, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. There is an inherent risk that the magnitude of the deferral ordered by the OEB will result in regulated prices that do not provide sufficient cash flow to the Company for meeting its financial objectives in an optimal manner, including ensuring sufficient liquidity, cost effectively funding the Darlington Refurbishment project and other expenditures, and maintaining the Company's investment grade credit rating. Maintaining adequate levels of credit metrics will support OPG's investment grade credit rating. As such, OPG has advanced credit metrics as a key criterion for the OEB to apply in determining the smoothed nuclear base rates.

Recovery of Pension and OPEB Costs

The OEB is currently conducting a consultation in the gas and electricity sectors to develop standard principles to guide the OEB's review of pension and OPEB costs for rate-regulated utilities, including establishing appropriate regulatory mechanisms for cost recovery. The OEB's November 2014 decision establishing OPG's existing regulated prices indicated that a change in the recovery methodology for OPG's pension and OPEB costs from the accrual basis, if required, would be addressed in OPG's next rate proceeding, having been informed by the outcome of the OEB's generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The decision also stated that the future recovery, if any, of amounts recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account authorized by that decision also would be subject to the outcome of the generic proceeding. As such, the outcome of the current consultation could have a material impact on OPG's ability to recover the balance in

the Pension & OPEB Cash Versus Accrual Differential Deferral Account and full pension and OPEB costs in the future. This would have significant adverse implications on OPG's future financial results. OPG is participating in the OEB consultation and has advanced its position in support of the appropriateness of using the accrual basis for cost recovery purposes.

Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds

Changes in cost estimates or strategies for nuclear waste management and nuclear facilities decommissioning obligations could impact OPG's future contributions to the Nuclear Segregated Funds to cover these obligations.

As required by the CNSC, OPG is responsible for the management of used nuclear fuel and L&ILW and the decommissioning of its nuclear stations and waste management facilities. The cost estimates for OPG's nuclear waste management and decommissioning obligations are based on multiple underlying assumptions and estimates that are inherently uncertain and may evolve over time. The assumptions include station end-of-life dates, waste volumes, waste disposal methods, the timing of construction of assumed waste disposal facilities, waste packaging systems, decommissioning strategy, and financial indicators. To address the inherent uncertainty, OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates at least once every five years, in line with the required ONFA Reference Plan update process.

The most recent comprehensive update of the nuclear waste management and decommissioning obligations was performed as part the 2017 ONFA Reference Plan approved by the Province in December 2016. An approved ONFA Reference Plan determines OPG's contributions to the Nuclear Segregated Funds. The changes in contribution levels are impacted by changes in the values of the Nuclear Segregated Funds as well as changes in the associated nuclear waste management and nuclear facilities decommissioning obligations. Based on the 2017 ONFA Reference Plan, no contributions are currently required to the Nuclear Segregated Funds. Contributions may be required in the future should the Nuclear Segregated Funds be in an underfunded position relative to the funding requirement of a new approved reference plan.

Financial Markets

The market value of investments held by OPG's Nuclear Segregated Funds and registered pension plan could be significantly affected by changes in various market factors such as equity prices, interest rates, inflation, and commodity prices.

Nuclear Segregated Funds Market Risk

Investments in the Nuclear Segregated Funds are allocated to certain asset classes including fixed income securities, domestic and international equity securities, pooled funds, infrastructure, agriculture and real estate. These funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, in order to fund the expenditures associated with the long-term management of used fuel and L&ILW after station shutdown, and the decommissioning of OPG's nuclear stations and waste management facilities. The rates of return earned on these segregated funds are subject to various factors including the current and future financial market conditions, which are inherently uncertain. The asset mix of the funds is determined jointly by OPG and the Province in accordance with the ONFA.

For the Used Fuel Segregated Fund, the Province guarantees the annual rate of return at 3.25 percent plus the change in the Ontario CPI, as defined by the ONFA, for the portion of the fund attributed to the first 2.23 million nuclear fuel bundles. As such, a change in the portion of the fund's value attributed to the first 2.23 million bundles impacts OPG's earnings to the extent of changes in the Ontario CPI. OPG is subject to the market risk for the investment of funds set aside in the Used Fuel Segregated Fund for incremental bundles in excess of 2.23 million.

In accordance with the cost recovery methodology established by the OEB, the performance of the portion of the Nuclear Segregated Funds attributed to the nuclear generating stations leased to Bruce Power has been subject to the Bruce Lease Net Revenues Variance Account. The variance account partially mitigates rate of return risk related to the Nuclear Segregated Funds, as it captures the differences between actual and forecast earnings from the Nuclear Segregated Funds related to these stations. Forecast earnings are those approved by the OEB in setting nuclear regulated prices. OPG is exposed to rate of return risk related to the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodology. The income statement impact of rate of return risk is reduced when the Nuclear Segregated Funds are in a fully funded position.

Post-Employment Benefit Obligations Risk

OPG's post-employment benefit obligations include pension, group life insurance, health care benefits, and LTD benefits. OPG's post-employment benefit obligations and costs, and pension plan contributions could be materially affected in the future by numerous factors, including: changes in discount rates, inflation rates, and other actuarial assumptions; future investment returns; experience gains and losses; the funded status of the pension plans; changes in benefits; changes in the regulatory environment including potential changes to the *Pension Benefits Act* (Ontario); changes in OPG's operations; and the measurement uncertainty incorporated into the actuarial valuation process.

The OPG registered pension plan, which covers most of OPG's employees and retirees, is a contributory defined benefit plan that is indexed to inflation. Contributions to the OPG registered pension plan are determined by actuarial valuations, which are filed with the appropriate regulatory authorities at least every three years. The most recent actuarial valuation of the OPG registered pension plan, covering the three-year period to the end of 2018, was completed as of January 1, 2016. There is an inherent risk that future actuarial valuations could increase OPG's funding requirements due to market and economic-related conditions. A significant decline in the financial markets could trigger an immediate requirement to update the actuarial valuation based on declines in the funded status. OPG continues to assess the requirements for contributions to the registered pension plan, including the timing of future actuarial valuations. The next actuarial valuation of the OPG registered plan must have an effective date no later than January 1, 2019. OPG's OPEB obligations are not funded and the associated employee benefits are paid from cash flow provided by operating activities or other sources of liquidity.

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017	2018	2019
Estimated fuel requirements hedged[1]	75%	76%	65%

[1] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars (USD). To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at December 31, 2016, OPG had total foreign exchange contracts outstanding with a notional value of USD $9 million.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. During 2016, the VaR utilization ranged between nil and $1.5 million, compared to between nil and $1.5 million in 2015.

Credit

Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

The Company's credit risk exposure is a function of its electricity sales, trading and hedging activities, treasury activities including investing, and commercial transactions with various suppliers of goods and services. OPG's credit risk exposure relating to electricity sales is considered low as the majority of sales are through the IESO-administered spot market. The IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market.

Other major components of OPG's credit risk exposure include those associated with vendors that are contracted to provide services or products. OPG manages its exposure to various suppliers or counterparties by evaluating their financial condition and ensuring that the Company holds appropriate collateral or other forms of security.

The following table summarizes OPG's credit exposure to all counterparties from electricity transactions and trading as at December 31, 2016:

Credit Rating [1]	Number of Counterparties [2]	Potential Exposure [3] *(million of dollars)*	Potential Exposure for Largest Counterparties: Number of Counterparties	Potential Exposure for Largest Counterparties: Counterparty Exposure *(millions of*
Investment grade	11	11	5	9
IESO[4]	1	421	1	422
Total	12	432	6	431

[1] Credit ratings are based on OPG's own analysis, taking into consideration external rating agency analysis where available, as well as recognizing explicit credit support provided through parental guarantees, Letters of Credit or other forms of security.

[2] OPG's counterparties are defined on the basis of individual master agreements.

[3] Potential exposure is OPG's statistical assessment of maximum exposure over the life of each transaction at a 95 percent confidence interval.

[4] Credit exposure is an estimate of the receivable amount arising from OPG's electricity sales into the IESO market. The credit exposure and associated receivable vary each month based on electricity sales. The monthly receivable from the IESO is typically paid to OPG in the subsequent month as per the IESO payment schedule.

Liquidity

Rising liquidity requirements can impact OPG's capital investment projects and ability to meet financial obligations.

OPG operates in a capital intensive business. Significant financial resources are required to fund major development and other capital improvement projects, including the Darlington Refurbishment project. In addition, the Company has other significant disbursement requirements including pension contributions, payments towards OPEB and other benefit plans, expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, debt maturities with the OEFC, and investments in new generating capacity and other business growth opportunities. OPG must ensure that it has the financial capacity and sufficient access to cost effective financing sources to fund its capital requirements and other disbursements. In support of this objective, OPG utilizes multiple sources and forecasts availability of funds, actively monitors funding requirements, and is focused on maintaining its investment grade credit rating. A discussion of corporate liquidity is included under the section, *Liquidity and Capital Resources*.

Contracted Generation

OPG may incur costs if its contracted generating assets do not meet performance targets as specified in the ESAs with the IESO or other long-term contracts. There is also a risk that, upon expiry, subsequent ESAs may not be available.

The Company's generating stations operating under ESAs with the IESO or other long-term contracts are subject to availability and production targets specified in their respective contracts. OPG could incur charges and other costs if these facilities fail to operate at required capacity or production levels, as required. This risk is mitigated through the implementation of maintenance, capital investment and other programs, as appropriate.

OPG's owned and co-owned thermal generating stations operate under ESAs with the IESO or other long-term agreements. In December 2016, the Ontario and Quebec governments signed an electricity trade agreement that will allow Ontario to import up to 2 TWh of hydroelectric power from Quebec annually from 2017 to 2023. This is expected to replace some gas-fired generation in Ontario. While OPG expects that its thermal generating stations will continue to provide capacity to the market over the term of the respective agreements, there is a risk that, upon expiry of the current agreements, subsequent contracts for these stations may not be available or may not be available on financially viable terms.

Ontario Electricity Market

Ontario electricity market conditions could impact OPG's revenue and operations.

OPG's revenue can be impacted by external factors related to the electricity market including: the entrance of new participants into the Ontario market; the competitive actions of market participants; Ontario electricity demand; changes in the regulatory environment; and wholesale electricity prices in the interconnected markets.

The structure of the Ontario electricity market is subject to regulation and market rules, changes to which may affect OPG's revenue. The Province, the IESO, the OEB, or another entity or regulatory body may change or institute regulations or rules that can impact OPG's capability to generate revenue or ability to recover appropriate costs and earn a return on the assets.

Ownership by the Province

OPG's commitment to maximize the return on the Shareholder's investment in the Company may compete with the obligation of the Shareholder to respond to a broad range of matters in its role as the Government of Ontario.

The Province owns all of OPG's issued and outstanding common shares. Accordingly, the Province, as represented by the Ontario Ministry of Energy, has the authority to make appointments to OPG's Board of Directors. OPG could be subject to Shareholder direction, under Section 108 of the OBCA, that can directly influence major decisions including those related to project development, timing and strategy of applications for regulated prices, asset divestitures, financing and capital structure, that could require OPG to undertake activities that result in increased expenditures, or that reduce revenues or cash flows relative to the business activities or strategies that would have otherwise been undertaken. In addition, the obligation of OPG's Shareholder to respond to a broad range of matters in its role as the Government of Ontario may compete with OPG's commitment to maximize the return on the Shareholder's investment in the Company. This includes, but is not limited to, the Province's response to mitigate the impact of rising electricity prices on consumers.

Government Legislation and Regulation Change

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on the Company's operations and financial position.

OPG's core business and strategy may be impacted by changes in federal and provincial legislation and regulations. Matters that are subject to regulation include, among others, rate regulation, electricity generating operations, nuclear waste management and nuclear decommissioning, and taxation. Regulatory bodies may change or enact regulations or rules, such as new nuclear fitness for duty requirements, that could increase OPG's costs, decrease OPG's revenue, or limit the Company's ability to recover appropriate costs or earn a return on the assets.

Since legal requirements are subject to change and to interpretation, OPG is unable to predict the impact of such changes on the Company and its operations. To mitigate legislative risks, OPG continues to monitor and actively engage with the federal and provincial governments in order to determine if future legislation will impact the Company.

Risks to Maintaining Social Licence

OPG is exposed to risks associated with its social licence and public profile due to changes in the opinions of various stakeholders, including local communities, Ontario customers, government agencies, and Indigenous Communities. Additionally, inability to achieve operational excellence and project excellence safely and reliably and to maintain financial strength could impact OPG's social licence.

Maintaining public trust and meeting stakeholders and Indigenous communities' expectations are critical to OPG's success. OPG focuses on building and maintaining its social licence and corporate reputation through safe, reliable,

environmentally-responsible operations as well as corporate citizenship initiatives across the province. The inability to maintain safe, reliable operations could negatively impact OPG's reputation and result in a loss of public support.

OPG has transparent governance practices and works continuously towards effective communication and consultation with Indigenous communities and stakeholders. Efforts to reinforce OPG's social licence include various media campaigns that highlight the Company's contribution as a clean power generator with a commitment to safety, environment and community partnerships. OPG undertakes various assurance and risk management activities to effectively manage the risks to its social licence and corporate reputation. Issue management and response plans are developed to address specific concerns as they arise.

Indigenous Communities

The quality of OPG's relationships and the outcome of negotiations with Indigenous communities may impact OPG's project and financial performance, as well as its social licence to operate.

OPG may be subject to claims by Indigenous communities. These claims stem from projects and generation development related to the operations of OPG and historic operations of OPG's predecessor company, Ontario Hydro, which may have impacted the Aboriginal and/or Treaty rights of Indigenous communities.

OPG has an Indigenous Relations Policy, which sets out the Company's commitment to proactively build and maintain positive relationships with Indigenous communities. OPG has been successful in resolving a number of past grievances by Indigenous communities. However, the outcome of the ongoing and any future negotiations depends on a number of factors, including legislation and regulations and precedents created by court rulings, which are subject to change over time. OPG pursues generation-related developments in partnerships with Indigenous communities on the basis of long-term mutually beneficial commercial arrangements.

Environmental Risks

OPG may be subject to orders or charges if it is not in compliance with applicable environmental laws. Changes in environmental regulatory requirements can result in existing operations being in a state of non-compliance, a potential inability to comply, and potential costs and liabilities for OPG.

Changes to environmental laws could create compliance risks and result in potential liabilities that may be addressed by the installation of control technologies, development of new processes, allowances or offsets, or constraints on electricity production. A failure to comply with applicable environmental laws may result in enforcement actions, including the potential for orders or charges. In addition, some of OPG's activities have the potential to impair natural habitat, damage aquatic or terrestrial plant and wildlife, or cause contamination to land or water that may require remediation. There is also a risk that OPG may incur additional costs to meet heritage conservation program requirements under the *Ontario Heritage Act*.

Potential environmental regulatory changes being managed as risks by the Company include electricity production constraints and water flow management requirements to protect fish and fish habitat, expanded fish passage requirements, and lower drinking and ground water tritium concentration standards. These changes could impact plant operations and increase costs. OPG continues to monitor and address risks associated with changes to environmental laws and regulatory requirements. There were no significant changes to environmental legislation applicable to OPG during 2016.

OPG recognizes that efforts are required to plan for the effects of climate change and has identified climate change adaptation as a strategic issue for the company. OPG monitors developments in climate science, adaptation activities, and potential changes to policy and regulatory requirements. OPG continues to work with stakeholders to better define adaptation requirements through analysis and understanding of climate change impacts on watersheds and electricity supply and demand. Once adaptation requirements are better known, a risk-based analysis will help OPG determine the extent of efforts it will undertake to reduce the impact of climate change on its operations.

A carbon cap and trade program became effective in Ontario in January 2017. The program is not expected to have a material adverse economic impact on OPG due to the Company's low GHG emitting generating fleet. Further details can be found under the heading, *Environmental Performance*, in the section, *Core Business, Strategy and Outlook*.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		2015	
(millions of dollars)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**15**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,070**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

Management, including the President and Chief Executive Officer (President and CEO) and the Chief Financial Officer (CFO), are responsible for maintaining Disclosure Controls and Procedures (DC&P) and Internal Controls over Financial Reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements in accordance with US GAAP.

There were no other changes in OPG's ICOFR during the year ended December 31, 2016 that have materially affected or are reasonably likely to materially affect OPG's ICOFR.

Management, including the President and CEO and the CFO, concluded that, as of December 31, 2016, OPG's DC&P and ICOFR (as defined in National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings*) were effective.

FOURTH QUARTER

Discussion of Results

(millions of dollars) (unaudited)	Three Months Ended December 31 2016	2015
Revenue	**1,388**	1,312
Fuel expense	**186**	175
Gross margin	**1,202**	1,137
Operations, maintenance and administration	**686**	788
Depreciation and amortization	**316**	354
Accretion on fixed asset removal and nuclear waste management liabilities	**233**	223
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(126)**	(169)
Income from investments subject to significant influence	**(9)**	(9)
Property taxes	**11**	11
Restructuring	**6**	5
Income (loss) before other loss, interest, and income taxes	**85**	(66)
Other loss	**6**	12
Income (loss) before interest and income taxes	**79**	(78)
Net interest expense	**28**	44
Income (loss) before income taxes	**51**	(122)
Income tax expense (recovery)	**59**	(22)
Net loss	**(8)**	(100)
Net loss attributable to the Shareholder	**(13)**	(101)
Net income attributable to non-controlling interest	**5**	1

Net loss attributable to the Shareholder for the fourth quarter was $13 million, compared to a net loss of $101 million for the same quarter in 2015.

Income before interest and income taxes was $79 million during the fourth quarter of 2016, an increase of $157 million compared to loss before interest and income taxes of $78 million during the same period in 2015. The following summarizes the significant factors which caused the variance:

Significant factors that increased income before other loss, interest and income taxes:

- Lower number of outage days increased nuclear generation by 2.2 TWh during the fourth quarter in 2016, compared to the same period in 2015, primarily due to the four-unit Darlington VBO that was completed on October 30, 2015 and a lower number of unplanned outage days at the Darlington GS. The increase in nuclear generation resulted in an increase in revenue from the nuclear base regulated price of approximately $130 million.
- Lower OM&A expenses of $77 million in the Regulated – Nuclear Generation segment primarily due to increased outage activities in 2015, including the Darlington VBO.

Significant factors that decreased income before other loss, interest and income taxes:

- Decrease in earnings from the Nuclear Segregated Funds of $43 million during the fourth quarter of 2016, compared to the same quarter in 2015, mainly due to an accounting adjustment recorded during the fourth quarter of 2016 to limit the funds asset values recognized on OPG's consolidated balance sheet to the lower underlying obligations as reflected in the 2017 ONFA Reference Plan.
- Higher accretion expense of $10 million, reflecting the increase in the Nuclear Liabilities recognized in December 2015 in connection with the changes in the estimated useful life assumptions for OPG's nuclear stations, net of the impact of the Bruce Lease Net Revenues Variance Account.

The increase in income tax expense during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets in 2016.

Average Sales Prices

The average sales price for the Regulated – Nuclear Generation segment during the fourth quarter of 2016 was 6.9 ¢/kWh, compared to 7.0 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of an OEB-authorized nuclear rate rider of $1.33/MWh related to the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment during the fourth quarter of 2016 was 4.5 ¢/kWh, compared to 4.8 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of a rate rider of $6.04 per MWh related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014.

The income impact of changes in revenue from rate riders was largely offset by changes in amortization expense related to regulatory balances.

Electricity Generation

OPG's electricity generation for the three months ended December 31, 2016 and 2015 was as follows:

	Three Months Ended December 31	
(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**11.0**	8.8
Regulated – Hydroelectric	**6.7**	7.3
Contracted Generation Portfolio [1]	**0.6**	0.7
Total OPG electricity generation	**18.3**	16.8
Total electricity generation by all other generators in Ontario [2]	**18.9**	19.6

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The increase in OPG's electricity generation of 1.5 TWh during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher electricity generation of 2.2 TWh from the Regulated – Nuclear Generation segment as a result of fewer outage days at the Darlington GS during the fourth quarter of 2016, which was primarily due to the Darlington VBO that occurred during the fourth quarter of 2015. The increase in generation was partially offset by reduced generation from the Regulated – Hydroelectric Segment of 0.6 TWh, primarily due to lower water flows in eastern Ontario during the fourth quarter of 2016.

Ontario's electricity demand as reported by the IESO was 33.2 TWh during the fourth quarter of 2016, compared to 32.7 TWh during the fourth quarter of 2015.

Liquidity and Capital Resources

Cash flow provided by operating activities during the three months ended December 31, 2016 was $437 million, compared to $111 million for the same period in 2015. The increase in cash flow was primarily due to higher generation revenue receipts, lower pension plan contributions and lower OM&A expenditures during the fourth quarter of 2016. Higher generation revenue receipts reflected higher nuclear generation in the fourth quarter of 2016, compared to the same period in 2015.

Cash flow used in investing activities during the three months ended December 31, 2016 was $497 million, compared to $571 million during the same period in 2015. The decrease was primarily due to partial maturity, in the fourth quarter of 2016, of a structured deposit note invested in the fourth quarter of 2015, partially offset by higher expenditures for the Darlington Refurbishment project. The deposit note invested proceeds from the long-term debt issued in support of the Peter Sutherland Sr. GS project in October 2015.

Cash flow used by financing activities during the three months ended December 31, 2016 was $180 million, compared to cash flow provided in financing activities of $356 million for the same period in 2015. The decrease in cash flow provided by financing activities was due to the net repayment of short-term notes and lower net issuance of long-term debt in the fourth quarter of 2016.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected annual financial information for the last three years and financial information for each of the eight most recently completed quarters. This information is derived from OPG's unaudited interim consolidated financial statements and the audited consolidated financial statements, and has been prepared in accordance with US GAAP.

Annual Financial Information

(millions of dollars – except where noted)	**2016**	**2015**	**2014**
Revenue	**5,653**	5,476	4,963
Income before extraordinary item attributable to the Shareholder	**436**	402	561
Net income attributable to the Shareholder	**436**	402	804
Net income per common share before extraordinary item *(dollars)*	**$1.70**	$1.57	$2.19
Net income per common share *(dollars)*	**$1.70**	$1.57	$3.14
Total assets	**44,372**	44,250	41,645
Total long-term liabilities	**31,460**	32,404	30,483
Common shares outstanding *(millions)*	**256.3**	256.3	256.3

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**2016 Quarters Ended**				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	**1,388**	**1,400**	**1,387**	**1,478**	**5,653**
Net (loss) income	**(8)**	**198**	**135**	**128**	**453**
Less: Net income attributable to non-controlling interest	**5**	**4**	**3**	**5**	**17**
Net (loss) income attributable to the Shareholder	**(13)**	**194**	**132**	**123**	**436**
Per common share, attributable to the Shareholder *(dollars)*	**($0.05)**	**$0.76**	**$0.51**	**$0.48**	**$1.70**

Quarterly Financial Information

(millions of dollars – except where noted) (unaudited)	2015 Quarters Ended				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	1,312	1,426	1,383	1,355	5,476
Net (loss) income	(100)	85	193	239	417
Less: Net income attributable to non-controlling interest	1	5	4	5	15
Net (loss) income attributable to the Shareholder	(101)	80	189	234	402
Per common share, attributable to the Shareholder *(dollars)*	($0.39)	$0.31	$0.74	$0.91	$1.57

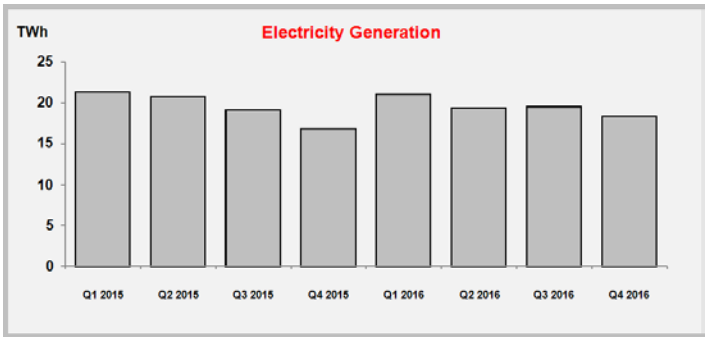
Trends

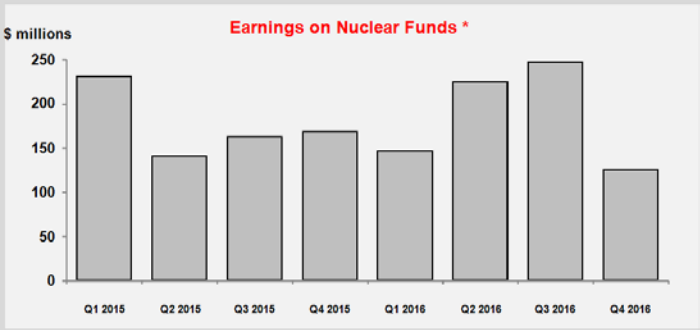
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues are higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of foregone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington VBO, which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items which affected net income (loss) in certain quarters above are described below:

- A gain of $22 million recorded during the first quarter of 2016 reflecting the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to Niagara Tunnel project expenditures.
- Lower earnings of $16 million during the first quarter of 2015, compared to the same quarter in 2016, in the Contracted Generation Portfolio segment, primarily as a result of a provision made in that quarter related to an IESO audit.
- Higher OM&A expenses of $105 million for the Regulated – Nuclear Generation segment during the first half of 2016, compared to the same period in 2015, primarily resulting from an increase in planned outage activities and the timing of planned outage activities during the year.
- Lower OM&A expenses of $91 million for the Regulated – Nuclear Generation segment during the last half of 2016, compared to the same period in 2015, primarily as a result of the VBO at the Darlington GS in the third and fourth quarters of 2015.

Additional information about OPG, including its audited consolidated financial statements and notes thereto, can be found on SEDAR at www.sedar.com.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow from operations, or any other measure in accordance with US GAAP, but as an indicator of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period.

ROE Excluding AOCI is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**436**	402
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,442**	10,023
ROE Excluding AOCI *(percent)*	**4.2**	4.0

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
FFO before interest		
Cash flow provided by operating activities	**1,705**	1,465
Add: Interest paid	**269**	269
Less: Interest capitalized to fixed and intangible assets	**(141)**	(102)
Add: Changes to non-cash working capital balances	**(68)**	100
FFO before interest	**1,765**	1,732
Adjusted interest expense		
Net interest expense	**120**	180
Add: Interest income	**7**	9
Add: Interest capitalized to fixed and intangible assets	**141**	102
Add: Interest related to regulatory assets and liabilities	**30**	2
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**45**	53
Adjusted interest expense	**343**	346
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.0

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Enterprise TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Enterprise TGC		
Total OM&A expenses	**2,747**	2,783
Total fuel expense	**727**	687
Total capital expenditures	**1,704**	1,376
Less: Darlington Refurbishment capital and non-capital costs	**(1,022)**	(707)
Less: Other generation development project capital and OM&A costs	**(162)**	(197)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**62**	250
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(55)
Add: Hydroelectric gross revenue charge due to electricity foregone due to SBG conditions	**49**	34
Less: OM&A expenses ancillary to electricity generation business	**(24)**	(27)
Other adjustments	**(25)**	(46)
	3,989	4,098
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**78.2**	78.0
Add: Electricity generation foregone due to SBG conditions	**4.7**	3.2
	82.9	81.2
Enterprise TGC per MWh *($/MWh)* [1]	**48.10**	**50.46**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Nuclear TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**2,210**	2,196
Regulated – Nuclear Generation fuel expense	**315**	301
Regulated – Nuclear Generation capital expenditures	**1,338**	1,023
Less: Darlington Refurbishment capital and OM&A costs	**(1,022)**	(708)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**81**	230
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(62)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(6)**	(6)
Other adjustments	**(8)**	(28)
	2,841	2,946
Nuclear electricity generation *(TWh)*	**45.6**	44.5
Nuclear TGC per MWh *($/MWh)* [1]	**62.30**	66.20

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Hydroelectric TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**325**	340
Regulated – Hydroelectric Generation fuel expense	**353**	345
Contracted Generation Portfolio OM&A expenses	**178**	185
Contracted Generation Portfolio fuel expense	**58**	39
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**333**	311
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(158)**	(197)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(177)**	(163)
(Less) Add: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(24)**	18
Add: Hydroelectric gross revenue charge and water rental payments due to electricity generation foregone due to SBG conditions	**49**	34
Other adjustments	**(1)**	-
	936	912
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**29.5**	30.4
Contracted Generation Portfolio electricity generation	**3.1**	3.1
Add: Hydroelectric electricity generation foregone due to SBG conditions	**4.7**	3.2
Less: Non-hydroelectric electricity generation of the Contracted Generation Portfolio	**(0.7)**	(0.6)
	36.6	36.1
Hydroelectric TGC per MWh *($/MWh)*[1]	**25.57**	25.26

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

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www.sedar.com

ONTARIO POWER GENERATION INC.

CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2016

[DRAFT]

STATEMENT OF MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL INFORMATION

Ontario Power Generation Inc.'s (OPG) management is responsible for the presentation and preparation of the annual consolidated financial statements and Management's Discussion and Analysis (MD&A).

The consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States Securities and Exchange Commission for annual financial statements. The MD&A has been prepared in accordance with the requirements of securities regulators, including National Instrument 51-102 of the Canadian Securities Administrators and its related published requirements.

The consolidated financial statements and information in the MD&A necessarily include amounts based on informed judgments and estimates of the expected effects of current events and transactions with appropriate consideration to materiality. Something is considered material if it is reasonably expected to have a significant impact on the Company's earnings, cash flow, value of an asset or liability, or reputation. In addition, in preparing the financial information, we must interpret the requirements described above, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect the reported information. The MD&A also includes information regarding the impact of current transactions and events, sources of liquidity and capital resources, operating trends, and risks and uncertainties. Actual results in the future may differ materially from our present assessment of this information because future events and circumstances may not occur as expected.

In meeting our responsibility for the reliability of the financial information, we maintain and rely on a comprehensive system of internal controls and internal audits, including organizational and procedural controls and internal controls over financial reporting. Our system of internal controls includes: written communication of our policies and procedures governing corporate conduct and risk management; comprehensive business planning; effective segregation of duties; delegation of authority and personal accountability; careful selection and training of personnel; and accounting policies, which we regularly update. This structure ensures appropriate internal controls over transactions, assets and records. We also regularly test internal controls. These controls and testing are designed to provide us with reasonable assurance that the financial records are reliable for preparing financial statements and other financial information, assets are safeguarded against unauthorized use or disposition, liabilities are recognized, and we are in compliance with all regulatory requirements.

Management, including the President and Chief Executive Officer (CEO) and the Chief Financial Officer (CFO), is responsible for maintaining disclosure controls and procedures (DC&P) and internal controls over financial reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements in accordance with US GAAP.

An evaluation of the effectiveness of the design and operation of OPG's DC&P and ICOFR was conducted as of December 31, 2016. Accordingly, we, as OPG's President and CEO and CFO, will certify OPG's annual disclosure documents filed with the Ontario Securities Commission, which includes attesting to the design and effectiveness of OPG's DC&P and ICOFR.

The Board of Directors, based on recommendations from its Audit and Risk Committee, reviews and approves the consolidated financial statements and the MD&A, and oversees management's responsibilities for the presentation and preparation of financial information, maintenance of appropriate internal controls, management and control of major areas of financial risk, and assessment of significant and related party transactions.

The consolidated financial statements have been audited by Ernst & Young LLP, independent external auditors appointed by the Board of Directors. The Independent Auditors' Report outlines the auditors' responsibilities and the scope of their examination and their opinion on OPG's consolidated financial statements. The independent external auditors, as confirmed by the Audit and Risk Committee, had direct and full access to the Audit and Risk Committee, with and without the presence of management, to discuss their audit and their findings therefrom, as to the integrity of OPG's financial reporting and the effectiveness of the system of internal controls.

Jeff Lyash
President and Chief Executive Officer

Ken Hartwick
Senior Vice President, Finance, Strategy, Risk and Chief Financial Officer

March 10, 2017

INDEPENDENT
AUDITORS' REPORT

To the Shareholder of Ontario Power Generation Inc.

We have audited the accompanying consolidated financial statements of Ontario Power Generation Inc., which comprise the consolidated balance sheets as at December 31, 2016 and 2015, and the consolidated statements of income, comprehensive income, cash flows, and changes in shareholder's equity for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with United States generally accepted accounting principles, and for such internal controls as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Ontario Power Generation Inc. as at December 31, 2016 and 2015 and the results of its operations and its cash flows for the years then ended in accordance with United States generally accepted accounting principles.

Toronto, Canada

March 10, 2017

Ernst & Young LLP

Chartered Professional Accountants,
Licensed Public Accountants

CONSOLIDATED STATEMENTS OF INCOME

Years Ended December 31 *(millions of dollars except where noted)*	**2016**	**2015**
Revenue *(Note 16)*	**5,653**	5,476
Fuel expense *(Note 16)*	**727**	687
Gross margin *(Note 16)*	**4,926**	4,789
Expenses *(Note 16)*		
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization *(Note 4)*	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities *(Note 8)*	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (gains) losses, interest and income taxes	**724**	703
Other (gains) losses *(Note 16)*	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense *(Note 7)*	**120**	180
Income before income taxes	**621**	509
Income tax expense *(Note 9)*	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest	**17**	15
Basic and diluted net income per common share *(dollars)*	**1.70**	1.57
Common shares outstanding *(millions)*	**256.3**	256.3

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Years Ended December 31 *(millions of dollars)*	2016	2015
Net income	**453**	417
Other comprehensive income, net of income taxes *(Note 10)*		
Actuarial (loss) gain and past service costs on re-measurement of liabilities for pension and other post-employment benefits [1]	**(6)**	148
Reclassification to income of amounts related to pension and other post-employment benefits [2]	**12**	18
Net loss on derivatives designated as cash flow hedges [3]	**-**	(5)
Reclassification to income of losses on derivatives designated as cash flow hedges [4]	**19**	16
Unrealized loss on available-for-sale securities [5]	**(1)**	-
Other comprehensive income	**24**	177
Comprehensive income	**477**	594
Comprehensive income attributable to the Shareholder	**460**	579
Comprehensive income attributable to non-controlling interest	**17**	15

[1] Net of income tax recoveries of $2 million and income tax expenses of $49 million for 2016 and 2015, respectively.

[2] Net of income tax expenses of $4 million and $7 million for 2016 and 2015, respectively.

[3] Net of income tax recoveries of nil and $2 million for 2016 and 2015, respectively.

[4] Net of income tax expenses of $2 million for each of 2016 and 2015.

[5] Net of income tax expenses of nil for each of 2016 and 2015.

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years Ended December 31 *(millions of dollars)*	2016	2015
Operating activities		
Net income	**453**	417
Adjust for non-cash items:		
Depreciation and amortization *(Note 4)*	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities *(Note 8)*	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(746)**	(704)
Pension and other post-employment benefit costs *(Note 11)*	**464**	483
Deferred income taxes and other accrued charges	**(36)**	23
Mark-to-market on derivative instruments	**3**	(218)
Provision for used nuclear fuel and low and intermediate level waste	**118**	117
Regulatory assets and liabilities	**(170)**	141
Provision for materials and supplies	**42**	28
Other (gains) losses	**(17)**	14
Other	**(8)**	5
	2,289	2,301
Contributions to nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(150)**	(143)
Expenditures on fixed asset removal and nuclear waste management *(Note 8)*	**(275)**	(218)
Reimbursement of expenditures on nuclear fixed asset removal and nuclear waste management *(Note 8)*	**70**	76
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans *(Note 11)*	**(363)**	(480)
Expenditures on restructuring	**(6)**	(16)
Distributions received from investments subject to significant influence	**52**	51
Net changes to other long-term assets and liabilities	**20**	(6)
Net changes to non-cash working capital balances *(Note 17)*	**68**	(100)
Cash flow provided by operating activities	**1,705**	1,465
Investing activities		
Purchase of available-for-sale securities	**(213)**	-
Investment in deposit note *(Note 6)*	**-**	(180)
Proceeds from deposit note *(Note 6)*	**110**	-
Net proceeds from sale of property, plant and equipment	**-**	3
Investment in property, plant and equipment and intangible assets *(Note 16)*	**(1,704)**	(1,376)
Cash flow used in investing activities	**(1,807)**	(1,553)
Financing activities		
Issuance of long-term debt *(Note 6)*	**334**	245
Repayment of long-term debt *(Note 6)*	**(273)**	(503)
Settlement of cash flow hedges	**-**	(9)
Distribution to non-controlling interest	**(14)**	(16)
Issuance of short-term notes *(Note 7)*	**3,108**	2,628
Repayment of short-term notes *(Note 7)*	**(3,331)**	(2,403)
Cash flow used in financing activities	**(176)**	(58)
Net decrease in cash and cash equivalents	**(278)**	(146)
Cash and cash equivalents, beginning of year	**464**	610
Cash and cash equivalents, end of year	**186**	464

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 *(millions of dollars)*	2016	2015
Assets		
Current assets		
Cash and cash equivalents	**186**	464
Available-for-sale securities *(Note 18)*	**212**	-
Receivables from related parties *(Note 18)*	**429**	545
Nuclear fixed asset removal and nuclear waste management funds *(Notes 8 and 16)*	**24**	15
Fuel inventory *(Note 16)*	**310**	344
Materials and supplies *(Note 16)*	**100**	96
Regulatory assets *(Note 5)*	**-**	628
Prepaid expenses	**200**	92
Other current assets *(Notes 4 and 6)*	**282**	206
	1,743	2,390
Property, plant and equipment *(Notes 4, 15, and 16)*	**29,319**	29,469
Less: accumulated depreciation	**9,317**	8,874
	20,002	20,595
Intangible assets *(Notes 4 and 16)*	**503**	476
Less: accumulated amortization	**404**	378
	99	98
Other assets		
Nuclear fixed asset removal and nuclear waste management funds *(Notes 8 and 16)*	**15,960**	15,121
Long-term materials and supplies *(Note 16)*	**345**	337
Regulatory assets *(Note 5)*	**5,855**	5,240
Investments subject to significant influence *(Note 19)*	**321**	336
Other long-term assets *(Note 6)*	**47**	133
	22,528	21,167
	44,372	44,250

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 *(millions of dollars)*	2016	2015
Liabilities		
Current liabilities		
Accounts payable and accrued charges *(Note 18)*	**1,164**	1,199
Short-term debt *(Note 7)*	**2**	225
Deferred revenue due within one year	**12**	12
Long-term debt due within one year *(Note 6)*	**1,103**	273
Income taxes payable	**123**	66
Regulatory liabilities *(Note 5)*	**-**	26
	2,404	1,801
Long-term debt *(Note 6 and 18)*	**4,417**	5,186
Other liabilities		
Fixed asset removal and nuclear waste management liabilities *(Notes 8 and 16)*	**19,484**	20,169
Pension liabilities *(Note 11)*	**3,012**	2,597
Other post-employment benefit liabilities *(Note 11)*	**2,897**	3,085
Long-term accounts payable and accrued charges	**213**	207
Deferred revenue	**298**	246
Deferred income taxes *(Note 9)*	**829**	880
Regulatory liabilities *(Note 5)*	**310**	34
	27,043	27,218
Equity		
Common shares *(Note 14)* [1]	**5,126**	5,126
Retained earnings	**5,534**	5,098
Accumulated other comprehensive loss *(Note 10)*	**(295)**	(319)
Equity attributable to the Shareholder	**10,365**	9,905
Equity attributable to non-controlling interest *(Note 21)*	**143**	140
Total equity	**10,508**	10,045
	44,372	44,250

[1] 256,300,010 common shares outstanding at a stated value of $5,126 million as at December 31, 2016 and 2015.

Commitments and Contingencies *(Notes 6, 9, 11, and 15)*

See accompanying notes to the consolidated financial statements

On behalf of the Board of Directors:

Bernard Lord
Board Chair

M. George Lewis
Director

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Common shares *(Note 14)*	**5,126**	5,126
Retained earnings		
Balance at beginning of year	**5,098**	4,696
Net income attributable to the Shareholder	**436**	402
Balance, end of year	**5,534**	5,098
Accumulated other comprehensive loss, net of income taxes *(Note 10)*		
Balance at beginning of year	**(319)**	(496)
Other comprehensive income	**24**	177
Balance, end of year	**(295)**	(319)
Equity attributable to the Shareholder	**10,365**	9,905
Equity attributable to non-controlling interest *(Note 21)*		
Balance at beginning of year	**140**	141
Distribution to non-controlling interest	**(14)**	(16)
Net income attributable to non-controlling interest	**17**	15
Balance, end of year	**143**	140
Total equity	**10,508**	10,045

See accompanying notes to the consolidated financial statements

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2016 and 2015

1. DESCRIPTION OF BUSINESS

Ontario Power Generation Inc. (OPG or the Company) was incorporated on December 1, 1998 pursuant to the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (the Province or the Shareholder). OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario.

2. BASIS OF PRESENTATION

These consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States (US) Securities and Exchange Commission for annual financial statements.

As required by *Ontario Regulation 395/11,* as amended, under the Financial Administration Act (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG has also received exemptive relief from the Ontario Securities Commission (OSC) from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant, or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

All dollar amounts are presented in Canadian dollars, except in tabular format where noted. Certain of the 2015 comparative amounts have been reclassified from financial statements previously presented to conform to the 2016 consolidated financial statement presentation.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Consolidation

The consolidated financial statements of the Company include the accounts of OPG and its majority-owned subsidiaries, and a variable interest entity (VIE) where OPG is the primary beneficiary. All significant intercompany balances and intercompany transactions have been eliminated on consolidation.

Where OPG does not control an investment, but has significant influence over operating and financing policies of the investee, the investment is accounted for under the equity method. OPG co-owns the Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS) with TransCanada Energy Ltd. and co-owns the Brighton Beach gas-fired combined cycle generating station (Brighton Beach) with ATCO Power Canada Ltd. OPG accounts for its 50 percent ownership interest in each of these jointly controlled entities using the equity method.

Variable Interest Entities

OPG performs ongoing analysis to assess whether it holds any VIEs. VIEs of which OPG is deemed to be the primary beneficiary are consolidated. The primary beneficiary of a VIE has both the power to direct the activities of the entity that most significantly impact its economic performance and the obligation to absorb losses of the entity that could potentially be significant to the Company. In circumstances where OPG is not deemed to be the primary beneficiary, the VIE is not recorded in OPG's consolidated financial statements.

In 2002, OPG and other Canadian nuclear waste producers established the Nuclear Waste Management Organization (NWMO) in accordance with the *Nuclear Fuel Waste Act* (NFWA). The primary long-term mandate of the NWMO is to implement an approach to address the long-term management of used nuclear fuel. In addition to the above mandate, the NWMO provides project management services for OPG's proposed Deep Geologic Repository (DGR) for the long-term management of low and intermediate level waste (L&ILW) and other nuclear lifecycle liability management services. OPG has the majority of voting rights at the NWMO Board of Directors' and members' level. The NFWA requires the nuclear fuel waste owners to establish and make payments into trust funds for the purpose of funding the implementation of the long-term nuclear used fuel management plan. OPG provides over 90 percent of NWMO's funding, primarily towards the design and implementation of Canada's Adaptive Phased Management plan for the long-term management of nuclear used fuel. As a result, OPG is expected to absorb a majority of the NWMO's expected losses through future funding in the event of any shortfall. Therefore, OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated.

As at December 31, 2016, PSS Generating Station Limited Partnership (PSS or the Partnership) was classified as a VIE because it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership.

Use of Management Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefit (OPEB) balances, asset retirement obligations (AROs), income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments and investments in segregated funds, depreciation and amortization expenses, valuation of the nuclear fixed assets and nuclear waste management funds, and inventories. Actual results may differ significantly from these estimates.

Cash and Cash Equivalents and Short-Term Investments

Cash and cash equivalents include cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments and classified as current assets. These securities are valued at the lower of cost and market.

Inventories

Inventories, consisting of fuel and materials and supplies, are measured at the lower of cost and net realizable value. Cost is determined as weighted average cost for fuel inventory and average cost for materials and supplies.

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to operations, maintenance and administration (OM&A) expenses when incurred. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis, except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis. As at December 31, 2016, the amortization periods of PP&E and intangible assets are as follows:

Nuclear generating stations and major components	15 to 74 years [1]
Thermal generating stations and major components	5 to 50 years
Hydroelectric generating stations and major components	10 to 100 years
Administration and service facilities	10 to 50 years
Computers, and transport and work equipment assets – declining balance	12% to 40% per year
Major application software	5 years
Service equipment	5 to 10 years

[1] As at December 31, 2016, the end of station life for depreciation purposes for the Darlington, Pickering, and Bruce A and B nuclear generating stations ranged between 2020 and 2061. Major components are depreciated over the lesser of the station life and the life of the components.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

The carrying value of investments accounted for under the equity method are reviewed annually for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the Ontario Energy Board (OEB).

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998,* the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB are classified as current if they are expected to be recovered from, or refunded to, customers within 12 months of the end of the reporting period, based on recovery or repayment periods authorized by the OEB. All other regulatory asset and liability balances are classified as non-current on the consolidated balance sheets.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in accumulated other comprehensive income (AOCI) in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans. The regulatory asset is reversed as underlying unamortized balances are amortized as components of the benefit cost.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures on its pension and OPEB plans. It is the Company's position that this decision by the OEB does not constitute a change in the basis of rate recovery for OPG's of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices or in an OEB-authorized deferral or variance account for future recovery as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account to record the difference between OPG's actual pension and OPEB costs for the regulated business

determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the above noted consultation process.

See Notes 5, 8, 9, and 11 to these consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Revenue Recognition

All of OPG's electricity generation is offered into the real-time energy spot market administered by the Independent Electricity System Operator (IESO). Revenue is recognized as electricity is generated and metered to the IESO.

Revenue Recognition – Regulated Generation

Energy revenue generated from OPG's regulated facilities is based on regulated prices determined by the OEB that currently include a base regulated price and rate riders for the recovery or repayment of approved variance and deferral account balances.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base is a regulatory construct that, for OPG, represents the average net level of investment in regulated fixed and intangible assets in-service and an allowance for working capital. The revenues from the regulated hydroelectric facilities are also subject to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The rate riders in effect during 2016 were established by the OEB in its October 2015 order based on OPG's application to recover balances in most of the authorized variance and deferral accounts as at December 31, 2014. The rate riders in effect during 2015 included those established by the OEB in 2014 in conjunction with the base regulated prices in effect since November 1, 2014 and those authorized by the OEB in October 2015 based on OPG's application to recover the December 31, 2014 balances. The OEB-authorized variance and deferral accounts are discussed in Note 5 to these consolidated financial statements.

Revenue Recognition – Non-regulated Generation and Other Revenue

The electricity generation from OPG's non-regulated assets receives the Ontario electricity spot market price, except where an energy supply agreement (ESA) with the IESO or another contractual agreement is in place. As at December 31, 2016, most of OPG's operating non-regulated assets are subject to an ESA. Revenue from the generating stations subject to an ESA is recognized in accordance with the terms of the agreement. Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO is substituted as the counterparty of the ESAs or other agreements that were previously executed with the OPA.

OPG also sells into, and purchases from, interconnected markets of other provinces and the northeast and midwest regions of the US. All contracts that are not designated as hedges are recorded in the consolidated balance sheets at market value, with gains or losses recorded in the consolidated statements of income. Gains and losses on energy trading contracts (including those to be physically settled) are recorded on a net basis in the consolidated statements of income. Accordingly, power purchases of $19 million were netted against revenue in 2016 (2015 – $75 million).

OPG derives non-energy revenue under the terms of a lease arrangement and associated agreements with Bruce Power L.P. (Bruce Power) related to the Bruce nuclear generating stations. This includes lease revenue and revenue from heavy water sales, detritiation services and waste management services. OPG's net revenues from the lease of the Bruce stations and related agreements, including a portion of heavy water sales, are credited to customers and have therefore reduced regulated prices for the generation from the nuclear facilities owned and operated by OPG. The minimum lease payments are recognized in revenue on a straight-line basis over the term of the lease.

In addition, non-energy revenue includes isotope sales, real estate rentals and other service revenues. Revenues from these activities are recognized as services are provided, or as products are delivered.

Fixed Asset Removal and Nuclear Waste Management Liabilities

OPG recognizes AROs for fixed asset removal and nuclear waste management, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The liabilities are initially recorded at their estimated fair value, which is based on a discounted value of the expected costs to be paid.

On an ongoing basis, the liabilities for nuclear fixed asset removal and nuclear waste management (Nuclear Liabilities) are increased by the present value of the incremental (variable) cost portion for the nuclear waste generated each year, with the corresponding amounts charged to operating expenses. Variable expenses relating to low and intermediate level nuclear waste are charged to OM&A expenses. Variable expenses relating to the management and storage of nuclear used fuel are charged to fuel expense. The liabilities may also be adjusted due to any changes in the estimated amount or timing of the underlying future cash flows, with any resulting changes in the related asset retirement costs capitalized as part of the carrying amount of the related fixed assets. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the originally estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of increases in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of decreases in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets. Upon settlement of the liabilities, a gain or loss would be recorded.

Accretion arises because the fixed asset removal and nuclear waste management liabilities are reported on a net present value basis. Accretion expense is the increase in the carrying amount of the liabilities due to the passage of time.

The asset retirement cost is capitalized by increasing the carrying value of the related fixed assets. The capitalized cost is depreciated over the remaining service life of the related fixed assets and is included in depreciation and amortization expenses.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG established a Used Fuel Segregated Fund and a Decommissioning Segregated Fund (together the Nuclear Segregated Funds). The Used Fuel Segregated Fund is intended to fund expenditures associated with the long-term management of radioactive used nuclear fuel bundles, while the Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the nuclear stations are shut down. OPG maintains the Nuclear Segregated Funds in third-party custodial and trust accounts that are segregated from the rest of OPG's assets.

OPG's investments in the Nuclear Segregated Funds and the corresponding amounts payable to/receivable from the Province are classified as held-for-trading. The Nuclear Segregated Funds are measured at fair value based on the bid prices of the underlying equity and fixed income securities, and, in the case of the alternative investment portfolio, using appropriate valuation techniques as outlined in Note 13 to these consolidated financial statements, with realized and unrealized gains and losses recognized in OPG's consolidated statements of income.

Derivatives

All derivatives, including embedded derivatives that must be separately accounted for, generally are classified as held-for-trading and recorded at fair value in the consolidated balance sheets. Transaction costs are expensed as incurred for financial instruments classified or designated as held-for-trading.

Derivatives qualify for hedge accounting if they meet stringent documentation requirements, and if the derivative instrument that is designated as a hedge is expected to effectively hedge the identified risk throughout the life of the hedged item. At the inception of a hedging relationship, OPG documents the relationship between the hedging instrument and the hedged item, its risk management objective, and its strategy for undertaking the hedge. A documented assessment is made, both at the inception of a hedge and on an ongoing basis, of whether or not the derivatives that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

All derivative contracts not designated as hedges are recorded on the consolidated balance sheets as derivative assets or liabilities at fair value with changes in the fair value recorded in the revenue of the Services, Trading, and Other Non-Generation segment. Refer to Note 12 for a discussion of OPG's risk exposures and the derivative instruments used to manage these risks.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model. OPG uses a fair value hierarchy, grouping assets and liabilities into three levels based on the relative objectivity of the inputs used to measure fair value, with Level 1 representing the most objective. Refer to Note 13 for a discussion of fair value measurements and the fair value hierarchy.

Investments in Equity Securities

Available-for-sale (AFS) securities are measured at fair value with unrealized gains and losses due to changes in fair value recognized in other comprehensive income (OCI). Realized gains and losses are included in net income when the shares are sold or awarded. Related transaction costs are expensed as incurred, and dividend income is included in net income in the period dividends are declared. Equity securities are initially measured at the transaction price.

Research and Development

Research and development costs are expensed as incurred. Research and development costs incurred to discharge long-term obligations, such as the Nuclear Liabilities, for which specific provisions have already been made, are charged to the related liability.

Leases

Leases are evaluated and classified as either operating or capital leases for financial reporting purposes. Capital leases, which transfer substantially all of the risks and benefits incidental to ownership of the leased item, are capitalized at the inception of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Capital leases are depreciated over the shorter of the estimated useful life of the asset and the lease term.

Leases where the lessor retains substantially all the risks and benefits incidental to ownership of the asset are classified as operating leases. Operating lease payments, other than contingent rentals, are recognized as an expense in the consolidated statements of income on a straight-line basis over the lease term. Where the amount of rent expense recognized is different from the actual operating lease payment, other than contingent rentals, the difference is deferred and included as assets or liabilities on the consolidated balance sheets.

Pension and Other Post-Employment Benefits

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post-retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective

benefit obligations is accumulated and amortized over future periods; for LTD benefits, the impact of these updates and differences is immediately recognized as OPEB costs in the period incurred.

The discount rates, which are representative of AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure, and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments, and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor), is amortized over the expected average remaining service life of the employees, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on the consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in OCI, net of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as components of pension and OPRB costs as described above.

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the amounts reclassified from AOCI into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the Ontario Electricity Financial Corporation (OEFC). These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or payable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized income tax benefits as income tax expense.

Changes in Accounting Policies and Estimates

Change in Nuclear Liabilities Estimate

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for Nuclear Liabilities as at December 31, 2016 was finalized as part of the required process to update the Reference Plan under the ONFA between OPG and the Province. The update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities, with a corresponding decrease to the asset retirement costs capitalized as part of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear decommissioning at least once every five years, in line with the required ONFA Reference Plan update process.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. These changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account established by the OEB pursuant to *Ontario Regulation 53/05*, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices. The estimated impact on 2017 expenses, before regulatory deferrals, includes a decrease to depreciation expense of approximately $8 million**,** a decrease to accretion expense of approximately $78 million in 2017, and a combined decrease in used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million**.** Under the current OEB-approved cost recovery methodologies, these changes are not expected to materially affect OPG's income in 2017, as they are expected to be largely offset by the OEB-approved variance and deferral accounts, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to *Ontario Regulation 53/05*. It records the revenue requirement impact

associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the amount due to the Province. This accounting adjustment represented the overfunded position of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 relative to the value of the corresponding life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province, because OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and because any excess funding in the Nuclear Segregated Funds upon termination of the ONFA accrues to the Province. Of the $88 million reduction in the Nuclear Segregated Funds assets, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

Pension and Other Post-Employment Benefits

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined under the heading, *Contractual and Commercial Commitments,* in Note 15 Commitments and Contingencies. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation, and assumptions as at December 31, 2016. As part of the valuation, the plan's demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The weighted average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

The deficit for the registered pension plan increased, for accounting purposes, from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million).

Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

OEB's Decision on OPG's December 2014 Motion

In January 2016, OEB issued its decision on OPG's December 2014 motion that requested the OEB to review and vary parts of its November 2014 decision, including the disallowed Niagara Tunnel project capital costs. In its January 2016 decision, the OEB reversed a portion of the November 2014 Niagara Tunnel capital cost disallowance and established a new variance account to record the revenue requirement impact of the reversed disallowance effective November 1, 2014. The November 2014 disallowance resulted in a write off of capital costs in the fourth quarter of 2014. To recognize the expected future recovery of the reversed portion of the disallowance and related revenue requirement impact to March 31, 2016, during the first quarter of 2016, OPG recorded an increase to property, plant and equipment and a corresponding gain of $22 million, and a regulatory asset of $3 million related to the balance in the variance account, in accordance with Accounting Standards Codification (ASC) Topic 980, *Regulated Operations*.

Recent Accounting Pronouncements

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact that the new standard will have on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the AFS classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of other comprehensive income. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One Limited (Hydro One) share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

Intra-Entity Transfers of Assets Other than Inventory

In October 2016, the FASB issued ASU No. 2016-16, *Income* Taxes, where entities will be required to recognize the income tax effects of certain intercompany transfers of assets as an income tax expense or benefit in the period the transaction occurs. This is different from current standards where entities are required to defer the income tax effects until that asset has been sold to a third party or otherwise recognized. OPG is required to adopt this ASU on January 1, 2018. The amendments in this ASU should be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. OPG expects to record a cumulative-effect adjustment to the 2018 opening retained earnings of a debit of $7 million.

Significant Accounting Standard Update Adopted

Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share

In May 2015, the FASB issued ASU No. 2015-07, *Fair Value Measurement (Topic 820) – Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent)*. Under the new guidance, investments measured at net asset value (NAV), which have been elected under the guidance as a practical expedient for fair value, are excluded from the fair value hierarchy. Removing investments measured using the practical expedient from the fair value hierarchy is intended to eliminate the diversity in practice that currently exists with respect to the categorization of these investments. The only criterion for categorizing investments in the fair value hierarchy is the observability of the inputs. OPG has adopted the updates to ASC Topic 820, *Fair Value Measurement* in 2016. The changes in disclosures required under this update are reflected in Notes 11 and 13.

4. PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND DEPRECIATION AND AMORTIZATION

Depreciation and amortization expenses, including amounts recognized in regulatory variance and deferral accounts authorized by the OEB, for the years ended December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Depreciation	**602**	617
Amortization of intangible assets	**27**	20
Amounts recognized in regulatory variance and deferral accounts	**26**	(1)
Amortization of regulatory assets and liabilities *(Note 5)*	**602**	464
	1,257	1,100

Property, plant and equipment as at December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Nuclear generating stations	**11,057**	11,999
Regulated hydroelectric generating stations	**9,430**	9,351
Contracted generation portfolio generating stations	**3,751**	3,713
Other property, plant and equipment	**1,598**	1,839
Construction in progress	**3,483**	2,567
	29,319	29,469
Less: accumulated depreciation		
Generating stations	**7,948**	7,359
Other property, plant and equipment	**1,369**	1,515
	9,317	8,874
	20,002	20,595

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. An active program to locate a buyer was initiated in October 2016. As such, in the fourth quarter of 2016, OPG reclassified the assets' net book value of approximately $93 million (December 31, 2015 – $96 million) out of property, plant and equipment and into Other current assets in the Services, Trading, and Other Non-Generation segment. Depreciation on the assets ceased in the fourth quarter of 2016. In December 2016, a purchase and sale agreement was executed and the disposition is expected to close during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be recognized in the second quarter of 2017 when the transaction is expected to be completed. Pursuant to the December 2015 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act 2014*, OPG is required to transfer a portion of the proceeds of disposition into the Province's Consolidated Revenue Fund.

Construction in progress as at December 31 consists of the following:

(millions of dollars)	**2016**	**2015**
Darlington Refurbishment	**2,563**	1,868
Peter Sutherland Sr. GS	**236**	95
Other	**684**	604
	3,483	2,567

Interest capitalized to construction and development in progress at an average rate of five percent during 2016 (2015 – five percent) was $141 million (2015 – $102 million).

Intangible assets as at December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Nuclear generating stations	**122**	118
Regulated hydroelectric generating stations	**7**	4
Contracted generation portfolio generating stations	**4**	5
Computer software and other intangible assets	**350**	321
Development in progress	**20**	28
	503	476
Less: accumulated amortization		
Generating stations	**120**	115
Computer software and other intangible assets	**284**	263
	404	378
	99	98

The estimated aggregate amortization expense for each of the five succeeding years for intangible assets in service as at December 31, 2016 is as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**
Amortization expense	24	21	20	8	2

5. REGULATORY ASSETS AND LIABILITIES

In December 2014, OPG filed an application with the OEB to recover approximately $1.8 billion in December 31, 2014 balances in most of its authorized regulatory variance and deferral accounts. The recovery of the amount sought was approved by the OEB in 2015.

In October 2015, the OEB issued an order implementing its 2015 decisions on OPG's application. The order authorized OPG to recover $933 million over the period from October 1, 2015 to December 31, 2016 through new rate riders for generation from all of OPG's regulated nuclear and regulated hydroelectric facilities during this period, as shown below. The remaining approved balances will be subject to recovery after 2016.

($/Megawatt hour)	**Nuclear**	**Hydroelectric**
2015/2016 rate riders	10.84	3.19
2015/2016 interim period rate riders [1]	2.17	0.64
Rate riders for the period from October 1, 2015 to December 31, 2016	13.01	3.83

[1] The new riders were made effective July 1, 2015 and implemented effective October 1, 2015 by the OEB. The interim period rate riders were authorized by the OEB to allow for the recovery of the new riders for the period from July 1, 2015 to September 30, 2015. The revenue for the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The income impact of the revenue accrual was largely offset by a corresponding increase in amortization expense related to regulatory assets and liabilities for deferral and variance accounts.

In 2016, OPG recorded amortization of the regulatory assets and liabilities for the deferral and variance account balances approved for disposition on a straight-line basis, based on recovery or repayment periods authorized by the OEB's October 2015 order. In 2015, OPG recorded such amortization on a straight-line basis based on balances and recovery or repayment periods authorized by the OEB's December 2014 and October 2015 orders.

Any shortfall or over-recovery of the approved balances due to differences between actual and forecast production are recorded in the authorized Nuclear Deferral and Variance Over/Under Recovery Variance Account and the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account to be collected from, or refunded to, customers in the future.

The OEB's October 2015 order also approved the continuation of previously authorized variance and deferral accounts, including those authorized pursuant to *Ontario Regulation 53/05*.

Where authorized by the OEB, OPG recorded interest on the unamortized balances in the applicable variance and deferral accounts at the OEB-prescribed rates of 1.10 percent per annum for the period from April 1, 2015 to December 31, 2016 and 1.47 percent per annum for the period from January 1, 2015 to March 31, 2015.

The regulatory assets and liabilities recorded as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Regulatory assets		
Variance and deferral accounts authorized by the OEB		
Pension and OPEB Cost Variance Account	**716**	865
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 11)*	**497**	315
Hydroelectric Surplus Baseload Generation Variance Account	**210**	114
Bruce Lease Net Revenues Variance Account	**95**	95
Nuclear Deferral and Variance Over/Under Recovery Variance Account	**74**	82
Other variance and deferral accounts	**33**	243
	1,625	1,714
Pension and OPEB regulatory asset *(Note 11)*	**3,392**	3,362
Deferred Income Taxes *(Note 9)*	**838**	792
Total regulatory assets	**5,855**	5,868
Less: current portion	**-**	628
Non-current regulatory assets	**5,855**	5,240
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Capacity Refurbishment Variance Account	**102**	-
Other variance and deferral accounts	**208**	60
Total regulatory liabilities	**310**	60
Less: current portion	**-**	26
Non-current regulatory liabilities	**310**	34

The changes in the regulatory assets and liabilities during 2016 and 2015 are as follows:

(millions of dollars)	**Pension and OPEB Cost Variance**	**Pension & OPEB Cash vs Accrual Differential Deferral**	**Hydro-electric Surplus Baseload Generation Variance**	**Bruce Lease Net Revenues Variance**	**Nuclear Deferral and Variance Over/Under Recovery Variance**	**Capacity Refurb-ishment Variance**	**Other Variance and Deferral (net)**	**Pension and OPEB Regula-tory Asset**	**Deferred Income Taxes**
Net regulatory assets January 1, 2015	939	36	67	315	56	190	320	4,363	861
Increase (decrease)	-	279	82	(149)	44	(68)	3	(1,001)	(69)
Interest	-	-	-	-	1	2	1	-	-
Amortization	(74)	-	(35)	(71)	(19)	(124)	(141)	-	-
Net regulatory assets December 31, 2015	865	315	114	95	82	-	183	3,362	792
Increase (decrease)	**-**	**182**	**126**	**143**	**29**	**(36)**	**(184)**	**30**	**46**
Interest	**-**	**-**	**2**	**-**	**1**	**-**	**-**	**-**	**-**
Amortization	**(149)**	**-**	**(32)**	**(143)**	**(38)**	**(66)**	**(174)**	**-**	**-**
Net regulatory assets December 31, 2016	**716**	**497**	**210**	**95**	**74**	**(102)**	**(175)**	**3,392**	**838**

Pension and OPEB Cost Variance Account

As authorized by the OEB, for the period from March 1, 2011 to October 30, 2014, the Pension and OPEB Cost Variance Account recorded the differences between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and related tax impacts, and corresponding forecast amounts reflected in the regulated prices then in effect. In its November 2014 decision, the OEB determined that the pension and OPEB amounts reflected in OPG's new regulated prices effective November 1, 2014 would be limited to the Company's estimated minimum contributions to its registered pension plan and a forecast of OPG's expenditures on the OPEB and supplementary pension plans. As such, the OEB ordered the Pension and OPEB Cost Variance Account to record only amortization beginning on November 1, 2014.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of 10/12 of the account balance as at December 31, 2012 over a 144-month period to December 31, 2024. Amounts recorded in the account in 2013 and 2014 were approved for recovery over a 72-month period to June 30, 2021 by the OEB's October 2015 order.

Pension & OPEB Cash Versus Accrual Differential Deferral Account

In its November 2014 decision and December 2014 order, the OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Effective November 1, 2014, this deferral account records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis under US GAAP and OPG's corresponding actual cash expenditures for these plans. The balance in the account as at December 31, 2016 represents the excess of costs calculated using the accrual basis over the cash basis for the period from November 1, 2014 to December 31, 2016. The Company has recognized the amount set aside in the deferral account as a regulatory asset.

The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of the generic OEB proceeding on the regulatory treatment and recovery of pension and OPEB costs. The OEB's consultation process to develop standard principles to guide its review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery, began in May 2015. OPG is participating in the consultation. In July 2016, the OEB held a public stakeholder forum as part of the consultation. In September 2016, OPG made a written submission of its position on the matter with the OEB. OEB's consultation process remains ongoing.

Hydroelectric Surplus Baseload Generation Variance Account

The Hydroelectric Surplus Baseload Generation Variance Account records the impact of foregone production at OPG's regulated hydroelectric facilities due to surplus baseload generation conditions. The variance account was authorized by the OEB effective March 1, 2011 for the regulated hydroelectric facilities prescribed for rate regulation prior to 2014, and effective November 1, 2014 for the applicable regulated hydroelectric facilities prescribed for rate regulation effective in 2014.

In its November 2014 decision and December 2014 order, the OEB approved the recovery of the account balance as at December 31, 2013 over a 12-month period beginning on January 1, 2015. The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 over an 18-month period from July 1, 2015 to December 31, 2016. OPG's May 2016 application to the OEB included a request to recover the balance in this account as at December 31, 2015 less amounts approved in the OEB's October 2015 order.

Bruce Lease Net Revenues Variance Account

In accordance with *Ontario Regulation 53/05*, the OEB is required to include the difference between OPG's revenues and costs associated with its ownership of the two nuclear stations on lease to Bruce Power in the determination of the regulated prices for production from OPG's regulated nuclear facilities. The OEB established a variance account

that captures differences between OPG's revenues and costs related to the Bruce nuclear generating stations and the corresponding forecasts included in approved nuclear regulated prices.

In 2013, the OEB ordered the portion of the balance in the Bruce Lease Net Revenues Variance Account related to the impact of the derivative liability embedded in the terms of the Bruce Lease in effect prior to December 2015 to be recovered on the basis of OPG's expected rent rebate payments to Bruce Power and associated income tax impacts. The OEB's October 2015 order reaffirmed this approach. In December 2015, as a result of amendments to the Bruce Lease, OPG reversed the derivative liability, with a corresponding reduction to the regulatory asset for this account. Amounts collected from customers for the derivative liability for periods after its reversal are subject to refund in the future and recognized as a regulatory liability as part of the variance account balance.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of the non-derivative portion of the account balance as at December 31, 2012 over a 48-month period ending December 31, 2016. The non-derivative portion of amounts recorded in the account in 2013 and 2014 was approved for recovery over an 18-month period from July 1, 2015 to December 31, 2016 by the OEB's October 2015 order. The balance in this account as at December 31, 2016 therefore reflects the cumulative variances in net revenues related to the non-derivative portion of the account between January 1, 2015 and December 2016, partially offset by the refund to ratepayers for the derivative cancellation in 2015.

Nuclear Deferral and Variance Over/Under Recovery Variance Account

The Nuclear Deferral and Variance Over/Under Recovery Variance Account records any shortfall or over-recovery of the approved variance and deferral account balances due to differences between actual and forecast nuclear production. The account also captures transfer of balances remaining in other variance and deferral accounts as they expire. The balance in the account will be collected from, or refunded to, customers following OPG's next application to the OEB.

The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 over an 18-month period from July 1, 2015 to December 31, 2016. OPG's May 2016 application to the OEB included a request to recover the balance in this account as at December 31, 2015 less amounts approved in the OEB's October 2015 order.

Capacity Refurbishment Variance Account

Pursuant to *Ontario Regulation 53/05*, the OEB has authorized the Capacity Refurbishment Variance Account (CRVA). The account captures variances from the forecasts reflected in the regulated prices for capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to one or more of the regulated facilities. The balance in the account as at December 31, 2016 includes variances related to the refurbishment of the Darlington nuclear generating station, life extension initiatives at the Pickering nuclear generation station, and other projects.

OPG determines amounts to be recovered from, or refunded to, customers with respect to variances in capital costs as the difference from forecast depreciation expense and cost of capital associated with the in-service capital reflected in the regulated prices and associated income tax effects. The cost of capital amount in the account is calculated using the weighted average cost of capital, including a return on equity, as approved by the OEB in determining the regulated prices. In accordance with US GAAP, in recognizing a regulatory asset for the CRVA, OPG limits the portion of cost of capital additions recognized as a regulatory asset to the amount calculated using the average rate of capitalized interest applied to construction and development in progress.

The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 less amounts approved in the OEB's December 2014 order over an 18-month period from July 1, 2015 to December 31, 2016. In setting new regulated prices effective November 1, 2014, the OEB approved the recovery of the December 31, 2013 nuclear capital and hydroelectric portions of the account balance, totaling $119 million, over a 12-month period beginning on January 1, 2015.

Other Variance Accounts

Regulatory assets

As at December 31, 2016 and 2015, regulatory assets for other variance and deferral accounts included amounts for Nuclear Liability Deferral Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Development Variance Account, and the Pickering Life Extension Depreciation Variance Account.

The Nuclear Liability Deferral Account is authorized in connection with changes to OPG's liabilities for nuclear used fuel management and nuclear decommissioning and L&ILW management associated with the nuclear facilities owned and operated by OPG, which are comprised of the Pickering and Darlington nuclear generating stations. The deferral account records the revenue requirement impact associated with the changes in these liabilities arising from an approved reference plan, in accordance with the terms of the ONFA.

The Hydroelectric Deferral and Variance Over/Under Recovery Variance Account records any shortfall or over-recovery of the approved variance and deferral account balances due to differences between actual and forecast hydroelectric production. The account also captures transfer of balances remaining in other variance and deferral accounts as they expire. The balance in the account will be collected from, or refunded to, customers following OPG's next application to the OEB.

The Nuclear Development Variance Account records variances between the actual non-capital costs incurred and firm financial commitments made in the course of planning and preparation for the development of proposed new nuclear generation facilities and the corresponding forecasts reflected in the regulated prices approved by the OEB.

The Pickering Life Extension Depreciation Variance Account balance was recorded wholly during the period from November 1, 2014 to December 31, 2014. This balance represents an offset to the customer credit for the reduction in depreciation expense for the Pickering nuclear generating station that was reflected both as a reduction to the base regulated prices effective November 1, 2014 and the nuclear rate rider in effect during 2014. The regulatory asset for this balance was fully amortized during the year ended December 31, 2016 based on the recovery periods authorized by the OEB.

As at December 31, 2016, regulatory assets for other variance and deferral accounts also included the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account. This account was established in the OEB's January 2016 decision in which it reversed a portion of the November 2014 Niagara Tunnel Capital cost disallowance. This account records the revenue requirement impact of the reversed disallowance effective November 1, 2014. To recognize the expected future recovery of the reversed portion of the disallowance, OPG recorded an increase to property, plant and equipment and a corresponding gain of $22 million during 2016 in accordance with ASC Topic 980, *Regulated Operations*. As at December 31, 2016, OPG also recorded a regulatory asset of $3 million related to the balance in the variance account.

As at December 31, 2015, regulatory assets for other variance and deferral accounts also included the Pension & OPEB Cash Payment Variance Account.

Regulatory liabilities

As at December 31, 2016 and 2015, regulatory liabilities for other variance and deferral accounts included amounts for the Hydroelectric Water Conditions Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account.

The Hydroelectric Water Conditions Variance Account captures the impact of differences in regulated hydroelectric electricity production due to differences between forecast water conditions underlying the production forecast approved by the OEB in setting regulated hydroelectric prices, and the actual water conditions.

The Ancillary Services Net Revenue Variance Account was authorized by the OEB to capture differences between actual nuclear and regulated hydroelectric ancillary services net revenue and the forecast amounts of such revenue approved by the OEB in setting regulated prices.

The Income and Other Taxes Variance Account includes deviations in income taxes for the regulated business, from those approved by the OEB in setting regulated prices, caused by changes in tax rates and rules, as well as reassessments.

The Hydroelectric Incentive Mechanism Variance Account records a credit to customers equal to 50 percent of OPG's hydroelectric incentive mechanism revenues above a specified threshold for the regulated hydroelectric facilities.

In its November 2014 decision and December 2014 order, the OEB approved the recovery or repayment of certain of the account balances of the other variance accounts as at December 31, 2013 over a 12-month period beginning on January 1, 2015. In its October 2015 order, the OEB approved the recovery or repayment of the majority of the account balances of the other variance and deferral accounts as at December 31, 2014, less amounts approved in the December 2014 order, over an 18-month period from July 1, 2015 to December 31, 2016.

As at December 31, 2016, regulatory liabilities for other variance and deferral accounts also included the Impact Resulting from Changes in Station-End-of-Life Deferral Account. In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of the changes to the nuclear fixed asset removal and nuclear waste management liabilities and depreciation expense arising from the changes in the estimated useful lives of the Company's nuclear stations, for accounting purposes, implemented effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station-End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG recognized a regulatory liability of $71 million related to the balance in the deferral account.

In addition, as at December 31, 2016, the regulatory liabilities also included the Pension & OPEB Cash Payment Variance Account. This account records, effective November 1, 2014, the difference between OPG's actual contributions to its registered pension plan and expenditures on its OPEB and supplementary pension plans for the regulated business, and the corresponding amounts reflected in the regulated prices.

Pension and OPEB Regulatory Asset

The Pension and OPEB Regulatory Asset represents unamortized amounts in respect of OPG's pension and OPEB plans that have been recognized in OCI and not yet reclassified into the amortization component of the benefit costs in respect of these plans. These amounts are expected to be recovered from customers through future regulated prices. The regulatory asset is reversed as underlying unamortized balances are amortized as components of benefit costs. Refer to Note 3 for a detailed discussion of the rate recovery methodology for pension and OPEB costs under the heading, *Rate Regulated Accounting*. The AOCI amounts related to pension and OPEB plans are presented in Note 11.

Deferred Income Taxes

OPG is required to record a regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities. In addition, OPG is required to recognize a deferred income tax liability or asset for the regulatory asset or liability for the amount of deferred income taxes expected to be included in future regulated prices and paid to or recovered from customers. Income taxes are discussed in Note 9.

6. LONG-TERM DEBT

Long-term debt consists of the following as at December 31: [1]

(millions of dollars)	**2016**	**2015**
Notes payable to the OEFC		
Senior Notes [2]		
4.91% due 2016	**-**	270
5.35% due 2017	**900**	900
5.27% due 2018	**395**	395
5.44% due 2019	**365**	365
4.56% due 2020	**660**	660
4.28% due 2021	**185**	185
3.30% due 2022	**150**	150
3.12% due 2023	**40**	40
3.04% due 2026	**50**	-
5.07% due 2041	**300**	300
4.36% due 2042	**200**	200
4.03% due 2046	**50**	-
UMH Energy Partnership [3]		
Senior Notes		
7.86% due to 2041	**184**	187
PSS Generating Station Limited Partnership [4]		
Senior Notes		
4.90% due to 2067	**245**	245
Lower Mattagami Energy Limited Partnership [5]		
Senior Notes		
2.35% due 2017	**200**	200
4.46% due 2021	**225**	225
3.53% due 2024	**200**	200
2.40% due 2026	**220**	-
5.26% due 2041	**250**	250
5.05% due 2043	**200**	200
4.26% due 2046	**275**	275
4.26% due 2052	**225**	225
Other	**15**	-
	5,534	5,472
Less: bond issuance fees	**(14)**	(13)
Less: due within one year	**(1,103)**	(273)
Long-term debt	**4,417**	5,186

[1] The interest rates disclosed reflect the effective interest rate of the debt.

[2] OEFC senior debt is entitled to receive, in full, amounts owing in respect of the senior debt and is pari passu to the Lower Mattagami Energy Limited Partnership senior notes.

[3] These notes are secured by the assets of the Upper Mattagami and Hound Chute project. Principal repayments of $3 million per year are made on a semi-annual basis until maturity in 2041, at which time the remaining principal balance of $116 million becomes due.

[4] These notes are secured by the assets of the Peter Sutherland Sr. GS project. The notes have an interest-only feature until 2025 and will be amortized with blended semi-annual principal and interest payments thereafter until maturity in 2067, at which time the remaining principal balance of $49 million becomes due.

[5] These notes are secured by the assets of the Lower Mattagami River project, including existing and new operating facilities, and are recourse to OPG until the recourse release date. These notes rank pari passu to the OEFC senior notes.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As at December 31, 2016, there were outstanding borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016,

OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

Interest paid in 2016 was $269 million (2015 – $269 million), of which $261 million (2015 – $261 million) relates to interest paid on long-term debt.

In the fourth quarter of 2015, PSS, a subsidiary of OPG, issued long-term debt totalling $245 million in support of the Peter Sutherland Sr. GS project. The majority of the debt proceeds, totalling $180 million, were invested in a structured deposit note with staggered maturity dates ranging from January 2016 to April 2017. As at December 31, 2016, $70 million was reported as Other current assets on the consolidated balance sheets, based on the terms of the deposit note. As at December 31, 2015, $110 million was reported as Other current assets and $70 million as Other long-term assets.

In October 2016, Lower Mattagami Energy Limited Partnership (LME) issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes is x.xx percent and x.xx percent, respectively. **[MONITOR]**

A summary of the contractual maturities of all long-term borrowings outstanding as at December 31, 2016, by year, is as follows:

(millions of dollars)	
2017	**1,103**
2018	**398**
2019	**368**
2020	**663**
2021	**413**
Thereafter	**2,589**
	5,534

The book value of the pledged assets as at December 31, 2016 was $3,510 million (2015 – $3,520 million).

7. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended both tranches to May 2021. As at December 31, 2016 and 2015, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, the LME maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for the LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program (2015 – $225 million). There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016 and 2015.

As at December 31, 2016, OPG maintained $25 million of short-term, uncommitted overdraft facilities and $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included

$349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016 and 2015, there were Letters of Credit outstanding under this agreement of $150 million which were issued in support of OPG's supplementary pension plan.

In October 2014, UMH Energy Partnership entered into an $8 million short-term, uncommitted overdraft facility and $16 million of irrevocable, standby Letters of Credit facilities in support of its operations. As at December 31, 2016, total Letters of Credit of $14 million had been issued under these facilities.

The following table summarizes the net interest expense for the years ended December 31:

(millions of dollars)	**2016**	**2015**
Interest on long-term debt	**290**	285
Interest on short-term debt	**8**	8
Interest income	**(7)**	(9)
Interest capitalized to property, plant and equipment and intangible assets	**(141)**	(102)
Interest related to regulatory assets and liabilities [1]	**(30)**	(2)
Net interest expense	**120**	180

[1] Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Bruce Lease Net Revenues Variance Account, the Capacity Refurbishment Variance Account, and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

8. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES AND FUNDS

The liabilities for fixed asset removal and nuclear waste management on a present value basis consist of the following as at December 31:

(millions of dollars)	**2016**	**2015**
Liability for nuclear used fuel management	**11,292**	12,793
Liability for nuclear decommissioning and L&ILW waste management	**7,811**	6,999
Liability for non-nuclear fixed asset removal	**381**	377
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169

The changes in the fixed asset removal and nuclear waste management liabilities for the years ended December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Liabilities, beginning of year	**20,169**	17,028
Increase in liabilities due to accretion [1]	**1,024**	906
(Decrease) increase in liabilities reflecting changes to the estimated useful lives of nuclear generating stations *(Note 3)*	**(1,567)**	2,330
Increase in liabilities due to nuclear used fuel and nuclear waste management expenses and other expenses [1]	**133**	123
Liabilities settled by expenditures on fixed asset removal and nuclear waste management	**(275)**	(218)
Liabilities, end of year	**19,484**	20,169

[1] Amounts shown exclude the impact of regulatory variance and deferral accounts.

OPG's fixed asset removal and nuclear waste management liabilities are comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating facilities, and other facilities. Costs will be incurred for activities such as preparation for safe storage, dismantling, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel and L&ILW material.

The determination of the accrual for fixed asset removal and nuclear waste management costs requires significant assumptions since these programs are long-term in nature. The most recent comprehensive update of the cost estimates for the nuclear decommissioning and nuclear waste management liabilities is contained in the approved 2017 ONFA Reference Plan, which covers the 2017-2021 period.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years. The estimates for the Nuclear Liabilities include cash flow estimates for decommissioning the nuclear stations for approximately 40 years after stations are shut down and to 2088 for placement of used fuel into the long-term disposal repository, followed by extended monitoring.

The significant assumptions underlying operational, technical, and economic factors used in the calculation of the accrued Nuclear Liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the nuclear waste programs including construction of waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, or the technology employed may result in significant changes to the value of the accrued liabilities. With programs of this duration and the evolving technology to handle the nuclear waste, there is a significant degree of uncertainty surrounding the measurement of the costs for these long-term programs. These costs may increase or decrease over time.

Liability for Nuclear Used Fuel Management Costs

The liability for nuclear used fuel management represents the cost of managing the highly radioactive used nuclear fuel bundles. The federal NFWA, proclaimed into force in 2002, required that Canada's nuclear fuel waste owners form a nuclear waste management organization, and that each waste owner establish a trust fund for used fuel management costs. This organization, the NWMO, is responsible for the design and implementation of Canada's plan for the long-term management of nuclear used fuel waste. To estimate its liability for nuclear used fuel management costs, OPG has adopted a conservative approach consistent with the Adaptive Phased Management concept approved by the Government of Canada, which assumes a deep geologic repository as part of the long-term management of nuclear used fuel, with an in-service date of 2043 at the earliest.

Liability for Nuclear Decommissioning and L&ILW Management Costs

The liability for nuclear decommissioning and L&ILW management represents the estimated costs of decommissioning the nuclear generating stations after the end of their service lives, as well as the cost of managing L&ILW generated by the stations. The significant assumptions used in estimating future nuclear fixed asset removal costs include a deferred dismantlement basis for decommissioning of the stations, whereby the reactors will remain in a safe state condition for a 30-year period prior to an approximate 10-year dismantlement period.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the accrued costs for the management of L&ILW include an L&ILW DGR. Agreement was previously reached with local municipalities for OPG to develop a deep geologic repository for the long-term management of L&ILW adjacent to OPG's Western Waste Management Facility. OPG has suspended design activities for the L&ILW DGR pending receipt of the site preparation and construction licence.

Liability for Non-Nuclear Fixed Asset Removal Costs

The liability for non-nuclear fixed asset removal primarily represents the estimated costs of decommissioning OPG's thermal generating stations at the end of their services lives. The liability is based on third-party cost estimates after an in-depth review of plant sites and an assessment of required clean-up and restoration activities, completed in 2011 for most of the thermal generating stations. For the purpose of measuring the liability, asset removal activities are estimated to take place over the next one to 15 years. As at December 31, 2016, the liability for non-nuclear fixed asset removal was $381 million (2015 – $377 million).

Ontario Nuclear Funds Agreement

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Segregated Funds based on the approved ONFA Reference Plan in effect.

OPG makes quarterly payments to the Used Fuel Segregated Fund over the life of its nuclear generating stations, as specified in the ONFA, including contributions to the NFWA Trust (the Trust). The Trust forms part of the Used Fuel Segregated Fund, and contributions to the Trust, as required by the NFWA, may be applied towards OPG's ONFA payment obligations. Required funding for 2016 under the ONFA was $150 million (2015 – $143 million). In 2016, OPG completed a comprehensive update of the estimate for its obligations for nuclear waste management and nuclear decommissioning, in line with the required reference plan update process under the ONFA. The results of the update were reflected in a new ONFA reference plan, for years 2017 to 2021, as well as an adjustment reducing the asset retirement obligation carried on OPG's consolidated balance sheet as at December 31, 2016. The 2017-2021 ONFA reference plan was approved by the Province in December 2016, with an effective date of January 1, 2017 (the 2017 ONFA Reference Plan). Based on the funded status of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund reflecting the revised, overall lower life cycle liability estimates per the 2017 ONFA Reference Plan, no contributions to the Nuclear Segregated Funds are required starting in 2017. Contributions may be required in the future should either or both of the funds be in an underfunded position when a new reference plan is prepared.

The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge the current nuclear decommissioning and waste management liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the Canadian Nuclear Safety Commission (CNSC) since 2003, on behalf of OPG. The Provincial Guarantee provides for any shortfall between the CNSC consolidated financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount of the Provincial Guarantee. The current value of the Provincial Guarantee amount of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016.

The investments in the Nuclear Segregated Funds include a diversified portfolio of equities and fixed income securities that are invested across geographic markets, as well as investments in infrastructure, real estate, and agriculture. The Nuclear Segregated Funds are invested to fund long-term liability requirements and, as such, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While short-term fluctuations in market value will occur, managing the long-term return of the Nuclear Segregated Funds remains the primary goal. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Decommissioning Segregated Fund

OPG bears the risk and liability for cost estimate changes and fund earnings in the Decommissioning Segregated Fund. As at December 31, 2016 and December 31, 2015, the Decommissioning Segregated Fund was in an overfunded position.

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund, which is the excess of the fair market value of the Decommissioning Segregated Fund assets over the estimated completion costs, as per the most recently approved ONFA Reference Plan. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the earnings recognized in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus, that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded. Based on the 2017 ONFA Reference Plan, the Used Fuel Segregated Fund was in an overfunded position as at December 31, 2016. As a result, the Decommissioning Segregated Fund balance was reduced by amounts due to the Province. When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets. The payable to the Province may be reduced in subsequent periods in the event that the Decommissioning Segregated Fund earns less than its target rate of return or in the event that a new ONFA Reference Plan is approved with a higher estimated decommissioning liability.

The Province's right to any excess funding in the Decommissioning Segregated Fund upon termination of the ONFA results in OPG capping its annual earnings generally at 3.25 percent plus the long-term Ontario Consumer Price Index (CPI) specified in the most recently approved ONFA Reference Plan, which is the rate of growth in the liability for the estimated completion cost, as long as the Decommissioning Segregated Fund is in an overfunded status of less than 120 percent.

Used Fuel Segregated Fund

OPG is responsible for the risk and liability of cost increases for used fuel waste management under the ONFA, subject to specified graduated liability thresholds, which limit OPG's total financial exposure for the first 2.23 million nuclear used fuel bundles at approximately $15 billion in present value dollars as at December 31, 2016. The graduated liability thresholds do not apply to incremental used fuel bundles beyond 2.23 million.

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined by ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return and the actual market return determined based on the fair value of the fund assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount OPG would pay to or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions for fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province, has the right at any time to access

the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. As at December 31, 2016, the Used Fuel Segregated Fund was overfunded in accordance with the 2017 ONFA Reference Plan. As such, the fund balances are reduced by amounts due to the Province.

Nuclear Segregated Funds

The nuclear fixed asset removal and nuclear waste management funds as at December 31 consist of the following:

(millions of dollars)	Fair Value 2016	2015
Decommissioning Segregated Fund	**8,317**	7,834
Due to Province – Decommissioning Segregated Fund	**(1,477)**	(1,285)
	6,840	6,549
Used Fuel Segregated Fund [1]	**11,082**	10,290
Due to Province – Used Fuel Segregated Fund	**(1,938)**	(1,703)
	9,144	8,587
Total Nuclear Segregated Funds	**15,984**	15,136
Less: current portion	**24**	15
Non-current Nuclear Segregated Funds	**15,960**	15,121

[1] The Ontario NFWA Trust represented $3,688 million as at December 31, 2016 (2015 – $3,409 million) of the Used Fuel Segregated Fund on a fair value basis.

Commented [AJ1]: Slight variance from $8,309 presented in the 2017 approved reference plan

Commented [AJ2]: Due to Province in January submission is 1,913. Is this due to cash vs. accrual account variance?

Commented [AJ3]: 9,154 is the approved Reference Plan amount, again cash vs. accrual here?

The fair value of the securities invested in the Nuclear Segregated Funds as at December 31 is as follows:

(millions of dollars)	Fair Value 2016	2015
Cash and cash equivalents and short-term investments	**354**	343
Alternative investments	**1,989**	1,620
Pooled funds	**1,330**	1,311
Marketable equity securities	**9,503**	8,621
Fixed income securities	**6,181**	6,219
Net receivables/payables	**42**	10
	19,399	18,124
Due to Province	**(3,415)**	(2,988)
	15,984	15,136

The historical cost, gross unrealized aggregate appreciation and depreciation of investment, gross unrealized foreign exchange gains, and fair value of the Nuclear Segregated Funds as at December 31, 2016 and 2015 are summarized as follows:

	2016		
(millions of dollars)	**Decommissioning Segregated Fund**	**Used Fuel Segregated Fund**	**Total**
Historical cost	**6,896**	**9,385**	**16,281**
Gross unrealized gains (losses)			
Aggregate appreciation	**1,326**	**1,564**	**2,890**
Aggregate depreciation	**(165)**	**(222)**	**(387)**
Foreign exchange	**260**	**355**	**615**
	8,317	**11,082**	**19,399**
Due to Province	**(1,477)**	**(1,938)**	**(3,415)**
Total fair value	**6,840**	**9,144**	**15,984**
Less: current portion	**16**	**8**	**24**
Non-current fair value	**6,824**	**9,136**	**15,960**

	2015		
(millions of dollars)	**Decommissioning Segregated Fund**	**Used Fuel Segregated Fund**	**Total**
Historical cost	6,608	8,819	15,427
Gross unrealized gains (losses)			
Aggregate appreciation	1,098	1,283	2,381
Aggregate depreciation	(297)	(383)	(680)
Foreign exchange	425	571	996
	7,834	10,290	18,124
Due to Province	(1,285)	(1,703)	(2,988)
Fair value	6,549	8,587	15,136
Less: current portion	5	10	15
Non-current fair value	6,544	8,577	15,121

Net realized and unrealized gains or losses from investments for the years ended December 31, 2016 and 2015 are summarized as follows:

(millions of dollars)	2016 Decommissioning Segregated Fund	2016 Used Fuel Segregated Fund	2016 Total
Net realized gains			
Realized gains excluding foreign exchange	**84**	**180**	**264**
Realized foreign exchange gains	**30**	**41**	**71**
Net realized gains	**114**	**221**	**335**
Net unrealized gains			
Unrealized gains excluding foreign exchange	**360**	**442**	**802**
Unrealized foreign exchange losses	**(165)**	**(216)**	**(381)**
Net unrealized gains	**195**	**226**	**421**

(millions of dollars)	2015 Decommissioning Segregated Fund	2015 Used Fuel Segregated Fund	2015 Total
Net realized gains			
Realized gains	159	221	380
Realized foreign exchange gains	56	71	127
Net realized gains	215	292	507
Net unrealized gains			
Unrealized losses	(267)	(367)	(634)
Unrealized foreign exchange gains	335	439	774
Net unrealized gains	68	72	140

The change in the Nuclear Segregated Funds for the years ended December 31 is as follows:

(millions of dollars)	Fair Value 2016	2015
Decommissioning Segregated Fund, beginning of year	**6,549**	6,246
Increase in fund due to return on investments	**505**	507
Decrease in fund due to reimbursement of eligible expenditures	**(22)**	(19)
Increase in due to Province	**(192)**	(185)
Decommissioning Segregated Fund, end of year	**6,840**	6,549
Used Fuel Segregated Fund, beginning of year	**8,587**	8,133
Increase in fund due to contributions made	**150**	143
Increase in fund due to return on investments	**690**	642
Decrease in fund due to reimbursement of eligible expenditures	**(48)**	(57)
Increase in due to Province	**(235)**	(274)
Used Fuel Segregated Fund, end of year	**9,144**	8,587

The earnings from the Nuclear Segregated Funds during 2016 and 2015 were impacted by the Bruce Lease Net Revenues Variance Account authorized by the OEB. The earnings on the Nuclear Segregated Funds for the years ended December 31 are as follows:

(millions of dollars)	2016	2015
Decommissioning Segregated Fund	**313**	322
Used Fuel Segregated Fund	**455**	368
Bruce Lease Net Revenues Variance Account	**(22)**	14
Total earnings	**746**	704

9. INCOME TAXES

OPG follows the liability method of accounting for income taxes. The Company records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities.

A reconciliation between the statutory and the effective rate of income taxes is as follows:

(millions of dollars)	**2016**	**2015**
Income before income taxes	**621**	509
Combined Canadian federal and provincial statutory enacted income tax rates	**26.5%**	26.5%
Statutory income tax rates applied to accounting income	**165**	135
Increase (decrease) in income taxes resulting from:		
Impact of rate regulated accounting	**65**	29
Scientific Research and Experimental Development investment tax credits	**(42)**	(55)
Manufacturing and processing credit	**(9)**	(8)
Other	**(11)**	(9)
	3	(43)
Income tax expense	**168**	92
Effective rate of income taxes	**27.0%**	18.1%

Significant components of the income tax expense are presented in the table below:

(millions of dollars)	**2016**	**2015**
Current income tax expense:	**204**	59
Deferred income tax (recovery) expense:	**(36)**	33
Income tax expense	**168**	92

The income tax effects of temporary differences that give rise to deferred income tax assets and liabilities as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Deferred income tax assets:		
Fixed asset removal and nuclear waste management liabilities	**4,861**	5,032
Other liabilities and assets	**1,813**	1,699
	6,674	6,731
Deferred income tax liabilities:		
Property, plant and equipment and intangible assets	**(1,807)**	(2,119)
Nuclear fixed asset removal and nuclear waste management funds	**(3,996)**	(3,784)
Other assets and liabilities	**(1,700)**	(1,708)
	(7,503)	(7,611)
Net deferred income tax liabilities	**(829)**	(880)

During 2016, OPG recorded an increase in the deferred income tax liability for the income taxes that are expected to be recovered or refunded through regulated prices charged to customers of $46 million (2015 – a decrease of $69 million). Since these deferred income taxes are expected to be refunded through future regulated prices, OPG recorded a corresponding increase to the regulatory asset for deferred income taxes. As a result, the deferred income tax expense for 2016 and 2015 was not impacted.

The following table summarizes the deferred income tax liabilities recorded for the rate regulated operations that are expected to be recovered through future regulated prices:

(millions of dollars)	**2016**	**2015**
January 1:		
Deferred income tax liabilities on temporary differences related to regulated operations	**592**	644
Deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liability	**200**	217
	792	861
Changes during the year:		
Increase (decrease) in deferred income tax liabilities on temporary differences related to regulated operations	**35**	(52)
Increase (decrease) in deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liability	**11**	(17)
Balance as at December 31	**838**	792

The tax benefit associated with an income tax position is recognized only when it is more likely than not that such a position will be sustained upon examination by the taxing authorities based on the technical merits of the position. The current and deferred income tax benefit is equal to the largest amount, considering possible settlement outcomes, that is greater than 50 percent likely of being realized upon settlement with the taxing authorities.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(millions of dollars)	**2016**	**2015**
Unrecognized tax benefits, beginning of year	**72**	79
Additions based on tax positions related to the current year	**19**	16
Additions for tax positions of prior years	**2**	7
Reductions for tax positions of prior years	**(16)**	(14)
Other	**-**	(16)
Unrecognized tax benefits, end of year	**77**	72

As at December 31, 2016, OPG's unrecognized tax benefits were $77 million (2015 – $72 million), excluding interest and penalties, all of which, if recognized, would affect OPG's effective tax rate. Changes in unrecognized tax benefits over the next 12 months cannot be predicted with certainty.

OPG recognizes interest and penalties related to unrecognized tax benefits as income tax expense. As at December 31, 2016, OPG had recorded interest on unrecognized tax benefits of $8 million (2015 – $7 million). OPG considers its significant tax jurisdiction to be Canada. OPG remains subject to income tax examination for years after 2012.

OPG paid $98 million in income taxes (net of tax refunds) during 2016 (2015 – $47 million).

10. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of Accumulated Other Comprehensive Loss (AOCL), net of income taxes, during the years December 31, 2016 and 2015 are as follows:

	2016			
(millions of dollars)	**Unrealized Gains and Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities[1]**	**Total [1]**
AOCL, beginning of year	**(106)**	**(213)**	**-**	**(319)**
Actuarial loss on re-measurement of liabilities for pension and OPEB	**-**	**(6)**	**-**	**(6)**
Unrealized loss on available-for-sale securities	**-**	**-**	**(1)**	**(1)**
Amounts reclassified from AOCL	**19**	**12**	**-**	**31**
OCI for the year	**19**	**6**	**(1)**	**24**
AOCL, end of year	**(87)**	**(207)**	**(1)**	**(295)**

[1] All amounts are net of income taxes.

	2015		
(millions of dollars)	**Unrealized Gains and Losses on Cash Flow Hedges [1]**	**Pension and OPEB[1]**	**Total [1]**
AOCL, beginning of year	(117)	(379)	(496)
Net loss on cash flow hedges	(5)	-	(5)
Actuarial gain on re-measurement of liabilities for pension and OPEB	-	148	148
Amounts reclassified from AOCL	16	18	34
OCI for the year	11	166	177
AOCL, end of year	(106)	(213)	(319)

[1] All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the years ended December 31, 2016 and 2015 are as follows:

	Amount Reclassified from AOCL		
(millions of dollars)	**2016**	**2015**	**Statement of Income Line Item**
Amortization of losses from cash flow hedges			
Losses	**21**	18	Net interest expense and fuel expense
Income tax recovery	**(2)**	(2)	Income tax expense
	19	16	
Amortization of amounts related to pension and OPEB			
Actuarial losses and past service costs	**16**	25	See (1) below
Income tax recovery	**(4)**	(7)	Income tax expense
	12	18	
Total reclassifications for the year	**31**	34	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 11 for additional details).

11. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

Fund Assets

The OPG registered pension fund investment guidelines are stated in an approved Statement of Investment Policies and Procedures (SIPP). The SIPP is reviewed and approved by the Audit and Risk Committee of OPG's Board of Directors at least annually and includes a discussion of investment objectives and expectations, asset mix and rebalancing, and the basis for measuring the performance of the pension fund assets.

In accordance with the SIPP, investment allocation decisions are made with a view to achieve OPG's objective of meeting obligations of the plan as they come due. The pension fund assets are invested in four categories of asset classes. The first category is liability hedging assets which are intended to hedge the inflation and interest rate sensitivity of the plan liabilities. The second category is return enhancing assets which are intended to obtain higher investment returns compared to the returns expected for liability hedging assets. The third category is real assets which offer exposure to the combined characteristics of liability hedging and return enhancing assets. The fourth category is return diversifying strategies, which are intended to improve the overall return of the pension fund while mitigating the downside market risk.

To achieve the above objective, OPG has adopted the following target strategic asset allocation:

	Target
Asset Class	
Liability Hedging Assets	34%
Return Enhancing Assets	31%
Real Assets	20%
Return on Diversifying Assets	15%

The plan may enter into derivative securities, such as interest rate swaps and forward foreign exchange contracts, for risk management purposes, where such activity is consistent with the plan's investment objectives.

Significant Concentrations of Risk in Fund Assets

The assets of the pension fund are diversified to limit the impact of any individual investment. The pension fund is diversified across multiple asset classes. Fixed income securities are diversified among Canadian government bonds, government agency bonds, real return bonds, corporate bonds, and an interest rate overlay hedging program, which is disclosed under pooled funds. Equity securities are diversified across Canadian, US, and non-North American stocks. There are also real estate, infrastructure, and agriculture portfolios that represent approximately 12 percent of the total pension fund assets as at December 31, 2016. Investments in the above asset classes are further diversified across funds, investment managers, strategies, vintages, sectors and geographies, depending on the specific characteristics of each asset class.

Credit risk with respect to the pension fund's fixed income securities is managed by risk tolerance guidelines, which requires that fixed income securities comply with various investment constraints that ensure prudent diversification and prescribed minimum required credit rating quality. Credit risk, as it relates to the pension fund's derivatives, is managed through the use of International Swap and Derivatives Association documentation and counterparty management performed by the fund's investment managers.

Risk Management

Risk management oversight with respect to the pension fund includes, but is not limited to, the following activities:

- Periodic asset/liability management and strategic asset allocation studies
- Monitoring of funding levels and funding ratios
- Monitoring compliance with asset allocation guidelines and investment management agreements
- Monitoring asset class performance against asset class benchmarks
- Monitoring investment manager performance against benchmarks

- Monitoring of risk tolerance guidelines

Expected Rate of Return on Plan Assets

The expected rate of return on plan assets is based on the fund's asset allocation, as well as the return expectations considering long-term historical risks and returns associated with each asset class within the plan portfolio. The asset management decisions consider the economic liabilities of the plan.

Fair Value Measurements

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities. Refer to Note 13 for a detailed discussion of fair value measurements and the fair value hierarchy.

The following tables present pension plan assets measured at fair value in accordance with the fair value hierarchy:

	December 31, 2016			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	**690**	**-**	**-**	**690**
Fixed income				
Corporate debt securities	**-**	**407**	**-**	**407**
Government bonds	**-**	**3,483**	**-**	**3,483**
Equities				
Canadian	**1,451**	**291**	**-**	**1,742**
US	**1,495**	**-**	**-**	**1,495**
Non-North American	**1,643**	**-**	**-**	**1,643**
Pooled funds	**118**	**413**	**-**	**531**
Other	**(2)**	**-**	**-**	**(2)**
	5,395	**4,594**	**-**	**9,989**
Investments measured at NAV [1]				**3,865**
				13,854 [2]

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.
[2] The table above excludes pension fund receivables and payables.

	December 31, 2015			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	374	-	-	374
Short-term investments	-	1	-	1
Fixed income				
Corporate debt securities	-	392	-	392
Government bonds	-	3,794	-	3,794
Equities				
Canadian	1,547	-	-	1,547
US	1,786	-	-	1,786
Non-North American	1,992	-	-	1,992
Pooled funds	37	147	-	184
Other	1	-	-	1
	5,737	4,334	-	10,071
Investments measured at NAV [1]				3,079
				13,150 [2]

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.
[2] The table above excludes pension fund receivables and payables.

During the years ended December 31, 2016 and 2015, there were no transfers between Level 1 and Level 2.

Plan Costs and Liabilities

Details of OPG's pension and OPEB obligations, pension fund assets and costs are presented in the following tables:

	Registered and Supplementary Pension Plans		Other Post-Employment Benefits	
	2016	**2015**	**2016**	**2015**
Weighted Average Assumptions – Benefit Obligations at Year-End				
Rate used to discount future benefits	**3.90%**	4.10%	**3.94%**	4.13%
Salary schedule escalation rate - initial rate [1]	**1.80%**	1.60%	**1.80%**	1.60%
- thereafter	**2.50%**	2.50%	**2.50%**	2.50%
Rate of cost of living increase to pensions	**2.00%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**5.90%**	6.00%
Ultimate health care trend rate	**n/a**	n/a	**4.32%**	4.33%
Year ultimate health care trend rate reached	**n/a**	n/a	**2030**	2030
Rate of increase in disability benefits	**n/a**	n/a	**2.00%**	2.00%

[1] Per year to December 31, 2021.

	Registered and Supplementary Pension Plans		Other Post-Employment Benefits	
	2016	**2015**	**2016**	**2015**
Weighted Average Assumptions – Costs for the Year				
Expected return on plan assets, net of expenses	**6.00%**	6.25%	**n/a**	n/a
Rate used to discount future benefits	**4.10%**	4.00%	**4.13%**	4.03%
Salary schedule escalation rate - initial rate [1]	**1.60%**	2.00%	**1.60%**	2.00%
- thereafter	**2.50%**	2.50%	**2.50%**	2.50%
Rate of cost of living increase to pensions	**2.00%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**6.00%**	6.09%
Ultimate health care trend rate	**n/a**	n/a	**4.33%**	4.33%
Year ultimate health care trend rate reached	**n/a**	n/a	**2030**	2030
Rate of increase in disability benefits	**n/a**	n/a	**2.00%**	2.00%
Expected average remaining service life for employees (years)	**12**	12	**13**	13

[1] 1.60% per year to December 31, 2021; 2.00% per year to December 31, 2020.

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Components of Cost Recognized						
Current service costs	**277**	320	**7**	7	**67**	71
Interest on projected benefit obligation	**634**	630	**12**	13	**133**	127
Expected return on plan assets, net of expenses	**(734)**	(717)	**-**	-	**-**	-
Amortization of past service costs [1]	**-**	-	**-**	-	**1**	-
Amortization of net actuarial loss [1]	**192**	292	**4**	6	**19**	27
Recognition of LTD net actuarial (gain) loss	**-**	-	**-**	-	**(52)**	7
Costs recognized [2]	**369**	525	**23**	26	**168**	232

[1] The amortization of past service costs and net actuarial loss was recognized as an increase to OCI. This increase was partially offset by the impact of the Pension and OPEB Regulatory Asset discussed in Note 5.

[2] Excludes the impact of regulatory variance and deferral accounts discussed in Note 5.

Total benefit costs, including the impact of the Pension & OPEB Cash Payment Variance Account and the Pension & OPEB Cash Versus Accrual Differential Deferral Account, for the years ended December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Registered pension plans	**369**	525
Supplementary pension plans	**23**	26
Other post-employment benefits	**168**	232
Pension & OPEB Cash Payment Variance Account *(Note 5)*	**86**	(21)
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 5)*	**(182)**	(279)
Pension and other post-employment benefit costs	**464**	483

The pension and OPEB obligations and the pension fund assets measured as at December 31 are as follows:

	Registered Pension Plans		**Supplementary Pension Plans**		**Other Post-Employment Benefits**	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Change in Plan Assets						
Fair value of plan assets at beginning of year	**13,160**	12,407	**-**	-	**-**	-
Contributions by employer	**255**	362	**15**	24	**93**	94
Contributions by employees	**85**	72	**-**	-	**-**	-
Actual return on plan assets, net of expenses	**714**	1,151	**-**	-	**-**	-
Benefit payments	**(708)**	(832)	**(15)**	(24)	**(93)**	(94)
Fair value of plan assets at end of year	**13,506**	13,160	**-**	-	**-**	-
Change in Projected Benefit Obligations						
Projected benefit obligations at beginning of year	**15,475**	15,669	**299**	317	**3,188**	3,143
Employer current service costs	**277**	320	**7**	7	**67**	71
Contributions by employees	**85**	72	**-**	-	**-**	-
Interest on projected benefit obligation	**634**	630	**12**	13	**133**	127
Benefit payments	**(708)**	(832)	**(15)**	(24)	**(93)**	(94)
Past service costs	**-**	-	**-**	-	**-**	5
Net actuarial loss (gain)	**436**	(384)	**33**	(14)	**(303)**	(64)
Projected benefit obligations at end of year	**16,199**	15,475	**336**	299	**2,992**	3,188
Funded status – deficit at end of year	**(2,693)**	(2,315)	**(336)**	(299)	**(2,992)**	(3,188)

The following table provides the pension and OPEB liabilities and their classification on the consolidated balance sheets as at December 31:

	Registered Pension Plans		**Supplementary Pension Plans**		**Other Post-Employment Benefits**	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Current liabilities	**-**	-	**(17)**	(17)	**(95)**	(103)
Non-current liabilities	**(2,693)**	(2,315)	**(319)**	(282)	**(2,897)**	(3,085)
Total liabilities	**(2,693)**	(2,315)	**(336)**	(299)	**(2,992)**	(3,188)

The accumulated benefit obligations for the registered pension plans and supplementary pension plans as at December 31, 2016 are $14,909 million and $293 million, respectively (2015 – $14,327 million and $267 million, respectively). The accumulated benefit obligation differs from the projected benefit obligation in that the accumulated benefit obligation includes no assumption about future compensation levels.

The following table provides the components of OPG's OCI related to pension and OPEB plans and the offsetting Pension and OPEB Regulatory Asset as discussed in Note 5 for the years ended December 31, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Changes in plan assets and benefit obligations recognized in OCI						
Current year net actuarial loss (gain)	**456**	(818)	**33**	(14)	**(251)**	(71)
Current year past service costs	**-**	-	**-**	-	**-**	5
Amortization of net actuarial loss	**(192)**	(292)	**(4)**	(6)	**(19)**	(27)
Amortization of past service costs	**-**	-	**-**	-	**(1)**	-
Total decrease (increase) in OCI	**264**	(1,110)	**29**	(20)	**(271)**	(93)
Less: Increase (decrease) in Pension and OPEB Regulatory Asset*(Note 5)*	**253**	(916)	**27**	(15)	**(250)**	(70)
Net decrease (increase) in OCI (pre-tax)	**11**	(194)	**2**	(5)	**(21)**	(23)

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset that have not yet been recognized as components of benefit costs as at December 31, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Unamortized amounts recognized in AOCL						
Past service costs	**-**	-	**-**	-	**5**	6
Net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Total recognized in AOCL	**3,287**	3,023	**106**	77	**275**	546
Less: Pension and OPEB Regulatory Asset *(Note 5)*	**3,039**	2,786	**100**	73	**253**	503
Net recognized in AOCL (pre-tax)	**248**	237	**6**	4	**22**	43

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset as at December 31 (included in the table above) that are expected to be amortized as components of benefit costs and recognized as increases to OCI and reductions in the Pension and OPEB Regulatory Asset, in 2017, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post-Employment Benefits
Past service costs	**-**	**-**	**1**
Net actuarial loss	**183**	**6**	**-**
Total increase in AOCL	**183**	**6**	**1**
Less: Estimated decrease in Pension and OPEB Regulatory Asset	**170**	**6**	**1**
Net increase in AOCL (pre-tax)	**13**	**-**	**-**

Based on the most recently filed actuarial valuation, for funding purposes, of the OPG registered pension plan, as at January 1, 2016, there was an unfunded liability on a going-concern basis of $485 million and a deficiency on a hypothetical wind-up basis of $7,347 million. The funded status to be determined in the next filed funding valuation, which must have an effective date no later than January 1, 2019, could be significantly different. For 2017, OPG's required contribution to its registered pension plan is expected to be $248 million. The amount of OPG's additional,

voluntary contribution, if any, is revisited from time to time. OPG will continue to assess the requirements for contributions to the pension plan.

The supplementary pension plans are not funded, but are secured by Letters of Credit totalling $349 million as at December 31, 2016 (2015 – $345 million).

Estimated future benefit payments to participants in the pension and OPEB plans based on the assumptions used to measure the benefit obligations as at December 31, 2016 are as follows:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post-Employment Benefits
2017	687	18	95
2018	759	18	98
2019	750	18	101
2020	767	19	105
2021	795	19	108
2022 through 2026	4,218	102	613

A one percent increase or decrease in the health care trend rate would result in an increase in the current service and interest components of the 2016 OPEB costs of $45 million (2015 – $45 million) or a decrease in the service and interest components of the 2016 OPEB costs of $33 million (2015 – $33 million). A one percent increase or decrease in the health care trend rate would result in an increase in the projected OPEB obligation as at December 31, 2016 of $560 million (2015 – $584 million) or a decrease in the projected OPEB obligation as at December 31, 2016 of $426 million (2015 – $446 million).

12. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect the Company's assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the IESO-administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at December 31, 2016 was less than $1 million. OPG's fair value derivatives totalled a net liability of $24 million as at December 31, 2016 (2015 – $2 million).

The following table shows the amount related to derivatives recorded in AOCL and income for the years ended December 31:

(millions of dollars)	**2016**	**2015**
Cash flow hedges (recorded in AOCL)		
Losses in OCI	**-**	(7)
Reclassification of losses to net interest expense	**21**	20
Reclassification of gains to fuel expense	**-**	(2)
Commodity derivatives (recorded in income)		
Realized losses in revenue	**(12)**	(16)
Unrealized losses in revenue	**(3)**	(7)
Embedded derivative (recorded in income)		
Unrealized gains in revenue [1]	**-**	225

[1] Excludes the impact of the Bruce Lease Net Revenues Variance Account.

Existing net losses of $20 million deferred in AOCL as at December 31, 2016 are expected to be reclassified to net income within the next 12 months.

13. FAIR VALUE MEASUREMENTS

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial assets and liabilities into three levels, based on the inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The fair value of financial instruments traded in active markets is based on quoted market prices at the consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The Company is required to determine the fair value of all its financial instruments. The following is a summary of OPG's financial instruments as at December 31:

	Fair Value		Carrying Value [1]		
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**Balance Sheet Line Item**
Nuclear Segregated Funds (includes current portion)	**15,984**	15,136	**15,984**	15,136	Nuclear fixed asset removal and nuclear waste management funds
Investment in Hydro One shares	**212**	-	**212**	-	Available-for-sale securities
Payable related to cash flow hedges	**(48)**	(56)	**(48)**	(56)	Long-term accounts payable and accrued charges
Long-term debt (includes current portion)	**(6,033)**	(5,978)	**(5,520)**	(5,459)	Long-term debt
Other financial instruments	**(18)**	6	**(18)**	6	Various

[1] The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other current assets, short-term debt, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs.

The following tables present financial assets and financial liabilities measured at fair value in accordance with the fair value hierarchy as at December 31, 2016 and 2015:

	December 31, 2016			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**5,602**	**4,394**	**-**	**9,996**
Investments measured at NAV [1]				**1,086**
				11,082
Due to Province				**(1,938)**
Used Fuel Segregated Fund, net				**9,144**
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**4,171**	**3,243**	**-**	**7,414**
Investments measured at NAV [1]				**903**
				8,317
Due to Province				**(1,477)**
Decommissioning Segregated Fund, net				**6,840**
Investment in available-for-sale securities	**212**	**-**	**-**	**212**
Other financial assets	**6**	**2**	**9**	**17**
Liabilities				
Other financial liabilities	**(29)**	**(6)**	**-**	**(35)**

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

(millions of dollars)	December 31, 2015 Level 1	Level 2	Level 3	Total
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	5,114	4,293	-	9,407
Investments measured at NAV [1]				883
				10,290
Due to Province				(1,703)
Used Fuel Segregated Fund, net				8,587
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	3,870	3,227	-	7,097
Investments measured at NAV [1]				737
				7,834
Due to Province				(1,285)
Decommissioning Segregated Fund, net				6,549
Other financial assets	14	4	16	34
Liabilities				
Other financial liabilities	(18)	(8)	(2)	(28)

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

During the year ended December 31, 2016, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3:

(millions of dollars)	Other financial instruments
Opening balance, January 1, 2016	**14**
Unrealized losses included in revenue	**1**
Realized losses included in revenue	**(12)**
Purchases	**6**
Closing balance, December 31, 2016	**9**

Nuclear Segregated Funds

The fair value of the investments within the Nuclear Segregated Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Segregated Funds that are reported on the basis of NAV as at December 31, 2016:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Infrastructure	**1,205**	**648**	**n/a**	**n/a**
Real Estate	**713**	**406**	**n/a**	**n/a**
Agriculture	**71**	**128**	**n/a**	**n/a**
Pooled Funds				
Short-term Investments	**34**	**n/a**	**Daily**	**1 - 5 Days**
Fixed Income	**553**	**n/a**	**Daily**	**1 - 5 Days**
Equity	**743**	**n/a**	**Daily**	**1 - 5 Days**
Total	**3,319**	**1,182**		

The fair value of the pooled funds is classified as Level 2. Infrastructure, real estate and agriculture investments are measured using NAV as a practical expedient for determining their fair value.

Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

Real Estate

This class includes investments in institutional-grade real estate property. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests to another party, as stipulated in the partnership agreement. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements.

Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations, and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally

managed portfolios. The fair value of the investments in this class has been estimated using the NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

14. COMMON SHARES

As at December 31, 2016 and 2015, OPG had 256,300,010 common shares issued and outstanding at a stated value of $5,126 million. OPG is authorized to issue an unlimited number of common shares without nominal or par value. Any issue of new shares is subject to the consent of OPG's shareholder.

15. COMMITMENTS AND CONTINGENCIES

Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered by June 30, 2017, as required by the timetable.

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at December 31, 2016, the total amount of guarantees OPG provided to these entities was $83 million (2015 – $81 million). OPG may terminate some of these guarantees within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at December 31, 2016, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, were as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

Lease Commitments

The Company leases the Bruce A and Bruce B nuclear generating stations to Bruce Power. Under the lease, as amended in December 2015, Bruce Power has options to renew the lease up to the end of 2064. As per *Ontario Regulation 53/05* pursuant to the *Ontario Energy Board Act, 1998*, the difference between OPG's revenues, including lease revenues, and costs, including depreciation expense, associated with its ownership of the Bruce A and B nuclear generating stations is included in the determination of OPG's nuclear regulated prices established by the OEB. These revenues and costs are determined on the basis of the manner in which they are recognized in OPG's consolidated financial statements. As the assets on lease to Bruce Power are not prescribed facilities under *Ontario Regulation 53/05*, the net book value of the assets is not included in the regulated rate base. The net book value of property, plant and equipment on lease to Bruce Power as at December 31, 2016 was $2,986 million (2015 – $4,400 million).

Collective Bargaining Agreements

As at December 31, 2016, the Power Workers' Union (PWU) represented approximately 5,070 OPG regular employees or approximately 55 percent of OPG's regular workforce. The previous collective agreement between OPG and the PWU expired on March 31, 2015. In May 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on March 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each year of the agreement.

As at December 31, 2016, The Society of Energy Professionals (The Society) represented approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce. The governing collective agreement between OPG and The Society expired on December 31, 2015. In November 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on December 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each of the first two years of the agreement.

The changes to both collective agreements will provide existing employees with lump-sum payments for each of the first two years of the contract and eligibility to annually receive shares in Hydro One for up to 15 years starting in year three of the contract, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service.

16. BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel and low and intermediate level wastes, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Lease and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because the costs associated with the Nuclear Liabilities are included by the OEB in the determination of regulated prices for production from OPG's Pickering and Darlington nuclear generating stations, in accordance with the methodologies applied since the OEB's 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. OPG's share of the in-service generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of these activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the US market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and the Nanticoke generating stations' sites.

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The service fee included in OM&A expenses by segment in 2016 and 2015 was as follows:

(millions of dollars)	2016	2015
Regulated – Nuclear Generation	**34**	33
Regulated – Hydroelectric	**7**	6
Contracted Generation Portfolio	**4**	4
Reduction to Services, Trading, and Other Non-Generation	**45**	43

Segment Income (Loss) for the Year Ended December 31, 2016 *(millions of dollars)*	**Nuclear Generation**	**Regulated Nuclear Waste Manage-ment**	**Hydro-electric**	**Unregulated Contracted Generation Portfolio**	**Unregulated Services, Trading, and Other Non-Generation**	**Elimination**	**Total**
Revenue	**3,481**	**138**	**1,527**	**573**	**68**	**(134)**	**5,653**
Fuel expense	**315**	**-**	**353**	**58**	**1**	**-**	**727**
Gross margin	**3,166**	**138**	**1,174**	**515**	**67**	**(134)**	**4,926**
Operations, maintenance and administration	**2,210**	**146**	**325**	**178**	**22**	**(134)**	**2,747**
Depreciation and amortization	**925**	**-**	**225**	**75**	**32**	**-**	**1,257**
Accretion on fixed asset removal and nuclear waste management liabilities	**-**	**912**	**-**	**9**	**8**	**-**	**929**
Earnings on nuclear fixed asset removal and nuclear waste management funds	**-**	**(746)**	**-**	**-**	**-**	**-**	**(746)**
Income from investments subject to significant influence	**-**	**-**	**-**	**(37)**	**-**	**-**	**(37)**
Property taxes	**26**	**-**	**1**	**7**	**12**	**-**	**46**
Restructuring	**-**	**-**	**-**	**-**	**6**	**-**	**6**
Other losses (gains)	**1**	**-**	**(19)**	**1**	**-**	**-**	**(17)**
Income (loss) before interest and income taxes	**4**	**(174)**	**642**	**282**	**(13)**	**-**	**741**

Segment Income (Loss) for the Year Ended December 31, 2015 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	3,245	122	1,619	535	73	(118)	5,476
Fuel expense	301	-	345	39	2	-	687
Gross margin	2,944	122	1,274	496	71	(118)	4,789
Operations, maintenance and administration	2,196	132	340	185	48	(118)	2,783
Depreciation and amortization	717	-	282	72	29	-	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	-	880	-	8	7	-	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(704)	-	-	-	-	(704)
Income from investments subject to significant influence	-	-	-	(39)	-	-	(39)
Property taxes	26	-	1	7	11	-	45
Restructuring	-	-	-	-	6	-	6
Other losses	3	-	3	1	7	-	14
Income (loss) before interest and income taxes	2	(186)	648	262	(37)	-	689

Selected Consolidated Balance Sheet Information as at December 31, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Total
Segment property, plant and equipment in-service, net	**5,653**	**-**	**7,355**	**3,282**	**229**	**16,519**
Segment construction in progress	**2,988**	**-**	**166**	**301**	**28**	**3,483**
Segment property, plant and equipment, net	**8,641**	**-**	**7,521**	**3,583**	**257**	**20,002**
Segment intangible assets in-service, net	**7**	**-**	**2**	**4**	**66**	**79**
Segment development in progress	**3**	**-**	**-**	**1**	**16**	**20**
Segment intangible assets, net	**10**	**-**	**2**	**5**	**82**	**99**
Segment fuel inventory	**276**	**-**	**-**	**34**	**-**	**310**
Segment materials and supplies inventory, net:						
Current	**99**	**-**	**-**	**1**	**-**	**100**
Long-term	**340**	**-**	**1**	**4**	**-**	**345**
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	**-**	**15,984**	**-**	**-**	**-**	**15,984**
Fixed asset removal and nuclear waste management liabilities	**-**	**(19,103)**	**-**	**(160)**	**(221)**	**(19,484)**

Selected Consolidated Balance Sheet Information as at December 31, 2015		Regulated		Unregulated		
(millions of dollars)	Nuclear Generation	Nuclear Waste Manage-ment	Hydro-electric	Contracted Generation Portfolio	Services, Trading, and Other Non-Generation	Total
Segment property, plant and equipment in-service, net	6,972	-	7,413	3,319	324	18,028
Segment construction in progress	2,289	-	99	141	38	2,567
Segment property, plant and equipment, net	9,261	-	7,512	3,460	362	20,595
Segment intangible assets in-service, net	8	-	1	3	58	70
Segment development in progress	-	-	4	-	24	28
Segment intangible assets, net	8	-	5	3	82	98
Segment fuel inventory	304	-	-	40	-	344
Segment materials and supplies inventory, net:						
Current	95	-	-	1	-	96
Long-term	333	-	1	3	-	337
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	15,136	-	-	-	15,136
Fixed asset removal and nuclear waste management liabilities	-	(19,792)	-	(163)	(214)	(20,169)

Selected Consolidated Cash Flow Information		Regulated		Unregulated		
(millions of dollars)	Nuclear Generation	Nuclear Waste Management	Hydro-electric	Contracted Generation Portfolio	Services, Trading, and Other Non-Generation	Total
Year ended December 31, 2016						
Investment in property, plant and equipment, and intangible assets	**1,338**	**-**	**135**	**198**	**33**	**1,704**
Year ended December 31, 2015						
Investment in property, plant and equipment, and intangible assets	1,023	-	89	222	42	1,376

17. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	2016	2015
Receivables from related parties	**116**	(63)
Prepaid expenses	**(108)**	(35)
Other current assets [1]	**(32)**	(12)
Fuel inventory	**34**	(10)
Materials and supplies	**(4)**	(2)
Income taxes payable	**57**	42
Accounts payable and accrued charges	**5**	(20)
	68	(100)

[1] Includes other accounts receivable.

18. RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		2015	
(millions of dollars)	Revenue	Expense	Revenue	Expense
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**15**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,070**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Hydro One Limited Shares

During 2015, OPG entered into renewed three-year collective bargaining agreements with the PWU and The Society. Changes to the respective collective agreements included increases to employee pension plan contributions and provisions for qualifying existing employees represented by the PWU and The Society to annually receive common shares of Hydro One for up to 15 years starting in the third year of the respective agreements. In April 2016, OPG acquired nine million common shares of Hydro One at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements. The shares acquired in this transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

OPG classified the Hydro One shares as AFS securities.

For the year ended December 31, 2016, unrealized losses recognized in accumulated AOCL related to the changes in the fair value of the Hydro One shares were $1 million, net of income taxes. The fair value of the shares was $212 million as at December 31, 2016. Refer to Notes 10 and 13 for the required disclosures related to the AFS securities.

19. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of PEC and Brighton Beach, which are accounted for using the equity method as described in Note 3. The details of the balance included in the consolidated balance sheets as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
PEC		
Current assets	**18**	14
Long-term assets	**256**	270
Current liabilities	**(8)**	(4)
Long-term liabilities	**(5)**	(5)
Brighton Beach		
Current assets	**5**	9
Long-term assets	**168**	177
Current liabilities	**(16)**	(15)
Long-term liabilities	**(7)**	(6)
Long-term debt	**(90)**	(104)
Investments subject to significant influence	**321**	336

20. RESEARCH AND DEVELOPMENT

For the year ended December 31, 2016, research and development expenses of $58 million (2015 – $91 million) were charged to operations.

21. NON-CONTROLLING INTEREST

Lower Mattagami Limited Partnership (LMLP) is an Ontario limited partnership between OPG and Amisk-oo-Skow Finance Corporation (AFC), a corporation wholly owned by the Moose Cree First Nation. The principal business of LMLP is the development, construction, ownership, operation and maintenance of hydroelectric generating facilities located on the Lower Mattagami River.

During 2014, all six new units constructed as part of the Lower Mattagami River project were declared in-service. Subsequent to the units' in-service dates, the AFC made contributions of $141 million to acquire their equity interest in LMLP, through the settlement of existing liabilities, including long-term debt. As of December 31, 2016, the AFC had a 25 percent interest in LMLP. OPG consolidates the results of LMLP in its consolidated financial statements and the non-controlling interest represents the AFC's equity interest in LMLP.

From: Gavin He
To: Ronald Kwan
Cc: Francisco Chinchon; Darren Scanlan; John Kim
Subject: FW: OPG Q4 2016 submission to Province
Date: Monday, February 27, 2017 6:31:02 PM
Attachments: Q4 2016 MDA_DRAFT_PROVINCE MAILINGajcomment.docx
Q4 2016 FS DRAFT_PROVINCE MAILING ai comment.docx

Hi Ron,

Please see below comments from SIFB. Also, SIFB noted that:

OPG seems to be carrying the H1 shares as "available for sale securities". If I am reading things correctly, they are carrying the shares at FMV, with changes recognized in AOCL. However, they also note the following future changes in accounting:

"In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements."

Please note that comments are due back to OPG today.

Thanks,
Gavin He

From: Ronald Kwan
Sent: Thursday, February 16, 2017 2:05 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Subject: Fw: OPG Q4 2016 submission to Province

Hi,

Note the disclosure on the head office building sale on p. 14 of the MD&A and similarly in the F/S. And note the planned filing date of March 10.

Please review that and the ONFA and Hydro one shares related materials.

Thanks,
Ron

From: DYKXHOORN Sandra -CORPRELCOMM <sandra.dykxhoorn@opg.com>
Sent: February 15, 2017 9:14 AM
To: John Kim; Ronald Kwan; 'Talwar, Shruti (ENERGY)'; Sunita Chander (ENERGY)
Cc: CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
Subject: OPG Q4 2016 submission to Province

Good morning,

Please find attached OPG's draft Q4 2016 News Release, Management's Discussion and Analysis (MD&A), Annual Information Form (AIF) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Monday, February 27th**.

These documents will be filed with the Ontario Securities Commission on **Friday, March 10th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Sandra Dykxhoorn (copy to Alec Cheng – alec.cheng@opg.com and Philip Ho – philip.ho@opg.com).

To assist the review process, the following are the key items in the Q4 2016 MD&A:

Highlights Recent Developments	MD&A p.11-16
Darlington Refurbishment	MD&A p.11-12; 24-25
Peter Sutherland Sr. GS project	MD&A p.25
Outlook – OEB application on OPG's results, impact of ONFA update on Nuclear Segregated Funds earnings, and the expected income and cash flow trends for 2017	MD&A p.30-31

Sandra Dykxhoorn | Acting Director, Provincial Relations | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | p: (416) 592-2887 | c: (416) 571-4366 | sandra.dykxhoorn@opg.com

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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

DECEMBER 31, 2016

[DRAFT]

2016 YEAR-END REPORT

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ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the audited consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the year ended December 31, 2016. OPG's consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. The Ontario Securities Commission (OSC) approved an exemption that allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the heading, *Exemptive Relief for Reporting under US GAAP,* in the section *Critical Accounting Policies and Estimates.* This MD&A is dated March 10, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act (Ontario)* (OBCA) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at December 31, 2016, OPG's electricity generation portfolio had an in-service capacity of 16,177 megawatts (MW). OPG operates two nuclear generating stations, 65 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report.

All of OPG's owned and co-owned generating facilities are located in Ontario.

OPG's Reporting Structure

The composition of OPG's reportable business segments is as follows:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

OPG receives regulated prices for electricity generated from most of its hydroelectric facilities and all of the nuclear facilities that it operates (collectively, prescribed facilities or regulated facilities). This includes the following facilities:

- the six hydroelectric generating stations prescribed for rate regulation prior to 2014, as follows:
    - Sir Adam Beck 1, 2 and Pump hydroelectric generating stations
    - DeCew Falls 1 and 2 hydroelectric generating stations
    - R.H. Saunders hydroelectric GS
- the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014
- Pickering Nuclear GS (Pickering GS)
- Darlington Nuclear GS (Darlington GS).

The operating results related to these regulated facilities are described under the Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, and Regulated – Hydroelectric segments. For the remainder of OPG's operating generating facilities, the operating results are described under the Contracted Generation Portfolio segment. A description of all OPG's segments is provided under the section, *Business Segments*.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of December 31 was as follows:

(MW)	**2016**	**2015**
Regulated – Nuclear Generation [1]	**5,728**	6,606
Regulated – Hydroelectric	**6,421**	6,428
Contracted Generation Portfolio [2]	**4,028**	4,021
Total	**16,177**	17,055

[1] The in-service generating capacity as of December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

The total in-service capacity as at December 31, 2016 decreased by 878 MW compared to 2015. The decrease was primarily due to the commencement of the refurbishment of the first Darlington GS unit, Unit 2, which was taken offline in mid-October 2016. In addition, during 2016, the capacity of the regulated hydroelectric units at the Abitibi Canyon GS and the Sir Adam Beck 1 GS was reduced to reflect unit limit capability. This decrease in in-service capacity was partially offset by an increase in capacity of the Contracted Generation Portfolio segment, reflecting the completion of an upgrade and rehabilitation of Unit 2 of the Harmon hydroelectric GS during 2016.

REVENUE MECHANISMS FOR REGULATED AND NON-REGULATED GENERATION

Regulated Generation

The OEB sets the prices for electricity generated from OPG's regulated nuclear and regulated hydroelectric facilities. The following are the OEB-authorized regulated prices for electricity generated from these facilities:

	2016	**2015**	
($/MWh)		**January 1 to June 30**	**July 1 to December 31**
Regulated – Nuclear Generation			
Base regulated price	**59.29**	59.29	59.29
Rate riders	**10.84** [1]	1.33	12.17 [1]
	70.13	60.62	71.46
Regulated – Hydroelectric			
Hydroelectric generating stations prescribed for rate regulation prior to 2014			
Base regulated price	**40.20**	40.20	40.20
Rate riders	**3.19** [1]	6.04	9.23 [1]
	43.39	46.24	49.43
Hydroelectric generating stations prescribed for rate regulation effective in 2014			
Base regulated price	**41.93**	41.93	41.93
Rate rider	**3.19** [1]	-	3.19 [1]
	45.12	41.93	45.12

[1] The increase in the 2015 rate riders effective July 1, 2015 was implemented by the OEB effective October 1, 2015. As such, the OEB authorized interim period rate riders for the period from October 1, 2015 to December 31, 2016 to allow for the recovery of the increase in the riders for the period from July 1, 2015 to September 30, 2015. The revenue from the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The nuclear interim period rate rider was $2.17 per megawatt hour (MWh) and the regulated hydroelectric interim period rate rider was $0.64/MWh. These interim period rate riders have not been included in the above table. All rate riders in effect during 2016 expired on December 31, 2016.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements for the 2014 to 2015 period, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base for OPG represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital.

In accordance with *Ontario Regulation 53/05* under the *Ontario Energy Board Act, 1998*, OPG's nuclear regulated prices are reduced by the amount of OPG's revenues, net of costs, from leasing the Bruce nuclear generating stations to Bruce Power. As directed by the OEB, OPG's revenues and costs related to the Bruce nuclear generating stations are determined in accordance with US GAAP for the purposes of establishing OPG's nuclear regulated prices and are subject to the Bruce Lease Net Revenues Variance Account in accordance with *Ontario Regulation 53/05*. This includes OPG's costs related to its obligations for nuclear waste management and nuclear facilities decommissioning associated with the Bruce nuclear generating stations and the corresponding portion of earnings on the nuclear fixed asset removal and nuclear waste management segregated funds (Nuclear Segregated Funds) established pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province.

Rate riders for OPG are established to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts. Variance and deferral accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The rate riders in effect during 2015 included those established by the OEB's December 2014 order for the period from January 1, 2015 to December 31, 2015, as well as those authorized by the OEB's October 2015 order on OPG's 2014 application to recover the December 31, 2014 variance and deferral account balances, for the period from July 1, 2015 December 31, 2016. The rate riders in effect during 2016 were those authorized by the October 2015 order.

Non-Regulated Generation

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements (ESAs) with the Independent Electricity System Operator (IESO). Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO was substituted as the counterparty of ESAs and other agreements that were previously executed with the OPA.

During 2016, ESAs were in effect for the following thermal generating facilities:

- Lennox GS: Capacity provided by, and production from, the station are subject to an ESA for the period from January 1, 2013 to September 30, 2022
- Atikokan GS: Capacity provided by, and production from, the station are subject to a 10-year ESA expiring in July 2024
- Thunder Bay GS: Capacity provided by, and production from, the station are subject to a 5-year ESA expiring in January 2020.

In addition, long-term hydroelectric ESAs are in place for the following facilities, with expiry dates for currently operating stations ranging from 2059 to 2064:

- Lac Seul and Ear Falls generating stations
- Healey Falls GS
- Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations
- Little Long, Harmon, Smoky Falls, and Kipling generating stations (collectively the Lower Mattagami River generating stations)

- Peter Sutherland Sr. GS which is being commissioned. **[MONITOR]** Payments under this ESA will commence when the station achieves commercial operation. Further details on the Peter Sutherland Sr. GS project are found under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's operating results for 2016 and 2015.

(millions of dollars – except where noted)	**2016**	**2015**
Revenue	**5,653**	5,476
Fuel expense	**727**	687
Gross margin	**4,926**	4,789
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (income) loss, interest, and income taxes	**724**	703
Other (income) loss	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense	**120**	180
Income before income taxes	**621**	509
Income tax expense	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest [1]	**17**	15
Electricity production (TWh) [2]	**78.2**	78.0
Cash flow		
Cash flow provided by operating activities	**1,705**	1,465

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $436 million for 2016, an increase of $34 million compared to 2015. Income before interest and income taxes was $741 million for 2016, an increase of $52 million compared to 2015.

The following summarizes the significant factors which contributed to the variance:

Significant factors that increased income before interest and income taxes:

- Higher generation of 1.1 terawatt hours (TWh) from the Regulated – Nuclear generation segment, resulting in an increase in revenue of $65 million from the nuclear base regulated price. The year-over-year increase

in revenue from the higher nuclear rate riders in effect during the first half of 2016, compared to the same period in 2015, was primarily offset by an increase in the amortization expense related to regulatory balances.

- Higher earnings on the Nuclear Segregated Funds of $42 million, primarily due to a higher rate of return on the portion of the Used Fuel Segregated Fund that is subject to a consumer price index (CPI) adjusted rate of return guarantee by the Province pursuant to the ONFA. This increase in Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the updated ONFA reference plan, approved by the Province in December 2016
- Increase in earnings from the Services, Trading, and Other Non-Generation segment of $24 million, primarily due to lower operations, maintenance and administration (OM&A) expenses
- A gain of $22 million recorded during the first quarter of 2016, reflecting the OEB's January 2016 decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices
- Increase in earnings of $20 million from the Contracted Generation Portfolio segment, mainly as a result of an increase in the gross margin due to higher revenues from the Lower Mattagami River generating stations, the Lennox GS and the Atikokan GS.

Significant factors that reduced income before interest and income taxes:

- Higher financing expense of $32 million, which represents an increase in the present value of the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities). The financing expense, known as accretion expense, is added to the Nuclear Liabilities balance over time
- A decrease in nuclear non-electricity revenue of $21 million, primarily due to a decrease in nuclear detritiation services revenue and lower isotope sales
- Higher OM&A expenses, fuel expense and depreciation expense for the Regulated – Nuclear Generation segment. The increase in OM&A expenses of $14 million reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium costs and higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million, primarily due to new assets in service in 2016. The increase in amortization expense related to regulatory balances was largely offset by the increase in nuclear revenue related to rate riders
- Lower earnings before other gains from the Regulated – Hydroelectric segment of $28 million, primarily due to lower hydroelectric incentive mechanism revenue and the income impact of OEB-approved variance accounts.

Net interest expense decreased by $60 million in 2016, compared to 2015, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project and a higher amount of interest costs deferred in regulatory variance and deferral accounts.

Income tax expense increased by $76 million in 2016, compared to 2015, primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. Significant factors which contributed to the higher income during 2016, compared to 2015, are discussed above. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	**2016**	**2015**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**4**	2
Regulated – Hydroelectric	**642**	648
Contracted Generation Portfolio	**282**	262
Total electricity generation business segments	**928**	912
Regulated – Nuclear Waste Management	**(174)**	(186)
Services, Trading, and Other Non-Generation	**(13)**	(37)
	741	689

Electricity Generation

Electricity generation for 2016 and 2015 was as follows:

(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**45.6**	44.5
Regulated – Hydroelectric	**29.5**	30.4
Contracted Generation Portfolio [1]	**3.1**	3.1
Total OPG electricity generation	**78.2**	78.0
Total electricity generation by other generators in Ontario [2]	**72.7**	76.1

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The higher electricity generation from the Regulated – Nuclear Generation segment in 2016 was primarily a result of a lower number of non-refurbishment outage days at the Darlington GS due to the planned Vacuum Building Outage (VBO) in 2015 and a decrease in unplanned outages at the station in 2016. The VBO is a unique outage to inspect and maintain specific safety and other systems common to all four units of the station. The 2015 VBO required the shutdown of the four units for 47 days. Vacuum building outages are currently required every 12 years at the Darlington GS. The year-over-year increase in electricity generation was partially offset by a decrease in generation from the Pickering GS, primarily due to an increase in the number of unplanned outage days, and the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment beginning on October 15, 2016.

Lower electricity generation from the Regulated – Hydroelectric generating segment was primarily due to a higher volume of water spilled as a result of higher SBG conditions during 2016.

Electricity generation from the Contracted Generation Portfolio segment was 3.1 TWh for each of 2016 and 2015. Electricity generation in 2016 reflected higher production from the Lennox and Atikokan generating stations, primarily due to increased market demand. The increase was offset by a higher volume of water spilled at the contracted hydroelectric stations as a result of higher SBG conditions during 2016, and transmission system constraints in northeastern Ontario in 2016. **[CONFIRM]**

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Ontario's electricity demand as reported by the IESO was 137.0 TWh in each of 2016 and 2015, which excludes electricity exports out of the province.

Baseload generation supply surplus in Ontario was more prevalent in 2016 than in 2015, mainly due to higher water flows in the province during 2016 and limitations on the export of surplus power out of the province, primarily due to transmission constraints in the state of New York. Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric and nuclear stations and other grid-connected renewable resources. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. During 2016 and 2015, OPG lost 4.7 TWh and 3.2 TWh of hydroelectric generation due to SBG conditions, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions in 2016 and 2015 was offset by a regulatory variance account authorized by the OEB. OPG did not forego any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The regulated prices authorized by the OEB for electricity generated from OPG's nuclear and regulated hydroelectric generating stations are discussed in the section *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment during 2016 was 6.9 cents per kilowatt hour (¢/kWh), compared to 6.5 ¢/kWh during 2015. The average sales price in 2016 reflected the higher OEB-authorized nuclear rate rider of $10.84/MWh for recovery of variance and deferral account balances in effect during the year. The average sales price for the Regulated – Hydroelectric segment was 4.4 ¢/kWh, compared to 4.7 ¢/kWh during 2015. The decrease was primarily due to a lower rate rider in effect during 2016 related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years.

As such, the year-over-year changes in revenue from rate riders were largely offset by changes in amortization expense related to regulatory balances.

Cash Flow from Operations

Cash flow provided by operating activities for 2016 was $1,705 million, compared to $1,465 million for 2015. The increase in cash flow provided by operating activities for 2016, compared to 2015, was primarily due to higher generation revenue receipts reflecting higher nuclear rate riders and higher nuclear generation in 2016. The increase in cash flow was also due to lower pension plan contributions in 2016 reflecting an updated actuarial valuation of the OPG registered pension plan. The increase in cash flow was partially offset by higher OM&A expenditures during 2016, compared to 2015, and the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to the period from January 1, 2015 to December 4, 2015. The rebate was made pursuant to a provision under the lease agreement for the Bruce nuclear generating stations. This provision was eliminated effective December 4, 2015 as part of the 2015 amendments to the lease agreement.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. The FFO Adjusted Interest Coverage was 5.1 times for 2016, compared to 5.0 times for 2015. The modest increase in the FFO Adjusted Interest Coverage in 2016 reflected an increase in FFO before interest for 2016, compared to 2015, as a result of the year-over-year increase in cash flow provided by operating activities.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for 2016 was 4.2 percent, compared to 4.0 percent for 2015. ROE Excluding AOCI increased for 2016, compared to 2015, primarily due to higher net income attributable to the Shareholder. OPG's ROE Excluding AOCI reflects regulated prices established by the OEB in 2014. These prices were lower than requested by OPG based on submitted forecast cost and production levels, which has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

ROE Excluding AOCI also reflects the relatively higher equity component in the Company's capital structure, compared to the deemed capital structure used by the OEB in determining OPG's regulated prices. The OEB establishes the allowed return on OPG's investment in regulated assets, which represent the majority of the Company's operations, using the OEB's generic prescribed rate of return and an OPG-specific deemed capital structure. In setting the regulated prices in 2014, the OEB applied a deemed capital structure of 45 percent equity and 55 percent debt. OPG's actual capital structure (excluding AOCI) contains approximately 65 percent equity. The higher equity component in OPG's actual capital structure, compared to the deemed capital structure applied by the OEB, results in a reduced actual ROE Excluding AOCI. In its application for new regulated prices filed with the OEB in May 2016, OPG is seeking an increase in the deemed capital structure to 49 percent equity and 51 percent debt. For further discussion on OPG's application, refer to the heading *Recent Developments* in the section *Highlights*.

Enterprise Total Generating Cost per MWh

The Enterprise Total Generating Cost (TGC) per MWh was $48.10 for the year ended December 31, 2016, compared to $50.46 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses, excluding the impact of regulatory variance and deferral accounts, and higher electricity generation as adjusted for foregone generation due to SBG conditions during 2016.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $62.30 for the year ended December 31, 2016, compared to $66.20 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses excluding the impact of regulatory variance and deferral accounts, and higher electricity generation during 2016.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $25.57 for the year ended December 31, 2016, which was comparable to $25.26 for the same period in 2015.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow from operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in

January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The unit is scheduled to be returned to service in the first quarter of 2020. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

In April 2016, the Federal Court of Appeal unanimously dismissed the request by certain intervenors for a judicial review of the 2013 Environmental Assessment (EA) decision for the Darlington Refurbishment project by the Canadian Nuclear Safety Commission (CNSC) and Fisheries and Oceans Canada. The EA decision had confirmed that, taking into account identified mitigation measures, the project was not likely to cause significant adverse environmental effects. In dismissing the appeal, the Federal Court of Appeal determined that there were no gaps in the EA, that there was nothing unreasonable about the discretionary determinations made by the responsible authorities, and that the intervenors' arguments were not borne out by the evidence. OPG was also awarded its costs of the appeal, as the successful party.

The Darlington Refurbishment project is discussed further under the heading, *Project Excellence* in the *Core Business, Strategy and Outlook* section.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. For the first time since OPG's prescribed assets became subject to rate regulation, the new prices are expected to be determined on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. Rate-setting under incentive regulation is typically more formulaic and involves greater de-coupling of a regulated entity's allowed revenues or prices from its costs than under a cost-of-service rate-setting methodology.

For the hydroelectric facilities, OPG's May 2016 application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021 based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production.

The proposed nuclear revenue requirements reflect OPG's plans to pursue Pickering extended operations until 2024, as well as the projected impact of the scheduled return to service of the first refurbished Darlington unit in the first quarter of 2020. OPG is also seeking an increase in the deemed capital structure applied to its total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt applied by the OEB in setting the existing regulated prices.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG's application incorporates a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved nuclear revenue requirements in a deferral account for future collection, with a view of making more stable year-over-year changes in OPG's nuclear regulated prices for the period from January 1, 2017 to the end of the Darlington Refurbishment project. The regulation stipulates that the deferral account will record interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually, and that the OEB shall authorize recovery of the balance in the account on a straight line basis over a period not to exceed 10 years following the end of the Darlington Refurbishment project. OPG expects to recognize the deferred amounts as income in the period to which the approved revenue requirements relate.

OPG's application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the

Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment in 2016 through rate riders in effect to December 31, 2016. The application also requests the continuation of all applicable existing variance and deferral accounts. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed in the section *Critical Accounting Policies and Estimates,* under the heading, *Rate Regulated Accounting.*

In December 2016, the OEB issued an order granting OPG's request to declare the existing base regulated prices interim, effective January 1, 2017. This preserves the OEB's ability to make new regulated prices effective as early as January 1, 2017, which would allow OPG to recover the difference between the approved new regulated prices and the existing prices for the period between the effective date of the new regulated prices and their implementation date based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017, following a public proceeding. The public proceeding is in progress, with the oral hearing portion having commenced in February 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

In February 2017, the OEB approved a settlement agreement reached by OPG and intervenors on certain limited elements of OPG's application (Settlement Agreement). Among other elements, the Settlement Agreement accepts a number of year-end 2015 variance and deferral account balances totaling $419 million, allows for continuation of all applicable existing variance and deferral accounts, and confirms methodologies for calculating amounts to be recorded in most of the continuing accounts once new regulated prices take effect, as proposed by OPG. The balances of, and methodologies for recording future amounts in the Nuclear Liability Deferral Account, the Bruce Lease Net Revenues Variance Account and the Capacity Refurbishment Variance Account are excluded from the Settlement Agreement. The agreement also results in approval of OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017-2021 period. The Settlement Agreement does not impact OPG's 2016 financial results. **[MONITOR]**

OEB's Decision on OPG's December 2014 Motion

In January 2016, the OEB issued its decision on OPG's December 2014 motion asking the OEB to review and vary the parts of its November 2014 decision related to the disallowance of the Niagara Tunnel project expenditures, and the application of the 2013 regulatory tax loss to reduce the 2014/2015 revenue requirement. In its decision, the OEB reversed a portion of the original disallowance of the Niagara Tunnel project expenditures, and upheld the original tax loss decision. In the first quarter of 2016, OPG recorded a gain of $22 million to recognize the expected future recovery from customers of the portion of the disallowance reversed by the OEB's motion decision.

The original disallowance of the Niagara Tunnel project expenditures resulted in a write-off of $77 million that was charged to operations in 2014. The original tax loss decision resulted in a reduction of the 2014/2015 revenue requirement by approximately $70 million. As OPG's financial results have previously reflected the effect of the OEB's original tax loss decision, the motion decision on the tax loss did not impact OPG's 2016 financial results.

Ontario Nuclear Funds Agreement Reference Plan Update

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for nuclear waste management and nuclear facilities decommissioning as at December 31, 2016 was finalized as part of the required process to update the reference plan under the ONFA. As at December 31, 2016, the update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities with a corresponding decrease to the asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear facilities decommissioning at least once every five years, in line with the required ONFA reference plan update process.

The updated estimate of the obligations was reflected in a new ONFA reference plan, for years 2017 to 2021, which was approved by the Province in December 2016, effective January 1, 2017 (the 2017 ONFA Reference Plan). Based on the lower life cycle liability estimates per the 2017 ONFA Reference Plan, starting in 2017, OPG is not currently required to make overall contributions to the Used Fuel Segregated Fund or the Decommissioning Segregated Fund established under the ONFA. Prior to 2017, OPG made contributions to the Used Fuel Segregated Fund every year, including a one-time special payment in earlier years, as required by the ONFA. These contributions reflected ONFA requirements to fund the majority of the underlying used fuel liability by the end of the estimated useful lives of the nuclear stations in effect at OPG's inception in 1999, resulting in significantly higher contributions to the Used Fuel Segregated Fund in the earlier years of OPG's existence. OPG has not been required to make contributions to the Decommissioning Segregated Fund, which was fully funded at its inception and at the time of every subsequent approved ONFA reference plan. Contributions to either or both funds may be required in the future should the funds be in an underfunded position when a new reference plan is prepared. Such may be the case as a result of variability in asset performance due to volatility inherent in financial markets and Ontario CPI changes. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the underlying obligations in subsequent ONFA reference plans.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of the new regulated prices. In accordance with *Ontario Regulation 53/05*, the OEB is required to ensure that OPG recovers the revenue requirement impact of its nuclear waste management and nuclear decommissioning liabilities arising from the current approved ONFA reference plan. For further discussion on the accounting for Nuclear Liabilities, refer to the section, *Critical Accounting Policies* under the heading, *Asset Retirement Obligation*.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the amount due to the Province. This accounting adjustment represented the overfunded position of Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 relative to the value of the corresponding present value life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province as OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and as any excess funding in the Nuclear Segregated Funds upon termination of the ONFA accrues to the Province. Of the $88 million reduction in Nuclear Segregated Funds earnings, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

For further discussion of the accounting for the Nuclear Segregated Funds, refer to the section, *Critical Accounting Policies* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*. For further discussion of OPG's risks with respect to nuclear waste management and nuclear decommissioning obligations and Nuclear Segregated Funds, refer to the section, *Risk Management* under the headings, *Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds* and *Financial Markets*.

Shareholder Declaration and Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that required the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. The assets are reported under the Services, Trading and Other Non-Generation segment. An active program to locate a buyer for these real estate assets was initiated in October 2016, and a purchase and sale agreement was executed in December 2016. The sale is expected to be completed during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be

recognized upon completion of the transaction. Pursuant to the December 2015 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer a portion of the proceeds from this disposition into the Province's Consolidated Revenue Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario, an asset reported under the Services, Trading and Other Non-Generation segment. OPG is currently in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer a portion of the proceeds from this disposition into the Province's Consolidated Revenue Fund.

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business.

Contract Award for Nanticoke Solar Facility

In March 2016, Nanticoke Solar LP, then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation, was selected through the first phase of the IESO's Large Renewable Procurement (LRP) program to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands in Haldimand County, Ontario. The LRP program was a competitive bidding process for procuring large renewable energy projects in Ontario. In March 2016, Nanticoke Solar LP and the IESO executed a 20-year LRP contract, which formalized the terms and conditions for the development and operation of the new solar facility. In the first quarter of 2017 **[MONITOR]**, OPG purchased SECCLP's interests in Nanticoke Solar LP and is working to obtain approvals and permits required to enable the commencement of construction planned for the first half of 2018.

The 20-year term of the LRP contract takes effect once the station achieves commercial operation, which is expected in the first quarter of 2019. For further discussion, refer to the section, *Core Business, Strategy and Outlook* under the heading, *Project Excellence*.

Decommissioning of the Lambton GS

In November 2016, the Company announced the decommissioning of the Lambton GS, which ceased coal-fired generation in 2013, as it was determined that continuing to preserve the station beyond 2016 for future conversion was no longer economically feasible. OPG is currently developing a decommissioning plan for the Lambton GS, which will ensure that the station is closed safely, securely, and in an environmentally responsible manner.

Canadian Nuclear Safety Commission Safety Rating for the Pickering GS and the Darlington GS

The CNSC publishes an annual report on the safety performance of Canada's nuclear power plants. The report assesses how well plant operators are meeting regulatory requirements and program expectations in the areas of operational performance, safety analysis, radiation protection, waste management and conventional health and safety. In its 2015 annual report, the CNSC gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". The Pickering GS received this rating for the first time, while the Darlington GS achieved the rating for the seventh year in a row.

Acquisition of Hydro One Limited Shares

In April 2016, OPG acquired nine million common shares of Hydro One Limited (Hydro One) at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. OPG paid the same price as other investors in the offering. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union (PWU) and The Society of Energy Professional (The Society) renewed in 2015. Changes to these agreements included increases to employee pension plan contributions and provisions for existing employees represented by the PWU and The Society with eligibility to annually receive common shares of Hydro One for up to 15 years starting in

the third year of the respective agreements, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service. The shares acquired in the April 2016 transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

CORE BUSINESS, STRATEGY AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

OPG's four key strategic imperatives are as follows:

- Operational Excellence
- Project Excellence
- Financial Strength
- Social Licence.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Workplace Safety and Public Safety

Workplace safety and public safety are fundamental core values at OPG. OPG is committed to operating all of its facilities in a safe, secure, and reliable manner that minimizes risks to a reasonably achievable level. Safety is an overriding priority in all activities performed at OPG's generating and other facilities, and all employees and contractors are expected to conduct themselves in manner that ensures workplace safety and public safety in line with the Company's safety culture.

In the area of workplace safety, OPG is committed to achieving excellent safety performance through continuous improvement and a strong safety culture, with the ultimate goal of zero injuries. OPG utilizes an integrated health and safety management system and set of operational risk control procedures to ensure continued monitoring of health and safety performance and to support continuous learning and improvement in this area. Overall, OPG's workplace safety performance has been one of the best amongst its comparator Canadian electrical utilities. In 2016, OPG received the Canadian Electricity Association (CEA) President's Gold Award recognizing three consecutive years, 2013 to 2015, of sustained top quartile safety performance within the comparator group.

Workplace safety performance is measured using two primary indicators at OPG, All Injury Rate (AIR) and Accident Severity Rate (ASR). OPG's AIR and ASR results for employee workplace safety were as follows for the year ended December 31:

	2016	2015
AIR *(injuries per 200,000 hours worked)*	**0.56**	0.39
ASR *(days lost per 200,000 hours)*	**2.59**	0.50

In 2016, OPG's AIR and ASR safety performance was worse than in 2015. OPG's analysis of the underlying events indicated that major contributors to the injuries and near misses included inadequate situational awareness and attention to detail, and suboptimal risk-based decisions, rather than missing or inadequate standards or programs.

OPG is implementing a number of initiatives to target the injury trends based on the analysis of the safety events, with a focus on the use of human performance tools including increased field supervisory oversight, situational awareness, communication, and procedural use and adherence.

In 2016, OPG launched an organization-wide "iCare Enough to Act" initiative aimed at renewing employees' commitment to their own and each other's safety and well-being. Plans to further strengthen safety as a foundational element of the Company's values-based culture are being developed through leadership forums and other engagement activities.

Contractors are required to conduct work safely at OPG sites. In support of this requirement, OPG utilizes an independent contractor pre-qualification process, provides on-site safety support for many of OPG's major projects, and works with contract partners to improve their health and safety programs to meet OPG's requirements. To further strengthen contractors' safety performance, in 2016, OPG updated its contractor's safety requirements and related governance, and implemented additional oversight and field monitoring to ensure ongoing compliance. In the past eight years, OPG has consistently shown a better than average Construction Contractor AIR as compared to the Health and Safety Association Contractor AIR, a metric of construction contractor safety performance across Ontario.

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for those individuals who live or work near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), which is an international unit of radiation dose measurement. For 2015, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.5 μSv and 1.2 μSv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000 μSv. While the public doses from OPG's nuclear operations for the 2016 operating year will not be finalized until the second quarter of 2017, they are not expected to differ significantly from the 2015 levels.

In June 2016 and August 2016, the CNSC released sampling results from its independent environmental monitoring program, which confirmed that the public and the environment around OPG's nuclear generating stations continued to be safe. Also in 2016, the CNSC published its 2015 annual report on the safety performance of Canada's nuclear power plants, which gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". For further details, refer to the CNSC safety rating discussion under the heading, *Recent Developments* in the *Highlights* section.

OPG remains committed to high standards of public safety on waterways around hydroelectric dams and generating stations. A Dam Safety Review Panel comprised of internationally recognized experts has previously concluded that OPG's dam and public safety program is comparable with international best practices in a number of areas related to maintaining safe dam operations. OPG continues to develop a new risk-informed approach on behalf of the Ontario Ministry of Natural Resources and Forestry (MNRF) to prioritize and manage risks identified through dam safety assessments. In 2016, OPG continued its water safety campaign with a series of public service announcements illustrating the danger of water near hydroelectric dams and hydroelectric generating stations.

Electricity Generation Production and Reliability

Key strategic initiatives in support of operational excellence, specific to each of OPG's core generating operations, are discussed below. Generation and reliability performance for 2016 is discussed by operating segment in the section, *Discussion of Operating Results by Business Segment*.

Nuclear Operations

OPG is pursuing a number of strategic initiatives aimed at the continued safe and reliable operation of the Pickering GS and targeting top performance at the Darlington GS.

OPG's nuclear operations are regularly benchmarked against top performing nuclear facilities around the world. This allows OPG to identify, develop and implement initiatives to further improve performance. During 2016, OPG participated in two World Association of Nuclear Operators (WANO) peer evaluations to compare its stations against standards of excellence through an in-depth, objective review by an international panel of industry experts. In May 2016, OPG hosted a WANO peer evaluation for the Darlington GS. The review maintained Darlington's excellent standing as one of the top performing nuclear plants in the world. In September 2016, OPG hosted a team of experts from the International Atomic Energy Agency at the Pickering GS to conduct a standard Operational Safety Review Team mission. The team conducted an in-depth review of performance and adherence to international safety standards. A report on the mission is expected to be released in the second quarter of 2017.

In January 2016, OPG announced its plan to pursue continued safe and reliable operation of the Pickering GS beyond 2020. OPG's objective is to maximize the operating life of the Pickering units. Under OPG's current plan, all six operating units at the station would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The Province announced its approval of OPG's plan to pursue continued operation of the Pickering GS beyond 2020 up to 2024 in January 2016. Extending operations at the Pickering GS will provide continued employment to approximately 3,000 regular employees at OPG, and will help reduce approximately 17 million tonnes of carbon dioxide emissions, which is the equivalent to removing 3.4 million cars from Ontario's roads.

As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will achieve the additional life necessary to operate to 2024. OPG is also conducting component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently established as the end of 2020, are expected to be reassessed when OPG's further technical work confirms the longer fuel channel life and the units' fitness to operate beyond 2020, taking into account the requirement for the CNSC's approval, discussed below.

OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. OPG has started work on the Pickering licence renewal application, which is expected to be filed in mid-2017 for the CNSC's approval in 2018. The requested licence renewal spans the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. A Periodic Safety Review and an Integrated Implementation Plan (IIP) for the station will be submitted to the CNSC as part of the application.

OPG strives to operate and maintain its nuclear facilities to optimize equipment, performance, availability and electricity generation, while improving the reliability and predictability of the fleet. Improved equipment reliability generally results in fewer generation interruptions. OPG continues to make investments in the performance of the Pickering GS, with a focus on improving plant reliability and maximizing the value of the asset through implementing equipment modifications and fuel handling reliability improvements, reducing equipment maintenance backlogs, and completing critical and high priority work.

Nuclear inspection and testing programs are largely driven by maintenance and regulatory requirements, and are designed to ensure that equipment is performing safely and reliably. Execution of this and other outage work continues to be a high priority. As part of its commitment to operational excellence, OPG continues to focus on improving the planning, execution, monitoring, and reporting of outage work.

Work continues to ensure the integration of life cycle management and refurbishment programs at the Darlington GS. This includes developing staffing strategies to support both ongoing station operations and the refurbishment project, planning and incorporating pre-requisite work for the refurbishment into the station's work schedule, and identifying life cycle and aging management work to sustain safe and reliable station operations for the next three decades.

OPG's longer-term efforts are aimed at positioning the Darlington GS for industry leading operating and cost performance.

Delivering solutions that provide the best combination of safety, cost and effectiveness, as well as establishing challenging financial targets based on comprehensive benchmarking continues to be a vital part of OPG's strategy to improve performance of the nuclear business unit. Financial and staffing targets continue to be reviewed and adjusted where necessary to reduce operating costs, while ensuring safety is not compromised.

In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications will be presented to the CNSC at a public hearing in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018.

Hydroelectric Operations

The objectives of OPG's hydroelectric operations include operating and maintaining the generating facilities in an efficient and cost-effective manner, while enhancing their reliability and availability. OPG continues to evaluate and implement plans to increase capacity, maintain and improve performance, and extend the operating life of its hydroelectric generating assets.

OPG's plans for its existing hydroelectric generating stations are accomplished through multi-year capital investment and other programs, including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers, and controls. The aim of OPG's runner replacement and upgrade program is to increase hydroelectric station capacity by leveraging efficiency enhancements in runner design. Where economical and practical, OPG pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations. Over the next three years, OPG plans to increase the total capacity of its hydroelectric generating fleet by approximately 135 MW, which, in addition to the runner replacement and upgrade program, includes the Peter Sutherland Sr. GS project and the Ranney Falls GS projects. Both of these projects are discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Project Excellence*. OPG is also planning to repair, rehabilitate, or replace a number of aging civil hydroelectric structures.

As part of its commitment to operational excellence, OPG continues to make investments in its existing hydroelectric generating fleet. During 2016, OPG continued to execute a number of projects, including:

- Completion of major equipment overhauls and rehabilitation work on Unit 5 of the Sir Adam Beck Pump GS, and Unit 2 of the Whitedog Falls GS
- Completion of a runner upgrade, headgate replacement and rehabilitation of Unit 2 of the Harmon GS
- Completion of headgate replacement at Units 1 and 2 of the Kipling GS
- Completion of concrete rehabilitation of the main dam at Chats Falls GS
- Continued work on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 5 of the DeCew Falls 1 GS, Unit 1 of the Harmon GS, and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.

OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS. **[MONITOR]**

Thermal Operations

OPG's thermal operations consist of biomass-fuelled generating units at each of Atikokan GS and Thunder Bay GS, and the oil/gas dual-fuelled Lennox GS.

These stations, which operate as peaking facilities, provide Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements and enable the system to accommodate the expansion of Ontario's renewable generation portfolio. The continued operation of these stations during the initial years of the refurbishment of the Darlington GS and Bruce nuclear facilities is expected to provide Ontario with over 2,000 MW of peaking generation.

During the third quarter of 2016, the Atikokan and Thunder Bay generating stations provided renewable generation when called upon to meet system requirements while utility maintenance was being conducted on a local transformer station. As a result of utility maintenance, the Atikokan GS operated continuously from late July 2016 to early September 2016, while the Thunder Bay GS operated as needed. To meet the increased demand for biomass fuels at Atikokan GS, OPG coordinated the acceleration of biomass fuel deliveries with suppliers while continuing to operate the plant safely.

As part of OPG's ongoing strategy to reduce costs and increase efficiency, the operations of the Company's hydroelectric and thermal assets have been combined into one organization. OPG continues to evaluate opportunities to consolidate departments within the stations and across regions.

Thermal stations that are no longer available to generate electricity are included in the Services, Trading and Other Non-Generation segment once they are removed from service. This includes the Lambton GS and Nanticoke GS sites, which ceased coal-fired generation in 2013. In 2015, OPG announced the decommissioning of the Nanticoke GS, as it could not commercially support continued preservation costs.

In November 2016, OPG announced the decommissioning of the Lambton GS, as further discussed in the section, *Highlights* under the heading, *Recent Developments*. OPG is currently developing decommissioning plans for the Lambton and Nanticoke generating stations, which will ensure that they are closed safely, securely and in an environmentally responsible manner. The decommissioning plan for the Nanticoke GS will accommodate the construction and operation of the Nanticoke solar facility. The costs of decommissioning the stations will be charged to a previously established decommissioning provision. OPG expects to review the decommissioning provision estimates for these sites in 2017.

Environmental Performance

OPG's Environmental Policy states that "OPG shall meet all legal requirements and any environmental commitments that it makes, with the objective of exceeding these legal requirements where it makes business sense". This policy commits OPG to:

- establish and maintain an environmental management system (EMS)
- work to prevent or mitigate adverse effects on the environment with a long-term objective of continual improvement
- manage sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern.

In 2016, OPG maintained the ISO 14001 registration of its company-wide EMS. Within the EMS, OPG has planning, operational control, and monitoring programs to manage the Company's positive and negative impacts on the environment. Significant environmental aspects of OPG's operations include: spills, chemical and thermal emissions to water, water flow and level changes, radioactive emissions, low and intermediate level radioactive waste (L&ILW), wildlife habitat, displacement of fossil fuels, and fish impingement and entrainment. Further details regarding OPG's environmental risks can be found in the section, *Risk Management* under the heading, *Environmental Risk*.

Environmental performance targets are set as part of the annual business planning process. OPG met or outperformed its 2016 targets for spills, environmental infractions, and carbon-14 emissions to air. An increase in the volume of waste generated from work activities at the Darlington GS and preparation for the Darlington Refurbishment project led to a higher than expected volume of L&ILW produced in 2016. Performance for tritium

emissions to air and water during 2016 remained less than one percent of the regulatory limit. There were no significant environmental events during 2016.

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. The program requirements are expected to result in increased fuel costs for some OPG-owned and co-owned generating facilities. Fuel costs for these stations are generally recovered from the electricity market. With OPG's low GHG emitting fleet, the program is not expected to have a material adverse financial impact on the Company. OPG has established the necessary processes to comply with the cap and trade program requirements.

OPG is monitoring actions being taken by the Government of Ontario and the Government of Canada to reduce GHG emission levels and transition to a low-carbon economy. In support of efforts to mitigate climate change, the Company continues to evaluate and implement plans to increase the generation capacity of its hydroelectric generating fleet, where economic, and invest in other low-carbon technologies.

OPG communicates its environmental performance internally to employees and to external stakeholders, including the Ontario Ministry of the Environment and Climate Change, Environment and Climate Change Canada, the CNSC, and local communities. Details of OPG's environmental performance and initiatives to fulfill the Company's Environmental Policy can be found in OPG's 2015 Sustainability Report, available on the Company's website at www.opg.com.

Improving Efficiency and Reducing Costs

As part of its commitment to operational excellence, OPG remains focused on reducing costs by pursuing efficiency and productivity improvements across operating business units and support functions, while ensuring that there is no adverse impact on the safety, reliability and environmental sustainability of the Company's operations. This includes streamlining of processes, simplifying governance, upgrading information technology, optimizing service delivery models, and, where appropriate, leveraging attrition to achieve human resource targets aligned with business requirements. Initiatives to improve cost performance and organizational capability are being implemented at the enterprise and business unit level.

To drive efficiency and performance improvement, the Company continues to leverage a more scalable, centre-led organizational model. In 2016, the reduction in OPG's regular headcount from ongoing operations, since the beginning of 2011, reached over 2,800. Improving organizational performance and building on these efficiency gains remains a key priority for the Company. OPG continues to review its cost structure, identify cost improvement strategies and embed an outcomes-driven culture that reinforces low cost, efficiency, and organizational agility as part of business decision-making. In order to enhance the overall focus on productivity, in 2016 OPG adopted Enterprise TGC per MWh as a measure of OPG's overall organizational cost performance and Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets, in addition to the existing Nuclear TGC per MWh measure. Further details regarding these measures are included in the sections, *Highlights, Key Operating and Financial Performance Indicators* and *Supplemental Non-GAAP Measures*.

People and Culture

A well trained and engaged workforce is fundamental to the achievement of OPG's strategic imperatives. To succeed in a demanding business environment, OPG is focused on building a diverse, healthy, engaged workforce and fostering a culture of collaboration, accountability and innovation. OPG also continues to communicate and

implement the values and behaviours expected from its employees in order to maintain a strong focus on safety, performance excellence, continuous improvement, and corporate citizenship.

The Company continues to focus on improving the capability of its workforce through leadership development, knowledge management, diversity and inclusion programs, and hiring in key areas. Ability to secure the right talent mix in order to effectively meet the Company's immediate and longer term business needs on a timely basis is supported through workforce planning, resourcing and on-boarding strategies, both to acquire external talent into the organization and to develop existing employees. The goal of workforce planning and resourcing strategies is to ensure that the Company's workforce is diverse and has the right skill set and capability for the safe and effective operation of the generating facilities and successful delivery of major projects, including the refurbishment of the Darlington GS. These strategies are being designed to take into account anticipated staffing requirements to the end of planned commercial operations of the Pickering GS, through to the end of the planned period to de-fuel, de-water and place the station in a safe state condition.

As part of the strategy to develop and engage employees and to build leadership talent, the Company has an active succession planning program with a focus on accelerating development. OPG also has a talent management monitoring process to proactively assess staffing risks, challenges and opportunities. Since 2015, OPG offers a company-wide high-potential leadership development program to qualified internal candidates. This 18-month cross-functional, competitive-entry program is designed to identify and develop candidates for future leadership positions while they are still relatively early in their career.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification. In addition to maintaining its internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners and educational institutions to meet the required level of qualification. Training delivery models are evaluated for effectiveness and efficiency.

Effective January 1, 2017, OPG implemented a new Executive Compensation Program that is compliant with *Ontario Regulation 304/16: Executive Compensation Framework*, introduced in September 2016. The regulation sets out how all employers designated under the *Broader Public Sector Executive Compensation Act, 2014*, including OPG, must establish and post compensation programs for executives. The program must include the compensation philosophy, salary and performance-related pay caps, comparative analysis details, and a description of other elements of compensation. OPG's new Executive Compensation Program, which applies to employees at the Vice President level and higher, is designed to provide compensation that is at the 50th percentile of the market and focused on at-risk, performance based pay. The program will better enable OPG to attract, align and retain the executive talent critical to delivering Shareholder and customer value, while ensuring continued safe and reliable operations.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. OPG also continues to plan and execute maintenance and capital improvement projects related to its existing assets. OPG strives for excellence in the planning and delivery of all projects across the Company.

OPG's vision for project excellence is to be an industry leader in project management capability and performance. As part of its commitment to project excellence, OPG continues to enhance and streamline its approach to project planning and execution, with the goal of delivering all projects safely, on time, on budget, and with high quality. Achieving project excellence at OPG involves, among other things, putting in place a common, scalable project delivery model across all business units, establishing qualified project management teams, optimizing contracting strategies, engaging qualified and experienced vendors, and effectively monitoring and controlling performance. The status updates for OPG's major projects as of December 31, 2016 are outlined below.

Project	Capital	Approved	Expected

(millions of dollars)	expenditures Year-to-date	Life-to-date	budget	in-service date	Current status
Darlington Refurbishment	1,019	3,185	12,800 [1]	First unit - 2020 Last unit - 2026	The refurbishment of Unit 2 commenced in October 2016, as planned. De-fueling of Unit 2, the first critical path activity, was completed in January 2017, ahead of schedule. The project is tracking on budget. See update below.
Peter Sutherland Sr. Hydroelectric GS	141	236	300	2017	Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, ahead of the originally planned schedule. **[MONITOR]** See update below.
Sir Adam Beck Pump GS Reservoir Refurbishment	39	46	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget. See update below.
Ranney Falls Hydroelectric GS	2	3	77 **[MONITOR]**	2019	Project design work was completed in 2016 and construction is expected to commence in 2017. See update below. **[MONITOR]**
Nanticoke Solar Facility	1	1			Project definition work is in progress and construction is planned to commence in the first half of 2018. See update below.
Deep Geologic Repository for L&ILW	9 [2]	195 [2]			OPG has completed the additional studies required by the Canadian Environmental Assessment Agency (CEAA) and the federal Minister of Environment and Climate Change and submitted this information in December 2016. See update below.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the Darlington GS by approximately 30 years. The Darlington Refurbishment project is a multi-phase program comprising the following five major sub-projects:

- **Retube and Feeder Replacement (RFR)**, which includes the removal and replacement of fuel channel assemblies and feeder tubes in each reactor

- **Turbines and Generators**, which consists of inspections and repairs of turbine generator sets and the replacement of analog control systems with digital control systems
- **De-fuelling and Fuel Handling**, which involves the de-fuelling of the reactors and the refurbishment of the fuel handling equipment
- **Steam Generators**, which includes mechanical cleaning, water lancing, and inspection and maintenance work on the generators
- **Balance of Plant**, which consists of work on smaller projects to replace or repair certain other station components.

In January 2016, the Government of Ontario's support for the Darlington Refurbishment project was affirmed through the Ontario Minister of Energy's announcement endorsing OPG's plan to refurbish the four Darlington units at a total project budget of $12.8 billion, including capitalized interest and escalation. The Province's announcement followed the approval of the project budget and schedule by OPG's Board of Directors in November 2015. The refurbishment of the last unit is scheduled to be completed by 2026. OPG's current operating licence for the Darlington GS spans most of the planned duration of the Darlington Refurbishment project, expiring in November 2025.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. *Ontario Regulation 53/05* requires the OEB to accept the need for the Darlington Refurbishment project in light of Ontario's 2013 Long-Term Energy Plan (LTEP) and the related policy of the Province endorsing the need for nuclear refurbishment. It also requires the OEB to ensure that OPG recovers capital and non-capital costs and firm financial commitments in respect of the Darlington Refurbishment project, if the OEB is satisfied that the costs were prudently incurred and that the firm financial commitments were prudently made.

A number of pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, in support of the execution phase of the project have been completed, with the remaining projects continuing to track for completion in line with the refurbishment execution schedule.

All major contracts for the Darlington Refurbishment project that OPG expected to award were in place prior to proceeding with the Unit 2 refurbishment. This included the RFR execution phase contract awarded in January 2016 and valued at approximately $2.75 billion for work to be executed on all four units. All of the major contracts contain suspension and termination provisions.

Other key activities related to the project in 2016 included the following:

- Fabrication of the major reactor components including fuel channels and feeder tubes is in progress, with the first set of feeder tubes delivered in the fourth quarter of 2016. The remaining components have planned deliveries tracking in line with the project schedule.
- The specialized tooling for removal and replacement of feeder tubes and fuel channel assemblies in each reactor was delivered to OPG's reactor training and mock-up facility in the second quarter of 2016, as planned, and testing of the tooling has been completed.

- All 28 storage tanks have been installed in the Heavy Water Storage and Drum Handling Facility, which will provide storage and processing capability for the removal of heavy water from the units during refurbishment, as well as for continued station operations.
- The RFR Island Support Annex was completed in February 2016. The facility houses RFR field preparatory, contractor management, and project oversight activities.

In addition to the de-fuelling of the Unit 2 reactor completed in January 2017, milestones for the Darlington Refurbishment project in 2017 include:

- Completion of reactor vault preparation activities to support RFR work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Third Emergency Power Generator and Containment Filtered Venting System safety enhancement projects, which were originally scheduled to be placed in-service in 2016. Remediation measures are in progress and OPG expects both projects to be placed in-service during the first quarter of 2017. These delays will not impact the overall Darlington Refurbishment project schedule, as neither of the two projects is on the critical path.
- Completion of the Re-tube Waste Processing Building and the Heavy Water Storage and Drum Handling Facility.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of the second unit, Unit 3, at the Darlington GS and is entering into associated commitments to procure major components that require long-lead times. As of December 31, 2016, $31 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Peter Sutherland Sr. Hydroelectric GS

The project to construct the 28 MW Peter Sutherland Sr. hydroelectric GS is in the process of testing and commissioning the turbine and generator units, as well as operator training and document turnover. Work also continues on demobilization efforts, as well as site reclamation. Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. **[MONITOR]** The project is tracking within the approved budget of $300 million.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The construction work on the project included installation of a partial new liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

During 2016, OPG completed project design work for the construction of an additional 10 MW single-unit powerhouse on the existing Ranney Falls GS site. The new unit will replace an existing unit that reached its end of life in 2014. Capital expenditures for project definition work completed as of December 31, 2016 were $3 million. OPG plans to commence construction work in 2017, with an expected in-service date in the fourth quarter of 2019 and a budget of $77 million. **[MONITOR]**

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS and adjacent lands is planned to commence in the first half of 2018. It is expected to be completed in early 2019. Capital expenditures for project definition work completed as of December 31, 2016 were $1 million.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In August 2015, OPG responded to the CEAA's list of potential environmental conditions relating to the JRP report. In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and the impact on environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization (NWMO) were located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following a review by the CEAA and a period of public comment, an EA Decision Statement by the Minister is expected by the third quarter of 2017. Based on the information submitted to the Minister, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

In 2013, OPG suspended design activities on the project pending receipt of a site preparation and construction licence. If the decision on the EA is positive, the licensing process will resume. Upon receipt of the site preparation and construction licence, OPG will complete detailed design and development of a project schedule and a budget. In parallel, OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The approval of OPG's Board of Directors must also be obtained in order to proceed with construction. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

New Nuclear Units

The 2013 LTEP also indicated that the Ontario Ministry of Energy would work with OPG to maintain the site preparation licence granted by the CNSC in relation to the potential construction of these reactors. As such, OPG has been undertaking activities required to support the CNSC Power Reactor Site Preparation Licence and the

Darlington New Nuclear Project EA. The JRP Report on the EA had concluded that the project was not likely to cause significant adverse environmental effects, given mitigation. In April 2016, the Supreme Court of Canada dismissed the application for leave to appeal filed by the parties that had challenged the Darlington New Nuclear Project EA through a judicial review, concluding the litigation on the matter. The CNSC site preparation licence expires in 2022.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth. Inherent in this priority are three objectives:

- Increase revenue, reduce costs and achieve appropriate return
- Ensure availability of cost effective funding for operational needs, generation development projects and long-term obligations
- Pursue opportunities to expand the existing core business and capitalize on new growth paths.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In line with its commercial mandate, OPG is focused on increasing revenue and achieving an appropriate rate of return on the Shareholder's investment, while taking into account the impact on Ontario electricity customers.

In order to achieve the above objectives with respect to the regulated operations, OPG is focused on clearly demonstrating in its rate applications to the OEB that the costs required to operate and invest in the assets are reasonable and being prudently incurred, and should be fully recovered, and that the Shareholder's investment in these assets should earn an appropriate rate of return. OPG's existing base regulated prices, which came into effect in November 2014, were lower than requested by OPG based on its forecast costs. This has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

To improve the financial strength of the regulated operations going forward, OPG has been focused on providing appropriate, transparent evidence in support of its OEB rate requests, aligning organizational resources to support an effective rate application process, and continuing to identify opportunities for further efficiencies in the Company's cost structure. To date, OPG's focus on cost reduction and efficiency improvement initiatives has resulted in significant changes across the Company. This includes over $1 billion in cumulative savings realized across the Company since the beginning of 2011 from reductions in ongoing operations regular headcount through Business Transformation and other initiatives. OPG's cost and productivity improvement efforts are discussed further under the heading, *Operational Excellence*.

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. The OEB's decision on the application, including the effective date of the approved new regulated prices, is expected in the second half of 2017. Consistent with *Ontario Regulation 53/05*, OPG incorporated a nuclear rate smoothing proposal into its application, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impact on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the deemed capital structure applied to the regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent

debt. If approved, this would improve OPG's return on Shareholder's investment. Further details on OPG's rate application can be found under the heading, *Recent Developments* in the *Highlights* section.

For generation development projects that do not form a part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements prior to proceeding with the project. In line with this strategy, most of OPG's non-regulated operating facilities and assets under construction are subject to ESAs with the IESO. Based on these agreements, OPG expects its non-regulated generation operations, reported under the Contracted Generation Portfolio segment, to continue to provide a generally stable level of earnings and cash flow going forward.

OPG's capital structure currently reflects lower levels of debt than the deemed capital structure reflected in the Company's existing or proposed regulated prices. OPG is evaluating strategies to enhance Shareholder returns by optimizing the Company's capital structure through better alignment with the deemed capital structure, taking into account the overall financial strength of the Company and the potential impact on the Company's investment grade credit rating.

Ensure Availability of Cost Effective Funding

OPG actively monitors its funding requirements and forecasts availability of funds to ensure that it can meet the Company's operational needs, project commitments and long-term obligations. OPG utilizes multiple sources of funds, including funds from operations, commercial paper, securitization of assets, letters of credit, credit facilities, long-term corporate debt, and private placement project financing. The Company's financing strategy leverages the strength of its balance sheet to obtain cost effective long-term corporate debt. OPG also accesses the capital markets for private placement project financing, secured by the assets of the project, where the characteristics of the project support such financing. Maintaining an investment grade credit rating is critical to OPG's ability to access cost effective financing.

In April 2016, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2016, S&P Global Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

OPG intends to continue to access the capital markets, where appropriate, to obtain cost effective financing for future generation development projects. The Company also continues to evaluate arrangements that would appropriately support its financing needs and capital expenditure programs. OPG's liquidity and capital resources are discussed under the section, *Liquidity and Capital Resources.*

Pursue Business Growth Opportunities

OPG pursues commercially-based business growth opportunities through investments in its core generation portfolio, as well as emerging renewable energy project opportunities. OPG's growth strategy considers the Company's financial position and anticipated future changes in the generating fleet, including the eventual end of Pickering commercial operations. The growth strategy is also informed by industry, technological, environmental, social, and economic external factors. Growth opportunities are evaluated using financial and risk-based analyses as well as strategic considerations.

OPG's core business growth strategy focuses on the renewal and expansion of the Company's generation portfolio of nuclear, hydroelectric and thermal generating assets in Ontario, including the redevelopment and expansion of existing sites and potential new developments. The strategy leverages OPG's operating and project development expertise as well as the Company's existing diverse physical asset base. OPG considers acquisition opportunities as they arise, taking into account operating synergies, strategic benefits, financial returns and risk profile. OPG's current major generation development projects and asset life extension initiatives are discussed under the headings, *Operational Excellence* and *Project Excellence* in the *Core Business and Strategy* section.

OPG seeks to continue to expand beyond its core generation business through investments in innovation and emergent low-carbon technologies, including selective solar generation, energy storage, micro-grid, electric vehicle infrastructure and other development. OPG is also considering longer-term growth paths that include broader electricity sector opportunities, within and outside Ontario. Growth opportunities may be pursued in partnership with other commercial entities where appropriate synergies exist and are aligned with OPG's business objectives.

In March 2016, Nanticoke Solar LP was selected, through the first phase of the IESO's LRP program, to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. The partnership and the IESO executed a 20-year LRP contract in March 2016, which formalized the terms and conditions for the development and operation of the new solar facility. In September 2016, the Government of Ontario suspended the second phase of the LRP program, which does not impact the project.

From October 2016 to December 2016, the Government of Ontario conducted a consultation process to update its LTEP. OPG made a formal submission as part of the consultation as it relates to OPG's core generation business and growth opportunities. The Ontario Ministry of Energy has indicated that the development of the updated LTEP, scheduled to be published in 2017, will balance the principles of affordability, reliability, clean energy, community and Indigenous engagement, as well as conservation and demand management. OPG's business growth opportunities may be affected by the results of the 2017 LTEP.

Social Licence

As the largest, publicly-owned electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations. OPG's commitment to safety is discussed under the heading, *Workplace and Public Safety* in the *Core Business and Strategy* section.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish relationships with Indigenous communities based on a foundation of respect for their languages, customs, and political, social and cultural organizations. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, and other joint projects. Recent examples of partnerships include the Peter Sutherland Sr. GS in partnership with the Taykwa Tagamou Nation, the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River, and two recently completed shoreline remediation projects. The Whitesand First Nation, working closely with OPG, completed a project to remediate nearly two kilometers of shoreline in 2016, while the Long Lake #58 First Nation undertook the management of a five-year shoreline remediation project. OPG also has been engaging proactively with Indigenous communities regarding the Company's nuclear operations, including both regularly scheduled meetings and an outreach effort in connection with OPG's proposed L&ILW DGR and the re-licensing of the PWMF and the WWMF. In November 2016, OPG was recognized for its ongoing commitment to engaging local Indigenous communities with the CEA's 2016 Sustainable Electricity award for Leadership in External Collaboration and Partnerships.

OPG is committed to being an open, transparent, and accountable company. With operations across Ontario, OPG works to maintain public trust with stakeholders by engaging site communities, sharing information, and being transparent about performance. In addition, OPG's operations are subject to extensive regulatory oversight, with public participation, by the CNSC, the OEB, and other bodies.

As part of its commitment to environmental sustainability, OPG works with community partners to support regional ecosystems and biodiversity. In 2016, OPG continued efforts to protect and restore habitat, promote biodiversity education and awareness, and help the recovery of species at risk. In addition, OPG helps contributes to the well-being of its host communities through the Company's Corporate Citizenship Program (CCP), which supports

charitable and non-profit grassroots initiatives in the areas of environment, education, and community, which includes support for including Indigenous initiatives. In 2016, OPG's CCP provided support to over 850 initiatives, of which 87 were Indigenous.

Further details regarding OPG's commitment to sustainable development, including information regarding the Company's environmental, social and economic performance and initiatives, are provided in OPG's 2015 Sustainability Report available on the Company's website at www.opg.com.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of revenue requirement and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's application for new base regulated prices submitted to the OEB in May 2016 is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its May 2016 application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

Until the OEB's decision on OPG's application is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In large part, this is due to the expected year-over-year reduction in nuclear electricity generation resulting from the full year effect of the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined based on a production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision's issuance could have a significant impact on OPG's financial results during 2017. The application for new regulated prices is further discussed in the *Highlights* section under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. Combined with the expiry of rate riders in effect during 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment, as expected, OPG anticipates this to result in lower cash flow from operations and lower Adjusted FFO Interest Coverage ratio in 2017, compared to 2016. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements. In addition, the expected reduction in nuclear generation as a result of the planned outages at Darlington GS is expected to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Other factors that may impact the Enterprise TGC include potential hydroelectric generation losses due to surplus baseload generation conditions and planned capital expenditures.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, variance accounts include those related to the revenue impact of variability in water flows and SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Pursuant to the Settlement Agreement, these and all other applicable existing variance and deferral accounts have been approved to continue once new regulated prices take effect. Considering the impacts of these accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. **[MONITOR]**

OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to ESAs with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major development projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI, which, in the short term, can be volatile and cause fluctuations in the Company's income. This volatility has been partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account. OPG is exposed to rate of return risk for the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodologies for the Nuclear Liabilities.

As OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle liabilities per the most recently approved ONFA reference plan, the volatility of earnings on the Nuclear Segregated Funds reflected in net income is reduced when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at December 31, 2016, the Decommissioning Segregated Fund was overfunded by 21 percent, and the Used Fuel Segregated Fund was marginally overfunded by less than one percent, relative to the liabilities per the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future, which would increase earnings volatility. The 2017 ONFA Reference Plan is discussed in the *Highlights* section, under the heading *Recent Developments.* The accounting for the Nuclear Segregated Funds is discussed in the section *Critical Accounting Policies*, under the heading *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

KEY OPERATING AND FINANCIAL PERFORMANCE INDICATORS

OPG evaluates the performance of its generating stations using a number of key indicators. Key operating performance indicators aligned with corporate strategic imperatives are measures of production reliability, cost effectiveness, environmental performance, and safety performance. Certain of the measures used vary depending on the generating technology. The key financial performance indicators evaluate the Company's financial performance at the enterprise level.

In 2016, OPG adopted Enterprise TGC per MWh as an enterprise-wide measure of operational cost effectiveness. Concurrently, OPG adopted Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets and no longer reports Hydroelectric OM&A expense per MWh. The new performance measures, together with Nuclear TGC per MWh, provide the Company with a single, consistent method of evaluating cost effectiveness across the organization.

Enterprise TGC, Nuclear TGC, Hydroelectric TGC, ROE Excluding AOCI, and the FFO Adjusted Interest Coverage ratio discussed below are not measurements in accordance with US GAAP. They should not be considered as alternative measures to net income or any other measure of performance under US GAAP. However, OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the

Company's strategic imperatives and related objectives. The definition and calculation of Enterprise TGC per MWh, Nuclear TGC per MWh, Hydroelectric TGC per MWh, ROE Excluding AOCI and FFO Adjusted Interest Coverage are found in the section, *Supplementary Non-GAAP Financial Measures*.

Enterprise Total Generating Cost per MWh

Enterprise TGC per MWh is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Nuclear Total Generating Cost per MWh

Nuclear TGC per MWh is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts and expenses ancillary to OPG's nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Hydroelectric Total Generating Cost per MWh

Hydroelectric TGC per MWh is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Nuclear Unit Capability Factor

OPG's nuclear stations are baseload facilities and are not designed for fluctuating production levels to meet peaking demand. The nuclear Unit Capability Factor is a key measure of nuclear station performance. It measures the amount of energy that the unit(s) generated over a period of time, adjusted for externally imposed constraints such as transmission or demand limitations, as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. Capability factors are primarily affected by planned and unplanned outages. By industry definition, capability factors exclude production losses beyond plant management's control, such as grid-related unavailability. The nuclear Unit Capability Factor also excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS is excluded from the measure effective October 15, 2016, when the unit was taken offline as part of the Darlington Refurbishment project.

Hydroelectric Availability

OPG's hydroelectric stations operate as baseload, intermediate, or peaking stations. Hydroelectric Availability is a measure of the reliability of a hydroelectric generating unit. It represents the percentage of time the generating unit is capable of providing service, whether or not it is actually generating electricity, compared to the total time for the respective period.

Thermal Equivalent Forced Outage Rate

Equivalent Forced Outage Rate (EFOR) is an index of the reliability of a generating unit at OPG's thermal stations. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its objective to deliver value to the Shareholder. ROE Excluding AOCI is defined as net income attributable to the Shareholder for the period divided by average equity attributable to the Shareholder excluding AOCI for that period, and is measured over a period of 12 months.

Funds from Operations Adjusted Interest Coverage

The FFO Adjusted Interest Coverage ratio is an indicator of OPG's ability to meet interest obligations from operating cash flow and is consistent with the Company's objective of ensuring availability of cost effective funding. The FFO Adjusted Interest Coverage ratio is defined as FFO before interest divided by adjusted interest expense, and is measured over a period of 12 months.

Other Key Indicators

In addition to production reliability, cost effectiveness, and financial performance indicators, OPG has identified certain environmental and safety performance measures. These measures are discussed under the section, *Core Business, Strategy and Outlook*.

BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary

services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power and other facilities, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to the passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel L&ILW, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Power lease arrangement and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because OPG's costs associated with the Nuclear Liabilities have been included by the OEB in the determination of regulated prices for production from the Pickering and Darlington nuclear generating stations, in accordance with the methodologies applied since the OEB's 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. Brighton Beach operates under an energy conversion agreement between Brighton Beach and Shell Energy North America (Canada) Inc, and the PEC station is operated under the terms of an Accelerated Clean Energy Supply contract with the IESO. OPG's share of the in-service

generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of trading activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the United States (US) market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets, with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and Nanticoke generating stations' sites.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**3,481**	3,245
Fuel expense	**315**	301
Gross margin	**3,166**	2,944
Operations, maintenance and administration	**2,210**	2,196
Depreciation and amortization	**925**	717
Property taxes	**26**	26
Income before other loss, interest, and income taxes	**5**	5
Other loss	**1**	3
Income before interest and income taxes	**4**	2

Income before interest and income taxes from the segment increased to $4 million in 2016, compared to $2 million in 2015. The improvement in earnings of $2 million was primarily due to higher electricity generation in 2016, compared to 2015, which increased revenue from the nuclear base regulated price. The increase in revenue was largely offset by higher OM&A expenses, higher fuel expense, and higher depreciation and amortization expense, excluding amortization expense related to regulatory balances, in 2016, compared to 2015.

Higher nuclear production of 1.1 TWh in 2016, compared to 2015, was primarily due to the planned four-unit VBO in 2015 and a decrease in the number of unplanned outages at the Darlington GS in 2016. This was partially offset by the impact of the increased number of unplanned outage days at the Pickering GS in 2016, and the removal from service of Unit 2 of the Darlington GS in October 2016 as part of the Darlington Refurbishment project.

The increase in OM&A expenses of $14 million in 2016 reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium prices and

higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million primarily due to new assets in service in 2016.

A decrease in non-electricity generation revenue in 2016, compared to 2015, also partially offset the increase in segment earnings. The lower non-electricity generation revenue was mainly attributable to lower detritiation services revenue and lower isotope sales in 2016 and an insurance recovery recognized in 2015.

A higher OEB-authorized rate rider of $10.84/MWh effective from July 1, 2015 to the end of 2016 contributed to the increase in segment revenue in 2016, compared to 2015. In the first half of 2015, OPG received a rate rider of $1.33/MWh. As the rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this increase in revenue was largely offset by an increase in amortization expense related to the regulatory balances.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2016 and 2015 were as follows:

	2016	2015
Unit Capability Factor *(%)* [1]		
Darlington GS	**89.5**	76.9
Pickering GS	**75.2**	79.4

[1] The nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS increased in 2016, compared to 2015, primarily due to the four-unit VBO completed during 2015. In addition, a lower number of unplanned outage days at the Darlington GS during 2016, compared to 2015, also contributed to the improvement in the Unit Capability Factor.

The decrease in the Unit Capability Factor at the Pickering GS in 2016, compared to 2015, was primarily due to a higher number of unplanned outage days at the station in 2016, as a result of emergent discovery work during planned outages.

The definition of the nuclear Unit Capability Factor is found under the heading, *Key Operating and Financial Performance Indicators.*

Regulated – Nuclear Waste Management Segment

	2016	2015
Revenue	**138**	122
Operations, maintenance and administration	**146**	132
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**912**	880
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Loss before interest and income taxes	**(174)**	(186)

Earnings from the segment improved by $12 million in 2016 compared to 2015. The improvement was primarily due to higher earnings from the Nuclear Segregated Funds, partially offset by an increase in accretion expense on the Nuclear Liabilities.

The improvement in Nuclear Segregated Funds earnings was primarily due to an increase in the Used Fuel Segregated Fund earnings due to higher CPI-adjusted rate of return guaranteed by the Province for funding related to the initial 2.23 million used fuel bundles. Pursuant to the ONFA, the guaranteed annual rate of return for that portion of the Used Fuel Segregated Fund is set at 3.25 percent plus the change in the Ontario CPI. This increase in

Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the 2017 ONFA Reference Plan. The 2017 ONFA Reference Plan was approved by the Province in December 2016, and is discussed in the section, *Highlights* under the heading, *Recent Developments*. The accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section. The Nuclear Segregated Funds earnings are reported net of the impact of the Bruce Lease Net Revenue Variance Account.

The higher accretion expense on the Nuclear Liabilities during 2016, compared to 2015, reflected an upward adjustment in the liabilities recognized in December 2015 related to the revised accounting assumptions for the estimated useful lives of OPG's nuclear generating stations. The increased accretion expense was partially offset by the impact of the Bruce Lease Net Revenues Variance Account. The changes in the assumed estimated useful lives of the nuclear stations and the related adjustment to Nuclear Liabilities are discussed further in the section, *Balance Sheet Highlights* under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account*.

Regulated – Hydroelectric Segment

(millions of dollars)	**2016**	**2015**
Revenue [1]	**1,527**	1,619
Fuel expense	**353**	345
Gross margin	**1,174**	1,274
Operations, maintenance and administration	**325**	340
Depreciation and amortization	**225**	282
Property tax	**1**	1
Income before other (income) loss, interest and income taxes	**623**	651
Other (income) loss	**(19)**	3
Income before interest and income taxes	**642**	648

[1] During 2016 and 2015, the Regulated – Hydroelectric segment revenue included incentive payments of $14 million and $26 million, respectively, related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $6 million in 2016, compared to 2015, was primarily due to lower hydroelectric incentive mechanism payments and the income impact of OEB-approved variance accounts. The lower payments under the hydroelectric incentive mechanism were primarily due to the reservoir refurbishment outage at the Sir Adam Beck Pump GS during 2016. The decrease in segment income was partially offset by a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to OPG's December 2014 motion. The decrease in segment income also was partially offset by a year-over-year decrease in OM&A expenses, primarily due to higher costs incurred in 2015 for shoreline remediation work.

The decrease in segment revenues due to the lower OEB-authorized rate rider in 2016, compared to 2015, was largely offset by a corresponding decrease in amortization expense related to the regulatory balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	2016	**2015**
Hydroelectric Availability *(%)*	**89.0**	91.2

The Hydroelectric Availability decreased during 2016, compared to 2015, primarily due to the planned reservoir refurbishment project at the Sir Adam Beck Pump GS. The project was completed in February 2017.

The definition of Hydroelectric Availability is found under the heading, *Key Operating and Financial Performance Indicators*.

Contracted Generation Portfolio Segment

(millions of dollars)	2016	2015
Revenue	**573**	535
Fuel expense	**58**	39
Gross margin	**515**	496
Operations, maintenance and administration	**178**	185
Depreciation and amortization	**75**	72
Accretion on fixed asset removal liabilities	**9**	8
Property taxes	**7**	7
Income from investments subject to significant influence	**(37)**	(39)
Income before other loss, interest, and income taxes	**283**	263
Other loss	**1**	1
Income before interest and income taxes	**282**	262

Income before interest and income taxes increased by $20 million during 2016, compared to 2015. The increase primarily resulted from the higher gross margin, due to increased revenues from the Lower Mattagami River generating stations, the Lennox GS, and the Atikokan GS. Higher revenue from the Lennox GS was primarily due to increased market demand. The increase in revenue from the Atikokan GS reflected the support provided to the electricity system in northwestern Ontario as a result of an outage at a local transformer station from late July 2016 to early September 2016. The year-over-year increase in segment revenue was also due to a provision made in 2015 related to an IESO audit.

The Hydroelectric Availability and the Thermal EFOR for the Contracted Generation Portfolio segment were as follows:

	2016	2015
Hydroelectric Availability *(%)*	**77.3**	88.6
Thermal EFOR *(%)*	**1.6**	11.2

Lower Hydroelectric Availability during 2016, compared to 2015, was primarily due to a higher number of planned outage days at the Kipling and Harmon generating stations on the Lower Mattagami River. During 2016, headgate replacements were made at certain units of the Kipling GS and Harmon GS. In addition, a runner upgrade and rehabilitation work was completed at Unit 2 of the Harmon GS. The lower thermal EFOR in 2016, compared to 2015, was primarily due to an outage in 2015 to perform repair work at the Lennox GS.

The definitions of Hydroelectric Availability and Thermal EFOR are found under the heading, *Key Operating and Financial Performance Indicators*.

Services, Trading, and Other Non-Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**68**	73
Fuel expense	**1**	2
Gross margin	**67**	71
Operations, maintenance and administration	**22**	48
Depreciation and amortization	**32**	29
Accretion on fixed asset removal liabilities	**8**	7
Property taxes	**12**	11
Restructuring	**6**	6
Loss before other loss, interest, and income taxes	**(13)**	(30)
Other loss	**-**	7
Loss before interest and income taxes	**(13)**	(37)

Segment earnings improved by $24 million in 2016 compared to 2015. The losses incurred by the segment in 2015 and 2016 largely reflect the costs associated with the Nanticoke and Lambton generating stations prior to OPG's decisions, in 2015 and November 2016, respectively, to proceed with the stations' decommissioning. These losses are partially offset by OPG's trading activities.

The improvement in earnings in 2016 primarily reflected higher OM&A expenses in 2015, including those incurred related to the Nanticoke GS prior to OPG's decision to proceed with the station's decommissioning, and a provision made in 2015 related to an IESO audit. The year-over-year decrease in OM&A expenses also reflected reduced work programs at the Lambton GS during 2016 due to lower staffing levels used to preserve the station. The preservation activities were discontinued after the announcement to decommission the station. Expenditures incurred in connection with decommissioning activities for the Nanticoke and Lambton generating stations are charged against a previously established decommissioning provision.

During each of 2016 and 2015, OPG recorded a charge against earnings to adjust the scrap value estimates for the Lambton GS. In 2016, this adjustment was offset by dividend income earned from OPG's investment in Hydro One shares, which contributed to the year-over-year improvement in earnings.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies; to undertake major projects; to fund long-term obligations such as contributions to the pension fund; to make payments under the OPEB plans; to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds; and to service and repay long-term debt.

Changes in cash and cash equivalents for 2016 and 2015 are as follows:

(millions of dollars)	**2016**	**2015**
Cash and cash equivalents, beginning of period	**464**	610
Cash flow provided by operating activities	**1,705**	1,465
Cash flow used in investing activities	**(1,807)**	(1,553)
Cash flow used in financing activities	**(176)**	(58)
Net decrease	**(278)**	(146)
Cash and cash equivalents, end of period	**186**	464

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details under the heading, *Overview of Results* in the section, *Highlights*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities in 2016 was $1,807 million, compared to $1,553 million in 2015. The increase was primarily due to higher expenditures on the Darlington Refurbishment project as it transitioned to execution phase, and the acquisition of nine million common shares of Hydro One in April 2016. The increase in cash flow used in investing activities in 2016, compared to 2015, was partially offset by the investment of proceeds from a long-term debt issuance in support of the Peter Sutherland Sr. GS project into a structured deposit note in 2015, and the subsequent receipt of proceeds from this investment on staggered maturity dates throughout 2016. The final maturity date of the deposit note is in April 2017. The acquisition of the Hydro One shares is discussed under the heading *Recent Developments* in the *Highlights* section, as well as in Note 3 of the Company's 2016 audited consolidated financial statements.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, sustaining capital investments across the generating fleet, and hydroelectric development projects including the expansion of the Ranney Falls GS and the completion of Peter Sutherland Sr. GS.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended the expiry date of both tranches from May 2020 to May 2021. As at December 31, 2016, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this

agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plan.

As at December 31, 2016, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As of December 31, 2016, there were outstanding borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

As at December 31, 2016, OPG's long-term debt outstanding was $5,534 million, including $1,103 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes is x.xx percent and x.xx percent, respectively. **[MONITOR]**

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, were as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Other Commitments

Collective Agreements

As of December 31, 2016, OPG had approximately 9,270 regular employees. Most of OPG's regular employees are represented by two unions:

- **The PWU** – This union represents approximately 5,070 OPG employees or approximately 55 percent of OPG's regular workforce as at December 31, 2016. Union membership includes operators, technicians, skilled trades, clerical, and security personnel. The current collective agreement between OPG and the PWU has a three-year term, expiring on March 31, 2018.
- **The Society** – This union represents approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce as at December 31, 2016. Union membership includes supervisors, professional engineers, scientists, and other professionals. The current collective agreement between OPG and The Society has a three-year term, expiring on December 31, 2018.

In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights at OPG facilities. These bargaining rights are established either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. All of these collective agreements currently have multi-year terms, expiring on April 30, 2020.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's audited consolidated financial position using selected balance sheet data as at December 31:

(millions of dollars)	**2016**	**2015**
Property, plant and equipment – net	**20,002**	20,595
The decrease was primarily due to a reduction in asset retirement costs of approximately $1,570 million in 2016 as a result of a reduction in the estimates for the Nuclear Liabilities to reflect the 2017 ONFA Reference Plan cost estimates. The decrease was partially offset by capital expenditures on the Darlington Refurbishment and other projects, net of depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**15,984**	15,136
The increase was primarily due to earnings on the Nuclear Segregated Funds and contributions to the Used Fuel Segregated Fund, partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded to the lower underlying obligations reflected in the updated ONFA reference plan and reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Available-for-sale securities	**212**	-
The balance as at December 31, 2016 represents the fair value of the nine million Hydro One shares acquired in April 2016, as discussed under the heading *Recent Developments* in the *Highlights* Section.		
Regulatory assets and liabilities – net *(current and non-current portions)*	**5,545**	5,808
The decrease was primarily due to the amortization of regulatory balances recovered through rate riders in effect during 2016 and an increase in regulatory liabilities resulting from a change in the estimated useful lives of OPG's nuclear stations at the end of 2015, as discussed under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account* below. This was partially offset by amounts deferred in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and other variance and deferral accounts during the year.		
Short-term debt	**2**	225
The decrease was due to the maturity of external commercial paper outstanding under LME's commercial paper program.		
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169
The decrease was primarily due to a reduction of approximately $1,570 million in the estimates for the Nuclear Liabilities at the end of 2016 to reflect the 2017 ONFA Reference Plan cost estimates, partially offset by accretion expense during the year.		
Pension liabilities	**3,012**	2,597
The increase was primarily due to the re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as discussed in the section, *Changes In Accounting Policies* under the heading, *Pension and Other Post-Employment Benefits.*		

Impact of Changes in Station End-of-Life Dates Deferral Account

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense arising from the changes in the estimated useful lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG has recognized a regulatory liability of $71 million related to the balance in the deferral account. Together with the Bruce Lease Net Revenues Variance Account discussed below, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account offset the decrease in depreciation expense in 2016, compared to 2015, as a result of the changes in estimated useful lives of OPG's nuclear stations effective December 31, 2015.

The changes to the estimated useful lives of OPG's nuclear generating station effective December 31, 2015, for accounting purposes, were as follows:

- the average service lives of the Bruce A GS and Bruce B GS were extended from 2048 to 2052 and from 2019 to 2061, respectively, to reflect the estimated end-of-life dates reflected in the updated refurbishment agreement between the IESO and Bruce Power, which was announced in December 2015
- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015
- the average service life of the Pickering GS was extended by less than one year.

To reflect the above changes, OPG recognized a total increase of $2,330 million in the Nuclear Liabilities and a corresponding increase in the related asset retirement costs, effective December 31, 2015. These increases were primarily due to the changes in the estimated useful life of the Bruce B GS. The nuclear asset retirement obligations (ARO) associated with the Pickering GS and Darlington GS was impacted by the changes to the Bruce nuclear generating stations' useful lives because the costs of the fleet-wide waste management programs are shared by all of OPG's nuclear stations based on used nuclear fuel and waste volumes. Consistent with the changes in the end-of-life dates for the Bruce nuclear generating stations and the December 2015 amendments to the Bruce Lease in connection with the Province's endorsement of Bruce Power's refurbishment plans, the term of the Bruce Lease for accounting purposes also was extended, in line with the refurbishment plans for these stations.

The impact of the above changes on OPG's revenues and costs related to the Bruce nuclear generating stations effective January 1, 2016 is recorded in the Bruce Lease Net Revenues Variance Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's consolidated financial statements or are recorded in the Company's consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

Guarantees

As part of normal business, OPG and certain of its subsidiaries and joint ventures enter into various agreements to provide financial or performance assurance to third parties. Such agreements include guarantees, standby Letters of Credit and surety bonds. For more details on OPG's guarantees, refer to Note 15 of OPG's audited consolidated financial statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies, including the impact of major recent accounting pronouncements, are outlined in Note 3 of the audited consolidated financial statements. Certain of these policies are recognized as critical accounting policies by virtue of the subjective and complex judgments and estimates required around matters that are inherently uncertain and could result in materially different amounts being reported under different conditions or assumptions. The critical accounting policies and estimates that affect OPG's US GAAP consolidated financial statements are highlighted below.

Exemptive Relief for Reporting under US GAAP

As required by *Ontario Regulation 395/11,* as amended, under the FAA, OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG has also received exemptive relief from the OSC from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board (IASB) for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

As a result of OPG's 2011 decision to adopt US GAAP, as required by the FAA regulation, OPG's earlier plan to convert to IFRS, effective January 1, 2012, was discontinued. OPG had substantively completed its IFRS conversion project, which included separate diagnostic, development, and implementation phases, when it suspended the project. If a future transition to IFRS for the purposes of OPG's consolidated financial statements is required, conversion work can be effectively restarted with sufficient lead time to evaluate and conclude on changes that occurred subsequent to the decision to suspend the project. OPG continues to monitor the IASB's current standard-setting project related to entities with rate-regulated activities and is evaluating alternatives with respect to the Company's future financial reporting.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the OEB.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998*, the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the

future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05.* The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures for its pension and OPEB plans. It is the Company's position that this decision by the OEB did not constitute a change in the basis of OPG's rate recovery of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices, or in an OEB-authorized deferral or variance account for future recovery, as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account to record the difference between OPG's actual pension and OPEB costs for the regulated business determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million, which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the above noted consultation process.

See Notes 3, 5, 8, 9, and 11 of OPG's 2016 audited consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or payable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its rate regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and in respect of investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

The Company has recognized net deferred income tax liabilities of $829 million as at December 31, 2016 (2015 – $880 million).

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset, based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

The accounting estimates related to end-of-life assumptions for PP&E and intangible assets require significant management judgment, including consideration of various operating, technological, and other factors. OPG reviews the estimated useful lives for its PP&E and intangible assets on a regular basis.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

Various assumptions and accounting estimates are required to determine whether an impairment loss should be recognized and, if so, the value of such loss. This includes factors such as short-term and long-term forecasts of prices for electricity generation under applicable revenue mechanisms, the demand for and supply of electricity, inflation, fuel prices, capital and operating expenditures, and estimated useful service lives of the assets.

The carrying value of investments accounted for under the equity method are reviewed for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Segregated Funds based on approved ONFA reference plans. Costs for L&ILW management and used fuel storage incurred during station operation are not funded by the Nuclear Segregated Funds. They are funded through the Company's operating cash flow or other sources of liquidity.

Decommissioning Segregated Fund

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the earnings it recognizes in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded.

The amount due to the Province in respect of the Decommissioning Segregated Fund could be reduced in subsequent periods in the event that the fund earns less than is target rate of return, a new ONFA reference plan is approved with a higher underlying liability, or the amount of the underfunding in the Used Fuel Segregated Fund increases.

When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets.

Used Fuel Segregated Fund

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined in the ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return on the Used Fuel Segregated Fund and the actual market return determined based on the fair value of the fund's assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount OPG would pay to, or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions attributed to the used fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province has the right at any time to access the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. Accordingly, when the Used Fuel Segregated Fund is overfunded, OPG limits the earnings it recognizes int he consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the underlying liability based on the most recently approved ONFA reference plan. In accordance with the ONFA, OPG does not have a right to direct any amounts from the Used Fuel Segregated Fund to the Decommissioning Segregated Fund.

Provincial Guarantee

In accordance with the *Nuclear Safety and Control Act* (Canada), the CNSC requires OPG to have sufficient funds available to discharge the current nuclear waste management and nuclear decommissioning liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the CNSC, on behalf of OPG, for any shortfall between the CNSC financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee equal to 0.5 percent of the amount of the Provincial Guarantee. The

current value of the Provincial Guarantee of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016. The CNSC process requires the CNSC financial guarantee requirement to be updated once every five years. OPG is currently updating the CNSC financial quarantee requirement for the 2018-2022 period and expects to file it with the CNSC in the first half of 2017. **[MONITOR]**

Pension and Other Post-Employment Benefits

The determination of OPG's pension and OPEB costs and obligations is based on accounting policies and assumptions, as discussed below.

Accounting Policy

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor) for each plan is amortized over the expected average remaining service life of the employees covered by the plan, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on its consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation, on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net

of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as amortization components of pension and OPRB costs as described above.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Accounting Assumptions

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost, and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses.

The discount rates, which are representative of the AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. In 2016 and prior years, benefit costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. A lower discount rate increases the benefit obligations and increases benefit costs. The weighted-average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

Starting in 2017, OPG expects to change the method used to estimate the current service and interest cost components of pension and OPEB costs. OPG expects to adopt a full yield curve approach in the estimation of these components of pension and OPEB cost by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Making this change will improve the correlation between projected benefit cash flows and the corresponding yield curve spot rates, and provide a more precise measurement of service and interest costs. This change does not affect the measurement of the total benefit obligations, as the change in the current service and interest components of the costs from the previous method will be offset by a corresponding change in the actuarial (gain) loss recorded in AOCI. OPG will account for this change as a change in estimate, prospectively starting in 2017. With an upward sloping yield curve and the pattern of OPG's estimated future benefit cash flows, the adoption of the full yield curve approach is expected to materially lower OPG's current service and interest cost components, reducing the overall pension and OPEB costs in the initial years following adoption.

The expected rate of return on plan assets is determined based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined under the heading, *Contractual and Commercial Commitments,* in the section *Liquidity and Capital Resources*. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation and assumptions as at December 31, 2016. As part of the valuation, the plans' demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The deficit for the registered pension plan, for accounting purposes, increased from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

Asset Retirement Obligation

OPG recognized ARO for fixed asset removal and nuclear waste management liabilities, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The ARO is comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating plant facilities and other facilities. Costs are expected to be incurred for activities such as preparation for safe storage and safe storage of nuclear stations, dismantlement, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel bundles and L&ILW material. The liabilities associated with the decommissioning of the nuclear generating stations and the long-term management of used nuclear fuel comprise the most significant amounts of the total obligation.

The nuclear decommissioning liability includes the estimated costs of closing the nuclear stations after the end of their service lives, which includes preparation and placement of the stations into a safe state condition followed by an assumed 30-year safe store period prior to station dismantlement and site restoration. Activities associated with the placement of stations into a safe state condition include de-fueling and de-watering of the nuclear reactors. Under the terms of the lease agreement with Bruce Power and as required by the CNSC, OPG is responsible for the nuclear waste management and nuclear decommissioning obligations associated with the Bruce nuclear generating stations. Pursuant to the lease agreement, Bruce Power must return the two Bruce stations to OPG together, in a de-fueled and de-watered state. These de-watering and de-fueling costs are not part of OPG's ARO.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the obligation for these costs include an L&ILW DGR facility to be constructed and operated by OPG, as discussed under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section. To estimate the liability for nuclear used fuel management, OPG has adopted an approach consistent with the Adaptive Phased Management concept approved by the Government of

Canada, which assumes a deep geologic repository or the long-term management of Canada's nuclear used fuel waste. The NWMO is responsible for the design and implementation of Canada's plan for the long-term management of used nuclear fuel.

The following costs are recognized as a liability on OPG's consolidated balance sheets:

- the present value of the costs of decommissioning the nuclear and thermal production facilities and other facilities after the end of their useful lives
- the present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed lives of the stations
- the present value of the variable cost portion of nuclear waste management programs taking into account waste volumes generated to date.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs including construction of assumed waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, decommissioning strategy, and the technology employed may result in significant changes to the value of the accrued liabilities. With programs of such long-term duration and the evolving technology to handle nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the costs for these programs. These costs may increase or decrease over time.

The estimates for the Nuclear Liabilities are reviewed on an ongoing basis as part of the overall nuclear waste management program. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically, at least once every five years, in line with the required ONFA reference plan update process. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of a net increase in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of a net decrease in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets.

The most recent comprehensive update of the baseline cost estimates for the Nuclear Liabilities is contained in the approved 2017 ONFA Reference Plan, and was completed in the fourth quarter of 2016. The update resulted in a decrease of approximately $1,570 million in the Nuclear Liabilities as at December 31, 2016, which was determined using a discount rate of 4.95 percent. The overall reduction in OPG's nuclear waste management and nuclear decommissioning obligations was due mainly to a decrease in cost estimates to reflect a proposed new, more cost effective container design and engineered barrier concept to house used nuclear fuel for disposal, updated cost escalation rates for all programs, and a later expected in-service date for the NWMO's planned deep geologic repository for the long-term permanent disposal of Canada's used nuclear fuel. These decreases were partly offset by higher cost estimates related to decommissioning activities, primarily due to an improved definition of work required during the preparation for safe storage after station shutdown and a higher volume of waste expected to be generated during decommissioning. Cost escalation rates used to estimate future undiscounted cash flows reflected in the December 31, 2016 adjustment to the Nuclear Liabilities ranged from 2.0 percent to 3.4 percent.

Commented [AJ1]: Was the discount rate not 5.15%

The December 31, 2016 adjustment to the Nuclear Liabilities and associated asset retirement costs did not impact OPG's income for 2016. The estimated impact of this adjustment on 2017 expenses, before the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account, includes a decrease to depreciation expense of approximately $8 million, a decrease to accretion expense of approximately $78 million, and a combined decrease in used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as they are expected to be largely offset by

the OEB approved variance and deferral accounts, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to Ontario Regulation 53/05. It records the revenue requirement impact associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years.

The liability for nuclear fixed asset removal and nuclear waste management on a present value basis as at December 31, 2016 was $19,103 million (2015 – $19,792 million). As at December 31, 2016, the undiscounted cash flows of expenditures for OPG's Nuclear Liabilities in 2016 dollars are as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Expenditures for nuclear fixed asset removal and nuclear waste management [1]	354	360	386	429	465	39,296	41,290

[1] The majority of the expenditures are expected to be reimbursed by the Nuclear Segregated Funds established by the ONFA. Any contributions required under the ONFA are not included in these undiscounted cash flows. Accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The liability for non-nuclear fixed asset removal was $381 million as at December 31, 2016 (2015 – $377 million). This liability primarily represents the present value of estimated costs of decommissioning OPG's thermal generating stations at the end of their service lives. The liability reflects third party cost estimates based on an in-depth review of plant sites and an assessment of required clean-up and restoration activities. For the purpose of measuring the liability, asset removal activities are assumed to take place approximately over the next one to 15 years. The amount of undiscounted estimated future cash flows associated with the thermal liabilities is approximately $500 million. With the decisions taken in 2015 and 2016 to decommission the Nanticoke and Lambton generating stations, respectively, OPG expects to review the decommissioning liability estimates for these sites. Any adjustments as a result of a change in the liability estimates for these stations will be recorded in net income in the period of change.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model.

The fair value of financial assets and liabilities for which quoted prices in an active market are available, including exchange traded derivatives and other financial instruments, are determined directly from those quoted market prices.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the

use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that may affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If the valuation technique or model is not based on observable market data, specific valuation techniques are used, primarily based on recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

OPG's use of financial instruments exposes the Company to certain risks, including credit risk, foreign currency risk and interest rate risk. A discussion of how OPG manages these and other risks is found under the section, *Risk Management*.

Variable Interest Entities

OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated. As at December 31, 2016, PSS Generating Station Limited Partnership was classified as a variable interest entity because it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership. Refer to Note 3 of OPG's 2016 audited consolidated financial statements for further details.

Recent Accounting Pronouncements

The recent US GAAP accounting pronouncements related to revenue recognition, leases, and financial instruments are described below. Other recent accounting pronouncements applicable to OPG are outlined in Note 3 of the audited consolidated financial statements.

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact that the new standard will have on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

RISK MANAGEMENT

Overview

OPG faces various risks that could significantly impact the achievement of its strategic imperatives. The objective of risk management is to identify and mitigate these risks, and to preserve and increase the value of the Shareholder's investment in the Company.

Risk Governance Structure

The Audit and Risk Committee of OPG's Board of Directors assists the Board of Directors in fulfilling its oversight responsibilities for matters relating to the identification and management of the Company's key business risks. An Executive Risk Committee (ERC), which is comprised of business unit leaders and the Chief Risk & Audit Executive (CRAE), assists the Audit and Risk Committee in fulfilling its governance and oversight responsibilities related to OPG's risk management activities.

Risk Management Activities

OPG faces a wide array of risks as a result of its business operations. OPG's Enterprise Risk Management (ERM) framework is designed to identify and evaluate risks on the basis of their potential impact on the Company's capacity to achieve specific strategic imperatives and business plan objectives.

A centralized ERM group led by the CRAE coordinates the quarterly risk management reporting activities. The activities begin with business units identifying, reviewing, and assessing risks that could prevent achievement of their objectives. The ERM group reviews, validates, and consolidates this information and prioritizes risks based on their potential to impact OPG's overall strategic imperatives. The ERM group also assesses external developments that may have implications on the corporate risk profile and facilitates the identification and assessment of emerging risks. The ERC then reviews and validates significant changes in the top risks that may impact OPG's ability to achieve its strategic imperatives, as well as any emerging risks that have been identified. The results of the ERC review and significant changes in the enterprise risk profile are reviewed by the Audit and Risk Committee.

In order to maintain an appropriate balance between risk and return, senior management sets limits for the market risk, credit risk and energy trading activities of the Company. Senior management also establishes risk management policies and processes to ensure compliance with such limits.

The key risks to OPG's strategic imperatives are briefly described below.

Risks to Achieving Operational Excellence

OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance.

Operational risks are the risks inherent in the operation of electricity generating facilities. These risks can lead to interruptions in the operations of generating stations affecting future production. The operational risks of a station are generally a function of its age, human performance, and the technology used.

Nuclear Generating Stations

Operating an aging nuclear fleet exposes OPG to unique risks such as unplanned outages, an increase in operating costs, and risks associated with nuclear waste management operations.

Operating nuclear stations exposes OPG to unique risks, such as greater-than-anticipated deterioration of station components and systems, risks associated with the nuclear industry, supply chain and vendor quality, risks related to the handling, storage and disposal of nuclear waste, and the risk of a nuclear accident. The primary implications of these risks include additional safety requirements, potentially lower than expected generation and revenues, and potentially higher operating costs.

The uncertainty associated with production by OPG's Canadian Deuterium Uranium nuclear generating units is primarily driven by the condition of station components and systems, which are all subject to the effects of aging. Fuel channels are expected to be the most life-limiting component affecting station end-of-life. Another significant factor identified to date includes degradation of primary heat transport pump motors at the Darlington GS. Additionally, there are fuel handling performance challenges at both the Darlington GS and Pickering GS. To respond to these risks, OPG continues to monitor performance, implement extensive inspection and maintenance programs, identify corrective actions and undertake projects required to operate reliably and within design parameters.

Deterioration of station components may progress in an unexpected manner, resulting in the need to increase monitoring, conduct extensive repairs, or undertake additional remedial measures. To maintain a safe operating margin, a nuclear unit could be derated resulting in reduced generation. When an unexpected condition first appears, a specific monitoring program is established. The primary impact of these conditions on OPG is an increase in the long-term cost of operations. The associated mitigation may create additional outage work, increasing the number of outages or extending planned outages.

Pickering Extended Operations to 2024

In January 2016, the Province of Ontario announced its approval of OPG's plan to pursue the continued safe and reliable operation of the Pickering GS to 2024. Under OPG's plan, all six operating units at the Pickering GS would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The current operating licence for the Pickering GS, which expires in August 2018, was issued in 2013 assuming that the station would shut down in 2020.

Inability to achieve Pickering extended operations as planned would result in a reduction of OPG's future generation revenue and cash flows and lead to the advancement of shutdown and station decommissioning expenditures.

Risk factors for continued operation of the Pickering units include the discovery of unexpected conditions, equipment failures, the state of critical plant components that are reaching end-of-life, and a requirement for significant plant modifications. To mitigate these risks, OPG continues to undertake a number of activities, including the following:

- work to confirm achievability of fuel channel life necessary to enable extended operations
- component condition assessments to identify the work required to support the extended operation of the station
- modification of the operating and maintenance strategy to support continued operation of the station.

Over the remaining lifespan of the station, risks such as performance of the fuel handling system, challenges with parts procurement, and a shortage of qualified human resources may challenge operational excellence at the Pickering GS. OPG is addressing these risks by taking appropriate actions, including undertaking fuel handling reliability improvements, equipment modifications and targeted investments in plant systems and components, supply chain initiatives, and developing workforce planning and resourcing strategies.

Nuclear Waste Management

The process of generating electricity by nuclear generating stations produces nuclear waste. As required by the CNSC, OPG is accountable for the management of used fuel and L&ILW, and decommissioning of its nuclear stations and waste management facilities, including the stations on lease to Bruce Power. Currently, there are no licenced facilities in Canada for the permanent disposal of nuclear used fuel or L&ILW. The risks to OPG's proposed L&ILW DGR for the safe long-term management of L&ILW are discussed below, under the heading, *Deep Geologic Repository for Low and Intermediate Level Waste* in the section *Risks to Achieving Project Excellence*.

The NWMO has developed a process for moving forward with Adaptive Phased Management as the long-term solution for Canada's nuclear fuel waste. The Adaptive Phased Management plan contemplates the eventual long-term permanent disposal of radioactive nuclear fuel waste in a deep geologic repository. The NWMO is in the process of undertaking a multi-year site selection process for the used fuel deep geologic repository.

In the interim, OPG is storing and managing L&ILW at the WWMF site and used fuel at its nuclear generating station sites.

Nuclear Regulatory Requirements

The uncertainty associated with nuclear regulatory requirements is primarily driven by plant aging, changes to technical codes, and challenges raised by the public at regulatory hearings, particularly in the areas of safety, environment and emergency preparedness. Addressing these requirements could add to the cost of operations, and in some instances, may result in a reduction or elimination of the productive capacity of a station, earlier than planned replacement of a station component or additional requirements for waste management. Additionally, the operations of nuclear stations are often directly impacted by circumstances or events that occur at other nuclear stations globally. These circumstances or events may lead to CNSC regulatory changes with a significant impact on the cost and future operation of OPG's nuclear fleet.

In December 2015, the CNSC granted the station a 10-year operating licence, valid until November 30, 2025. The new licence spans most of the planned duration of the Darlington Refurbishment project, which provides greater regulatory stability and reduces regulatory risk. As discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Nuclear Operations*, the plan to extend Pickering operations to 2024 is subject to the CNSC's approval of the Pickering licence renewal application and other regulatory requirements as set out by the CNSC.

In January 2014, the federal government introduced Bill C-22 which contains a new *Nuclear Liability and Compensation Act* (NLCA). This bill received Royal Assent in February 2015, and the NLCA came into effect on January 1, 2017. The NLCA requires all operators of nuclear generating stations in Canada to maintain specified amounts of nuclear liability insurance purchased from a federal government approved insurer or other equivalent forms of financial security approved by the federal government. The NLCA increases OPG's nuclear liability limit from $75 million to an initial $650 million, with successive annual increases to $750 million, $850 million, and $1 billion. OPG has met this requirement for the $650 million liability limit required by the NLCA for 2017 and is assessing the availability and premium cost of coverage for the $750 million liability limit required for 2018.

Hydroelectric Generating Stations

OPG's hydroelectric generation is exposed to risks associated with water flows, the age of plant and equipment,surplus baseload generation conditions, and dam safety requirements.

The extent to which OPG can operate its hydroelectric generation facilities depends upon the availability of water. Significant variability in weather, including impacts of climate change, could affect water flows. For OPG's regulated hydroelectric generation, the financial impact of variability in electricity production due to differences between the forecast water conditions underpinning the hydroelectric regulated prices and the actual water conditions are captured in an OEB-approved regulatory variance account.

OPG's hydroelectric generating stations have an average age of approximately 80 years, with the majority of the hydroelectric generating equipment being over 50 years old. The condition of the equipment and civil components resulting from the age of these components requires OPG to plan potentially significant work to mitigate risks to the reliability of some hydroelectric generating stations. OPG manages these risks by performing inspection and maintenance of critical components and by reviewing mitigating actions. In addition, OPG conducts detailed engineering reviews and station condition assessments on an ongoing basis. These reviews and assessments help to identify future work required to sustain and, as appropriate, upgrade a station.

SBG has, and will continue to be, an issue in Ontario when electricity supply exceeds demand. To manage SBG conditions, the IESO may require OPG to reduce hydroelectric generation and spill water. A regulatory variance account authorized by the OEB helps to mitigate the financial impact of spill due to SBG conditions for OPG's regulated hydroelectric generating stations. The Company anticipates a declining trend in SBG for its hydroelectric assets due to reduced nuclear availability resulting from the refurbishment of the Darlington GS, future refurbishment of the Bruce generating stations, and the eventual shutdown of the Pickering GS.

The hydroelectric business operates 238 dams across Ontario. Dam safety legislation does not currently exist in the province. Technical guidelines which were published by the MNRF represent the government standards for dam safety. In general, OPG's practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the MNRF technical guidelines. OPG continues to develop a new risk-informed approach in cooperation with the MNRF to prioritize the outcomes of dam safety assessments. OPG could eventually incur additional costs for certain dams that it operates in order to comply with any new requirements.

People and Culture

OPG's operations could be affected if skilled human resources are not available or aligned with its talent requirements.

The development of new leaders and retention of staff in critical roles across OPG is a key factor to OPG's success. Another success factor is related to the effective transfer of knowledge from those in critical positions throughout the organization to future leaders. The risk associated with the alignment and/or availability of skilled and experienced resources continues to exist for OPG in specific areas, including leadership and project management positions. To mitigate this risk, OPG continues to focus on succession planning, leadership development and knowledge management programs to improve the capability of its workforce. There is also a continued risk of a mismatch between attrition levels and the resource requirements to meet OPG's future business needs.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification, which requires a long-term outlook to workforce planning.

To mitigate the above risks, OPG is developing an organization-wide workforce planning and resourcing strategies and has established ongoing monitoring processes to reassess risks, challenges and opportunities related to staffing on a regular basis. OPG expects to meet the human resource needs of the business by developing existing employees and hiring in specific areas, while continuing to leverage attrition through realignment of work and streamlining of processes, where appropriate.

As of December 31, 2016, approximately 90 percent of OPG's regular labour force was represented by a union. OPG's current collective agreements with the PWU and The Society expire on March 31, 2018 and December 31, 2018, respectively, while all 19 collective agreements with craft unions expire on April 30, 2020. As a result of these agreements, OPG considers the likelihood of a labour disruption in the near future to be significantly reduced.

Health and Safety

OPG's operations involve inherent occupational safety risks and hazards.

OPG's operations involve inherent occupational safety risks and hazards that could impact the achievement of the Company's health and safety goals. OPG is committed to continuous improvement and achievement of its ultimate goal of zero injuries through a formal enterprise-wide safety management system, integrated at the operating site level, and by continuing to foster a strong health and safety culture among its employees and contractors. The safety management system serves to focus the Company on proactively managing safety risks and hazard exposures to employees and contractors. In 2016, OPG launched the organization-wide "iCare Enough to Act" initiative aimed at renewing employees' and contractors' commitments to their own and each other's safety and well-being.

Cyber Security

OPG's ability to operate effectively is, in part, dependent on the efficient operation and management of the Company's complex information technology and industrial control systems in a secure, vigilant, and resilient manner that minimizes cyber risks. Cyber security incidents may have an adverse impact on OPG's reputation, energy production, and public and employee safety.

Cyber security incidents have been on the rise for the past few years and this trend is only expected to intensify as organizations' reliance on technology increases. OPG has strategies in place to prepare for, respond to, and recover from cyber security incidents. OPG continuously monitors, assesses, and improves the effectiveness of its strategies and program considering leading industry practices and remains proactive in information and intelligence sharing to learn and adapt to the changing cyber environment.

As a registered Ontario market participant, OPG is accountable to comply with all applicable reliability obligations. Within the context of the Ontario regulatory framework, OPG is a registered generator, and is responsible for complying with the associated reliability standards. These standards apply to the relevant Bulk Electric System (BES) elements specified under North American Electric Reliability Corporation (NERC) and the relevant Bulk Power System (BPS) facilities as determined by the Northeast Power Coordinating Council. In addition, OPG's nuclear cyber assets are subject to CNSC licensing conditions and regulatory requirements. For other cyber assets not subject to applicable regulatory requirements, OPG has adopted a risk-based approach based on the National Institute of Standards and Technology Cybersecurity Framework to manage its cyber security.

To mitigate cyber risks, OPG's cyber security program focuses on educating employees, contractors, and vendors, improving processes, and upgrading technology infrastructure. In particular, OPG's program focuses on the following:

1. Complying with regulatory requirements and applicable laws
2. Improving its cyber security protection and detection capabilities to reduce known or potential exposures by engaging the services of external experts to evaluate the security of its information technology infrastructure and controls
3. Adopting industry leading practices to reduce third party cyber security risks through enhanced vendor risk assessments, introducing cyber security requirements into commercial agreements, and enhanced governance
4. Improving and exercising its incident response, recovery capability, and business continuity plans to minimize the business impact of an incident
5. Increasing the cyber security awareness and training level of its workforce through mandatory annual cyber security awareness training, specialized training for cyber specialists, social engineering tests, and periodic company-wide communications on relevant cyber security topics.

The oversight responsibility of the Audit and Risk Committee of OPG's Board of Directors over the Company's risk management activities includes the review of a semi-annual update from management on the Company's cyber security position and programs.

Suppliers

Non-performance by strategic suppliers or an inability to diversify the supplier base could adversely impact operating and project performance, financial results and reputation of OPG.

OPG's ability to operate effectively is in part dependent upon timely access to equipment, materials, and service suppliers. Loss of key equipment, materials, and service suppliers, particularly for the nuclear business, could affect OPG's ability to operate effectively and/or to execute major development projects or other capital investment programs. OPG mitigates this risk, to the extent possible, through contract negotiations, contract terms, vendor monitoring, diversification of supplier base, and business continuity plans.

Business Continuity and Emergency Management

Natural, technological or human-caused hazards may impact OPG's business continuity.

OPG is exposed to potential or actual incidents or developments resulting from extreme temperatures, precipitation, wind conditions or other natural disasters, and technological or human-caused hazards; to significant events against which it is not fully insured or indemnified; or to parties that fail to meet their indemnification obligations. These incidents have the potential to disrupt operations resulting in decreased generation revenue or additional costs to repair damages and restore operations.

OPG's business continuity program provides a framework to build resilience into critical business processes by facilitating development of risk response plans and business continuity exercises. OPG's emergency management

program is designed to ensure that the Company can manage an emergency in a timely and effective manner. OPG's plans and implementation procedures identify immediate response actions to be taken to protect the health and safety of employees and the public, and to limit the impact of the crisis on site security, production capability, and the environment. The program elements are designed to meet legal and regulatory requirements.

Risks to Achieving Project Excellence

The risks associated with the cost, schedule, technical and contractor performance aspects of the major projects could adversely impact OPG's financial performance and its corporate reputation.

OPG is undertaking several capital intensive projects with significant investments. There may be an adverse effect on the Company if it is unable to: obtain necessary approvals; raise the necessary funds; effectively manage the projects on time and on budget; or fully recover capital costs and earn an appropriate return on investment in a timely manner. These projects may also have a significant impact on OPG's borrowing capacity and credit rating. Some projects may be ultimately reassessed as being uneconomic. The risks associated with OPG's current major projects are described below.

Darlington Refurbishment

OPG is responsible for the management of the Darlington Refurbishment project, including the project's budget and schedule, and continues to systematically manage all of the risks associated with the project through robust risk management practices. There are financial and reputational risk exposures for OPG if actual costs exceed the budget or if OPG does not meet the project schedule. In addition, failure to achieve the objectives of the refurbishment project may result in future forced outages and more complex planned outages, potentially impacting the post-refurbishment performance or useful life of the station. Failure to carry out the refurbishment of the first unit as planned may result in not proceeding with the refurbishment of the remaining units, which, together with the end of commercial operations at the Pickering GS, could result in most of OPG's nuclear units shutting down by the early to mid 2020s.

There are a number of specific risks that OPG is managing and mitigating in relation to the Darlington Refurbishment project, which include OPG and vendor performance risks, delay or productivity risks, financial risks related to escalation of costs, technical risks such as equipment conditions resulting in additional scope, and execution risks such as failure to manage foreign material exclusion from the heat transport system that could lead to post refurbishment operational risks.

To mitigate the above risks and to build on major lessons learned from other nuclear refurbishments and large scale, complex projects, OPG engaged in an extensive five-year project planning phase in order to determine the project scope, rigorously estimate costs in keeping with best practices, and incorporate lessons learned from other nuclear refurbishments. In order to fully define the scope and material requirements for the project, the planning phase included the completion of detailed designs before proceeding with the execution of the unit refurbishments. Further risk mitigation has been implemented through the construction of a full scale model training reactor, which allows for simulations and training for unit refurbishment execution tasks.

A large portion of the costs for the Darlington Refurbishment project is being paid to contractors and suppliers, including vendors that will engineer, procure, and construct components of the project. There is a risk that, as the volume of work increases significantly, vendor capability, capacity, and performance shortfalls may impact project objectives and deliverables. OPG's risk management strategy aims to ensure that contractors are held accountable and appropriate off-ramps are in place. In mitigating its overall financial risk, OPG utilizes a contracting strategy that aims to share the risk with key vendors in a cost effective manner, where appropriate. There is also an increased risk of contractor initiated safety events, which may impact OPG's reputation. Mitigating actions include collaborative execution phase planning, an enhanced human performance program, active risk management, increased field presence by supervisory staff, and assisting vendors in removing barriers to work. OPG also is managing other

ongoing risks that could potentially impact the project, including those related to continuity of skilled leaders within OPG and its vendor partners, as well as the availability of technical resources to support the project through execution.

Independent, third-party oversight has been established for the execution phase of the project, for both the project executive team and OPG's Board of Directors. The Ontario Ministry of Energy has also retained an external advisor to provide oversight of the project, reporting to the Minister of Energy.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG, with the support of Bruce County municipalities, is proposing to construct and operate a deep geologic repository as the preferred solution for the safe long-term management of L&ILW. While broad local community support for the proposed L&ILW DGR is stable, there are pockets of opposition. OPG is currently awaiting a decision on the EA for the project by the federal Minister of Environment and Climate Change, before the issuance of the site preparation and construction licence may proceed. There is a risk of delay to the EA approval and/or the issuance of the site preparation and construction licence from potential political or legal challenges. OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR.

Other Development Projects

Projects that are in the initial development stages are subject to schedule delays or possible cancellation due to unforeseen delays in receiving permits or approvals, or establishing sufficient certainty regarding project cost recovery through revenue mechanisms, which may involve various external stakeholders. OPG attempts to mitigate these risks through early involvement and regular communication with applicable government agencies, close consultation with external stakeholders and ongoing monitoring of contractor compliance relative to permits. Projects in the execution phase are subject to inherent risks related to performance against approved budgets and schedules. Mitigating activities for the risks include performing detailed engineering designs before proceeding with execution, engaging qualified and experienced vendors, and effectively monitoring and controlling performance.

Development projects also could be faced with increasing costs for equipment and construction that could impact their economic viability. OPG continuously monitors such trends in costs in order to identify emerging issues and seeks to manage and limit cost increases through contracting strategies, where possible.

Risks to Maintaining Financial Strength

Risks related to rate regulation, financial markets, and long-term obligations could significantly impact OPG's financial performance. The Company is also exposed to risks such as weak electricity demand, displacement of generation by competitors and financial risk associated with energy trading.

There is a risk that future regulated prices will not allow OPG to consistently achieve financial performance that is commensurate with that of a commercial enterprise. OPG is exposed to a number of other significant financial risks, many of which arise due to decreasing demand for electricity, competing energy sources, OPG's exposure to volatility in commodity and equity markets and interest rate fluctuations. This includes the Company's pension and OPEB obligations and costs that are impacted by market and interest rate fluctuations. OPG manages this complex array of risks with a view to reduce the uncertainty and/or mitigate the potential unfavourable impact on the Company's financial results.

Rate Regulation

Significant uncertainties remain regarding the outcome of rate and generic proceedings impacting OPG's rate regulated operations.

There is an inherent risk that regulated prices established by the OEB may not provide for the recovery of all actual costs that will be incurred by OPG's regulated operations or allow the regulated operations to earn an appropriate

rate of return. This could occur if, in setting regulated prices, the OEB makes adjustments to forecasts submitted by OPG, if actual production and costs significantly differ from the forecasts approved by the OEB, or if OPG is unable to achieve additional efficiencies to meet the OEB-approved stretch factors included in regulated prices under incentive ratemaking. Differences between OPG's actual and forecast production and costs could be due to factors such as outages or project execution risks. In providing evidence in support of its applications for regulated prices, OPG aims to clearly demonstrate to the OEB that the costs for the regulated operations are reasonable, being prudently incurred and should be fully recovered.

Certain differences between elements of OEB-approved revenue requirements and OPG's actual results are recorded in OEB-approved variance and deferral accounts for future review by the OEB, including a number of the variance and deferral accounts that are subject to an OEB prudence review. There is inherent uncertainty associated with the outcomes of future proceedings for the clearance of these balances.

Proposed Incentive Regulation Ratemaking Methodologies

In May 2016, OPG submitted a 5-year application to the OEB for new regulated prices effective January 1, 2017, on the basis of an incentive regulation rate making methodology for the hydroelectric operations and a custom incentive regulation ratemaking framework for the nuclear operations. If accepted by the OEB, both approaches would result in greater decoupling of OPG's revenues for the regulated operations from their costs. The OEB's decision on OPG's application is expected in the second half of 2017.

Effective Date of New Regulated Prices

There are inherent uncertainties regarding the effective date that the OEB will establish for the new regulated prices. OPG has requested January 1, 2017 as the effective date. The OEB's decision on the effective date and the timing of the decision issuance could have a significant impact on OPG's 2017 results. Until the OEB's decision is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017.

Nuclear Rate Smoothing Proposal

Consistent with *Ontario Regulation 53/05*, OPG's May 2016 application includes a nuclear rate smoothing proposal, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. There is an inherent risk that the magnitude of the deferral ordered by the OEB will result in regulated prices that do not provide sufficient cash flow to the Company for meeting its financial objectives in an optimal manner, including ensuring sufficient liquidity, cost effectively funding the Darlington Refurbishment project and other expenditures, and maintaining the Company's investment grade credit rating. Maintaining adequate levels of credit metrics will support OPG's investment grade credit rating. As such, OPG has advanced credit metrics as a key criterion for the OEB to apply in determining the smoothed nuclear base rates.

Recovery of Pension and OPEB Costs

The OEB is currently conducting a consultation in the gas and electricity sectors to develop standard principles to guide the OEB's review of pension and OPEB costs for rate-regulated utilities, including establishing appropriate regulatory mechanisms for cost recovery. The OEB's November 2014 decision establishing OPG's existing regulated prices indicated that a change in the recovery methodology for OPG's pension and OPEB costs from the accrual basis, if required, would be addressed in OPG's next rate proceeding, having been informed by the outcome of the OEB's generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The decision also stated that the future recovery, if any, of amounts recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account authorized by that decision also would be subject to the outcome of the generic proceeding. As such, the outcome of the current consultation could have a material impact on OPG's ability to recover the balance in

the Pension & OPEB Cash Versus Accrual Differential Deferral Account and full pension and OPEB costs in the future. This would have significant adverse implications on OPG's future financial results. OPG is participating in the OEB consultation and has advanced its position in support of the appropriateness of using the accrual basis for cost recovery purposes.

Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds

Changes in cost estimates or strategies for nuclear waste management and nuclear facilities decommissioning obligations could impact OPG's future contributions to the Nuclear Segregated Funds to cover these obligations.

As required by the CNSC, OPG is responsible for the management of used nuclear fuel and L&ILW and the decommissioning of its nuclear stations and waste management facilities. The cost estimates for OPG's nuclear waste management and decommissioning obligations are based on multiple underlying assumptions and estimates that are inherently uncertain and may evolve over time. The assumptions include station end-of-life dates, waste volumes, waste disposal methods, the timing of construction of assumed waste disposal facilities, waste packaging systems, decommissioning strategy, and financial indicators. To address the inherent uncertainty, OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates at least once every five years, in line with the required ONFA Reference Plan update process.

The most recent comprehensive update of the nuclear waste management and decommissioning obligations was performed as part the 2017 ONFA Reference Plan approved by the Province in December 2016. An approved ONFA Reference Plan determines OPG's contributions to the Nuclear Segregated Funds. The changes in contribution levels are impacted by changes in the values of the Nuclear Segregated Funds as well as changes in the associated nuclear waste management and nuclear facilities decommissioning obligations. Based on the 2017 ONFA Reference Plan, no contributions are currently required to the Nuclear Segregated Funds. Contributions may be required in the future should the Nuclear Segregated Funds be in an underfunded position relative to the funding requirement of a new approved reference plan.

Financial Markets

The market value of investments held by OPG's Nuclear Segregated Funds and registered pension plan could be significantly affected by changes in various market factors such as equity prices, interest rates, inflation, and commodity prices.

Nuclear Segregated Funds Market Risk

Investments in the Nuclear Segregated Funds are allocated to certain asset classes including fixed income securities, domestic and international equity securities, pooled funds, infrastructure, agriculture and real estate. These funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, in order to fund the expenditures associated with the long-term management of used fuel and L&ILW after station shutdown, and the decommissioning of OPG's nuclear stations and waste management facilities. The rates of return earned on these segregated funds are subject to various factors including the current and future financial market conditions, which are inherently uncertain. The asset mix of the funds is determined jointly by OPG and the Province in accordance with the ONFA.

For the Used Fuel Segregated Fund, the Province guarantees the annual rate of return at 3.25 percent plus the change in the Ontario CPI, as defined by the ONFA, for the portion of the fund attributed to the first 2.23 million nuclear fuel bundles. As such, a change in the portion of the fund's value attributed to the first 2.23 million bundles impacts OPG's earnings to the extent of changes in the Ontario CPI. OPG is subject to the market risk for the investment of funds set aside in the Used Fuel Segregated Fund for incremental bundles in excess of 2.23 million.

In accordance with the cost recovery methodology established by the OEB, the performance of the portion of the Nuclear Segregated Funds attributed to the nuclear generating stations leased to Bruce Power has been subject to the Bruce Lease Net Revenues Variance Account. The variance account partially mitigates rate of return risk related to the Nuclear Segregated Funds, as it captures the differences between actual and forecast earnings from the Nuclear Segregated Funds related to these stations. Forecast earnings are those approved by the OEB in setting nuclear regulated prices. OPG is exposed to rate of return risk related to the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodology. The income statement impact of rate of return risk is reduced when the Nuclear Segregated Funds are in a fully funded position.

Post-Employment Benefit Obligations Risk

OPG's post-employment benefit obligations include pension, group life insurance, health care benefits, and LTD benefits. OPG's post-employment benefit obligations and costs, and pension plan contributions could be materially affected in the future by numerous factors, including: changes in discount rates, inflation rates, and other actuarial assumptions; future investment returns; experience gains and losses; the funded status of the pension plans; changes in benefits; changes in the regulatory environment including potential changes to the *Pension Benefits Act* (Ontario); changes in OPG's operations; and the measurement uncertainty incorporated into the actuarial valuation process.

The OPG registered pension plan, which covers most of OPG's employees and retirees, is a contributory defined benefit plan that is indexed to inflation. Contributions to the OPG registered pension plan are determined by actuarial valuations, which are filed with the appropriate regulatory authorities at least every three years. The most recent actuarial valuation of the OPG registered pension plan, covering the three-year period to the end of 2018, was completed as of January 1, 2016. There is an inherent risk that future actuarial valuations could increase OPG's funding requirements due to market and economic-related conditions. A significant decline in the financial markets could trigger an immediate requirement to update the actuarial valuation based on declines in the funded status. OPG continues to assess the requirements for contributions to the registered pension plan, including the timing of future actuarial valuations. The next actuarial valuation of the OPG registered plan must have an effective date no later than January 1, 2019. OPG's OPEB obligations are not funded and the associated employee benefits are paid from cash flow provided by operating activities or other sources of liquidity.

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017	2018	2019
Estimated fuel requirements hedged[1]	75%	76%	65%

[1] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars (USD). To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at December 31, 2016, OPG had total foreign exchange contracts outstanding with a notional value of USD $9 million.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. During 2016, the VaR utilization ranged between nil and $1.5 million, compared to between nil and $1.5 million in 2015.

Credit

Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

The Company's credit risk exposure is a function of its electricity sales, trading and hedging activities, treasury activities including investing, and commercial transactions with various suppliers of goods and services. OPG's credit risk exposure relating to electricity sales is considered low as the majority of sales are through the IESO-administered spot market. The IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market.

Other major components of OPG's credit risk exposure include those associated with vendors that are contracted to provide services or products. OPG manages its exposure to various suppliers or counterparties by evaluating their financial condition and ensuring that the Company holds appropriate collateral or other forms of security.

The following table summarizes OPG's credit exposure to all counterparties from electricity transactions and trading as at December 31, 2016:

Credit Rating [1]	Number of Counterparties [2]	Potential Exposure [3] *(million of dollars)*	Potential Exposure for Largest Counterparties: Number of Counterparties	Potential Exposure for Largest Counterparties: Counterparty Exposure *(millions of*
Investment grade	11	11	5	9
IESO[4]	1	421	1	422
Total	12	432	6	431

[1] Credit ratings are based on OPG's own analysis, taking into consideration external rating agency analysis where available, as well as recognizing explicit credit support provided through parental guarantees, Letters of Credit or other forms of security.

[2] OPG's counterparties are defined on the basis of individual master agreements.

[3] Potential exposure is OPG's statistical assessment of maximum exposure over the life of each transaction at a 95 percent confidence interval.

[4] Credit exposure is an estimate of the receivable amount arising from OPG's electricity sales into the IESO market. The credit exposure and associated receivable vary each month based on electricity sales. The monthly receivable from the IESO is typically paid to OPG in the subsequent month as per the IESO payment schedule.

Liquidity

Rising liquidity requirements can impact OPG's capital investment projects and ability to meet financial obligations.

OPG operates in a capital intensive business. Significant financial resources are required to fund major development and other capital improvement projects, including the Darlington Refurbishment project. In addition, the Company has other significant disbursement requirements including pension contributions, payments towards OPEB and other benefit plans, expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, debt maturities with the OEFC, and investments in new generating capacity and other business growth opportunities. OPG must ensure that it has the financial capacity and sufficient access to cost effective financing sources to fund its capital requirements and other disbursements. In support of this objective, OPG utilizes multiple sources and forecasts availability of funds, actively monitors funding requirements, and is focused on maintaining its investment grade credit rating. A discussion of corporate liquidity is included under the section, *Liquidity and Capital Resources*.

Contracted Generation

OPG may incur costs if its contracted generating assets do not meet performance targets as specified in the ESAs with the IESO or other long-term contracts. There is also a risk that, upon expiry, subsequent ESAs may not be available.

The Company's generating stations operating under ESAs with the IESO or other long-term contracts are subject to availability and production targets specified in their respective contracts. OPG could incur charges and other costs if these facilities fail to operate at required capacity or production levels, as required. This risk is mitigated through the implementation of maintenance, capital investment and other programs, as appropriate.

OPG's owned and co-owned thermal generating stations operate under ESAs with the IESO or other long-term agreements. In December 2016, the Ontario and Quebec governments signed an electricity trade agreement that will allow Ontario to import up to 2 TWh of hydroelectric power from Quebec annually from 2017 to 2023. This is expected to replace some gas-fired generation in Ontario. While OPG expects that its thermal generating stations will continue to provide capacity to the market over the term of the respective agreements, there is a risk that, upon expiry of the current agreements, subsequent contracts for these stations may not be available or may not be available on financially viable terms.

Ontario Electricity Market

Ontario electricity market conditions could impact OPG's revenue and operations.

OPG's revenue can be impacted by external factors related to the electricity market including: the entrance of new participants into the Ontario market; the competitive actions of market participants; Ontario electricity demand; changes in the regulatory environment; and wholesale electricity prices in the interconnected markets.

The structure of the Ontario electricity market is subject to regulation and market rules, changes to which may affect OPG's revenue. The Province, the IESO, the OEB, or another entity or regulatory body may change or institute regulations or rules that can impact OPG's capability to generate revenue or ability to recover appropriate costs and earn a return on the assets.

Ownership by the Province

OPG's commitment to maximize the return on the Shareholder's investment in the Company may compete with the obligation of the Shareholder to respond to a broad range of matters in its role as the Government of Ontario.

The Province owns all of OPG's issued and outstanding common shares. Accordingly, the Province, as represented by the Ontario Ministry of Energy, has the authority to make appointments to OPG's Board of Directors. OPG could be subject to Shareholder direction, under Section 108 of the OBCA, that can directly influence major decisions including those related to project development, timing and strategy of applications for regulated prices, asset divestitures, financing and capital structure, that could require OPG to undertake activities that result in increased expenditures, or that reduce revenues or cash flows relative to the business activities or strategies that would have otherwise been undertaken. In addition, the obligation of OPG's Shareholder to respond to a broad range of matters in its role as the Government of Ontario may compete with OPG's commitment to maximize the return on the Shareholder's investment in the Company. This includes, but is not limited to, the Province's response to mitigate the impact of rising electricity prices on consumers.

Government Legislation and Regulation Change

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on the Company's operations and financial position.

OPG's core business and strategy may be impacted by changes in federal and provincial legislation and regulations. Matters that are subject to regulation include, among others, rate regulation, electricity generating operations, nuclear waste management and nuclear decommissioning, and taxation. Regulatory bodies may change or enact regulations or rules, such as new nuclear fitness for duty requirements, that could increase OPG's costs, decrease OPG's revenue, or limit the Company's ability to recover appropriate costs or earn a return on the assets.

Since legal requirements are subject to change and to interpretation, OPG is unable to predict the impact of such changes on the Company and its operations. To mitigate legislative risks, OPG continues to monitor and actively engage with the federal and provincial governments in order to determine if future legislation will impact the Company.

Risks to Maintaining Social Licence

OPG is exposed to risks associated with its social licence and public profile due to changes in the opinions of various stakeholders, including local communities, Ontario customers, government agencies, and Indigenous Communities. Additionally, inability to achieve operational excellence and project excellence safely and reliably and to maintain financial strength could impact OPG's social licence.

Maintaining public trust and meeting stakeholders and Indigenous communities' expectations are critical to OPG's success. OPG focuses on building and maintaining its social licence and corporate reputation through safe, reliable,

environmentally-responsible operations as well as corporate citizenship initiatives across the province. The inability to maintain safe, reliable operations could negatively impact OPG's reputation and result in a loss of public support.

OPG has transparent governance practices and works continuously towards effective communication and consultation with Indigenous communities and stakeholders. Efforts to reinforce OPG's social licence include various media campaigns that highlight the Company's contribution as a clean power generator with a commitment to safety, environment and community partnerships. OPG undertakes various assurance and risk management activities to effectively manage the risks to its social licence and corporate reputation. Issue management and response plans are developed to address specific concerns as they arise.

Indigenous Communities

The quality of OPG's relationships and the outcome of negotiations with Indigenous communities may impact OPG's project and financial performance, as well as its social licence to operate.

OPG may be subject to claims by Indigenous communities. These claims stem from projects and generation development related to the operations of OPG and historic operations of OPG's predecessor company, Ontario Hydro, which may have impacted the Aboriginal and/or Treaty rights of Indigenous communities.

OPG has an Indigenous Relations Policy, which sets out the Company's commitment to proactively build and maintain positive relationships with Indigenous communities. OPG has been successful in resolving a number of past grievances by Indigenous communities. However, the outcome of the ongoing and any future negotiations depends on a number of factors, including legislation and regulations and precedents created by court rulings, which are subject to change over time. OPG pursues generation-related developments in partnerships with Indigenous communities on the basis of long-term mutually beneficial commercial arrangements.

Environmental Risks

OPG may be subject to orders or charges if it is not in compliance with applicable environmental laws. Changes in environmental regulatory requirements can result in existing operations being in a state of non-compliance, a potential inability to comply, and potential costs and liabilities for OPG.

Changes to environmental laws could create compliance risks and result in potential liabilities that may be addressed by the installation of control technologies, development of new processes, allowances or offsets, or constraints on electricity production. A failure to comply with applicable environmental laws may result in enforcement actions, including the potential for orders or charges. In addition, some of OPG's activities have the potential to impair natural habitat, damage aquatic or terrestrial plant and wildlife, or cause contamination to land or water that may require remediation. There is also a risk that OPG may incur additional costs to meet heritage conservation program requirements under the *Ontario Heritage Act*.

Potential environmental regulatory changes being managed as risks by the Company include electricity production constraints and water flow management requirements to protect fish and fish habitat, expanded fish passage requirements, and lower drinking and ground water tritium concentration standards. These changes could impact plant operations and increase costs. OPG continues to monitor and address risks associated with changes to environmental laws and regulatory requirements. There were no significant changes to environmental legislation applicable to OPG during 2016.

OPG recognizes that efforts are required to plan for the effects of climate change and has identified climate change adaptation as a strategic issue for the company. OPG monitors developments in climate science, adaptation activities, and potential changes to policy and regulatory requirements. OPG continues to work with stakeholders to better define adaptation requirements through analysis and understanding of climate change impacts on watersheds and electricity supply and demand. Once adaptation requirements are better known, a risk-based analysis will help OPG determine the extent of efforts it will undertake to reduce the impact of climate change on its operations.

A carbon cap and trade program became effective in Ontario in January 2017. The program is not expected to have a material adverse economic impact on OPG due to the Company's low GHG emitting generating fleet. Further details can be found under the heading, *Environmental Performance*, in the section, *Core Business, Strategy and Outlook*.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		2015	
(millions of dollars)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**15**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,070**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

Management, including the President and Chief Executive Officer (President and CEO) and the Chief Financial Officer (CFO), are responsible for maintaining Disclosure Controls and Procedures (DC&P) and Internal Controls over Financial Reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements in accordance with US GAAP.

There were no other changes in OPG's ICOFR during the year ended December 31, 2016 that have materially affected or are reasonably likely to materially affect OPG's ICOFR.

Management, including the President and CEO and the CFO, concluded that, as of December 31, 2016, OPG's DC&P and ICOFR (as defined in National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings*) were effective.

FOURTH QUARTER

Discussion of Results

(millions of dollars) (unaudited)	Three Months Ended December 31 2016	2015
Revenue	**1,388**	1,312
Fuel expense	**186**	175
Gross margin	**1,202**	1,137
Operations, maintenance and administration	**686**	788
Depreciation and amortization	**316**	354
Accretion on fixed asset removal and nuclear waste management liabilities	**233**	223
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(126)**	(169)
Income from investments subject to significant influence	**(9)**	(9)
Property taxes	**11**	11
Restructuring	**6**	5
Income (loss) before other loss, interest, and income taxes	**85**	(66)
Other loss	**6**	12
Income (loss) before interest and income taxes	**79**	(78)
Net interest expense	**28**	44
Income (loss) before income taxes	**51**	(122)
Income tax expense (recovery)	**59**	(22)
Net loss	**(8)**	(100)
Net loss attributable to the Shareholder	**(13)**	(101)
Net income attributable to non-controlling interest	**5**	1

Net loss attributable to the Shareholder for the fourth quarter was $13 million, compared to a net loss of $101 million for the same quarter in 2015.

Income before interest and income taxes was $79 million during the fourth quarter of 2016, an increase of $157 million compared to loss before interest and income taxes of $78 million during the same period in 2015. The following summarizes the significant factors which caused the variance:

Significant factors that increased income before other loss, interest and income taxes:

- Lower number of outage days increased nuclear generation by 2.2 TWh during the fourth quarter in 2016, compared to the same period in 2015, primarily due to the four-unit Darlington VBO that was completed on October 30, 2015 and a lower number of unplanned outage days at the Darlington GS. The increase in nuclear generation resulted in an increase in revenue from the nuclear base regulated price of approximately $130 million.
- Lower OM&A expenses of $77 million in the Regulated – Nuclear Generation segment primarily due to increased outage activities in 2015, including the Darlington VBO.

Significant factors that decreased income before other loss, interest and income taxes:

- Decrease in earnings from the Nuclear Segregated Funds of $43 million during the fourth quarter of 2016, compared to the same quarter in 2015, mainly due to an accounting adjustment recorded during the fourth quarter of 2016 to limit the funds asset values recognized on OPG's consolidated balance sheet to the lower underlying obligations as reflected in the 2017 ONFA Reference Plan.
- Higher accretion expense of $10 million, reflecting the increase in the Nuclear Liabilities recognized in December 2015 in connection with the changes in the estimated useful life assumptions for OPG's nuclear stations, net of the impact of the Bruce Lease Net Revenues Variance Account.

The increase in income tax expense during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets in 2016.

Average Sales Prices

The average sales price for the Regulated – Nuclear Generation segment during the fourth quarter of 2016 was 6.9 ¢/kWh, compared to 7.0 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of an OEB-authorized nuclear rate rider of $1.33/MWh related to the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment during the fourth quarter of 2016 was 4.5 ¢/kWh, compared to 4.8 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of a rate rider of $6.04 per MWh related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014.

The income impact of changes in revenue from rate riders was largely offset by changes in amortization expense related to regulatory balances.

Electricity Generation

OPG's electricity generation for the three months ended December 31, 2016 and 2015 was as follows:

	Three Months Ended December 31	
(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**11.0**	8.8
Regulated – Hydroelectric	**6.7**	7.3
Contracted Generation Portfolio [1]	**0.6**	0.7
Total OPG electricity generation	**18.3**	16.8
Total electricity generation by all other generators in Ontario [2]	**18.9**	19.6

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The increase in OPG's electricity generation of 1.5 TWh during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher electricity generation of 2.2 TWh from the Regulated – Nuclear Generation segment as a result of fewer outage days at the Darlington GS during the fourth quarter of 2016, which was primarily due to the Darlington VBO that occurred during the fourth quarter of 2015. The increase in generation was partially offset by reduced generation from the Regulated – Hydroelectric Segment of 0.6 TWh, primarily due to lower water flows in eastern Ontario during the fourth quarter of 2016.

Ontario's electricity demand as reported by the IESO was 33.2 TWh during the fourth quarter of 2016, compared to 32.7 TWh during the fourth quarter of 2015.

Liquidity and Capital Resources

Cash flow provided by operating activities during the three months ended December 31, 2016 was $437 million, compared to $111 million for the same period in 2015. The increase in cash flow was primarily due to higher generation revenue receipts, lower pension plan contributions and lower OM&A expenditures during the fourth quarter of 2016. Higher generation revenue receipts reflected higher nuclear generation in the fourth quarter of 2016, compared to the same period in 2015.

Cash flow used in investing activities during the three months ended December 31, 2016 was $497 million, compared to $571 million during the same period in 2015. The decrease was primarily due to partial maturity, in the fourth quarter of 2016, of a structured deposit note invested in the fourth quarter of 2015, partially offset by higher expenditures for the Darlington Refurbishment project. The deposit note invested proceeds from the long-term debt issued in support of the Peter Sutherland Sr. GS project in October 2015.

Cash flow used by financing activities during the three months ended December 31, 2016 was $180 million, compared to cash flow provided in financing activities of $356 million for the same period in 2015. The decrease in cash flow provided by financing activities was due to the net repayment of short-term notes and lower net issuance of long-term debt in the fourth quarter of 2016.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected annual financial information for the last three years and financial information for each of the eight most recently completed quarters. This information is derived from OPG's unaudited interim consolidated financial statements and the audited consolidated financial statements, and has been prepared in accordance with US GAAP.

Annual Financial Information

(millions of dollars – except where noted)	**2016**	**2015**	**2014**
Revenue	**5,653**	5,476	4,963
Income before extraordinary item attributable to the Shareholder	**436**	402	561
Net income attributable to the Shareholder	**436**	402	804
Net income per common share before extraordinary item *(dollars)*	**$1.70**	$1.57	$2.19
Net income per common share *(dollars)*	**$1.70**	$1.57	$3.14
Total assets	**44,372**	44,250	41,645
Total long-term liabilities	**31,460**	32,404	30,483
Common shares outstanding *(millions)*	**256.3**	256.3	256.3

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**2016 Quarters Ended**				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	**1,388**	**1,400**	**1,387**	**1,478**	**5,653**
Net (loss) income	**(8)**	**198**	**135**	**128**	**453**
Less: Net income attributable to non-controlling interest	**5**	**4**	**3**	**5**	**17**
Net (loss) income attributable to the Shareholder	**(13)**	**194**	**132**	**123**	**436**
Per common share, attributable to the Shareholder *(dollars)*	**($0.05)**	**$0.76**	**$0.51**	**$0.48**	**$1.70**

Quarterly Financial Information

(millions of dollars – except where noted) (unaudited)	2015 Quarters Ended				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	1,312	1,426	1,383	1,355	5,476
Net (loss) income	(100)	85	193	239	417
Less: Net income attributable to non-controlling interest	1	5	4	5	15
Net (loss) income attributable to the Shareholder	(101)	80	189	234	402
Per common share, attributable to the Shareholder *(dollars)*	($0.39)	$0.31	$0.74	$0.91	$1.57

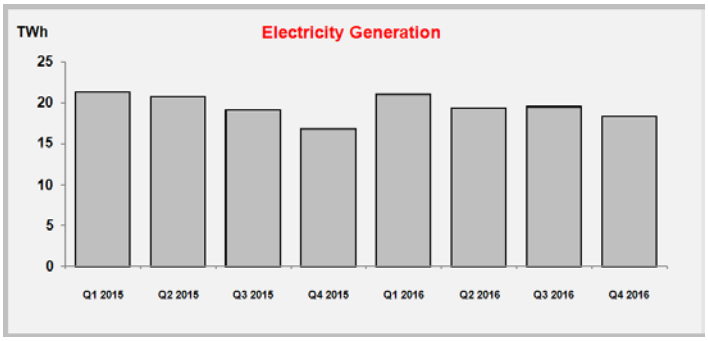
Trends

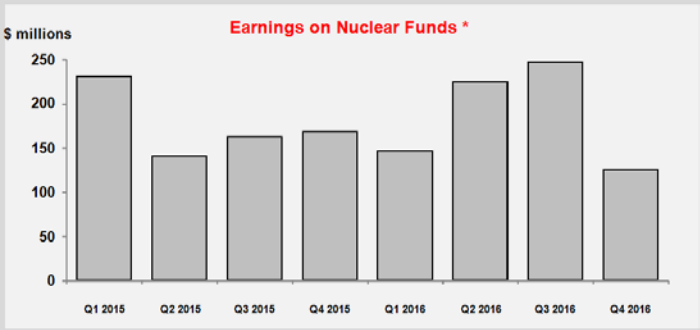
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues are higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of foregone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington VBO, which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items which affected net income (loss) in certain quarters above are described below:

- A gain of $22 million recorded during the first quarter of 2016 reflecting the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to Niagara Tunnel project expenditures.
- Lower earnings of $16 million during the first quarter of 2015, compared to the same quarter in 2016, in the Contracted Generation Portfolio segment, primarily as a result of a provision made in that quarter related to an IESO audit.
- Higher OM&A expenses of $105 million for the Regulated – Nuclear Generation segment during the first half of 2016, compared to the same period in 2015, primarily resulting from an increase in planned outage activities and the timing of planned outage activities during the year.
- Lower OM&A expenses of $91 million for the Regulated – Nuclear Generation segment during the last half of 2016, compared to the same period in 2015, primarily as a result of the VBO at the Darlington GS in the third and fourth quarters of 2015.

Additional information about OPG, including its audited consolidated financial statements and notes thereto, can be found on SEDAR at www.sedar.com.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow from operations, or any other measure in accordance with US GAAP, but as an indicator of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period.

ROE Excluding AOCI is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**436**	402
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,442**	10,023
ROE Excluding AOCI *(percent)*	**4.2**	4.0

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
FFO before interest		
Cash flow provided by operating activities	**1,705**	1,465
Add: Interest paid	**269**	269
Less: Interest capitalized to fixed and intangible assets	**(141)**	(102)
Add: Changes to non-cash working capital balances	**(68)**	100
FFO before interest	**1,765**	1,732
Adjusted interest expense		
Net interest expense	**120**	180
Add: Interest income	**7**	9
Add: Interest capitalized to fixed and intangible assets	**141**	102
Add: Interest related to regulatory assets and liabilities	**30**	2
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**45**	53
Adjusted interest expense	**343**	346
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.0

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Enterprise TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Enterprise TGC		
Total OM&A expenses	**2,747**	2,783
Total fuel expense	**727**	687
Total capital expenditures	**1,704**	1,376
Less: Darlington Refurbishment capital and non-capital costs	**(1,022)**	(707)
Less: Other generation development project capital and OM&A costs	**(162)**	(197)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**62**	250
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(55)
Add: Hydroelectric gross revenue charge due to electricity foregone due to SBG conditions	**49**	34
Less: OM&A expenses ancillary to electricity generation business	**(24)**	(27)
Other adjustments	**(25)**	(46)
	3,989	4,098
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**78.2**	78.0
Add: Electricity generation foregone due to SBG conditions	**4.7**	3.2
	82.9	81.2
Enterprise TGC per MWh *($/MWh)* [1]	**48.10**	**50.46**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Nuclear TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**2,210**	2,196
Regulated – Nuclear Generation fuel expense	**315**	301
Regulated – Nuclear Generation capital expenditures	**1,338**	1,023
Less: Darlington Refurbishment capital and OM&A costs	**(1,022)**	(708)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**81**	230
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(62)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(6)**	(6)
Other adjustments	**(8)**	(28)
	2,841	2,946
Nuclear electricity generation *(TWh)*	**45.6**	44.5
Nuclear TGC per MWh *($/MWh)* [1]	**62.30**	66.20

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Hydroelectric TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**325**	340
Regulated – Hydroelectric Generation fuel expense	**353**	345
Contracted Generation Portfolio OM&A expenses	**178**	185
Contracted Generation Portfolio fuel expense	**58**	39
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**333**	311
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(158)**	(197)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(177)**	(163)
(Less) Add: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(24)**	18
Add: Hydroelectric gross revenue charge and water rental payments due to electricity generation foregone due to SBG conditions	**49**	34
Other adjustments	**(1)**	-
	936	912
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**29.5**	30.4
Contracted Generation Portfolio electricity generation	**3.1**	3.1
Add: Hydroelectric electricity generation foregone due to SBG conditions	**4.7**	3.2
Less: Non-hydroelectric electricity generation of the Contracted Generation Portfolio	**(0.7)**	(0.6)
	36.6	36.1
Hydroelectric TGC per MWh *($/MWh)*[1]	**25.57**	25.26

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

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ONTARIO POWER GENERATION INC.

CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2016

[DRAFT]

STATEMENT OF MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL INFORMATION

Ontario Power Generation Inc.'s (OPG) management is responsible for the presentation and preparation of the annual consolidated financial statements and Management's Discussion and Analysis (MD&A).

The consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States Securities and Exchange Commission for annual financial statements. The MD&A has been prepared in accordance with the requirements of securities regulators, including National Instrument 51-102 of the Canadian Securities Administrators and its related published requirements.

The consolidated financial statements and information in the MD&A necessarily include amounts based on informed judgments and estimates of the expected effects of current events and transactions with appropriate consideration to materiality. Something is considered material if it is reasonably expected to have a significant impact on the Company's earnings, cash flow, value of an asset or liability, or reputation. In addition, in preparing the financial information, we must interpret the requirements described above, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect the reported information. The MD&A also includes information regarding the impact of current transactions and events, sources of liquidity and capital resources, operating trends, and risks and uncertainties. Actual results in the future may differ materially from our present assessment of this information because future events and circumstances may not occur as expected.

In meeting our responsibility for the reliability of the financial information, we maintain and rely on a comprehensive system of internal controls and internal audits, including organizational and procedural controls and internal controls over financial reporting. Our system of internal controls includes: written communication of our policies and procedures governing corporate conduct and risk management; comprehensive business planning; effective segregation of duties; delegation of authority and personal accountability; careful selection and training of personnel; and accounting policies, which we regularly update. This structure ensures appropriate internal controls over transactions, assets and records. We also regularly test internal controls. These controls and testing are designed to provide us with reasonable assurance that the financial records are reliable for preparing financial statements and other financial information, assets are safeguarded against unauthorized use or disposition, liabilities are recognized, and we are in compliance with all regulatory requirements.

Management, including the President and Chief Executive Officer (CEO) and the Chief Financial Officer (CFO), is responsible for maintaining disclosure controls and procedures (DC&P) and internal controls over financial reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements in accordance with US GAAP.

An evaluation of the effectiveness of the design and operation of OPG's DC&P and ICOFR was conducted as of December 31, 2016. Accordingly, we, as OPG's President and CEO and CFO, will certify OPG's annual disclosure documents filed with the Ontario Securities Commission, which includes attesting to the design and effectiveness of OPG's DC&P and ICOFR.

The Board of Directors, based on recommendations from its Audit and Risk Committee, reviews and approves the consolidated financial statements and the MD&A, and oversees management's responsibilities for the presentation and preparation of financial information, maintenance of appropriate internal controls, management and control of major areas of financial risk, and assessment of significant and related party transactions.

The consolidated financial statements have been audited by Ernst & Young LLP, independent external auditors appointed by the Board of Directors. The Independent Auditors' Report outlines the auditors' responsibilities and the scope of their examination and their opinion on OPG's consolidated financial statements. The independent external auditors, as confirmed by the Audit and Risk Committee, had direct and full access to the Audit and Risk Committee, with and without the presence of management, to discuss their audit and their findings therefrom, as to the integrity of OPG's financial reporting and the effectiveness of the system of internal controls.

Jeff Lyash
President and Chief Executive Officer

Ken Hartwick
Senior Vice President, Finance, Strategy, Risk and Chief Financial Officer

March 10, 2017

INDEPENDENT
AUDITORS' REPORT

To the Shareholder of Ontario Power Generation Inc.

We have audited the accompanying consolidated financial statements of Ontario Power Generation Inc., which comprise the consolidated balance sheets as at December 31, 2016 and 2015, and the consolidated statements of income, comprehensive income, cash flows, and changes in shareholder's equity for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with United States generally accepted accounting principles, and for such internal controls as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Ontario Power Generation Inc. as at December 31, 2016 and 2015 and the results of its operations and its cash flows for the years then ended in accordance with United States generally accepted accounting principles.

Toronto, Canada

March 10, 2017

Ernst & Young LLP

Chartered Professional Accountants,
Licensed Public Accountants

CONSOLIDATED STATEMENTS OF INCOME

Years Ended December 31 *(millions of dollars except where noted)*	**2016**	**2015**
Revenue *(Note 16)*	**5,653**	5,476
Fuel expense *(Note 16)*	**727**	687
Gross margin *(Note 16)*	**4,926**	4,789
Expenses *(Note 16)*		
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization *(Note 4)*	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities *(Note 8)*	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (gains) losses, interest and income taxes	**724**	703
Other (gains) losses *(Note 16)*	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense *(Note 7)*	**120**	180
Income before income taxes	**621**	509
Income tax expense *(Note 9)*	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest	**17**	15
Basic and diluted net income per common share *(dollars)*	**1.70**	1.57
Common shares outstanding *(millions)*	**256.3**	256.3

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Years Ended December 31 *(millions of dollars)*	2016	2015
Net income	**453**	417
Other comprehensive income, net of income taxes *(Note 10)*		
Actuarial (loss) gain and past service costs on re-measurement of liabilities for pension and other post-employment benefits [1]	**(6)**	148
Reclassification to income of amounts related to pension and other post-employment benefits [2]	**12**	18
Net loss on derivatives designated as cash flow hedges [3]	**-**	(5)
Reclassification to income of losses on derivatives designated as cash flow hedges [4]	**19**	16
Unrealized loss on available-for-sale securities [5]	**(1)**	-
Other comprehensive income	**24**	177
Comprehensive income	**477**	594
Comprehensive income attributable to the Shareholder	**460**	579
Comprehensive income attributable to non-controlling interest	**17**	15

[1] Net of income tax recoveries of $2 million and income tax expenses of $49 million for 2016 and 2015, respectively.

[2] Net of income tax expenses of $4 million and $7 million for 2016 and 2015, respectively.

[3] Net of income tax recoveries of nil and $2 million for 2016 and 2015, respectively.

[4] Net of income tax expenses of $2 million for each of 2016 and 2015.

[5] Net of income tax expenses of nil for each of 2016 and 2015.

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years Ended December 31 *(millions of dollars)*	2016	2015
Operating activities		
Net income	**453**	417
Adjust for non-cash items:		
Depreciation and amortization *(Note 4)*	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities *(Note 8)*	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(746)**	(704)
Pension and other post-employment benefit costs *(Note 11)*	**464**	483
Deferred income taxes and other accrued charges	**(36)**	23
Mark-to-market on derivative instruments	**3**	(218)
Provision for used nuclear fuel and low and intermediate level waste	**118**	117
Regulatory assets and liabilities	**(170)**	141
Provision for materials and supplies	**42**	28
Other (gains) losses	**(17)**	14
Other	**(8)**	5
	2,289	2,301
Contributions to nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(150)**	(143)
Expenditures on fixed asset removal and nuclear waste management *(Note 8)*	**(275)**	(218)
Reimbursement of expenditures on nuclear fixed asset removal and nuclear waste management *(Note 8)*	**70**	76
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans *(Note 11)*	**(363)**	(480)
Expenditures on restructuring	**(6)**	(16)
Distributions received from investments subject to significant influence	**52**	51
Net changes to other long-term assets and liabilities	**20**	(6)
Net changes to non-cash working capital balances *(Note 17)*	**68**	(100)
Cash flow provided by operating activities	**1,705**	1,465
Investing activities		
Purchase of available-for-sale securities	**(213)**	-
Investment in deposit note *(Note 6)*	**-**	(180)
Proceeds from deposit note *(Note 6)*	**110**	-
Net proceeds from sale of property, plant and equipment	**-**	3
Investment in property, plant and equipment and intangible assets *(Note 16)*	**(1,704)**	(1,376)
Cash flow used in investing activities	**(1,807)**	(1,553)
Financing activities		
Issuance of long-term debt *(Note 6)*	**334**	245
Repayment of long-term debt *(Note 6)*	**(273)**	(503)
Settlement of cash flow hedges	**-**	(9)
Distribution to non-controlling interest	**(14)**	(16)
Issuance of short-term notes *(Note 7)*	**3,108**	2,628
Repayment of short-term notes *(Note 7)*	**(3,331)**	(2,403)
Cash flow used in financing activities	**(176)**	(58)
Net decrease in cash and cash equivalents	**(278)**	(146)
Cash and cash equivalents, beginning of year	**464**	610
Cash and cash equivalents, end of year	**186**	464

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 *(millions of dollars)*	2016	2015
Assets		
Current assets		
Cash and cash equivalents	**186**	464
Available-for-sale securities *(Note 18)*	**212**	-
Receivables from related parties *(Note 18)*	**429**	545
Nuclear fixed asset removal and nuclear waste management funds *(Notes 8 and 16)*	**24**	15
Fuel inventory *(Note 16)*	**310**	344
Materials and supplies *(Note 16)*	**100**	96
Regulatory assets *(Note 5)*	**-**	628
Prepaid expenses	**200**	92
Other current assets *(Notes 4 and 6)*	**282**	206
	1,743	2,390
Property, plant and equipment *(Notes 4, 15, and 16)*	**29,319**	29,469
Less: accumulated depreciation	**9,317**	8,874
	20,002	20,595
Intangible assets *(Notes 4 and 16)*	**503**	476
Less: accumulated amortization	**404**	378
	99	98
Other assets		
Nuclear fixed asset removal and nuclear waste management funds *(Notes 8 and 16)*	**15,960**	15,121
Long-term materials and supplies *(Note 16)*	**345**	337
Regulatory assets *(Note 5)*	**5,855**	5,240
Investments subject to significant influence *(Note 19)*	**321**	336
Other long-term assets *(Note 6)*	**47**	133
	22,528	21,167
	44,372	44,250

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 *(millions of dollars)*	2016	2015
Liabilities		
Current liabilities		
Accounts payable and accrued charges *(Note 18)*	**1,164**	1,199
Short-term debt *(Note 7)*	**2**	225
Deferred revenue due within one year	**12**	12
Long-term debt due within one year *(Note 6)*	**1,103**	273
Income taxes payable	**123**	66
Regulatory liabilities *(Note 5)*	**-**	26
	2,404	1,801
Long-term debt *(Note 6 and 18)*	**4,417**	5,186
Other liabilities		
Fixed asset removal and nuclear waste management liabilities *(Notes 8 and 16)*	**19,484**	20,169
Pension liabilities *(Note 11)*	**3,012**	2,597
Other post-employment benefit liabilities *(Note 11)*	**2,897**	3,085
Long-term accounts payable and accrued charges	**213**	207
Deferred revenue	**298**	246
Deferred income taxes *(Note 9)*	**829**	880
Regulatory liabilities *(Note 5)*	**310**	34
	27,043	27,218
Equity		
Common shares *(Note 14)* [1]	**5,126**	5,126
Retained earnings	**5,534**	5,098
Accumulated other comprehensive loss *(Note 10)*	**(295)**	(319)
Equity attributable to the Shareholder	**10,365**	9,905
Equity attributable to non-controlling interest *(Note 21)*	**143**	140
Total equity	**10,508**	10,045
	44,372	44,250

[1] 256,300,010 common shares outstanding at a stated value of $5,126 million as at December 31, 2016 and 2015.

Commitments and Contingencies *(Notes 6, 9, 11, and 15)*

See accompanying notes to the consolidated financial statements

On behalf of the Board of Directors:

Bernard Lord
Board Chair

M. George Lewis
Director

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Common shares *(Note 14)*	**5,126**	5,126
Retained earnings		
Balance at beginning of year	**5,098**	4,696
Net income attributable to the Shareholder	**436**	402
Balance, end of year	**5,534**	5,098
Accumulated other comprehensive loss, net of income taxes *(Note 10)*		
Balance at beginning of year	**(319)**	(496)
Other comprehensive income	**24**	177
Balance, end of year	**(295)**	(319)
Equity attributable to the Shareholder	**10,365**	9,905
Equity attributable to non-controlling interest *(Note 21)*		
Balance at beginning of year	**140**	141
Distribution to non-controlling interest	**(14)**	(16)
Net income attributable to non-controlling interest	**17**	15
Balance, end of year	**143**	140
Total equity	**10,508**	10,045

See accompanying notes to the consolidated financial statements

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2016 and 2015

1. DESCRIPTION OF BUSINESS

Ontario Power Generation Inc. (OPG or the Company) was incorporated on December 1, 1998 pursuant to the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (the Province or the Shareholder). OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario.

2. BASIS OF PRESENTATION

These consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States (US) Securities and Exchange Commission for annual financial statements.

As required by *Ontario Regulation 395/11,* as amended, under the Financial Administration Act (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG has also received exemptive relief from the Ontario Securities Commission (OSC) from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant, or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

All dollar amounts are presented in Canadian dollars, except in tabular format where noted. Certain of the 2015 comparative amounts have been reclassified from financial statements previously presented to conform to the 2016 consolidated financial statement presentation.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Consolidation

The consolidated financial statements of the Company include the accounts of OPG and its majority-owned subsidiaries, and a variable interest entity (VIE) where OPG is the primary beneficiary. All significant intercompany balances and intercompany transactions have been eliminated on consolidation.

Where OPG does not control an investment, but has significant influence over operating and financing policies of the investee, the investment is accounted for under the equity method. OPG co-owns the Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS) with TransCanada Energy Ltd. and co-owns the Brighton Beach gas-fired combined cycle generating station (Brighton Beach) with ATCO Power Canada Ltd. OPG accounts for its 50 percent ownership interest in each of these jointly controlled entities using the equity method.

Variable Interest Entities

OPG performs ongoing analysis to assess whether it holds any VIEs. VIEs of which OPG is deemed to be the primary beneficiary are consolidated. The primary beneficiary of a VIE has both the power to direct the activities of the entity that most significantly impact its economic performance and the obligation to absorb losses of the entity that could potentially be significant to the Company. In circumstances where OPG is not deemed to be the primary beneficiary, the VIE is not recorded in OPG's consolidated financial statements.

In 2002, OPG and other Canadian nuclear waste producers established the Nuclear Waste Management Organization (NWMO) in accordance with the *Nuclear Fuel Waste Act* (NFWA). The primary long-term mandate of the NWMO is to implement an approach to address the long-term management of used nuclear fuel. In addition to the above mandate, the NWMO provides project management services for OPG's proposed Deep Geologic Repository (DGR) for the long-term management of low and intermediate level waste (L&ILW) and other nuclear lifecycle liability management services. OPG has the majority of voting rights at the NWMO Board of Directors' and members' level. The NFWA requires the nuclear fuel waste owners to establish and make payments into trust funds for the purpose of funding the implementation of the long-term nuclear used fuel management plan. OPG provides over 90 percent of NWMO's funding, primarily towards the design and implementation of Canada's Adaptive Phased Management plan for the long-term management of nuclear used fuel. As a result, OPG is expected to absorb a majority of the NWMO's expected losses through future funding in the event of any shortfall. Therefore, OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated.

As at December 31, 2016, PSS Generating Station Limited Partnership (PSS or the Partnership) was classified as a VIE because it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership.

Use of Management Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefit (OPEB) balances, asset retirement obligations (AROs), income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments and investments in segregated funds, depreciation and amortization expenses, valuation of the nuclear fixed assets and nuclear waste management funds, and inventories. Actual results may differ significantly from these estimates.

Cash and Cash Equivalents and Short-Term Investments

Cash and cash equivalents include cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments and classified as current assets. These securities are valued at the lower of cost and market.

Inventories

Inventories, consisting of fuel and materials and supplies, are measured at the lower of cost and net realizable value. Cost is determined as weighted average cost for fuel inventory and average cost for materials and supplies.

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to operations, maintenance and administration (OM&A) expenses when incurred. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis, except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis. As at December 31, 2016, the amortization periods of PP&E and intangible assets are as follows:

Nuclear generating stations and major components	15 to 74 years [1]
Thermal generating stations and major components	5 to 50 years
Hydroelectric generating stations and major components	10 to 100 years
Administration and service facilities	10 to 50 years
Computers, and transport and work equipment assets – declining balance	12% to 40% per year
Major application software	5 years
Service equipment	5 to 10 years

[1] As at December 31, 2016, the end of station life for depreciation purposes for the Darlington, Pickering, and Bruce A and B nuclear generating stations ranged between 2020 and 2061. Major components are depreciated over the lesser of the station life and the life of the components.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

The carrying value of investments accounted for under the equity method are reviewed annually for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the Ontario Energy Board (OEB).

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998,* the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB are classified as current if they are expected to be recovered from, or refunded to, customers within 12 months of the end of the reporting period, based on recovery or repayment periods authorized by the OEB. All other regulatory asset and liability balances are classified as non-current on the consolidated balance sheets.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in accumulated other comprehensive income (AOCI) in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans. The regulatory asset is reversed as underlying unamortized balances are amortized as components of the benefit cost.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures on its pension and OPEB plans. It is the Company's position that this decision by the OEB does not constitute a change in the basis of rate recovery for OPG's of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices or in an OEB-authorized deferral or variance account for future recovery as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account to record the difference between OPG's actual pension and OPEB costs for the regulated business

determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the above noted consultation process.

See Notes 5, 8, 9, and 11 to these consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Revenue Recognition

All of OPG's electricity generation is offered into the real-time energy spot market administered by the Independent Electricity System Operator (IESO). Revenue is recognized as electricity is generated and metered to the IESO.

Revenue Recognition – Regulated Generation

Energy revenue generated from OPG's regulated facilities is based on regulated prices determined by the OEB that currently include a base regulated price and rate riders for the recovery or repayment of approved variance and deferral account balances.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base is a regulatory construct that, for OPG, represents the average net level of investment in regulated fixed and intangible assets in-service and an allowance for working capital. The revenues from the regulated hydroelectric facilities are also subject to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The rate riders in effect during 2016 were established by the OEB in its October 2015 order based on OPG's application to recover balances in most of the authorized variance and deferral accounts as at December 31, 2014. The rate riders in effect during 2015 included those established by the OEB in 2014 in conjunction with the base regulated prices in effect since November 1, 2014 and those authorized by the OEB in October 2015 based on OPG's application to recover the December 31, 2014 balances. The OEB-authorized variance and deferral accounts are discussed in Note 5 to these consolidated financial statements.

Revenue Recognition – Non-regulated Generation and Other Revenue

The electricity generation from OPG's non-regulated assets receives the Ontario electricity spot market price, except where an energy supply agreement (ESA) with the IESO or another contractual agreement is in place. As at December 31, 2016, most of OPG's operating non-regulated assets are subject to an ESA. Revenue from the generating stations subject to an ESA is recognized in accordance with the terms of the agreement. Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO is substituted as the counterparty of the ESAs or other agreements that were previously executed with the OPA.

OPG also sells into, and purchases from, interconnected markets of other provinces and the northeast and midwest regions of the US. All contracts that are not designated as hedges are recorded in the consolidated balance sheets at market value, with gains or losses recorded in the consolidated statements of income. Gains and losses on energy trading contracts (including those to be physically settled) are recorded on a net basis in the consolidated statements of income. Accordingly, power purchases of $19 million were netted against revenue in 2016 (2015 – $75 million).

OPG derives non-energy revenue under the terms of a lease arrangement and associated agreements with Bruce Power L.P. (Bruce Power) related to the Bruce nuclear generating stations. This includes lease revenue and revenue from heavy water sales, detritiation services and waste management services. OPG's net revenues from the lease of the Bruce stations and related agreements, including a portion of heavy water sales, are credited to customers and have therefore reduced regulated prices for the generation from the nuclear facilities owned and operated by OPG. The minimum lease payments are recognized in revenue on a straight-line basis over the term of the lease.

In addition, non-energy revenue includes isotope sales, real estate rentals and other service revenues. Revenues from these activities are recognized as services are provided, or as products are delivered.

Fixed Asset Removal and Nuclear Waste Management Liabilities

OPG recognizes AROs for fixed asset removal and nuclear waste management, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The liabilities are initially recorded at their estimated fair value, which is based on a discounted value of the expected costs to be paid.

On an ongoing basis, the liabilities for nuclear fixed asset removal and nuclear waste management (Nuclear Liabilities) are increased by the present value of the incremental (variable) cost portion for the nuclear waste generated each year, with the corresponding amounts charged to operating expenses. Variable expenses relating to low and intermediate level nuclear waste are charged to OM&A expenses. Variable expenses relating to the management and storage of nuclear used fuel are charged to fuel expense. The liabilities may also be adjusted due to any changes in the estimated amount or timing of the underlying future cash flows, with any resulting changes in the related asset retirement costs capitalized as part of the carrying amount of the related fixed assets. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the originally estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of increases in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of decreases in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets. Upon settlement of the liabilities, a gain or loss would be recorded.

Accretion arises because the fixed asset removal and nuclear waste management liabilities are reported on a net present value basis. Accretion expense is the increase in the carrying amount of the liabilities due to the passage of time.

The asset retirement cost is capitalized by increasing the carrying value of the related fixed assets. The capitalized cost is depreciated over the remaining service life of the related fixed assets and is included in depreciation and amortization expenses.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG established a Used Fuel Segregated Fund and a Decommissioning Segregated Fund (together the Nuclear Segregated Funds). The Used Fuel Segregated Fund is intended to fund expenditures associated with the long-term management of radioactive used nuclear fuel bundles, while the Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the nuclear stations are shut down. OPG maintains the Nuclear Segregated Funds in third-party custodial and trust accounts that are segregated from the rest of OPG's assets.

OPG's investments in the Nuclear Segregated Funds and the corresponding amounts payable to/receivable from the Province are classified as held-for-trading. The Nuclear Segregated Funds are measured at fair value based on the bid prices of the underlying equity and fixed income securities, and, in the case of the alternative investment portfolio, using appropriate valuation techniques as outlined in Note 13 to these consolidated financial statements, with realized and unrealized gains and losses recognized in OPG's consolidated statements of income.

Derivatives

All derivatives, including embedded derivatives that must be separately accounted for, generally are classified as held-for-trading and recorded at fair value in the consolidated balance sheets. Transaction costs are expensed as incurred for financial instruments classified or designated as held-for-trading.

Derivatives qualify for hedge accounting if they meet stringent documentation requirements, and if the derivative instrument that is designated as a hedge is expected to effectively hedge the identified risk throughout the life of the hedged item. At the inception of a hedging relationship, OPG documents the relationship between the hedging instrument and the hedged item, its risk management objective, and its strategy for undertaking the hedge. A documented assessment is made, both at the inception of a hedge and on an ongoing basis, of whether or not the derivatives that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

All derivative contracts not designated as hedges are recorded on the consolidated balance sheets as derivative assets or liabilities at fair value with changes in the fair value recorded in the revenue of the Services, Trading, and Other Non-Generation segment. Refer to Note 12 for a discussion of OPG's risk exposures and the derivative instruments used to manage these risks.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model. OPG uses a fair value hierarchy, grouping assets and liabilities into three levels based on the relative objectivity of the inputs used to measure fair value, with Level 1 representing the most objective. Refer to Note 13 for a discussion of fair value measurements and the fair value hierarchy.

Investments in Equity Securities

Available-for-sale (AFS) securities are measured at fair value with unrealized gains and losses due to changes in fair value recognized in other comprehensive income (OCI). Realized gains and losses are included in net income when the shares are sold or awarded. Related transaction costs are expensed as incurred, and dividend income is included in net income in the period dividends are declared. Equity securities are initially measured at the transaction price.

Research and Development

Research and development costs are expensed as incurred. Research and development costs incurred to discharge long-term obligations, such as the Nuclear Liabilities, for which specific provisions have already been made, are charged to the related liability.

Leases

Leases are evaluated and classified as either operating or capital leases for financial reporting purposes. Capital leases, which transfer substantially all of the risks and benefits incidental to ownership of the leased item, are capitalized at the inception of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Capital leases are depreciated over the shorter of the estimated useful life of the asset and the lease term.

Leases where the lessor retains substantially all the risks and benefits incidental to ownership of the asset are classified as operating leases. Operating lease payments, other than contingent rentals, are recognized as an expense in the consolidated statements of income on a straight-line basis over the lease term. Where the amount of rent expense recognized is different from the actual operating lease payment, other than contingent rentals, the difference is deferred and included as assets or liabilities on the consolidated balance sheets.

Pension and Other Post-Employment Benefits

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post-retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective

benefit obligations is accumulated and amortized over future periods; for LTD benefits, the impact of these updates and differences is immediately recognized as OPEB costs in the period incurred.

The discount rates, which are representative of AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure, and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments, and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor), is amortized over the expected average remaining service life of the employees, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on the consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in OCI, net of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as components of pension and OPRB costs as described above.

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the amounts reclassified from AOCI into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the Ontario Electricity Financial Corporation (OEFC). These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or payable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized income tax benefits as income tax expense.

Changes in Accounting Policies and Estimates

Change in Nuclear Liabilities Estimate

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for Nuclear Liabilities as at December 31, 2016 was finalized as part of the required process to update the Reference Plan under the ONFA between OPG and the Province. The update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities, with a corresponding decrease to the asset retirement costs capitalized as part of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear decommissioning at least once every five years, in line with the required ONFA Reference Plan update process.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. These changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account established by the OEB pursuant to *Ontario Regulation 53/05*, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices. The estimated impact on 2017 expenses, before regulatory deferrals, includes a decrease to depreciation expense of approximately $8 million**,** a decrease to accretion expense of approximately $78 million in 2017, and a combined decrease in used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million**.** Under the current OEB-approved cost recovery methodologies, these changes are not expected to materially affect OPG's income in 2017, as they are expected to be largely offset by the OEB-approved variance and deferral accounts, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to *Ontario Regulation 53/05*. It records the revenue requirement impact

associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the amount due to the Province. This accounting adjustment represented the overfunded position of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 relative to the value of the corresponding life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province, because OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and because any excess funding in the Nuclear Segregated Funds upon termination of the ONFA accrues to the Province. Of the $88 million reduction in the Nuclear Segregated Funds assets, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

Pension and Other Post-Employment Benefits

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined under the heading, *Contractual and Commercial Commitments,* in Note 15 Commitments and Contingencies. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation, and assumptions as at December 31, 2016. As part of the valuation, the plan's demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The weighted average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

The deficit for the registered pension plan increased, for accounting purposes, from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million).

Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

OEB's Decision on OPG's December 2014 Motion

In January 2016, OEB issued its decision on OPG's December 2014 motion that requested the OEB to review and vary parts of its November 2014 decision, including the disallowed Niagara Tunnel project capital costs. In its January 2016 decision, the OEB reversed a portion of the November 2014 Niagara Tunnel capital cost disallowance and established a new variance account to record the revenue requirement impact of the reversed disallowance effective November 1, 2014. The November 2014 disallowance resulted in a write off of capital costs in the fourth quarter of 2014. To recognize the expected future recovery of the reversed portion of the disallowance and related revenue requirement impact to March 31, 2016, during the first quarter of 2016, OPG recorded an increase to property, plant and equipment and a corresponding gain of $22 million, and a regulatory asset of $3 million related to the balance in the variance account, in accordance with Accounting Standards Codification (ASC) Topic 980, *Regulated Operations*.

Recent Accounting Pronouncements

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact that the new standard will have on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the AFS classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of other comprehensive income. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One Limited (Hydro One) share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

Intra-Entity Transfers of Assets Other than Inventory

In October 2016, the FASB issued ASU No. 2016-16, *Income* Taxes, where entities will be required to recognize the income tax effects of certain intercompany transfers of assets as an income tax expense or benefit in the period the transaction occurs. This is different from current standards where entities are required to defer the income tax effects until that asset has been sold to a third party or otherwise recognized. OPG is required to adopt this ASU on January 1, 2018. The amendments in this ASU should be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. OPG expects to record a cumulative-effect adjustment to the 2018 opening retained earnings of a debit of $7 million.

Significant Accounting Standard Update Adopted

Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share

In May 2015, the FASB issued ASU No. 2015-07, *Fair Value Measurement (Topic 820) – Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent)*. Under the new guidance, investments measured at net asset value (NAV), which have been elected under the guidance as a practical expedient for fair value, are excluded from the fair value hierarchy. Removing investments measured using the practical expedient from the fair value hierarchy is intended to eliminate the diversity in practice that currently exists with respect to the categorization of these investments. The only criterion for categorizing investments in the fair value hierarchy is the observability of the inputs. OPG has adopted the updates to ASC Topic 820, *Fair Value Measurement* in 2016. The changes in disclosures required under this update are reflected in Notes 11 and 13.

4. PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND DEPRECIATION AND AMORTIZATION

Depreciation and amortization expenses, including amounts recognized in regulatory variance and deferral accounts authorized by the OEB, for the years ended December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Depreciation	**602**	617
Amortization of intangible assets	**27**	20
Amounts recognized in regulatory variance and deferral accounts	**26**	(1)
Amortization of regulatory assets and liabilities *(Note 5)*	**602**	464
	1,257	1,100

Property, plant and equipment as at December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Nuclear generating stations	**11,057**	11,999
Regulated hydroelectric generating stations	**9,430**	9,351
Contracted generation portfolio generating stations	**3,751**	3,713
Other property, plant and equipment	**1,598**	1,839
Construction in progress	**3,483**	2,567
	29,319	29,469
Less: accumulated depreciation		
Generating stations	**7,948**	7,359
Other property, plant and equipment	**1,369**	1,515
	9,317	8,874
	20,002	20,595

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. An active program to locate a buyer was initiated in October 2016. As such, in the fourth quarter of 2016, OPG reclassified the assets' net book value of approximately $93 million (December 31, 2015 – $96 million) out of property, plant and equipment and into Other current assets in the Services, Trading, and Other Non-Generation segment. Depreciation on the assets ceased in the fourth quarter of 2016. In December 2016, a purchase and sale agreement was executed and the disposition is expected to close during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be recognized in the second quarter of 2017 when the transaction is expected to be completed. Pursuant to the December 2015 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act 2014*, OPG is required to transfer a portion of the proceeds of disposition into the Province's Consolidated Revenue Fund.

Construction in progress as at December 31 consists of the following:

(millions of dollars)	**2016**	**2015**
Darlington Refurbishment	**2,563**	1,868
Peter Sutherland Sr. GS	**236**	95
Other	**684**	604
	3,483	2,567

Interest capitalized to construction and development in progress at an average rate of five percent during 2016 (2015 – five percent) was $141 million (2015 – $102 million).

Intangible assets as at December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Nuclear generating stations	**122**	118
Regulated hydroelectric generating stations	**7**	4
Contracted generation portfolio generating stations	**4**	5
Computer software and other intangible assets	**350**	321
Development in progress	**20**	28
	503	476
Less: accumulated amortization		
Generating stations	**120**	115
Computer software and other intangible assets	**284**	263
	404	378
	99	98

The estimated aggregate amortization expense for each of the five succeeding years for intangible assets in service as at December 31, 2016 is as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**
Amortization expense	24	21	20	8	2

5. REGULATORY ASSETS AND LIABILITIES

In December 2014, OPG filed an application with the OEB to recover approximately $1.8 billion in December 31, 2014 balances in most of its authorized regulatory variance and deferral accounts. The recovery of the amount sought was approved by the OEB in 2015.

In October 2015, the OEB issued an order implementing its 2015 decisions on OPG's application. The order authorized OPG to recover $933 million over the period from October 1, 2015 to December 31, 2016 through new rate riders for generation from all of OPG's regulated nuclear and regulated hydroelectric facilities during this period, as shown below. The remaining approved balances will be subject to recovery after 2016.

($/Megawatt hour)	**Nuclear**	**Hydroelectric**
2015/2016 rate riders	10.84	3.19
2015/2016 interim period rate riders [1]	2.17	0.64
Rate riders for the period from October 1, 2015 to December 31, 2016	13.01	3.83

[1] The new riders were made effective July 1, 2015 and implemented effective October 1, 2015 by the OEB. The interim period rate riders were authorized by the OEB to allow for the recovery of the new riders for the period from July 1, 2015 to September 30, 2015. The revenue for the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The income impact of the revenue accrual was largely offset by a corresponding increase in amortization expense related to regulatory assets and liabilities for deferral and variance accounts.

In 2016, OPG recorded amortization of the regulatory assets and liabilities for the deferral and variance account balances approved for disposition on a straight-line basis, based on recovery or repayment periods authorized by the OEB's October 2015 order. In 2015, OPG recorded such amortization on a straight-line basis based on balances and recovery or repayment periods authorized by the OEB's December 2014 and October 2015 orders.

Any shortfall or over-recovery of the approved balances due to differences between actual and forecast production are recorded in the authorized Nuclear Deferral and Variance Over/Under Recovery Variance Account and the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account to be collected from, or refunded to, customers in the future.

The OEB's October 2015 order also approved the continuation of previously authorized variance and deferral accounts, including those authorized pursuant to *Ontario Regulation 53/05*.

Where authorized by the OEB, OPG recorded interest on the unamortized balances in the applicable variance and deferral accounts at the OEB-prescribed rates of 1.10 percent per annum for the period from April 1, 2015 to December 31, 2016 and 1.47 percent per annum for the period from January 1, 2015 to March 31, 2015.

The regulatory assets and liabilities recorded as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Regulatory assets		
Variance and deferral accounts authorized by the OEB		
Pension and OPEB Cost Variance Account	**716**	865
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 11)*	**497**	315
Hydroelectric Surplus Baseload Generation Variance Account	**210**	114
Bruce Lease Net Revenues Variance Account	**95**	95
Nuclear Deferral and Variance Over/Under Recovery Variance Account	**74**	82
Other variance and deferral accounts	**33**	243
	1,625	1,714
Pension and OPEB regulatory asset *(Note 11)*	**3,392**	3,362
Deferred Income Taxes *(Note 9)*	**838**	792
Total regulatory assets	**5,855**	5,868
Less: current portion	**-**	628
Non-current regulatory assets	**5,855**	5,240
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Capacity Refurbishment Variance Account	**102**	-
Other variance and deferral accounts	**208**	60
Total regulatory liabilities	**310**	60
Less: current portion	**-**	26
Non-current regulatory liabilities	**310**	34

The changes in the regulatory assets and liabilities during 2016 and 2015 are as follows:

(millions of dollars)	**Pension and OPEB Cost Variance**	**Pension & OPEB Cash vs Accrual Differential Deferral**	**Hydro-electric Surplus Baseload Generation Variance**	**Bruce Lease Net Revenues Variance**	**Nuclear Deferral and Variance Over/Under Recovery Variance**	**Capacity Refurb-ishment Variance**	**Other Variance and Deferral (net)**	**Pension and OPEB Regula-tory Asset**	**Deferred Income Taxes**
Net regulatory assets January 1, 2015	939	36	67	315	56	190	320	4,363	861
Increase (decrease)	-	279	82	(149)	44	(68)	3	(1,001)	(69)
Interest	-	-	-	-	1	2	1	-	-
Amortization	(74)	-	(35)	(71)	(19)	(124)	(141)	-	-
Net regulatory assets December 31, 2015	865	315	114	95	82	-	183	3,362	792
Increase (decrease)	**-**	**182**	**126**	**143**	**29**	**(36)**	**(184)**	**30**	**46**
Interest	**-**	**-**	**2**	**-**	**1**	**-**	**-**	**-**	**-**
Amortization	**(149)**	**-**	**(32)**	**(143)**	**(38)**	**(66)**	**(174)**	**-**	**-**
Net regulatory assets December 31, 2016	**716**	**497**	**210**	**95**	**74**	**(102)**	**(175)**	**3,392**	**838**

Pension and OPEB Cost Variance Account

As authorized by the OEB, for the period from March 1, 2011 to October 30, 2014, the Pension and OPEB Cost Variance Account recorded the differences between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and related tax impacts, and corresponding forecast amounts reflected in the regulated prices then in effect. In its November 2014 decision, the OEB determined that the pension and OPEB amounts reflected in OPG's new regulated prices effective November 1, 2014 would be limited to the Company's estimated minimum contributions to its registered pension plan and a forecast of OPG's expenditures on the OPEB and supplementary pension plans. As such, the OEB ordered the Pension and OPEB Cost Variance Account to record only amortization beginning on November 1, 2014.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of 10/12 of the account balance as at December 31, 2012 over a 144-month period to December 31, 2024. Amounts recorded in the account in 2013 and 2014 were approved for recovery over a 72-month period to June 30, 2021 by the OEB's October 2015 order.

Pension & OPEB Cash Versus Accrual Differential Deferral Account

In its November 2014 decision and December 2014 order, the OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Effective November 1, 2014, this deferral account records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis under US GAAP and OPG's corresponding actual cash expenditures for these plans. The balance in the account as at December 31, 2016 represents the excess of costs calculated using the accrual basis over the cash basis for the period from November 1, 2014 to December 31, 2016. The Company has recognized the amount set aside in the deferral account as a regulatory asset.

The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of the generic OEB proceeding on the regulatory treatment and recovery of pension and OPEB costs. The OEB's consultation process to develop standard principles to guide its review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery, began in May 2015. OPG is participating in the consultation. In July 2016, the OEB held a public stakeholder forum as part of the consultation. In September 2016, OPG made a written submission of its position on the matter with the OEB. OEB's consultation process remains ongoing.

Hydroelectric Surplus Baseload Generation Variance Account

The Hydroelectric Surplus Baseload Generation Variance Account records the impact of foregone production at OPG's regulated hydroelectric facilities due to surplus baseload generation conditions. The variance account was authorized by the OEB effective March 1, 2011 for the regulated hydroelectric facilities prescribed for rate regulation prior to 2014, and effective November 1, 2014 for the applicable regulated hydroelectric facilities prescribed for rate regulation effective in 2014.

In its November 2014 decision and December 2014 order, the OEB approved the recovery of the account balance as at December 31, 2013 over a 12-month period beginning on January 1, 2015. The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 over an 18-month period from July 1, 2015 to December 31, 2016. OPG's May 2016 application to the OEB included a request to recover the balance in this account as at December 31, 2015 less amounts approved in the OEB's October 2015 order.

Bruce Lease Net Revenues Variance Account

In accordance with *Ontario Regulation 53/05*, the OEB is required to include the difference between OPG's revenues and costs associated with its ownership of the two nuclear stations on lease to Bruce Power in the determination of the regulated prices for production from OPG's regulated nuclear facilities. The OEB established a variance account

that captures differences between OPG's revenues and costs related to the Bruce nuclear generating stations and the corresponding forecasts included in approved nuclear regulated prices.

In 2013, the OEB ordered the portion of the balance in the Bruce Lease Net Revenues Variance Account related to the impact of the derivative liability embedded in the terms of the Bruce Lease in effect prior to December 2015 to be recovered on the basis of OPG's expected rent rebate payments to Bruce Power and associated income tax impacts. The OEB's October 2015 order reaffirmed this approach. In December 2015, as a result of amendments to the Bruce Lease, OPG reversed the derivative liability, with a corresponding reduction to the regulatory asset for this account. Amounts collected from customers for the derivative liability for periods after its reversal are subject to refund in the future and recognized as a regulatory liability as part of the variance account balance.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of the non-derivative portion of the account balance as at December 31, 2012 over a 48-month period ending December 31, 2016. The non-derivative portion of amounts recorded in the account in 2013 and 2014 was approved for recovery over an 18-month period from July 1, 2015 to December 31, 2016 by the OEB's October 2015 order. The balance in this account as at December 31, 2016 therefore reflects the cumulative variances in net revenues related to the non-derivative portion of the account between January 1, 2015 and December 2016, partially offset by the refund to ratepayers for the derivative cancellation in 2015.

Nuclear Deferral and Variance Over/Under Recovery Variance Account

The Nuclear Deferral and Variance Over/Under Recovery Variance Account records any shortfall or over-recovery of the approved variance and deferral account balances due to differences between actual and forecast nuclear production. The account also captures transfer of balances remaining in other variance and deferral accounts as they expire. The balance in the account will be collected from, or refunded to, customers following OPG's next application to the OEB.

The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 over an 18-month period from July 1, 2015 to December 31, 2016. OPG's May 2016 application to the OEB included a request to recover the balance in this account as at December 31, 2015 less amounts approved in the OEB's October 2015 order.

Capacity Refurbishment Variance Account

Pursuant to *Ontario Regulation 53/05*, the OEB has authorized the Capacity Refurbishment Variance Account (CRVA). The account captures variances from the forecasts reflected in the regulated prices for capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to one or more of the regulated facilities. The balance in the account as at December 31, 2016 includes variances related to the refurbishment of the Darlington nuclear generating station, life extension initiatives at the Pickering nuclear generation station, and other projects.

OPG determines amounts to be recovered from, or refunded to, customers with respect to variances in capital costs as the difference from forecast depreciation expense and cost of capital associated with the in-service capital reflected in the regulated prices and associated income tax effects. The cost of capital amount in the account is calculated using the weighted average cost of capital, including a return on equity, as approved by the OEB in determining the regulated prices. In accordance with US GAAP, in recognizing a regulatory asset for the CRVA, OPG limits the portion of cost of capital additions recognized as a regulatory asset to the amount calculated using the average rate of capitalized interest applied to construction and development in progress.

The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 less amounts approved in the OEB's December 2014 order over an 18-month period from July 1, 2015 to December 31, 2016. In setting new regulated prices effective November 1, 2014, the OEB approved the recovery of the December 31, 2013 nuclear capital and hydroelectric portions of the account balance, totaling $119 million, over a 12-month period beginning on January 1, 2015.

Other Variance Accounts

Regulatory assets

As at December 31, 2016 and 2015, regulatory assets for other variance and deferral accounts included amounts for Nuclear Liability Deferral Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Development Variance Account, and the Pickering Life Extension Depreciation Variance Account.

The Nuclear Liability Deferral Account is authorized in connection with changes to OPG's liabilities for nuclear used fuel management and nuclear decommissioning and L&ILW management associated with the nuclear facilities owned and operated by OPG, which are comprised of the Pickering and Darlington nuclear generating stations. The deferral account records the revenue requirement impact associated with the changes in these liabilities arising from an approved reference plan, in accordance with the terms of the ONFA.

The Hydroelectric Deferral and Variance Over/Under Recovery Variance Account records any shortfall or over-recovery of the approved variance and deferral account balances due to differences between actual and forecast hydroelectric production. The account also captures transfer of balances remaining in other variance and deferral accounts as they expire. The balance in the account will be collected from, or refunded to, customers following OPG's next application to the OEB.

The Nuclear Development Variance Account records variances between the actual non-capital costs incurred and firm financial commitments made in the course of planning and preparation for the development of proposed new nuclear generation facilities and the corresponding forecasts reflected in the regulated prices approved by the OEB.

The Pickering Life Extension Depreciation Variance Account balance was recorded wholly during the period from November 1, 2014 to December 31, 2014. This balance represents an offset to the customer credit for the reduction in depreciation expense for the Pickering nuclear generating station that was reflected both as a reduction to the base regulated prices effective November 1, 2014 and the nuclear rate rider in effect during 2014. The regulatory asset for this balance was fully amortized during the year ended December 31, 2016 based on the recovery periods authorized by the OEB.

As at December 31, 2016, regulatory assets for other variance and deferral accounts also included the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account. This account was established in the OEB's January 2016 decision in which it reversed a portion of the November 2014 Niagara Tunnel Capital cost disallowance. This account records the revenue requirement impact of the reversed disallowance effective November 1, 2014. To recognize the expected future recovery of the reversed portion of the disallowance, OPG recorded an increase to property, plant and equipment and a corresponding gain of $22 million during 2016 in accordance with ASC Topic 980, *Regulated Operations*. As at December 31, 2016, OPG also recorded a regulatory asset of $3 million related to the balance in the variance account.

As at December 31, 2015, regulatory assets for other variance and deferral accounts also included the Pension & OPEB Cash Payment Variance Account.

Regulatory liabilities

As at December 31, 2016 and 2015, regulatory liabilities for other variance and deferral accounts included amounts for the Hydroelectric Water Conditions Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account.

The Hydroelectric Water Conditions Variance Account captures the impact of differences in regulated hydroelectric electricity production due to differences between forecast water conditions underlying the production forecast approved by the OEB in setting regulated hydroelectric prices, and the actual water conditions.

The Ancillary Services Net Revenue Variance Account was authorized by the OEB to capture differences between actual nuclear and regulated hydroelectric ancillary services net revenue and the forecast amounts of such revenue approved by the OEB in setting regulated prices.

The Income and Other Taxes Variance Account includes deviations in income taxes for the regulated business, from those approved by the OEB in setting regulated prices, caused by changes in tax rates and rules, as well as reassessments.

The Hydroelectric Incentive Mechanism Variance Account records a credit to customers equal to 50 percent of OPG's hydroelectric incentive mechanism revenues above a specified threshold for the regulated hydroelectric facilities.

In its November 2014 decision and December 2014 order, the OEB approved the recovery or repayment of certain of the account balances of the other variance accounts as at December 31, 2013 over a 12-month period beginning on January 1, 2015. In its October 2015 order, the OEB approved the recovery or repayment of the majority of the account balances of the other variance and deferral accounts as at December 31, 2014, less amounts approved in the December 2014 order, over an 18-month period from July 1, 2015 to December 31, 2016.

As at December 31, 2016, regulatory liabilities for other variance and deferral accounts also included the Impact Resulting from Changes in Station-End-of-Life Deferral Account. In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of the changes to the nuclear fixed asset removal and nuclear waste management liabilities and depreciation expense arising from the changes in the estimated useful lives of the Company's nuclear stations, for accounting purposes, implemented effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station-End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG recognized a regulatory liability of $71 million related to the balance in the deferral account.

In addition, as at December 31, 2016, the regulatory liabilities also included the Pension & OPEB Cash Payment Variance Account. This account records, effective November 1, 2014, the difference between OPG's actual contributions to its registered pension plan and expenditures on its OPEB and supplementary pension plans for the regulated business, and the corresponding amounts reflected in the regulated prices.

Pension and OPEB Regulatory Asset

The Pension and OPEB Regulatory Asset represents unamortized amounts in respect of OPG's pension and OPEB plans that have been recognized in OCI and not yet reclassified into the amortization component of the benefit costs in respect of these plans. These amounts are expected to be recovered from customers through future regulated prices. The regulatory asset is reversed as underlying unamortized balances are amortized as components of benefit costs. Refer to Note 3 for a detailed discussion of the rate recovery methodology for pension and OPEB costs under the heading, *Rate Regulated Accounting*. The AOCI amounts related to pension and OPEB plans are presented in Note 11.

Deferred Income Taxes

OPG is required to record a regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities. In addition, OPG is required to recognize a deferred income tax liability or asset for the regulatory asset or liability for the amount of deferred income taxes expected to be included in future regulated prices and paid to or recovered from customers. Income taxes are discussed in Note 9.

6. LONG-TERM DEBT

Long-term debt consists of the following as at December 31: [1]

(millions of dollars)	**2016**	**2015**
Notes payable to the OEFC		
Senior Notes [2]		
4.91% due 2016	**-**	270
5.35% due 2017	**900**	900
5.27% due 2018	**395**	395
5.44% due 2019	**365**	365
4.56% due 2020	**660**	660
4.28% due 2021	**185**	185
3.30% due 2022	**150**	150
3.12% due 2023	**40**	40
3.04% due 2026	**50**	-
5.07% due 2041	**300**	300
4.36% due 2042	**200**	200
4.03% due 2046	**50**	-
UMH Energy Partnership [3]		
Senior Notes		
7.86% due to 2041	**184**	187
PSS Generating Station Limited Partnership [4]		
Senior Notes		
4.90% due to 2067	**245**	245
Lower Mattagami Energy Limited Partnership [5]		
Senior Notes		
2.35% due 2017	**200**	200
4.46% due 2021	**225**	225
3.53% due 2024	**200**	200
2.40% due 2026	**220**	-
5.26% due 2041	**250**	250
5.05% due 2043	**200**	200
4.26% due 2046	**275**	275
4.26% due 2052	**225**	225
Other	**15**	-
	5,534	5,472
Less: bond issuance fees	**(14)**	(13)
Less: due within one year	**(1,103)**	(273)
Long-term debt	**4,417**	5,186

[1] The interest rates disclosed reflect the effective interest rate of the debt.

[2] OEFC senior debt is entitled to receive, in full, amounts owing in respect of the senior debt and is pari passu to the Lower Mattagami Energy Limited Partnership senior notes.

[3] These notes are secured by the assets of the Upper Mattagami and Hound Chute project. Principal repayments of $3 million per year are made on a semi-annual basis until maturity in 2041, at which time the remaining principal balance of $116 million becomes due.

[4] These notes are secured by the assets of the Peter Sutherland Sr. GS project. The notes have an interest-only feature until 2025 and will be amortized with blended semi-annual principal and interest payments thereafter until maturity in 2067, at which time the remaining principal balance of $49 million becomes due.

[5] These notes are secured by the assets of the Lower Mattagami River project, including existing and new operating facilities, and are recourse to OPG until the recourse release date. These notes rank pari passu to the OEFC senior notes.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As at December 31, 2016, there were outstanding borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016,

OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

Interest paid in 2016 was $269 million (2015 – $269 million), of which $261 million (2015 – $261 million) relates to interest paid on long-term debt.

In the fourth quarter of 2015, PSS, a subsidiary of OPG, issued long-term debt totalling $245 million in support of the Peter Sutherland Sr. GS project. The majority of the debt proceeds, totalling $180 million, were invested in a structured deposit note with staggered maturity dates ranging from January 2016 to April 2017. As at December 31, 2016, $70 million was reported as Other current assets on the consolidated balance sheets, based on the terms of the deposit note. As at December 31, 2015, $110 million was reported as Other current assets and $70 million as Other long-term assets.

In October 2016, Lower Mattagami Energy Limited Partnership (LME) issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes is x.xx percent and x.xx percent, respectively. **[MONITOR]**

A summary of the contractual maturities of all long-term borrowings outstanding as at December 31, 2016, by year, is as follows:

(millions of dollars)	
2017	**1,103**
2018	**398**
2019	**368**
2020	**663**
2021	**413**
Thereafter	**2,589**
	5,534

The book value of the pledged assets as at December 31, 2016 was $3,510 million (2015 – $3,520 million).

7. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended both tranches to May 2021. As at December 31, 2016 and 2015, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, the LME maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for the LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program (2015 – $225 million). There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016 and 2015.

As at December 31, 2016, OPG maintained $25 million of short-term, uncommitted overdraft facilities and $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included

$349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016 and 2015, there were Letters of Credit outstanding under this agreement of $150 million which were issued in support of OPG's supplementary pension plan.

In October 2014, UMH Energy Partnership entered into an $8 million short-term, uncommitted overdraft facility and $16 million of irrevocable, standby Letters of Credit facilities in support of its operations. As at December 31, 2016, total Letters of Credit of $14 million had been issued under these facilities.

The following table summarizes the net interest expense for the years ended December 31:

(millions of dollars)	**2016**	**2015**
Interest on long-term debt	**290**	285
Interest on short-term debt	**8**	8
Interest income	**(7)**	(9)
Interest capitalized to property, plant and equipment and intangible assets	**(141)**	(102)
Interest related to regulatory assets and liabilities [1]	**(30)**	(2)
Net interest expense	**120**	180

[1] Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Bruce Lease Net Revenues Variance Account, the Capacity Refurbishment Variance Account, and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

8. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES AND FUNDS

The liabilities for fixed asset removal and nuclear waste management on a present value basis consist of the following as at December 31:

(millions of dollars)	**2016**	**2015**
Liability for nuclear used fuel management	**11,292**	12,793
Liability for nuclear decommissioning and L&ILW waste management	**7,811**	6,999
Liability for non-nuclear fixed asset removal	**381**	377
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169

The changes in the fixed asset removal and nuclear waste management liabilities for the years ended December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Liabilities, beginning of year	**20,169**	17,028
Increase in liabilities due to accretion [1]	**1,024**	906
(Decrease) increase in liabilities reflecting changes to the estimated useful lives of nuclear generating stations *(Note 3)*	**(1,567)**	2,330
Increase in liabilities due to nuclear used fuel and nuclear waste management expenses and other expenses [1]	**133**	123
Liabilities settled by expenditures on fixed asset removal and nuclear waste management	**(275)**	(218)
Liabilities, end of year	**19,484**	20,169

[1] Amounts shown exclude the impact of regulatory variance and deferral accounts.

OPG's fixed asset removal and nuclear waste management liabilities are comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating facilities, and other facilities. Costs will be incurred for activities such as preparation for safe storage, dismantling, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel and L&ILW material.

The determination of the accrual for fixed asset removal and nuclear waste management costs requires significant assumptions since these programs are long-term in nature. The most recent comprehensive update of the cost estimates for the nuclear decommissioning and nuclear waste management liabilities is contained in the approved 2017 ONFA Reference Plan, which covers the 2017-2021 period.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years. The estimates for the Nuclear Liabilities include cash flow estimates for decommissioning the nuclear stations for approximately 40 years after stations are shut down and to 2088 for placement of used fuel into the long-term disposal repository, followed by extended monitoring.

The significant assumptions underlying operational, technical, and economic factors used in the calculation of the accrued Nuclear Liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the nuclear waste programs including construction of waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, or the technology employed may result in significant changes to the value of the accrued liabilities. With programs of this duration and the evolving technology to handle the nuclear waste, there is a significant degree of uncertainty surrounding the measurement of the costs for these long-term programs. These costs may increase or decrease over time.

Liability for Nuclear Used Fuel Management Costs

The liability for nuclear used fuel management represents the cost of managing the highly radioactive used nuclear fuel bundles. The federal NFWA, proclaimed into force in 2002, required that Canada's nuclear fuel waste owners form a nuclear waste management organization, and that each waste owner establish a trust fund for used fuel management costs. This organization, the NWMO, is responsible for the design and implementation of Canada's plan for the long-term management of nuclear used fuel waste. To estimate its liability for nuclear used fuel management costs, OPG has adopted a conservative approach consistent with the Adaptive Phased Management concept approved by the Government of Canada, which assumes a deep geologic repository as part of the long-term management of nuclear used fuel, with an in-service date of 2043 at the earliest.

Liability for Nuclear Decommissioning and L&ILW Management Costs

The liability for nuclear decommissioning and L&ILW management represents the estimated costs of decommissioning the nuclear generating stations after the end of their service lives, as well as the cost of managing L&ILW generated by the stations. The significant assumptions used in estimating future nuclear fixed asset removal costs include a deferred dismantlement basis for decommissioning of the stations, whereby the reactors will remain in a safe state condition for a 30-year period prior to an approximate 10-year dismantlement period.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the accrued costs for the management of L&ILW include an L&ILW DGR. Agreement was previously reached with local municipalities for OPG to develop a deep geologic repository for the long-term management of L&ILW adjacent to OPG's Western Waste Management Facility. OPG has suspended design activities for the L&ILW DGR pending receipt of the site preparation and construction licence.

Liability for Non-Nuclear Fixed Asset Removal Costs

The liability for non-nuclear fixed asset removal primarily represents the estimated costs of decommissioning OPG's thermal generating stations at the end of their services lives. The liability is based on third-party cost estimates after an in-depth review of plant sites and an assessment of required clean-up and restoration activities, completed in 2011 for most of the thermal generating stations. For the purpose of measuring the liability, asset removal activities are estimated to take place over the next one to 15 years. As at December 31, 2016, the liability for non-nuclear fixed asset removal was $381 million (2015 – $377 million).

Ontario Nuclear Funds Agreement

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Segregated Funds based on the approved ONFA Reference Plan in effect.

OPG makes quarterly payments to the Used Fuel Segregated Fund over the life of its nuclear generating stations, as specified in the ONFA, including contributions to the NFWA Trust (the Trust). The Trust forms part of the Used Fuel Segregated Fund, and contributions to the Trust, as required by the NFWA, may be applied towards OPG's ONFA payment obligations. Required funding for 2016 under the ONFA was $150 million (2015 – $143 million). In 2016, OPG completed a comprehensive update of the estimate for its obligations for nuclear waste management and nuclear decommissioning, in line with the required reference plan update process under the ONFA. The results of the update were reflected in a new ONFA reference plan, for years 2017 to 2021, as well as an adjustment reducing the asset retirement obligation carried on OPG's consolidated balance sheet as at December 31, 2016. The 2017-2021 ONFA reference plan was approved by the Province in December 2016, with an effective date of January 1, 2017 (the 2017 ONFA Reference Plan). Based on the funded status of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund reflecting the revised, overall lower life cycle liability estimates per the 2017 ONFA Reference Plan, no contributions to the Nuclear Segregated Funds are required starting in 2017. Contributions may be required in the future should either or both of the funds be in an underfunded position when a new reference plan is prepared.

The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge the current nuclear decommissioning and waste management liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the Canadian Nuclear Safety Commission (CNSC) since 2003, on behalf of OPG. The Provincial Guarantee provides for any shortfall between the CNSC consolidated financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount of the Provincial Guarantee. The current value of the Provincial Guarantee amount of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016.

The investments in the Nuclear Segregated Funds include a diversified portfolio of equities and fixed income securities that are invested across geographic markets, as well as investments in infrastructure, real estate, and agriculture. The Nuclear Segregated Funds are invested to fund long-term liability requirements and, as such, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While short-term fluctuations in market value will occur, managing the long-term return of the Nuclear Segregated Funds remains the primary goal. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Decommissioning Segregated Fund

OPG bears the risk and liability for cost estimate changes and fund earnings in the Decommissioning Segregated Fund. As at December 31, 2016 and December 31, 2015, the Decommissioning Segregated Fund was in an overfunded position.

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund, which is the excess of the fair market value of the Decommissioning Segregated Fund assets over the estimated completion costs, as per the most recently approved ONFA Reference Plan. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the earnings recognized in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus, that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded. Based on the 2017 ONFA Reference Plan, the Used Fuel Segregated Fund was in an overfunded position as at December 31, 2016. As a result, the Decommissioning Segregated Fund balance was reduced by amounts due to the Province. When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets. The payable to the Province may be reduced in subsequent periods in the event that the Decommissioning Segregated Fund earns less than its target rate of return or in the event that a new ONFA Reference Plan is approved with a higher estimated decommissioning liability.

The Province's right to any excess funding in the Decommissioning Segregated Fund upon termination of the ONFA results in OPG capping its annual earnings generally at 3.25 percent plus the long-term Ontario Consumer Price Index (CPI) specified in the most recently approved ONFA Reference Plan, which is the rate of growth in the liability for the estimated completion cost, as long as the Decommissioning Segregated Fund is in an overfunded status of less than 120 percent.

Used Fuel Segregated Fund

OPG is responsible for the risk and liability of cost increases for used fuel waste management under the ONFA, subject to specified graduated liability thresholds, which limit OPG's total financial exposure for the first 2.23 million nuclear used fuel bundles at approximately $15 billion in present value dollars as at December 31, 2016. The graduated liability thresholds do not apply to incremental used fuel bundles beyond 2.23 million.

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined by ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return and the actual market return determined based on the fair value of the fund assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount OPG would pay to or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions for fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province, has the right at any time to access

the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. As at December 31, 2016, the Used Fuel Segregated Fund was overfunded in accordance with the 2017 ONFA Reference Plan. As such, the fund balances are reduced by amounts due to the Province.

Nuclear Segregated Funds

The nuclear fixed asset removal and nuclear waste management funds as at December 31 consist of the following:

(millions of dollars)	Fair Value 2016	2015
Decommissioning Segregated Fund	**8,317**	7,834
Due to Province – Decommissioning Segregated Fund	**(1,477)**	(1,285)
	6,840	6,549
Used Fuel Segregated Fund [1]	**11,082**	10,290
Due to Province – Used Fuel Segregated Fund	**(1,938)**	(1,703)
	9,144	8,587
Total Nuclear Segregated Funds	**15,984**	15,136
Less: current portion	**24**	15
Non-current Nuclear Segregated Funds	**15,960**	15,121

[1] The Ontario NFWA Trust represented $3,688 million as at December 31, 2016 (2015 – $3,409 million) of the Used Fuel Segregated Fund on a fair value basis.

Commented [AJ1]: Slight variance from $8,309 presented in the 2017 approved reference plan

Commented [AJ2]: Due to Province in January submission is 1,913. Is this due to cash vs. accrual account variance?

Commented [AJ3]: 9,154 is the approved Reference Plan amount, again cash vs. accrual here?

The fair value of the securities invested in the Nuclear Segregated Funds as at December 31 is as follows:

(millions of dollars)	Fair Value 2016	2015
Cash and cash equivalents and short-term investments	**354**	343
Alternative investments	**1,989**	1,620
Pooled funds	**1,330**	1,311
Marketable equity securities	**9,503**	8,621
Fixed income securities	**6,181**	6,219
Net receivables/payables	**42**	10
	19,399	18,124
Due to Province	**(3,415)**	(2,988)
	15,984	15,136

The historical cost, gross unrealized aggregate appreciation and depreciation of investment, gross unrealized foreign exchange gains, and fair value of the Nuclear Segregated Funds as at December 31, 2016 and 2015 are summarized as follows:

	2016		
(millions of dollars)	**Decommissioning Segregated Fund**	**Used Fuel Segregated Fund**	**Total**
Historical cost	**6,896**	**9,385**	**16,281**
Gross unrealized gains (losses)			
Aggregate appreciation	**1,326**	**1,564**	**2,890**
Aggregate depreciation	**(165)**	**(222)**	**(387)**
Foreign exchange	**260**	**355**	**615**
	8,317	**11,082**	**19,399**
Due to Province	**(1,477)**	**(1,938)**	**(3,415)**
Total fair value	**6,840**	**9,144**	**15,984**
Less: current portion	**16**	**8**	**24**
Non-current fair value	**6,824**	**9,136**	**15,960**

	2015		
(millions of dollars)	**Decommissioning Segregated Fund**	**Used Fuel Segregated Fund**	**Total**
Historical cost	6,608	8,819	15,427
Gross unrealized gains (losses)			
Aggregate appreciation	1,098	1,283	2,381
Aggregate depreciation	(297)	(383)	(680)
Foreign exchange	425	571	996
	7,834	10,290	18,124
Due to Province	(1,285)	(1,703)	(2,988)
Fair value	6,549	8,587	15,136
Less: current portion	5	10	15
Non-current fair value	6,544	8,577	15,121

Net realized and unrealized gains or losses from investments for the years ended December 31, 2016 and 2015 are summarized as follows:

(millions of dollars)	2016 Decommissioning Segregated Fund	2016 Used Fuel Segregated Fund	2016 Total
Net realized gains			
Realized gains excluding foreign exchange	**84**	**180**	**264**
Realized foreign exchange gains	**30**	**41**	**71**
Net realized gains	**114**	**221**	**335**
Net unrealized gains			
Unrealized gains excluding foreign exchange	**360**	**442**	**802**
Unrealized foreign exchange losses	**(165)**	**(216)**	**(381)**
Net unrealized gains	**195**	**226**	**421**

(millions of dollars)	2015 Decommissioning Segregated Fund	2015 Used Fuel Segregated Fund	2015 Total
Net realized gains			
Realized gains	159	221	380
Realized foreign exchange gains	56	71	127
Net realized gains	215	292	507
Net unrealized gains			
Unrealized losses	(267)	(367)	(634)
Unrealized foreign exchange gains	335	439	774
Net unrealized gains	68	72	140

The change in the Nuclear Segregated Funds for the years ended December 31 is as follows:

(millions of dollars)	Fair Value 2016	2015
Decommissioning Segregated Fund, beginning of year	**6,549**	6,246
Increase in fund due to return on investments	**505**	507
Decrease in fund due to reimbursement of eligible expenditures	**(22)**	(19)
Increase in due to Province	**(192)**	(185)
Decommissioning Segregated Fund, end of year	**6,840**	6,549
Used Fuel Segregated Fund, beginning of year	**8,587**	8,133
Increase in fund due to contributions made	**150**	143
Increase in fund due to return on investments	**690**	642
Decrease in fund due to reimbursement of eligible expenditures	**(48)**	(57)
Increase in due to Province	**(235)**	(274)
Used Fuel Segregated Fund, end of year	**9,144**	8,587

The earnings from the Nuclear Segregated Funds during 2016 and 2015 were impacted by the Bruce Lease Net Revenues Variance Account authorized by the OEB. The earnings on the Nuclear Segregated Funds for the years ended December 31 are as follows:

(millions of dollars)	2016	2015
Decommissioning Segregated Fund	**313**	322
Used Fuel Segregated Fund	**455**	368
Bruce Lease Net Revenues Variance Account	**(22)**	14
Total earnings	**746**	704

9. INCOME TAXES

OPG follows the liability method of accounting for income taxes. The Company records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities.

A reconciliation between the statutory and the effective rate of income taxes is as follows:

(millions of dollars)	**2016**	**2015**
Income before income taxes	**621**	509
Combined Canadian federal and provincial statutory enacted income tax rates	**26.5%**	26.5%
Statutory income tax rates applied to accounting income	**165**	135
Increase (decrease) in income taxes resulting from:		
Impact of rate regulated accounting	**65**	29
Scientific Research and Experimental Development investment tax credits	**(42)**	(55)
Manufacturing and processing credit	**(9)**	(8)
Other	**(11)**	(9)
	3	(43)
Income tax expense	**168**	92
Effective rate of income taxes	**27.0%**	18.1%

Significant components of the income tax expense are presented in the table below:

(millions of dollars)	**2016**	**2015**
Current income tax expense:	**204**	59
Deferred income tax (recovery) expense:	**(36)**	33
Income tax expense	**168**	92

The income tax effects of temporary differences that give rise to deferred income tax assets and liabilities as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Deferred income tax assets:		
Fixed asset removal and nuclear waste management liabilities	**4,861**	5,032
Other liabilities and assets	**1,813**	1,699
	6,674	6,731
Deferred income tax liabilities:		
Property, plant and equipment and intangible assets	**(1,807)**	(2,119)
Nuclear fixed asset removal and nuclear waste management funds	**(3,996)**	(3,784)
Other assets and liabilities	**(1,700)**	(1,708)
	(7,503)	(7,611)
Net deferred income tax liabilities	**(829)**	(880)

During 2016, OPG recorded an increase in the deferred income tax liability for the income taxes that are expected to be recovered or refunded through regulated prices charged to customers of $46 million (2015 – a decrease of $69 million). Since these deferred income taxes are expected to be refunded through future regulated prices, OPG recorded a corresponding increase to the regulatory asset for deferred income taxes. As a result, the deferred income tax expense for 2016 and 2015 was not impacted.

The following table summarizes the deferred income tax liabilities recorded for the rate regulated operations that are expected to be recovered through future regulated prices:

(millions of dollars)	**2016**	**2015**
January 1:		
Deferred income tax liabilities on temporary differences related to regulated operations	**592**	644
Deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liability	**200**	217
	792	861
Changes during the year:		
Increase (decrease) in deferred income tax liabilities on temporary differences related to regulated operations	**35**	(52)
Increase (decrease) in deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liability	**11**	(17)
Balance as at December 31	**838**	792

The tax benefit associated with an income tax position is recognized only when it is more likely than not that such a position will be sustained upon examination by the taxing authorities based on the technical merits of the position. The current and deferred income tax benefit is equal to the largest amount, considering possible settlement outcomes, that is greater than 50 percent likely of being realized upon settlement with the taxing authorities.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(millions of dollars)	**2016**	**2015**
Unrecognized tax benefits, beginning of year	**72**	79
Additions based on tax positions related to the current year	**19**	16
Additions for tax positions of prior years	**2**	7
Reductions for tax positions of prior years	**(16)**	(14)
Other	**-**	(16)
Unrecognized tax benefits, end of year	**77**	72

As at December 31, 2016, OPG's unrecognized tax benefits were $77 million (2015 – $72 million), excluding interest and penalties, all of which, if recognized, would affect OPG's effective tax rate. Changes in unrecognized tax benefits over the next 12 months cannot be predicted with certainty.

OPG recognizes interest and penalties related to unrecognized tax benefits as income tax expense. As at December 31, 2016, OPG had recorded interest on unrecognized tax benefits of $8 million (2015 – $7 million). OPG considers its significant tax jurisdiction to be Canada. OPG remains subject to income tax examination for years after 2012.

OPG paid $98 million in income taxes (net of tax refunds) during 2016 (2015 – $47 million).

10. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of Accumulated Other Comprehensive Loss (AOCL), net of income taxes, during the years December 31, 2016 and 2015 are as follows:

	2016			
(millions of dollars)	**Unrealized Gains and Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities[1]**	**Total [1]**
AOCL, beginning of year	**(106)**	**(213)**	**-**	**(319)**
Actuarial loss on re-measurement of liabilities for pension and OPEB	**-**	**(6)**	**-**	**(6)**
Unrealized loss on available-for-sale securities	**-**	**-**	**(1)**	**(1)**
Amounts reclassified from AOCL	**19**	**12**	**-**	**31**
OCI for the year	**19**	**6**	**(1)**	**24**
AOCL, end of year	**(87)**	**(207)**	**(1)**	**(295)**

[1] All amounts are net of income taxes.

	2015		
(millions of dollars)	**Unrealized Gains and Losses on Cash Flow Hedges [1]**	**Pension and OPEB[1]**	**Total [1]**
AOCL, beginning of year	(117)	(379)	(496)
Net loss on cash flow hedges	(5)	-	(5)
Actuarial gain on re-measurement of liabilities for pension and OPEB	-	148	148
Amounts reclassified from AOCL	16	18	34
OCI for the year	11	166	177
AOCL, end of year	(106)	(213)	(319)

[1] All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the years ended December 31, 2016 and 2015 are as follows:

	Amount Reclassified from AOCL		
(millions of dollars)	**2016**	**2015**	**Statement of Income Line Item**
Amortization of losses from cash flow hedges			
Losses	**21**	18	Net interest expense and fuel expense
Income tax recovery	**(2)**	(2)	Income tax expense
	19	16	
Amortization of amounts related to pension and OPEB			
Actuarial losses and past service costs	**16**	25	See (1) below
Income tax recovery	**(4)**	(7)	Income tax expense
	12	18	
Total reclassifications for the year	**31**	34	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 11 for additional details).

11. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

Fund Assets

The OPG registered pension fund investment guidelines are stated in an approved Statement of Investment Policies and Procedures (SIPP). The SIPP is reviewed and approved by the Audit and Risk Committee of OPG's Board of Directors at least annually and includes a discussion of investment objectives and expectations, asset mix and rebalancing, and the basis for measuring the performance of the pension fund assets.

In accordance with the SIPP, investment allocation decisions are made with a view to achieve OPG's objective of meeting obligations of the plan as they come due. The pension fund assets are invested in four categories of asset classes. The first category is liability hedging assets which are intended to hedge the inflation and interest rate sensitivity of the plan liabilities. The second category is return enhancing assets which are intended to obtain higher investment returns compared to the returns expected for liability hedging assets. The third category is real assets which offer exposure to the combined characteristics of liability hedging and return enhancing assets. The fourth category is return diversifying strategies, which are intended to improve the overall return of the pension fund while mitigating the downside market risk.

To achieve the above objective, OPG has adopted the following target strategic asset allocation:

	Target
Asset Class	
Liability Hedging Assets	34%
Return Enhancing Assets	31%
Real Assets	20%
Return on Diversifying Assets	15%

The plan may enter into derivative securities, such as interest rate swaps and forward foreign exchange contracts, for risk management purposes, where such activity is consistent with the plan's investment objectives.

Significant Concentrations of Risk in Fund Assets

The assets of the pension fund are diversified to limit the impact of any individual investment. The pension fund is diversified across multiple asset classes. Fixed income securities are diversified among Canadian government bonds, government agency bonds, real return bonds, corporate bonds, and an interest rate overlay hedging program, which is disclosed under pooled funds. Equity securities are diversified across Canadian, US, and non-North American stocks. There are also real estate, infrastructure, and agriculture portfolios that represent approximately 12 percent of the total pension fund assets as at December 31, 2016. Investments in the above asset classes are further diversified across funds, investment managers, strategies, vintages, sectors and geographies, depending on the specific characteristics of each asset class.

Credit risk with respect to the pension fund's fixed income securities is managed by risk tolerance guidelines, which requires that fixed income securities comply with various investment constraints that ensure prudent diversification and prescribed minimum required credit rating quality. Credit risk, as it relates to the pension fund's derivatives, is managed through the use of International Swap and Derivatives Association documentation and counterparty management performed by the fund's investment managers.

Risk Management

Risk management oversight with respect to the pension fund includes, but is not limited to, the following activities:

- Periodic asset/liability management and strategic asset allocation studies
- Monitoring of funding levels and funding ratios
- Monitoring compliance with asset allocation guidelines and investment management agreements
- Monitoring asset class performance against asset class benchmarks
- Monitoring investment manager performance against benchmarks

- Monitoring of risk tolerance guidelines

Expected Rate of Return on Plan Assets

The expected rate of return on plan assets is based on the fund's asset allocation, as well as the return expectations considering long-term historical risks and returns associated with each asset class within the plan portfolio. The asset management decisions consider the economic liabilities of the plan.

Fair Value Measurements

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities. Refer to Note 13 for a detailed discussion of fair value measurements and the fair value hierarchy.

The following tables present pension plan assets measured at fair value in accordance with the fair value hierarchy:

	December 31, 2016			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	**690**	**-**	**-**	**690**
Fixed income				
Corporate debt securities	**-**	**407**	**-**	**407**
Government bonds	**-**	**3,483**	**-**	**3,483**
Equities				
Canadian	**1,451**	**291**	**-**	**1,742**
US	**1,495**	**-**	**-**	**1,495**
Non-North American	**1,643**	**-**	**-**	**1,643**
Pooled funds	**118**	**413**	**-**	**531**
Other	**(2)**	**-**	**-**	**(2)**
	5,395	**4,594**	**-**	**9,989**
Investments measured at NAV [1]				**3,865**
				13,854 [2]

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.
[2] The table above excludes pension fund receivables and payables.

	December 31, 2015			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	374	-	-	374
Short-term investments	-	1	-	1
Fixed income				
Corporate debt securities	-	392	-	392
Government bonds	-	3,794	-	3,794
Equities				
Canadian	1,547	-	-	1,547
US	1,786	-	-	1,786
Non-North American	1,992	-	-	1,992
Pooled funds	37	147	-	184
Other	1	-	-	1
	5,737	4,334	-	10,071
Investments measured at NAV [1]				3,079
				13,150 [2]

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.
[2] The table above excludes pension fund receivables and payables.

During the years ended December 31, 2016 and 2015, there were no transfers between Level 1 and Level 2.

Plan Costs and Liabilities

Details of OPG's pension and OPEB obligations, pension fund assets and costs are presented in the following tables:

	Registered and Supplementary Pension Plans		Other Post-Employment Benefits	
	2016	**2015**	**2016**	**2015**
Weighted Average Assumptions – Benefit Obligations at Year-End				
Rate used to discount future benefits	**3.90%**	4.10%	**3.94%**	4.13%
Salary schedule escalation rate - initial rate [1]	**1.80%**	1.60%	**1.80%**	1.60%
- thereafter	**2.50%**	2.50%	**2.50%**	2.50%
Rate of cost of living increase to pensions	**2.00%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**5.90%**	6.00%
Ultimate health care trend rate	**n/a**	n/a	**4.32%**	4.33%
Year ultimate health care trend rate reached	**n/a**	n/a	**2030**	2030
Rate of increase in disability benefits	**n/a**	n/a	**2.00%**	2.00%

[1] Per year to December 31, 2021.

	Registered and Supplementary Pension Plans		Other Post-Employment Benefits	
	2016	**2015**	**2016**	**2015**
Weighted Average Assumptions – Costs for the Year				
Expected return on plan assets, net of expenses	**6.00%**	6.25%	**n/a**	n/a
Rate used to discount future benefits	**4.10%**	4.00%	**4.13%**	4.03%
Salary schedule escalation rate - initial rate [1]	**1.60%**	2.00%	**1.60%**	2.00%
- thereafter	**2.50%**	2.50%	**2.50%**	2.50%
Rate of cost of living increase to pensions	**2.00%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**6.00%**	6.09%
Ultimate health care trend rate	**n/a**	n/a	**4.33%**	4.33%
Year ultimate health care trend rate reached	**n/a**	n/a	**2030**	2030
Rate of increase in disability benefits	**n/a**	n/a	**2.00%**	2.00%
Expected average remaining service life for employees (years)	**12**	12	**13**	13

[1] 1.60% per year to December 31, 2021; 2.00% per year to December 31, 2020.

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Components of Cost Recognized						
Current service costs	**277**	320	**7**	7	**67**	71
Interest on projected benefit obligation	**634**	630	**12**	13	**133**	127
Expected return on plan assets, net of expenses	**(734)**	(717)	**-**	-	**-**	-
Amortization of past service costs [1]	**-**	-	**-**	-	**1**	-
Amortization of net actuarial loss [1]	**192**	292	**4**	6	**19**	27
Recognition of LTD net actuarial (gain) loss	**-**	-	**-**	-	**(52)**	7
Costs recognized [2]	**369**	525	**23**	26	**168**	232

[1] The amortization of past service costs and net actuarial loss was recognized as an increase to OCI. This increase was partially offset by the impact of the Pension and OPEB Regulatory Asset discussed in Note 5.

[2] Excludes the impact of regulatory variance and deferral accounts discussed in Note 5.

Total benefit costs, including the impact of the Pension & OPEB Cash Payment Variance Account and the Pension & OPEB Cash Versus Accrual Differential Deferral Account, for the years ended December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Registered pension plans	**369**	525
Supplementary pension plans	**23**	26
Other post-employment benefits	**168**	232
Pension & OPEB Cash Payment Variance Account *(Note 5)*	**86**	(21)
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 5)*	**(182)**	(279)
Pension and other post-employment benefit costs	**464**	483

The pension and OPEB obligations and the pension fund assets measured as at December 31 are as follows:

	Registered Pension Plans		**Supplementary Pension Plans**		**Other Post-Employment Benefits**	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Change in Plan Assets						
Fair value of plan assets at beginning of year	**13,160**	12,407	**-**	-	**-**	-
Contributions by employer	**255**	362	**15**	24	**93**	94
Contributions by employees	**85**	72	**-**	-	**-**	-
Actual return on plan assets, net of expenses	**714**	1,151	**-**	-	**-**	-
Benefit payments	**(708)**	(832)	**(15)**	(24)	**(93)**	(94)
Fair value of plan assets at end of year	**13,506**	13,160	**-**	-	**-**	-
Change in Projected Benefit Obligations						
Projected benefit obligations at beginning of year	**15,475**	15,669	**299**	317	**3,188**	3,143
Employer current service costs	**277**	320	**7**	7	**67**	71
Contributions by employees	**85**	72	**-**	-	**-**	-
Interest on projected benefit obligation	**634**	630	**12**	13	**133**	127
Benefit payments	**(708)**	(832)	**(15)**	(24)	**(93)**	(94)
Past service costs	**-**	-	**-**	-	**-**	5
Net actuarial loss (gain)	**436**	(384)	**33**	(14)	**(303)**	(64)
Projected benefit obligations at end of year	**16,199**	15,475	**336**	299	**2,992**	3,188
Funded status – deficit at end of year	**(2,693)**	(2,315)	**(336)**	(299)	**(2,992)**	(3,188)

The following table provides the pension and OPEB liabilities and their classification on the consolidated balance sheets as at December 31:

	Registered Pension Plans		**Supplementary Pension Plans**		**Other Post-Employment Benefits**	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Current liabilities	**-**	-	**(17)**	(17)	**(95)**	(103)
Non-current liabilities	**(2,693)**	(2,315)	**(319)**	(282)	**(2,897)**	(3,085)
Total liabilities	**(2,693)**	(2,315)	**(336)**	(299)	**(2,992)**	(3,188)

The accumulated benefit obligations for the registered pension plans and supplementary pension plans as at December 31, 2016 are $14,909 million and $293 million, respectively (2015 – $14,327 million and $267 million, respectively). The accumulated benefit obligation differs from the projected benefit obligation in that the accumulated benefit obligation includes no assumption about future compensation levels.

The following table provides the components of OPG's OCI related to pension and OPEB plans and the offsetting Pension and OPEB Regulatory Asset as discussed in Note 5 for the years ended December 31, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Changes in plan assets and benefit obligations recognized in OCI						
Current year net actuarial loss (gain)	**456**	(818)	**33**	(14)	**(251)**	(71)
Current year past service costs	**-**	-	**-**	-	**-**	5
Amortization of net actuarial loss	**(192)**	(292)	**(4)**	(6)	**(19)**	(27)
Amortization of past service costs	**-**	-	**-**	-	**(1)**	-
Total decrease (increase) in OCI	**264**	(1,110)	**29**	(20)	**(271)**	(93)
Less: Increase (decrease) in Pension and OPEB Regulatory Asset*(Note 5)*	**253**	(916)	**27**	(15)	**(250)**	(70)
Net decrease (increase) in OCI (pre-tax)	**11**	(194)	**2**	(5)	**(21)**	(23)

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset that have not yet been recognized as components of benefit costs as at December 31, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Unamortized amounts recognized in AOCL						
Past service costs	**-**	-	**-**	-	**5**	6
Net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Total recognized in AOCL	**3,287**	3,023	**106**	77	**275**	546
Less: Pension and OPEB Regulatory Asset *(Note 5)*	**3,039**	2,786	**100**	73	**253**	503
Net recognized in AOCL (pre-tax)	**248**	237	**6**	4	**22**	43

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset as at December 31 (included in the table above) that are expected to be amortized as components of benefit costs and recognized as increases to OCI and reductions in the Pension and OPEB Regulatory Asset, in 2017, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post-Employment Benefits
Past service costs	**-**	**-**	**1**
Net actuarial loss	**183**	**6**	**-**
Total increase in AOCL	**183**	**6**	**1**
Less: Estimated decrease in Pension and OPEB Regulatory Asset	**170**	**6**	**1**
Net increase in AOCL (pre-tax)	**13**	**-**	**-**

Based on the most recently filed actuarial valuation, for funding purposes, of the OPG registered pension plan, as at January 1, 2016, there was an unfunded liability on a going-concern basis of $485 million and a deficiency on a hypothetical wind-up basis of $7,347 million. The funded status to be determined in the next filed funding valuation, which must have an effective date no later than January 1, 2019, could be significantly different. For 2017, OPG's required contribution to its registered pension plan is expected to be $248 million. The amount of OPG's additional,

voluntary contribution, if any, is revisited from time to time. OPG will continue to assess the requirements for contributions to the pension plan.

The supplementary pension plans are not funded, but are secured by Letters of Credit totalling $349 million as at December 31, 2016 (2015 – $345 million).

Estimated future benefit payments to participants in the pension and OPEB plans based on the assumptions used to measure the benefit obligations as at December 31, 2016 are as follows:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post-Employment Benefits
2017	687	18	95
2018	759	18	98
2019	750	18	101
2020	767	19	105
2021	795	19	108
2022 through 2026	4,218	102	613

A one percent increase or decrease in the health care trend rate would result in an increase in the current service and interest components of the 2016 OPEB costs of $45 million (2015 – $45 million) or a decrease in the service and interest components of the 2016 OPEB costs of $33 million (2015 – $33 million). A one percent increase or decrease in the health care trend rate would result in an increase in the projected OPEB obligation as at December 31, 2016 of $560 million (2015 – $584 million) or a decrease in the projected OPEB obligation as at December 31, 2016 of $426 million (2015 – $446 million).

12. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect the Company's assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the IESO-administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at December 31, 2016 was less than $1 million. OPG's fair value derivatives totalled a net liability of $24 million as at December 31, 2016 (2015 – $2 million).

The following table shows the amount related to derivatives recorded in AOCL and income for the years ended December 31:

(millions of dollars)	**2016**	**2015**
Cash flow hedges (recorded in AOCL)		
Losses in OCI	**-**	(7)
Reclassification of losses to net interest expense	**21**	20
Reclassification of gains to fuel expense	**-**	(2)
Commodity derivatives (recorded in income)		
Realized losses in revenue	**(12)**	(16)
Unrealized losses in revenue	**(3)**	(7)
Embedded derivative (recorded in income)		
Unrealized gains in revenue [1]	**-**	225

[1] Excludes the impact of the Bruce Lease Net Revenues Variance Account.

Existing net losses of $20 million deferred in AOCL as at December 31, 2016 are expected to be reclassified to net income within the next 12 months.

13. FAIR VALUE MEASUREMENTS

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial assets and liabilities into three levels, based on the inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The fair value of financial instruments traded in active markets is based on quoted market prices at the consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The Company is required to determine the fair value of all its financial instruments. The following is a summary of OPG's financial instruments as at December 31:

	Fair Value		Carrying Value [1]		
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**Balance Sheet Line Item**
Nuclear Segregated Funds (includes current portion)	**15,984**	15,136	**15,984**	15,136	Nuclear fixed asset removal and nuclear waste management funds
Investment in Hydro One shares	**212**	-	**212**	-	Available-for-sale securities
Payable related to cash flow hedges	**(48)**	(56)	**(48)**	(56)	Long-term accounts payable and accrued charges
Long-term debt (includes current portion)	**(6,033)**	(5,978)	**(5,520)**	(5,459)	Long-term debt
Other financial instruments	**(18)**	6	**(18)**	6	Various

[1] The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other current assets, short-term debt, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs.

The following tables present financial assets and financial liabilities measured at fair value in accordance with the fair value hierarchy as at December 31, 2016 and 2015:

	December 31, 2016			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**5,602**	**4,394**	**-**	**9,996**
Investments measured at NAV [1]				**1,086**
				11,082
Due to Province				**(1,938)**
Used Fuel Segregated Fund, net				**9,144**
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**4,171**	**3,243**	**-**	**7,414**
Investments measured at NAV [1]				**903**
				8,317
Due to Province				**(1,477)**
Decommissioning Segregated Fund, net				**6,840**
Investment in available-for-sale securities	**212**	**-**	**-**	**212**
Other financial assets	**6**	**2**	**9**	**17**
Liabilities				
Other financial liabilities	**(29)**	**(6)**	**-**	**(35)**

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

(millions of dollars)	December 31, 2015 Level 1	Level 2	Level 3	Total
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	5,114	4,293	-	9,407
Investments measured at NAV [1]				883
				10,290
Due to Province				(1,703)
Used Fuel Segregated Fund, net				8,587
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	3,870	3,227	-	7,097
Investments measured at NAV [1]				737
				7,834
Due to Province				(1,285)
Decommissioning Segregated Fund, net				6,549
Other financial assets	14	4	16	34
Liabilities				
Other financial liabilities	(18)	(8)	(2)	(28)

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

During the year ended December 31, 2016, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3:

(millions of dollars)	Other financial instruments
Opening balance, January 1, 2016	**14**
Unrealized losses included in revenue	**1**
Realized losses included in revenue	**(12)**
Purchases	**6**
Closing balance, December 31, 2016	**9**

Nuclear Segregated Funds

The fair value of the investments within the Nuclear Segregated Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Segregated Funds that are reported on the basis of NAV as at December 31, 2016:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Infrastructure	**1,205**	**648**	**n/a**	**n/a**
Real Estate	**713**	**406**	**n/a**	**n/a**
Agriculture	**71**	**128**	**n/a**	**n/a**
Pooled Funds				
Short-term Investments	**34**	**n/a**	**Daily**	**1 - 5 Days**
Fixed Income	**553**	**n/a**	**Daily**	**1 - 5 Days**
Equity	**743**	**n/a**	**Daily**	**1 - 5 Days**
Total	**3,319**	**1,182**		

The fair value of the pooled funds is classified as Level 2. Infrastructure, real estate and agriculture investments are measured using NAV as a practical expedient for determining their fair value.

Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

Real Estate

This class includes investments in institutional-grade real estate property. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests to another party, as stipulated in the partnership agreement. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements.

Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations, and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally

managed portfolios. The fair value of the investments in this class has been estimated using the NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

14. COMMON SHARES

As at December 31, 2016 and 2015, OPG had 256,300,010 common shares issued and outstanding at a stated value of $5,126 million. OPG is authorized to issue an unlimited number of common shares without nominal or par value. Any issue of new shares is subject to the consent of OPG's shareholder.

15. COMMITMENTS AND CONTINGENCIES

Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered by June 30, 2017, as required by the timetable.

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at December 31, 2016, the total amount of guarantees OPG provided to these entities was $83 million (2015 – $81 million). OPG may terminate some of these guarantees within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at December 31, 2016, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, were as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

Lease Commitments

The Company leases the Bruce A and Bruce B nuclear generating stations to Bruce Power. Under the lease, as amended in December 2015, Bruce Power has options to renew the lease up to the end of 2064. As per *Ontario Regulation 53/05* pursuant to the *Ontario Energy Board Act, 1998*, the difference between OPG's revenues, including lease revenues, and costs, including depreciation expense, associated with its ownership of the Bruce A and B nuclear generating stations is included in the determination of OPG's nuclear regulated prices established by the OEB. These revenues and costs are determined on the basis of the manner in which they are recognized in OPG's consolidated financial statements. As the assets on lease to Bruce Power are not prescribed facilities under *Ontario Regulation 53/05*, the net book value of the assets is not included in the regulated rate base. The net book value of property, plant and equipment on lease to Bruce Power as at December 31, 2016 was $2,986 million (2015 – $4,400 million).

Collective Bargaining Agreements

As at December 31, 2016, the Power Workers' Union (PWU) represented approximately 5,070 OPG regular employees or approximately 55 percent of OPG's regular workforce. The previous collective agreement between OPG and the PWU expired on March 31, 2015. In May 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on March 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each year of the agreement.

As at December 31, 2016, The Society of Energy Professionals (The Society) represented approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce. The governing collective agreement between OPG and The Society expired on December 31, 2015. In November 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on December 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each of the first two years of the agreement.

The changes to both collective agreements will provide existing employees with lump-sum payments for each of the first two years of the contract and eligibility to annually receive shares in Hydro One for up to 15 years starting in year three of the contract, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service.

16. BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel and low and intermediate level wastes, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Lease and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because the costs associated with the Nuclear Liabilities are included by the OEB in the determination of regulated prices for production from OPG's Pickering and Darlington nuclear generating stations, in accordance with the methodologies applied since the OEB's 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. OPG's share of the in-service generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of these activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the US market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and the Nanticoke generating stations' sites.

.

The service fee included in OM&A expenses by segment in 2016 and 2015 was as follows:

(millions of dollars)	2016	2015
Regulated – Nuclear Generation	**34**	33
Regulated – Hydroelectric	**7**	6
Contracted Generation Portfolio	**4**	4
Reduction to Services, Trading, and Other Non-Generation	**45**	43

Segment Income (Loss) for the Year Ended December 31, 2016 *(millions of dollars)*	**Nuclear Generation**	**Regulated Nuclear Waste Manage-ment**	**Hydro-electric**	**Unregulated Contracted Generation Portfolio**	**Unregulated Services, Trading, and Other Non-Generation**	**Elimination**	**Total**
Revenue	**3,481**	**138**	**1,527**	**573**	**68**	**(134)**	**5,653**
Fuel expense	**315**	**-**	**353**	**58**	**1**	**-**	**727**
Gross margin	**3,166**	**138**	**1,174**	**515**	**67**	**(134)**	**4,926**
Operations, maintenance and administration	**2,210**	**146**	**325**	**178**	**22**	**(134)**	**2,747**
Depreciation and amortization	**925**	**-**	**225**	**75**	**32**	**-**	**1,257**
Accretion on fixed asset removal and nuclear waste management liabilities	**-**	**912**	**-**	**9**	**8**	**-**	**929**
Earnings on nuclear fixed asset removal and nuclear waste management funds	**-**	**(746)**	**-**	**-**	**-**	**-**	**(746)**
Income from investments subject to significant influence	**-**	**-**	**-**	**(37)**	**-**	**-**	**(37)**
Property taxes	**26**	**-**	**1**	**7**	**12**	**-**	**46**
Restructuring	**-**	**-**	**-**	**-**	**6**	**-**	**6**
Other losses (gains)	**1**	**-**	**(19)**	**1**	**-**	**-**	**(17)**
Income (loss) before interest and income taxes	**4**	**(174)**	**642**	**282**	**(13)**	**-**	**741**

Segment Income (Loss) for the Year Ended December 31, 2015 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	3,245	122	1,619	535	73	(118)	5,476
Fuel expense	301	-	345	39	2	-	687
Gross margin	2,944	122	1,274	496	71	(118)	4,789
Operations, maintenance and administration	2,196	132	340	185	48	(118)	2,783
Depreciation and amortization	717	-	282	72	29	-	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	-	880	-	8	7	-	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(704)	-	-	-	-	(704)
Income from investments subject to significant influence	-	-	-	(39)	-	-	(39)
Property taxes	26	-	1	7	11	-	45
Restructuring	-	-	-	-	6	-	6
Other losses	3	-	3	1	7	-	14
Income (loss) before interest and income taxes	2	(186)	648	262	(37)	-	689

Selected Consolidated Balance Sheet Information as at December 31, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Total
Segment property, plant and equipment in-service, net	**5,653**	**-**	**7,355**	**3,282**	**229**	**16,519**
Segment construction in progress	**2,988**	**-**	**166**	**301**	**28**	**3,483**
Segment property, plant and equipment, net	**8,641**	**-**	**7,521**	**3,583**	**257**	**20,002**
Segment intangible assets in-service, net	**7**	**-**	**2**	**4**	**66**	**79**
Segment development in progress	**3**	**-**	**-**	**1**	**16**	**20**
Segment intangible assets, net	**10**	**-**	**2**	**5**	**82**	**99**
Segment fuel inventory	**276**	**-**	**-**	**34**	**-**	**310**
Segment materials and supplies inventory, net:						
Current	**99**	**-**	**-**	**1**	**-**	**100**
Long-term	**340**	**-**	**1**	**4**	**-**	**345**
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	**-**	**15,984**	**-**	**-**	**-**	**15,984**
Fixed asset removal and nuclear waste management liabilities	**-**	**(19,103)**	**-**	**(160)**	**(221)**	**(19,484)**

Selected Consolidated Balance Sheet Information as at December 31, 2015		Regulated		Unregulated		
(millions of dollars)	Nuclear Generation	Nuclear Waste Manage-ment	Hydro-electric	Contracted Generation Portfolio	Services, Trading, and Other Non-Generation	Total
Segment property, plant and equipment in-service, net	6,972	-	7,413	3,319	324	18,028
Segment construction in progress	2,289	-	99	141	38	2,567
Segment property, plant and equipment, net	9,261	-	7,512	3,460	362	20,595
Segment intangible assets in-service, net	8	-	1	3	58	70
Segment development in progress	-	-	4	-	24	28
Segment intangible assets, net	8	-	5	3	82	98
Segment fuel inventory	304	-	-	40	-	344
Segment materials and supplies inventory, net:						
Current	95	-	-	1	-	96
Long-term	333	-	1	3	-	337
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	15,136	-	-	-	15,136
Fixed asset removal and nuclear waste management liabilities	-	(19,792)	-	(163)	(214)	(20,169)

Selected Consolidated Cash Flow Information		Regulated		Unregulated		
(millions of dollars)	Nuclear Generation	Nuclear Waste Management	Hydro-electric	Contracted Generation Portfolio	Services, Trading, and Other Non-Generation	Total
Year ended December 31, 2016						
Investment in property, plant and equipment, and intangible assets	**1,338**	**-**	**135**	**198**	**33**	**1,704**
Year ended December 31, 2015						
Investment in property, plant and equipment, and intangible assets	1,023	-	89	222	42	1,376

17. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	2016	2015
Receivables from related parties	**116**	(63)
Prepaid expenses	**(108)**	(35)
Other current assets [1]	**(32)**	(12)
Fuel inventory	**34**	(10)
Materials and supplies	**(4)**	(2)
Income taxes payable	**57**	42
Accounts payable and accrued charges	**5**	(20)
	68	(100)

[1] Includes other accounts receivable.

18. RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		2015	
(millions of dollars)	Revenue	Expense	Revenue	Expense
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**15**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,070**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Hydro One Limited Shares

During 2015, OPG entered into renewed three-year collective bargaining agreements with the PWU and The Society. Changes to the respective collective agreements included increases to employee pension plan contributions and provisions for qualifying existing employees represented by the PWU and The Society to annually receive common shares of Hydro One for up to 15 years starting in the third year of the respective agreements. In April 2016, OPG acquired nine million common shares of Hydro One at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements. The shares acquired in this transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

OPG classified the Hydro One shares as AFS securities.

For the year ended December 31, 2016, unrealized losses recognized in accumulated AOCL related to the changes in the fair value of the Hydro One shares were $1 million, net of income taxes. The fair value of the shares was $212 million as at December 31, 2016. Refer to Notes 10 and 13 for the required disclosures related to the AFS securities.

19. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of PEC and Brighton Beach, which are accounted for using the equity method as described in Note 3. The details of the balance included in the consolidated balance sheets as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
PEC		
Current assets	**18**	14
Long-term assets	**256**	270
Current liabilities	**(8)**	(4)
Long-term liabilities	**(5)**	(5)
Brighton Beach		
Current assets	**5**	9
Long-term assets	**168**	177
Current liabilities	**(16)**	(15)
Long-term liabilities	**(7)**	(6)
Long-term debt	**(90)**	(104)
Investments subject to significant influence	**321**	336

20. RESEARCH AND DEVELOPMENT

For the year ended December 31, 2016, research and development expenses of $58 million (2015 – $91 million) were charged to operations.

21. NON-CONTROLLING INTEREST

Lower Mattagami Limited Partnership (LMLP) is an Ontario limited partnership between OPG and Amisk-oo-Skow Finance Corporation (AFC), a corporation wholly owned by the Moose Cree First Nation. The principal business of LMLP is the development, construction, ownership, operation and maintenance of hydroelectric generating facilities located on the Lower Mattagami River.

During 2014, all six new units constructed as part of the Lower Mattagami River project were declared in-service. Subsequent to the units' in-service dates, the AFC made contributions of $141 million to acquire their equity interest in LMLP, through the settlement of existing liabilities, including long-term debt. As of December 31, 2016, the AFC had a 25 percent interest in LMLP. OPG consolidates the results of LMLP in its consolidated financial statements and the non-controlling interest represents the AFC's equity interest in LMLP.

From:	Ronald Kwan
To:	Ronald Kwan
Subject:	FW: OPG Q4 2016 submission to Province
Date:	Wednesday, March 01, 2017 9:46:50 AM
Attachments:	Q4 2016 MDA_DRAFT_PROVINCE MAILINGajcomment.docx Q4 2016 FS DRAFT_PROVINCE MAILING aj comment.docx

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From: Gavin He
Sent: February-27-17 18:31
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Subject: FW: OPG Q4 2016 submission to Province

Hi Ron,

Please see below comments from SIFB. Also, SIFB noted that:

OPG seems to be carrying the H1 shares as "available for sale securities". If I am reading things correctly, they are carrying the shares at FMV, with changes recognized in AOCL. However, they also note the following future changes in accounting:

"In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements."

Please note that comments are due back to OPG today.

Thanks,
Gavin He

From: Ronald Kwan
Sent: Thursday, February 16, 2017 2:05 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Subject: Fw: OPG Q4 2016 submission to Province

Hi,

Note the disclosure on the head office building sale on p. 14 of the MD&A and similarly in the F/S. And note the planned filing date of March 10.

Please review that and the ONFA and Hydro one shares related materials.

Thanks,
Ron

From: DYKXHOORN Sandra -CORPRELCOMM <sandra.dykxhoorn@opg.com>
Sent: February 15, 2017 9:14 AM
To: John Kim; Ronald Kwan; 'Talwar, Shruti (ENERGY)'; Sunita Chander (ENERGY)
Cc: CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
Subject: OPG Q4 2016 submission to Province

Good morning,

Please find attached OPG's draft Q4 2016 News Release, Management's Discussion and Analysis (MD&A), Annual Information Form (AIF) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Monday, February 27th**.

These documents will be filed with the Ontario Securities Commission on **Friday, March 10th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Sandra Dykxhoorn (copy to Alec Cheng – alec.cheng@opg.com and Philip Ho – philip.ho@opg.com).

To assist the review process, the following are the key items in the Q4 2016 MD&A:

Highlights Recent Developments	MD&A p.11-16
Darlington Refurbishment	MD&A p.11-12; 24-25
Peter Sutherland Sr. GS project	MD&A p.25
Outlook – OEB application on OPG's results, impact of ONFA update on Nuclear Segregated Funds earnings, and the expected income and cash flow trends for 2017	MD&A p.30-31

Sandra Dykxhoorn | Acting Director, Provincial Relations | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | p: (416) 592-2887 | c: (416) 571-4366 | sandra.dykxhoorn@opg.com

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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

DECEMBER 31, 2016

[DRAFT]

2016 YEAR-END REPORT

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ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the audited consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the year ended December 31, 2016. OPG's consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. The Ontario Securities Commission (OSC) approved an exemption that allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the heading, *Exemptive Relief for Reporting under US GAAP,* in the section *Critical Accounting Policies and Estimates.* This MD&A is dated March 10, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act (Ontario)* (OBCA) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at December 31, 2016, OPG's electricity generation portfolio had an in-service capacity of 16,177 megawatts (MW). OPG operates two nuclear generating stations, 65 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report.

All of OPG's owned and co-owned generating facilities are located in Ontario.

OPG's Reporting Structure

The composition of OPG's reportable business segments is as follows:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

OPG receives regulated prices for electricity generated from most of its hydroelectric facilities and all of the nuclear facilities that it operates (collectively, prescribed facilities or regulated facilities). This includes the following facilities:

- the six hydroelectric generating stations prescribed for rate regulation prior to 2014, as follows:
    - Sir Adam Beck 1, 2 and Pump hydroelectric generating stations
    - DeCew Falls 1 and 2 hydroelectric generating stations
    - R.H. Saunders hydroelectric GS
- the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014
- Pickering Nuclear GS (Pickering GS)
- Darlington Nuclear GS (Darlington GS).

The operating results related to these regulated facilities are described under the Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, and Regulated – Hydroelectric segments. For the remainder of OPG's operating generating facilities, the operating results are described under the Contracted Generation Portfolio segment. A description of all OPG's segments is provided under the section, *Business Segments*.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of December 31 was as follows:

(MW)	**2016**	**2015**
Regulated – Nuclear Generation [1]	**5,728**	6,606
Regulated – Hydroelectric	**6,421**	6,428
Contracted Generation Portfolio [2]	**4,028**	4,021
Total	**16,177**	17,055

[1] The in-service generating capacity as of December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

The total in-service capacity as at December 31, 2016 decreased by 878 MW compared to 2015. The decrease was primarily due to the commencement of the refurbishment of the first Darlington GS unit, Unit 2, which was taken offline in mid-October 2016. In addition, during 2016, the capacity of the regulated hydroelectric units at the Abitibi Canyon GS and the Sir Adam Beck 1 GS was reduced to reflect unit limit capability. This decrease in in-service capacity was partially offset by an increase in capacity of the Contracted Generation Portfolio segment, reflecting the completion of an upgrade and rehabilitation of Unit 2 of the Harmon hydroelectric GS during 2016.

REVENUE MECHANISMS FOR REGULATED AND NON-REGULATED GENERATION

Regulated Generation

The OEB sets the prices for electricity generated from OPG's regulated nuclear and regulated hydroelectric facilities. The following are the OEB-authorized regulated prices for electricity generated from these facilities:

	2016	**2015**	
($/MWh)		**January 1 to June 30**	**July 1 to December 31**
Regulated – Nuclear Generation			
Base regulated price	**59.29**	59.29	59.29
Rate riders	**10.84** [1]	1.33	12.17 [1]
	70.13	60.62	71.46
Regulated – Hydroelectric			
Hydroelectric generating stations prescribed for rate regulation prior to 2014			
Base regulated price	**40.20**	40.20	40.20
Rate riders	**3.19** [1]	6.04	9.23 [1]
	43.39	46.24	49.43
Hydroelectric generating stations prescribed for rate regulation effective in 2014			
Base regulated price	**41.93**	41.93	41.93
Rate rider	**3.19** [1]	-	3.19 [1]
	45.12	41.93	45.12

[1] The increase in the 2015 rate riders effective July 1, 2015 was implemented by the OEB effective October 1, 2015. As such, the OEB authorized interim period rate riders for the period from October 1, 2015 to December 31, 2016 to allow for the recovery of the increase in the riders for the period from July 1, 2015 to September 30, 2015. The revenue from the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The nuclear interim period rate rider was $2.17 per megawatt hour (MWh) and the regulated hydroelectric interim period rate rider was $0.64/MWh. These interim period rate riders have not been included in the above table. All rate riders in effect during 2016 expired on December 31, 2016.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements for the 2014 to 2015 period, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base for OPG represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital.

In accordance with *Ontario Regulation 53/05* under the *Ontario Energy Board Act, 1998*, OPG's nuclear regulated prices are reduced by the amount of OPG's revenues, net of costs, from leasing the Bruce nuclear generating stations to Bruce Power. As directed by the OEB, OPG's revenues and costs related to the Bruce nuclear generating stations are determined in accordance with US GAAP for the purposes of establishing OPG's nuclear regulated prices and are subject to the Bruce Lease Net Revenues Variance Account in accordance with *Ontario Regulation 53/05*. This includes OPG's costs related to its obligations for nuclear waste management and nuclear facilities decommissioning associated with the Bruce nuclear generating stations and the corresponding portion of earnings on the nuclear fixed asset removal and nuclear waste management segregated funds (Nuclear Segregated Funds) established pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province.

Rate riders for OPG are established to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts. Variance and deferral accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The rate riders in effect during 2015 included those established by the OEB's December 2014 order for the period from January 1, 2015 to December 31, 2015, as well as those authorized by the OEB's October 2015 order on OPG's 2014 application to recover the December 31, 2014 variance and deferral account balances, for the period from July 1, 2015 December 31, 2016. The rate riders in effect during 2016 were those authorized by the October 2015 order.

Non-Regulated Generation

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements (ESAs) with the Independent Electricity System Operator (IESO). Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO was substituted as the counterparty of ESAs and other agreements that were previously executed with the OPA.

During 2016, ESAs were in effect for the following thermal generating facilities:

- Lennox GS: Capacity provided by, and production from, the station are subject to an ESA for the period from January 1, 2013 to September 30, 2022
- Atikokan GS: Capacity provided by, and production from, the station are subject to a 10-year ESA expiring in July 2024
- Thunder Bay GS: Capacity provided by, and production from, the station are subject to a 5-year ESA expiring in January 2020.

In addition, long-term hydroelectric ESAs are in place for the following facilities, with expiry dates for currently operating stations ranging from 2059 to 2064:

- Lac Seul and Ear Falls generating stations
- Healey Falls GS
- Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations
- Little Long, Harmon, Smoky Falls, and Kipling generating stations (collectively the Lower Mattagami River generating stations)

- Peter Sutherland Sr. GS which is being commissioned. **[MONITOR]** Payments under this ESA will commence when the station achieves commercial operation. Further details on the Peter Sutherland Sr. GS project are found under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's operating results for 2016 and 2015.

(millions of dollars – except where noted)	**2016**	**2015**
Revenue	**5,653**	5,476
Fuel expense	**727**	687
Gross margin	**4,926**	4,789
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (income) loss, interest, and income taxes	**724**	703
Other (income) loss	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense	**120**	180
Income before income taxes	**621**	509
Income tax expense	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest [1]	**17**	15
Electricity production (TWh) [2]	**78.2**	78.0
Cash flow		
Cash flow provided by operating activities	**1,705**	1,465

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $436 million for 2016, an increase of $34 million compared to 2015. Income before interest and income taxes was $741 million for 2016, an increase of $52 million compared to 2015.

The following summarizes the significant factors which contributed to the variance:

Significant factors that increased income before interest and income taxes:

- Higher generation of 1.1 terawatt hours (TWh) from the Regulated – Nuclear generation segment, resulting in an increase in revenue of $65 million from the nuclear base regulated price. The year-over-year increase

in revenue from the higher nuclear rate riders in effect during the first half of 2016, compared to the same period in 2015, was primarily offset by an increase in the amortization expense related to regulatory balances.

- Higher earnings on the Nuclear Segregated Funds of $42 million, primarily due to a higher rate of return on the portion of the Used Fuel Segregated Fund that is subject to a consumer price index (CPI) adjusted rate of return guarantee by the Province pursuant to the ONFA. This increase in Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the updated ONFA reference plan, approved by the Province in December 2016
- Increase in earnings from the Services, Trading, and Other Non-Generation segment of $24 million, primarily due to lower operations, maintenance and administration (OM&A) expenses
- A gain of $22 million recorded during the first quarter of 2016, reflecting the OEB's January 2016 decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices
- Increase in earnings of $20 million from the Contracted Generation Portfolio segment, mainly as a result of an increase in the gross margin due to higher revenues from the Lower Mattagami River generating stations, the Lennox GS and the Atikokan GS.

Significant factors that reduced income before interest and income taxes:

- Higher financing expense of $32 million, which represents an increase in the present value of the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities). The financing expense, known as accretion expense, is added to the Nuclear Liabilities balance over time
- A decrease in nuclear non-electricity revenue of $21 million, primarily due to a decrease in nuclear detritiation services revenue and lower isotope sales
- Higher OM&A expenses, fuel expense and depreciation expense for the Regulated – Nuclear Generation segment. The increase in OM&A expenses of $14 million reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium costs and higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million, primarily due to new assets in service in 2016. The increase in amortization expense related to regulatory balances was largely offset by the increase in nuclear revenue related to rate riders
- Lower earnings before other gains from the Regulated – Hydroelectric segment of $28 million, primarily due to lower hydroelectric incentive mechanism revenue and the income impact of OEB-approved variance accounts.

Net interest expense decreased by $60 million in 2016, compared to 2015, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project and a higher amount of interest costs deferred in regulatory variance and deferral accounts.

Income tax expense increased by $76 million in 2016, compared to 2015, primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. Significant factors which contributed to the higher income during 2016, compared to 2015, are discussed above. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	**2016**	**2015**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**4**	2
Regulated – Hydroelectric	**642**	648
Contracted Generation Portfolio	**282**	262
Total electricity generation business segments	**928**	912
Regulated – Nuclear Waste Management	**(174)**	(186)
Services, Trading, and Other Non-Generation	**(13)**	(37)
	741	689

Electricity Generation

Electricity generation for 2016 and 2015 was as follows:

(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**45.6**	44.5
Regulated – Hydroelectric	**29.5**	30.4
Contracted Generation Portfolio [1]	**3.1**	3.1
Total OPG electricity generation	**78.2**	78.0
Total electricity generation by other generators in Ontario [2]	**72.7**	76.1

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The higher electricity generation from the Regulated – Nuclear Generation segment in 2016 was primarily a result of a lower number of non-refurbishment outage days at the Darlington GS due to the planned Vacuum Building Outage (VBO) in 2015 and a decrease in unplanned outages at the station in 2016. The VBO is a unique outage to inspect and maintain specific safety and other systems common to all four units of the station. The 2015 VBO required the shutdown of the four units for 47 days. Vacuum building outages are currently required every 12 years at the Darlington GS. The year-over-year increase in electricity generation was partially offset by a decrease in generation from the Pickering GS, primarily due to an increase in the number of unplanned outage days, and the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment beginning on October 15, 2016.

Lower electricity generation from the Regulated – Hydroelectric generating segment was primarily due to a higher volume of water spilled as a result of higher SBG conditions during 2016.

Electricity generation from the Contracted Generation Portfolio segment was 3.1 TWh for each of 2016 and 2015. Electricity generation in 2016 reflected higher production from the Lennox and Atikokan generating stations, primarily due to increased market demand. The increase was offset by a higher volume of water spilled at the contracted hydroelectric stations as a result of higher SBG conditions during 2016, and transmission system constraints in northeastern Ontario in 2016. **[CONFIRM]**

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Ontario's electricity demand as reported by the IESO was 137.0 TWh in each of 2016 and 2015, which excludes electricity exports out of the province.

Baseload generation supply surplus in Ontario was more prevalent in 2016 than in 2015, mainly due to higher water flows in the province during 2016 and limitations on the export of surplus power out of the province, primarily due to transmission constraints in the state of New York. Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric and nuclear stations and other grid-connected renewable resources. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. During 2016 and 2015, OPG lost 4.7 TWh and 3.2 TWh of hydroelectric generation due to SBG conditions, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions in 2016 and 2015 was offset by a regulatory variance account authorized by the OEB. OPG did not forego any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The regulated prices authorized by the OEB for electricity generated from OPG's nuclear and regulated hydroelectric generating stations are discussed in the section *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment during 2016 was 6.9 cents per kilowatt hour (¢/kWh), compared to 6.5 ¢/kWh during 2015. The average sales price in 2016 reflected the higher OEB-authorized nuclear rate rider of $10.84/MWh for recovery of variance and deferral account balances in effect during the year. The average sales price for the Regulated – Hydroelectric segment was 4.4 ¢/kWh, compared to 4.7 ¢/kWh during 2015. The decrease was primarily due to a lower rate rider in effect during 2016 related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years.

As such, the year-over-year changes in revenue from rate riders were largely offset by changes in amortization expense related to regulatory balances.

Cash Flow from Operations

Cash flow provided by operating activities for 2016 was $1,705 million, compared to $1,465 million for 2015. The increase in cash flow provided by operating activities for 2016, compared to 2015, was primarily due to higher generation revenue receipts reflecting higher nuclear rate riders and higher nuclear generation in 2016. The increase in cash flow was also due to lower pension plan contributions in 2016 reflecting an updated actuarial valuation of the OPG registered pension plan. The increase in cash flow was partially offset by higher OM&A expenditures during 2016, compared to 2015, and the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to the period from January 1, 2015 to December 4, 2015. The rebate was made pursuant to a provision under the lease agreement for the Bruce nuclear generating stations. This provision was eliminated effective December 4, 2015 as part of the 2015 amendments to the lease agreement.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. The FFO Adjusted Interest Coverage was 5.1 times for 2016, compared to 5.0 times for 2015. The modest increase in the FFO Adjusted Interest Coverage in 2016 reflected an increase in FFO before interest for 2016, compared to 2015, as a result of the year-over-year increase in cash flow provided by operating activities.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for 2016 was 4.2 percent, compared to 4.0 percent for 2015. ROE Excluding AOCI increased for 2016, compared to 2015, primarily due to higher net income attributable to the Shareholder. OPG's ROE Excluding AOCI reflects regulated prices established by the OEB in 2014. These prices were lower than requested by OPG based on submitted forecast cost and production levels, which has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

ROE Excluding AOCI also reflects the relatively higher equity component in the Company's capital structure, compared to the deemed capital structure used by the OEB in determining OPG's regulated prices. The OEB establishes the allowed return on OPG's investment in regulated assets, which represent the majority of the Company's operations, using the OEB's generic prescribed rate of return and an OPG-specific deemed capital structure. In setting the regulated prices in 2014, the OEB applied a deemed capital structure of 45 percent equity and 55 percent debt. OPG's actual capital structure (excluding AOCI) contains approximately 65 percent equity. The higher equity component in OPG's actual capital structure, compared to the deemed capital structure applied by the OEB, results in a reduced actual ROE Excluding AOCI. In its application for new regulated prices filed with the OEB in May 2016, OPG is seeking an increase in the deemed capital structure to 49 percent equity and 51 percent debt. For further discussion on OPG's application, refer to the heading *Recent Developments* in the section *Highlights*.

Enterprise Total Generating Cost per MWh

The Enterprise Total Generating Cost (TGC) per MWh was $48.10 for the year ended December 31, 2016, compared to $50.46 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses, excluding the impact of regulatory variance and deferral accounts, and higher electricity generation as adjusted for foregone generation due to SBG conditions during 2016.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $62.30 for the year ended December 31, 2016, compared to $66.20 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses excluding the impact of regulatory variance and deferral accounts, and higher electricity generation during 2016.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $25.57 for the year ended December 31, 2016, which was comparable to $25.26 for the same period in 2015.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow from operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in

January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The unit is scheduled to be returned to service in the first quarter of 2020. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

In April 2016, the Federal Court of Appeal unanimously dismissed the request by certain intervenors for a judicial review of the 2013 Environmental Assessment (EA) decision for the Darlington Refurbishment project by the Canadian Nuclear Safety Commission (CNSC) and Fisheries and Oceans Canada. The EA decision had confirmed that, taking into account identified mitigation measures, the project was not likely to cause significant adverse environmental effects. In dismissing the appeal, the Federal Court of Appeal determined that there were no gaps in the EA, that there was nothing unreasonable about the discretionary determinations made by the responsible authorities, and that the intervenors' arguments were not borne out by the evidence. OPG was also awarded its costs of the appeal, as the successful party.

The Darlington Refurbishment project is discussed further under the heading, *Project Excellence* in the *Core Business, Strategy and Outlook* section.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. For the first time since OPG's prescribed assets became subject to rate regulation, the new prices are expected to be determined on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. Rate-setting under incentive regulation is typically more formulaic and involves greater de-coupling of a regulated entity's allowed revenues or prices from its costs than under a cost-of-service rate-setting methodology.

For the hydroelectric facilities, OPG's May 2016 application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021 based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production.

The proposed nuclear revenue requirements reflect OPG's plans to pursue Pickering extended operations until 2024, as well as the projected impact of the scheduled return to service of the first refurbished Darlington unit in the first quarter of 2020. OPG is also seeking an increase in the deemed capital structure applied to its total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt applied by the OEB in setting the existing regulated prices.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG's application incorporates a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved nuclear revenue requirements in a deferral account for future collection, with a view of making more stable year-over-year changes in OPG's nuclear regulated prices for the period from January 1, 2017 to the end of the Darlington Refurbishment project. The regulation stipulates that the deferral account will record interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually, and that the OEB shall authorize recovery of the balance in the account on a straight line basis over a period not to exceed 10 years following the end of the Darlington Refurbishment project. OPG expects to recognize the deferred amounts as income in the period to which the approved revenue requirements relate.

OPG's application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the

Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment in 2016 through rate riders in effect to December 31, 2016. The application also requests the continuation of all applicable existing variance and deferral accounts. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed in the section *Critical Accounting Policies and Estimates,* under the heading, *Rate Regulated Accounting.*

In December 2016, the OEB issued an order granting OPG's request to declare the existing base regulated prices interim, effective January 1, 2017. This preserves the OEB's ability to make new regulated prices effective as early as January 1, 2017, which would allow OPG to recover the difference between the approved new regulated prices and the existing prices for the period between the effective date of the new regulated prices and their implementation date based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017, following a public proceeding. The public proceeding is in progress, with the oral hearing portion having commenced in February 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

In February 2017, the OEB approved a settlement agreement reached by OPG and intervenors on certain limited elements of OPG's application (Settlement Agreement). Among other elements, the Settlement Agreement accepts a number of year-end 2015 variance and deferral account balances totaling $419 million, allows for continuation of all applicable existing variance and deferral accounts, and confirms methodologies for calculating amounts to be recorded in most of the continuing accounts once new regulated prices take effect, as proposed by OPG. The balances of, and methodologies for recording future amounts in the Nuclear Liability Deferral Account, the Bruce Lease Net Revenues Variance Account and the Capacity Refurbishment Variance Account are excluded from the Settlement Agreement. The agreement also results in approval of OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017-2021 period. The Settlement Agreement does not impact OPG's 2016 financial results. **[MONITOR]**

OEB's Decision on OPG's December 2014 Motion

In January 2016, the OEB issued its decision on OPG's December 2014 motion asking the OEB to review and vary the parts of its November 2014 decision related to the disallowance of the Niagara Tunnel project expenditures, and the application of the 2013 regulatory tax loss to reduce the 2014/2015 revenue requirement. In its decision, the OEB reversed a portion of the original disallowance of the Niagara Tunnel project expenditures, and upheld the original tax loss decision. In the first quarter of 2016, OPG recorded a gain of $22 million to recognize the expected future recovery from customers of the portion of the disallowance reversed by the OEB's motion decision.

The original disallowance of the Niagara Tunnel project expenditures resulted in a write-off of $77 million that was charged to operations in 2014. The original tax loss decision resulted in a reduction of the 2014/2015 revenue requirement by approximately $70 million. As OPG's financial results have previously reflected the effect of the OEB's original tax loss decision, the motion decision on the tax loss did not impact OPG's 2016 financial results.

Ontario Nuclear Funds Agreement Reference Plan Update

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for nuclear waste management and nuclear facilities decommissioning as at December 31, 2016 was finalized as part of the required process to update the reference plan under the ONFA. As at December 31, 2016, the update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities with a corresponding decrease to the asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear facilities decommissioning at least once every five years, in line with the required ONFA reference plan update process.

The updated estimate of the obligations was reflected in a new ONFA reference plan, for years 2017 to 2021, which was approved by the Province in December 2016, effective January 1, 2017 (the 2017 ONFA Reference Plan). Based on the lower life cycle liability estimates per the 2017 ONFA Reference Plan, starting in 2017, OPG is not currently required to make overall contributions to the Used Fuel Segregated Fund or the Decommissioning Segregated Fund established under the ONFA. Prior to 2017, OPG made contributions to the Used Fuel Segregated Fund every year, including a one-time special payment in earlier years, as required by the ONFA. These contributions reflected ONFA requirements to fund the majority of the underlying used fuel liability by the end of the estimated useful lives of the nuclear stations in effect at OPG's inception in 1999, resulting in significantly higher contributions to the Used Fuel Segregated Fund in the earlier years of OPG's existence. OPG has not been required to make contributions to the Decommissioning Segregated Fund, which was fully funded at its inception and at the time of every subsequent approved ONFA reference plan. Contributions to either or both funds may be required in the future should the funds be in an underfunded position when a new reference plan is prepared. Such may be the case as a result of variability in asset performance due to volatility inherent in financial markets and Ontario CPI changes. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the underlying obligations in subsequent ONFA reference plans.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of the new regulated prices. In accordance with *Ontario Regulation 53/05*, the OEB is required to ensure that OPG recovers the revenue requirement impact of its nuclear waste management and nuclear decommissioning liabilities arising from the current approved ONFA reference plan. For further discussion on the accounting for Nuclear Liabilities, refer to the section, *Critical Accounting Policies* under the heading, *Asset Retirement Obligation*.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the amount due to the Province. This accounting adjustment represented the overfunded position of Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 relative to the value of the corresponding present value life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province as OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and as any excess funding in the Nuclear Segregated Funds upon termination of the ONFA accrues to the Province. Of the $88 million reduction in Nuclear Segregated Funds earnings, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

For further discussion of the accounting for the Nuclear Segregated Funds, refer to the section, *Critical Accounting Policies* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*. For further discussion of OPG's risks with respect to nuclear waste management and nuclear decommissioning obligations and Nuclear Segregated Funds, refer to the section, *Risk Management* under the headings, *Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds* and *Financial Markets*.

Shareholder Declaration and Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that required the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. The assets are reported under the Services, Trading and Other Non-Generation segment. An active program to locate a buyer for these real estate assets was initiated in October 2016, and a purchase and sale agreement was executed in December 2016. The sale is expected to be completed during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be

recognized upon completion of the transaction. Pursuant to the December 2015 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer a portion of the proceeds from this disposition into the Province's Consolidated Revenue Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario, an asset reported under the Services, Trading and Other Non-Generation segment. OPG is currently in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer a portion of the proceeds from this disposition into the Province's Consolidated Revenue Fund.

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business.

Contract Award for Nanticoke Solar Facility

In March 2016, Nanticoke Solar LP, then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation, was selected through the first phase of the IESO's Large Renewable Procurement (LRP) program to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands in Haldimand County, Ontario. The LRP program was a competitive bidding process for procuring large renewable energy projects in Ontario. In March 2016, Nanticoke Solar LP and the IESO executed a 20-year LRP contract, which formalized the terms and conditions for the development and operation of the new solar facility. In the first quarter of 2017 **[MONITOR]**, OPG purchased SECCLP's interests in Nanticoke Solar LP and is working to obtain approvals and permits required to enable the commencement of construction planned for the first half of 2018.

The 20-year term of the LRP contract takes effect once the station achieves commercial operation, which is expected in the first quarter of 2019. For further discussion, refer to the section, *Core Business, Strategy and Outlook* under the heading, *Project Excellence*.

Decommissioning of the Lambton GS

In November 2016, the Company announced the decommissioning of the Lambton GS, which ceased coal-fired generation in 2013, as it was determined that continuing to preserve the station beyond 2016 for future conversion was no longer economically feasible. OPG is currently developing a decommissioning plan for the Lambton GS, which will ensure that the station is closed safely, securely, and in an environmentally responsible manner.

Canadian Nuclear Safety Commission Safety Rating for the Pickering GS and the Darlington GS

The CNSC publishes an annual report on the safety performance of Canada's nuclear power plants. The report assesses how well plant operators are meeting regulatory requirements and program expectations in the areas of operational performance, safety analysis, radiation protection, waste management and conventional health and safety. In its 2015 annual report, the CNSC gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". The Pickering GS received this rating for the first time, while the Darlington GS achieved the rating for the seventh year in a row.

Acquisition of Hydro One Limited Shares

In April 2016, OPG acquired nine million common shares of Hydro One Limited (Hydro One) at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. OPG paid the same price as other investors in the offering. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union (PWU) and The Society of Energy Professional (The Society) renewed in 2015. Changes to these agreements included increases to employee pension plan contributions and provisions for existing employees represented by the PWU and The Society with eligibility to annually receive common shares of Hydro One for up to 15 years starting in

the third year of the respective agreements, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service. The shares acquired in the April 2016 transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

CORE BUSINESS, STRATEGY AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

OPG's four key strategic imperatives are as follows:

- Operational Excellence
- Project Excellence
- Financial Strength
- Social Licence.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Workplace Safety and Public Safety

Workplace safety and public safety are fundamental core values at OPG. OPG is committed to operating all of its facilities in a safe, secure, and reliable manner that minimizes risks to a reasonably achievable level. Safety is an overriding priority in all activities performed at OPG's generating and other facilities, and all employees and contractors are expected to conduct themselves in manner that ensures workplace safety and public safety in line with the Company's safety culture.

In the area of workplace safety, OPG is committed to achieving excellent safety performance through continuous improvement and a strong safety culture, with the ultimate goal of zero injuries. OPG utilizes an integrated health and safety management system and set of operational risk control procedures to ensure continued monitoring of health and safety performance and to support continuous learning and improvement in this area. Overall, OPG's workplace safety performance has been one of the best amongst its comparator Canadian electrical utilities. In 2016, OPG received the Canadian Electricity Association (CEA) President's Gold Award recognizing three consecutive years, 2013 to 2015, of sustained top quartile safety performance within the comparator group.

Workplace safety performance is measured using two primary indicators at OPG, All Injury Rate (AIR) and Accident Severity Rate (ASR). OPG's AIR and ASR results for employee workplace safety were as follows for the year ended December 31:

	2016	2015
AIR *(injuries per 200,000 hours worked)*	**0.56**	0.39
ASR *(days lost per 200,000 hours)*	**2.59**	0.50

In 2016, OPG's AIR and ASR safety performance was worse than in 2015. OPG's analysis of the underlying events indicated that major contributors to the injuries and near misses included inadequate situational awareness and attention to detail, and suboptimal risk-based decisions, rather than missing or inadequate standards or programs.

OPG is implementing a number of initiatives to target the injury trends based on the analysis of the safety events, with a focus on the use of human performance tools including increased field supervisory oversight, situational awareness, communication, and procedural use and adherence.

In 2016, OPG launched an organization-wide "iCare Enough to Act" initiative aimed at renewing employees' commitment to their own and each other's safety and well-being. Plans to further strengthen safety as a foundational element of the Company's values-based culture are being developed through leadership forums and other engagement activities.

Contractors are required to conduct work safely at OPG sites. In support of this requirement, OPG utilizes an independent contractor pre-qualification process, provides on-site safety support for many of OPG's major projects, and works with contract partners to improve their health and safety programs to meet OPG's requirements. To further strengthen contractors' safety performance, in 2016, OPG updated its contractor's safety requirements and related governance, and implemented additional oversight and field monitoring to ensure ongoing compliance. In the past eight years, OPG has consistently shown a better than average Construction Contractor AIR as compared to the Health and Safety Association Contractor AIR, a metric of construction contractor safety performance across Ontario.

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for those individuals who live or work near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), which is an international unit of radiation dose measurement. For 2015, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.5 μSv and 1.2 μSv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000 μSv. While the public doses from OPG's nuclear operations for the 2016 operating year will not be finalized until the second quarter of 2017, they are not expected to differ significantly from the 2015 levels.

In June 2016 and August 2016, the CNSC released sampling results from its independent environmental monitoring program, which confirmed that the public and the environment around OPG's nuclear generating stations continued to be safe. Also in 2016, the CNSC published its 2015 annual report on the safety performance of Canada's nuclear power plants, which gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". For further details, refer to the CNSC safety rating discussion under the heading, *Recent Developments* in the *Highlights* section.

OPG remains committed to high standards of public safety on waterways around hydroelectric dams and generating stations. A Dam Safety Review Panel comprised of internationally recognized experts has previously concluded that OPG's dam and public safety program is comparable with international best practices in a number of areas related to maintaining safe dam operations. OPG continues to develop a new risk-informed approach on behalf of the Ontario Ministry of Natural Resources and Forestry (MNRF) to prioritize and manage risks identified through dam safety assessments. In 2016, OPG continued its water safety campaign with a series of public service announcements illustrating the danger of water near hydroelectric dams and hydroelectric generating stations.

Electricity Generation Production and Reliability

Key strategic initiatives in support of operational excellence, specific to each of OPG's core generating operations, are discussed below. Generation and reliability performance for 2016 is discussed by operating segment in the section, *Discussion of Operating Results by Business Segment*.

Nuclear Operations

OPG is pursuing a number of strategic initiatives aimed at the continued safe and reliable operation of the Pickering GS and targeting top performance at the Darlington GS.

OPG's nuclear operations are regularly benchmarked against top performing nuclear facilities around the world. This allows OPG to identify, develop and implement initiatives to further improve performance. During 2016, OPG participated in two World Association of Nuclear Operators (WANO) peer evaluations to compare its stations against standards of excellence through an in-depth, objective review by an international panel of industry experts. In May 2016, OPG hosted a WANO peer evaluation for the Darlington GS. The review maintained Darlington's excellent standing as one of the top performing nuclear plants in the world. In September 2016, OPG hosted a team of experts from the International Atomic Energy Agency at the Pickering GS to conduct a standard Operational Safety Review Team mission. The team conducted an in-depth review of performance and adherence to international safety standards. A report on the mission is expected to be released in the second quarter of 2017.

In January 2016, OPG announced its plan to pursue continued safe and reliable operation of the Pickering GS beyond 2020. OPG's objective is to maximize the operating life of the Pickering units. Under OPG's current plan, all six operating units at the station would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The Province announced its approval of OPG's plan to pursue continued operation of the Pickering GS beyond 2020 up to 2024 in January 2016. Extending operations at the Pickering GS will provide continued employment to approximately 3,000 regular employees at OPG, and will help reduce approximately 17 million tonnes of carbon dioxide emissions, which is the equivalent to removing 3.4 million cars from Ontario's roads.

As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will achieve the additional life necessary to operate to 2024. OPG is also conducting component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently established as the end of 2020, are expected to be reassessed when OPG's further technical work confirms the longer fuel channel life and the units' fitness to operate beyond 2020, taking into account the requirement for the CNSC's approval, discussed below.

OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. OPG has started work on the Pickering licence renewal application, which is expected to be filed in mid-2017 for the CNSC's approval in 2018. The requested licence renewal spans the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. A Periodic Safety Review and an Integrated Implementation Plan (IIP) for the station will be submitted to the CNSC as part of the application.

OPG strives to operate and maintain its nuclear facilities to optimize equipment, performance, availability and electricity generation, while improving the reliability and predictability of the fleet. Improved equipment reliability generally results in fewer generation interruptions. OPG continues to make investments in the performance of the Pickering GS, with a focus on improving plant reliability and maximizing the value of the asset through implementing equipment modifications and fuel handling reliability improvements, reducing equipment maintenance backlogs, and completing critical and high priority work.

Nuclear inspection and testing programs are largely driven by maintenance and regulatory requirements, and are designed to ensure that equipment is performing safely and reliably. Execution of this and other outage work continues to be a high priority. As part of its commitment to operational excellence, OPG continues to focus on improving the planning, execution, monitoring, and reporting of outage work.

Work continues to ensure the integration of life cycle management and refurbishment programs at the Darlington GS. This includes developing staffing strategies to support both ongoing station operations and the refurbishment project, planning and incorporating pre-requisite work for the refurbishment into the station's work schedule, and identifying life cycle and aging management work to sustain safe and reliable station operations for the next three decades.

OPG's longer-term efforts are aimed at positioning the Darlington GS for industry leading operating and cost performance.

Delivering solutions that provide the best combination of safety, cost and effectiveness, as well as establishing challenging financial targets based on comprehensive benchmarking continues to be a vital part of OPG's strategy to improve performance of the nuclear business unit. Financial and staffing targets continue to be reviewed and adjusted where necessary to reduce operating costs, while ensuring safety is not compromised.

In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications will be presented to the CNSC at a public hearing in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018.

Hydroelectric Operations

The objectives of OPG's hydroelectric operations include operating and maintaining the generating facilities in an efficient and cost-effective manner, while enhancing their reliability and availability. OPG continues to evaluate and implement plans to increase capacity, maintain and improve performance, and extend the operating life of its hydroelectric generating assets.

OPG's plans for its existing hydroelectric generating stations are accomplished through multi-year capital investment and other programs, including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers, and controls. The aim of OPG's runner replacement and upgrade program is to increase hydroelectric station capacity by leveraging efficiency enhancements in runner design. Where economical and practical, OPG pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations. Over the next three years, OPG plans to increase the total capacity of its hydroelectric generating fleet by approximately 135 MW, which, in addition to the runner replacement and upgrade program, includes the Peter Sutherland Sr. GS project and the Ranney Falls GS projects. Both of these projects are discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Project Excellence*. OPG is also planning to repair, rehabilitate, or replace a number of aging civil hydroelectric structures.

As part of its commitment to operational excellence, OPG continues to make investments in its existing hydroelectric generating fleet. During 2016, OPG continued to execute a number of projects, including:

- Completion of major equipment overhauls and rehabilitation work on Unit 5 of the Sir Adam Beck Pump GS, and Unit 2 of the Whitedog Falls GS
- Completion of a runner upgrade, headgate replacement and rehabilitation of Unit 2 of the Harmon GS
- Completion of headgate replacement at Units 1 and 2 of the Kipling GS
- Completion of concrete rehabilitation of the main dam at Chats Falls GS
- Continued work on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 5 of the DeCew Falls 1 GS, Unit 1 of the Harmon GS, and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.

OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS. **[MONITOR]**

Thermal Operations

OPG's thermal operations consist of biomass-fuelled generating units at each of Atikokan GS and Thunder Bay GS, and the oil/gas dual-fuelled Lennox GS.

These stations, which operate as peaking facilities, provide Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements and enable the system to accommodate the expansion of Ontario's renewable generation portfolio. The continued operation of these stations during the initial years of the refurbishment of the Darlington GS and Bruce nuclear facilities is expected to provide Ontario with over 2,000 MW of peaking generation.

During the third quarter of 2016, the Atikokan and Thunder Bay generating stations provided renewable generation when called upon to meet system requirements while utility maintenance was being conducted on a local transformer station. As a result of utility maintenance, the Atikokan GS operated continuously from late July 2016 to early September 2016, while the Thunder Bay GS operated as needed. To meet the increased demand for biomass fuels at Atikokan GS, OPG coordinated the acceleration of biomass fuel deliveries with suppliers while continuing to operate the plant safely.

As part of OPG's ongoing strategy to reduce costs and increase efficiency, the operations of the Company's hydroelectric and thermal assets have been combined into one organization. OPG continues to evaluate opportunities to consolidate departments within the stations and across regions.

Thermal stations that are no longer available to generate electricity are included in the Services, Trading and Other Non-Generation segment once they are removed from service. This includes the Lambton GS and Nanticoke GS sites, which ceased coal-fired generation in 2013. In 2015, OPG announced the decommissioning of the Nanticoke GS, as it could not commercially support continued preservation costs.

In November 2016, OPG announced the decommissioning of the Lambton GS, as further discussed in the section, *Highlights* under the heading, *Recent Developments*. OPG is currently developing decommissioning plans for the Lambton and Nanticoke generating stations, which will ensure that they are closed safely, securely and in an environmentally responsible manner. The decommissioning plan for the Nanticoke GS will accommodate the construction and operation of the Nanticoke solar facility. The costs of decommissioning the stations will be charged to a previously established decommissioning provision. OPG expects to review the decommissioning provision estimates for these sites in 2017.

Environmental Performance

OPG's Environmental Policy states that "OPG shall meet all legal requirements and any environmental commitments that it makes, with the objective of exceeding these legal requirements where it makes business sense". This policy commits OPG to:

- establish and maintain an environmental management system (EMS)
- work to prevent or mitigate adverse effects on the environment with a long-term objective of continual improvement
- manage sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern.

In 2016, OPG maintained the ISO 14001 registration of its company-wide EMS. Within the EMS, OPG has planning, operational control, and monitoring programs to manage the Company's positive and negative impacts on the environment. Significant environmental aspects of OPG's operations include: spills, chemical and thermal emissions to water, water flow and level changes, radioactive emissions, low and intermediate level radioactive waste (L&ILW), wildlife habitat, displacement of fossil fuels, and fish impingement and entrainment. Further details regarding OPG's environmental risks can be found in the section, *Risk Management* under the heading, *Environmental Risk*.

Environmental performance targets are set as part of the annual business planning process. OPG met or outperformed its 2016 targets for spills, environmental infractions, and carbon-14 emissions to air. An increase in the volume of waste generated from work activities at the Darlington GS and preparation for the Darlington Refurbishment project led to a higher than expected volume of L&ILW produced in 2016. Performance for tritium

emissions to air and water during 2016 remained less than one percent of the regulatory limit. There were no significant environmental events during 2016.

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. The program requirements are expected to result in increased fuel costs for some OPG-owned and co-owned generating facilities. Fuel costs for these stations are generally recovered from the electricity market. With OPG's low GHG emitting fleet, the program is not expected to have a material adverse financial impact on the Company. OPG has established the necessary processes to comply with the cap and trade program requirements.

OPG is monitoring actions being taken by the Government of Ontario and the Government of Canada to reduce GHG emission levels and transition to a low-carbon economy. In support of efforts to mitigate climate change, the Company continues to evaluate and implement plans to increase the generation capacity of its hydroelectric generating fleet, where economic, and invest in other low-carbon technologies.

OPG communicates its environmental performance internally to employees and to external stakeholders, including the Ontario Ministry of the Environment and Climate Change, Environment and Climate Change Canada, the CNSC, and local communities. Details of OPG's environmental performance and initiatives to fulfill the Company's Environmental Policy can be found in OPG's 2015 Sustainability Report, available on the Company's website at www.opg.com.

Improving Efficiency and Reducing Costs

As part of its commitment to operational excellence, OPG remains focused on reducing costs by pursuing efficiency and productivity improvements across operating business units and support functions, while ensuring that there is no adverse impact on the safety, reliability and environmental sustainability of the Company's operations. This includes streamlining of processes, simplifying governance, upgrading information technology, optimizing service delivery models, and, where appropriate, leveraging attrition to achieve human resource targets aligned with business requirements. Initiatives to improve cost performance and organizational capability are being implemented at the enterprise and business unit level.

To drive efficiency and performance improvement, the Company continues to leverage a more scalable, centre-led organizational model. In 2016, the reduction in OPG's regular headcount from ongoing operations, since the beginning of 2011, reached over 2,800. Improving organizational performance and building on these efficiency gains remains a key priority for the Company. OPG continues to review its cost structure, identify cost improvement strategies and embed an outcomes-driven culture that reinforces low cost, efficiency, and organizational agility as part of business decision-making. In order to enhance the overall focus on productivity, in 2016 OPG adopted Enterprise TGC per MWh as a measure of OPG's overall organizational cost performance and Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets, in addition to the existing Nuclear TGC per MWh measure. Further details regarding these measures are included in the sections, *Highlights, Key Operating and Financial Performance Indicators* and *Supplemental Non-GAAP Measures*.

People and Culture

A well trained and engaged workforce is fundamental to the achievement of OPG's strategic imperatives. To succeed in a demanding business environment, OPG is focused on building a diverse, healthy, engaged workforce and fostering a culture of collaboration, accountability and innovation. OPG also continues to communicate and

implement the values and behaviours expected from its employees in order to maintain a strong focus on safety, performance excellence, continuous improvement, and corporate citizenship.

The Company continues to focus on improving the capability of its workforce through leadership development, knowledge management, diversity and inclusion programs, and hiring in key areas. Ability to secure the right talent mix in order to effectively meet the Company's immediate and longer term business needs on a timely basis is supported through workforce planning, resourcing and on-boarding strategies, both to acquire external talent into the organization and to develop existing employees. The goal of workforce planning and resourcing strategies is to ensure that the Company's workforce is diverse and has the right skill set and capability for the safe and effective operation of the generating facilities and successful delivery of major projects, including the refurbishment of the Darlington GS. These strategies are being designed to take into account anticipated staffing requirements to the end of planned commercial operations of the Pickering GS, through to the end of the planned period to de-fuel, de-water and place the station in a safe state condition.

As part of the strategy to develop and engage employees and to build leadership talent, the Company has an active succession planning program with a focus on accelerating development. OPG also has a talent management monitoring process to proactively assess staffing risks, challenges and opportunities. Since 2015, OPG offers a company-wide high-potential leadership development program to qualified internal candidates. This 18-month cross-functional, competitive-entry program is designed to identify and develop candidates for future leadership positions while they are still relatively early in their career.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification. In addition to maintaining its internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners and educational institutions to meet the required level of qualification. Training delivery models are evaluated for effectiveness and efficiency.

Effective January 1, 2017, OPG implemented a new Executive Compensation Program that is compliant with *Ontario Regulation 304/16: Executive Compensation Framework*, introduced in September 2016. The regulation sets out how all employers designated under the *Broader Public Sector Executive Compensation Act, 2014*, including OPG, must establish and post compensation programs for executives. The program must include the compensation philosophy, salary and performance-related pay caps, comparative analysis details, and a description of other elements of compensation. OPG's new Executive Compensation Program, which applies to employees at the Vice President level and higher, is designed to provide compensation that is at the 50th percentile of the market and focused on at-risk, performance based pay. The program will better enable OPG to attract, align and retain the executive talent critical to delivering Shareholder and customer value, while ensuring continued safe and reliable operations.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. OPG also continues to plan and execute maintenance and capital improvement projects related to its existing assets. OPG strives for excellence in the planning and delivery of all projects across the Company.

OPG's vision for project excellence is to be an industry leader in project management capability and performance. As part of its commitment to project excellence, OPG continues to enhance and streamline its approach to project planning and execution, with the goal of delivering all projects safely, on time, on budget, and with high quality. Achieving project excellence at OPG involves, among other things, putting in place a common, scalable project delivery model across all business units, establishing qualified project management teams, optimizing contracting strategies, engaging qualified and experienced vendors, and effectively monitoring and controlling performance. The status updates for OPG's major projects as of December 31, 2016 are outlined below.

Project	Capital	Approved	Expected

(millions of dollars)	expenditures Year-to-date	Life-to-date	budget	in-service date	Current status
Darlington Refurbishment	1,019	3,185	12,800 [1]	First unit - 2020 Last unit - 2026	The refurbishment of Unit 2 commenced in October 2016, as planned. De-fueling of Unit 2, the first critical path activity, was completed in January 2017, ahead of schedule. The project is tracking on budget. See update below.
Peter Sutherland Sr. Hydroelectric GS	141	236	300	2017	Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, ahead of the originally planned schedule. **[MONITOR]** See update below.
Sir Adam Beck Pump GS Reservoir Refurbishment	39	46	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget. See update below.
Ranney Falls Hydroelectric GS	2	3	77 **[MONITOR]**	2019	Project design work was completed in 2016 and construction is expected to commence in 2017. See update below. **[MONITOR]**
Nanticoke Solar Facility	1	1			Project definition work is in progress and construction is planned to commence in the first half of 2018. See update below.
Deep Geologic Repository for L&ILW	9 [2]	195 [2]			OPG has completed the additional studies required by the Canadian Environmental Assessment Agency (CEAA) and the federal Minister of Environment and Climate Change and submitted this information in December 2016. See update below.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the Darlington GS by approximately 30 years. The Darlington Refurbishment project is a multi-phase program comprising the following five major sub-projects:

- **Retube and Feeder Replacement (RFR)**, which includes the removal and replacement of fuel channel assemblies and feeder tubes in each reactor

- **Turbines and Generators**, which consists of inspections and repairs of turbine generator sets and the replacement of analog control systems with digital control systems
- **De-fuelling and Fuel Handling**, which involves the de-fuelling of the reactors and the refurbishment of the fuel handling equipment
- **Steam Generators**, which includes mechanical cleaning, water lancing, and inspection and maintenance work on the generators
- **Balance of Plant**, which consists of work on smaller projects to replace or repair certain other station components.

In January 2016, the Government of Ontario's support for the Darlington Refurbishment project was affirmed through the Ontario Minister of Energy's announcement endorsing OPG's plan to refurbish the four Darlington units at a total project budget of $12.8 billion, including capitalized interest and escalation. The Province's announcement followed the approval of the project budget and schedule by OPG's Board of Directors in November 2015. The refurbishment of the last unit is scheduled to be completed by 2026. OPG's current operating licence for the Darlington GS spans most of the planned duration of the Darlington Refurbishment project, expiring in November 2025.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. *Ontario Regulation 53/05* requires the OEB to accept the need for the Darlington Refurbishment project in light of Ontario's 2013 Long-Term Energy Plan (LTEP) and the related policy of the Province endorsing the need for nuclear refurbishment. It also requires the OEB to ensure that OPG recovers capital and non-capital costs and firm financial commitments in respect of the Darlington Refurbishment project, if the OEB is satisfied that the costs were prudently incurred and that the firm financial commitments were prudently made.

A number of pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, in support of the execution phase of the project have been completed, with the remaining projects continuing to track for completion in line with the refurbishment execution schedule.

All major contracts for the Darlington Refurbishment project that OPG expected to award were in place prior to proceeding with the Unit 2 refurbishment. This included the RFR execution phase contract awarded in January 2016 and valued at approximately $2.75 billion for work to be executed on all four units. All of the major contracts contain suspension and termination provisions.

Other key activities related to the project in 2016 included the following:

- Fabrication of the major reactor components including fuel channels and feeder tubes is in progress, with the first set of feeder tubes delivered in the fourth quarter of 2016. The remaining components have planned deliveries tracking in line with the project schedule.
- The specialized tooling for removal and replacement of feeder tubes and fuel channel assemblies in each reactor was delivered to OPG's reactor training and mock-up facility in the second quarter of 2016, as planned, and testing of the tooling has been completed.

- All 28 storage tanks have been installed in the Heavy Water Storage and Drum Handling Facility, which will provide storage and processing capability for the removal of heavy water from the units during refurbishment, as well as for continued station operations.
- The RFR Island Support Annex was completed in February 2016. The facility houses RFR field preparatory, contractor management, and project oversight activities.

In addition to the de-fuelling of the Unit 2 reactor completed in January 2017, milestones for the Darlington Refurbishment project in 2017 include:

- Completion of reactor vault preparation activities to support RFR work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Third Emergency Power Generator and Containment Filtered Venting System safety enhancement projects, which were originally scheduled to be placed in-service in 2016. Remediation measures are in progress and OPG expects both projects to be placed in-service during the first quarter of 2017. These delays will not impact the overall Darlington Refurbishment project schedule, as neither of the two projects is on the critical path.
- Completion of the Re-tube Waste Processing Building and the Heavy Water Storage and Drum Handling Facility.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of the second unit, Unit 3, at the Darlington GS and is entering into associated commitments to procure major components that require long-lead times. As of December 31, 2016, $31 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Peter Sutherland Sr. Hydroelectric GS

The project to construct the 28 MW Peter Sutherland Sr. hydroelectric GS is in the process of testing and commissioning the turbine and generator units, as well as operator training and document turnover. Work also continues on demobilization efforts, as well as site reclamation. Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. **[MONITOR]** The project is tracking within the approved budget of $300 million.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The construction work on the project included installation of a partial new liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

During 2016, OPG completed project design work for the construction of an additional 10 MW single-unit powerhouse on the existing Ranney Falls GS site. The new unit will replace an existing unit that reached its end of life in 2014. Capital expenditures for project definition work completed as of December 31, 2016 were $3 million. OPG plans to commence construction work in 2017, with an expected in-service date in the fourth quarter of 2019 and a budget of $77 million. **[MONITOR]**

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS and adjacent lands is planned to commence in the first half of 2018. It is expected to be completed in early 2019. Capital expenditures for project definition work completed as of December 31, 2016 were $1 million.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In August 2015, OPG responded to the CEAA's list of potential environmental conditions relating to the JRP report. In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and the impact on environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization (NWMO) were located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following a review by the CEAA and a period of public comment, an EA Decision Statement by the Minister is expected by the third quarter of 2017. Based on the information submitted to the Minister, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

In 2013, OPG suspended design activities on the project pending receipt of a site preparation and construction licence. If the decision on the EA is positive, the licensing process will resume. Upon receipt of the site preparation and construction licence, OPG will complete detailed design and development of a project schedule and a budget. In parallel, OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The approval of OPG's Board of Directors must also be obtained in order to proceed with construction. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

New Nuclear Units

The 2013 LTEP also indicated that the Ontario Ministry of Energy would work with OPG to maintain the site preparation licence granted by the CNSC in relation to the potential construction of these reactors. As such, OPG has been undertaking activities required to support the CNSC Power Reactor Site Preparation Licence and the

Darlington New Nuclear Project EA. The JRP Report on the EA had concluded that the project was not likely to cause significant adverse environmental effects, given mitigation. In April 2016, the Supreme Court of Canada dismissed the application for leave to appeal filed by the parties that had challenged the Darlington New Nuclear Project EA through a judicial review, concluding the litigation on the matter. The CNSC site preparation licence expires in 2022.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth. Inherent in this priority are three objectives:

- Increase revenue, reduce costs and achieve appropriate return
- Ensure availability of cost effective funding for operational needs, generation development projects and long-term obligations
- Pursue opportunities to expand the existing core business and capitalize on new growth paths.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In line with its commercial mandate, OPG is focused on increasing revenue and achieving an appropriate rate of return on the Shareholder's investment, while taking into account the impact on Ontario electricity customers.

In order to achieve the above objectives with respect to the regulated operations, OPG is focused on clearly demonstrating in its rate applications to the OEB that the costs required to operate and invest in the assets are reasonable and being prudently incurred, and should be fully recovered, and that the Shareholder's investment in these assets should earn an appropriate rate of return. OPG's existing base regulated prices, which came into effect in November 2014, were lower than requested by OPG based on its forecast costs. This has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

To improve the financial strength of the regulated operations going forward, OPG has been focused on providing appropriate, transparent evidence in support of its OEB rate requests, aligning organizational resources to support an effective rate application process, and continuing to identify opportunities for further efficiencies in the Company's cost structure. To date, OPG's focus on cost reduction and efficiency improvement initiatives has resulted in significant changes across the Company. This includes over $1 billion in cumulative savings realized across the Company since the beginning of 2011 from reductions in ongoing operations regular headcount through Business Transformation and other initiatives. OPG's cost and productivity improvement efforts are discussed further under the heading, *Operational Excellence*.

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. The OEB's decision on the application, including the effective date of the approved new regulated prices, is expected in the second half of 2017. Consistent with *Ontario Regulation 53/05*, OPG incorporated a nuclear rate smoothing proposal into its application, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impact on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the deemed capital structure applied to the regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent

debt. If approved, this would improve OPG's return on Shareholder's investment. Further details on OPG's rate application can be found under the heading, *Recent Developments* in the *Highlights* section.

For generation development projects that do not form a part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements prior to proceeding with the project. In line with this strategy, most of OPG's non-regulated operating facilities and assets under construction are subject to ESAs with the IESO. Based on these agreements, OPG expects its non-regulated generation operations, reported under the Contracted Generation Portfolio segment, to continue to provide a generally stable level of earnings and cash flow going forward.

OPG's capital structure currently reflects lower levels of debt than the deemed capital structure reflected in the Company's existing or proposed regulated prices. OPG is evaluating strategies to enhance Shareholder returns by optimizing the Company's capital structure through better alignment with the deemed capital structure, taking into account the overall financial strength of the Company and the potential impact on the Company's investment grade credit rating.

Ensure Availability of Cost Effective Funding

OPG actively monitors its funding requirements and forecasts availability of funds to ensure that it can meet the Company's operational needs, project commitments and long-term obligations. OPG utilizes multiple sources of funds, including funds from operations, commercial paper, securitization of assets, letters of credit, credit facilities, long-term corporate debt, and private placement project financing. The Company's financing strategy leverages the strength of its balance sheet to obtain cost effective long-term corporate debt. OPG also accesses the capital markets for private placement project financing, secured by the assets of the project, where the characteristics of the project support such financing. Maintaining an investment grade credit rating is critical to OPG's ability to access cost effective financing.

In April 2016, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2016, S&P Global Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

OPG intends to continue to access the capital markets, where appropriate, to obtain cost effective financing for future generation development projects. The Company also continues to evaluate arrangements that would appropriately support its financing needs and capital expenditure programs. OPG's liquidity and capital resources are discussed under the section, *Liquidity and Capital Resources.*

Pursue Business Growth Opportunities

OPG pursues commercially-based business growth opportunities through investments in its core generation portfolio, as well as emerging renewable energy project opportunities. OPG's growth strategy considers the Company's financial position and anticipated future changes in the generating fleet, including the eventual end of Pickering commercial operations. The growth strategy is also informed by industry, technological, environmental, social, and economic external factors. Growth opportunities are evaluated using financial and risk-based analyses as well as strategic considerations.

OPG's core business growth strategy focuses on the renewal and expansion of the Company's generation portfolio of nuclear, hydroelectric and thermal generating assets in Ontario, including the redevelopment and expansion of existing sites and potential new developments. The strategy leverages OPG's operating and project development expertise as well as the Company's existing diverse physical asset base. OPG considers acquisition opportunities as they arise, taking into account operating synergies, strategic benefits, financial returns and risk profile. OPG's current major generation development projects and asset life extension initiatives are discussed under the headings, *Operational Excellence* and *Project Excellence* in the *Core Business and Strategy* section.

OPG seeks to continue to expand beyond its core generation business through investments in innovation and emergent low-carbon technologies, including selective solar generation, energy storage, micro-grid, electric vehicle infrastructure and other development. OPG is also considering longer-term growth paths that include broader electricity sector opportunities, within and outside Ontario. Growth opportunities may be pursued in partnership with other commercial entities where appropriate synergies exist and are aligned with OPG's business objectives.

In March 2016, Nanticoke Solar LP was selected, through the first phase of the IESO's LRP program, to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. The partnership and the IESO executed a 20-year LRP contract in March 2016, which formalized the terms and conditions for the development and operation of the new solar facility. In September 2016, the Government of Ontario suspended the second phase of the LRP program, which does not impact the project.

From October 2016 to December 2016, the Government of Ontario conducted a consultation process to update its LTEP. OPG made a formal submission as part of the consultation as it relates to OPG's core generation business and growth opportunities. The Ontario Ministry of Energy has indicated that the development of the updated LTEP, scheduled to be published in 2017, will balance the principles of affordability, reliability, clean energy, community and Indigenous engagement, as well as conservation and demand management. OPG's business growth opportunities may be affected by the results of the 2017 LTEP.

Social Licence

As the largest, publicly-owned electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations. OPG's commitment to safety is discussed under the heading, *Workplace and Public Safety* in the *Core Business and Strategy* section.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish relationships with Indigenous communities based on a foundation of respect for their languages, customs, and political, social and cultural organizations. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, and other joint projects. Recent examples of partnerships include the Peter Sutherland Sr. GS in partnership with the Taykwa Tagamou Nation, the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River, and two recently completed shoreline remediation projects. The Whitesand First Nation, working closely with OPG, completed a project to remediate nearly two kilometers of shoreline in 2016, while the Long Lake #58 First Nation undertook the management of a five-year shoreline remediation project. OPG also has been engaging proactively with Indigenous communities regarding the Company's nuclear operations, including both regularly scheduled meetings and an outreach effort in connection with OPG's proposed L&ILW DGR and the re-licensing of the PWMF and the WWMF. In November 2016, OPG was recognized for its ongoing commitment to engaging local Indigenous communities with the CEA's 2016 Sustainable Electricity award for Leadership in External Collaboration and Partnerships.

OPG is committed to being an open, transparent, and accountable company. With operations across Ontario, OPG works to maintain public trust with stakeholders by engaging site communities, sharing information, and being transparent about performance. In addition, OPG's operations are subject to extensive regulatory oversight, with public participation, by the CNSC, the OEB, and other bodies.

As part of its commitment to environmental sustainability, OPG works with community partners to support regional ecosystems and biodiversity. In 2016, OPG continued efforts to protect and restore habitat, promote biodiversity education and awareness, and help the recovery of species at risk. In addition, OPG helps contributes to the well-being of its host communities through the Company's Corporate Citizenship Program (CCP), which supports

charitable and non-profit grassroots initiatives in the areas of environment, education, and community, which includes support for including Indigenous initiatives. In 2016, OPG's CCP provided support to over 850 initiatives, of which 87 were Indigenous.

Further details regarding OPG's commitment to sustainable development, including information regarding the Company's environmental, social and economic performance and initiatives, are provided in OPG's 2015 Sustainability Report available on the Company's website at www.opg.com.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of revenue requirement and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's application for new base regulated prices submitted to the OEB in May 2016 is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its May 2016 application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

Until the OEB's decision on OPG's application is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In large part, this is due to the expected year-over-year reduction in nuclear electricity generation resulting from the full year effect of the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined based on a production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision's issuance could have a significant impact on OPG's financial results during 2017. The application for new regulated prices is further discussed in the *Highlights* section under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. Combined with the expiry of rate riders in effect during 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment, as expected, OPG anticipates this to result in lower cash flow from operations and lower Adjusted FFO Interest Coverage ratio in 2017, compared to 2016. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements. In addition, the expected reduction in nuclear generation as a result of the planned outages at Darlington GS is expected to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Other factors that may impact the Enterprise TGC include potential hydroelectric generation losses due to surplus baseload generation conditions and planned capital expenditures.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, variance accounts include those related to the revenue impact of variability in water flows and SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Pursuant to the Settlement Agreement, these and all other applicable existing variance and deferral accounts have been approved to continue once new regulated prices take effect. Considering the impacts of these accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. **[MONITOR]**

OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to ESAs with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major development projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI, which, in the short term, can be volatile and cause fluctuations in the Company's income. This volatility has been partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account. OPG is exposed to rate of return risk for the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodologies for the Nuclear Liabilities.

As OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle liabilities per the most recently approved ONFA reference plan, the volatility of earnings on the Nuclear Segregated Funds reflected in net income is reduced when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at December 31, 2016, the Decommissioning Segregated Fund was overfunded by 21 percent, and the Used Fuel Segregated Fund was marginally overfunded by less than one percent, relative to the liabilities per the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future, which would increase earnings volatility. The 2017 ONFA Reference Plan is discussed in the *Highlights* section, under the heading *Recent Developments.* The accounting for the Nuclear Segregated Funds is discussed in the section *Critical Accounting Policies*, under the heading *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

KEY OPERATING AND FINANCIAL PERFORMANCE INDICATORS

OPG evaluates the performance of its generating stations using a number of key indicators. Key operating performance indicators aligned with corporate strategic imperatives are measures of production reliability, cost effectiveness, environmental performance, and safety performance. Certain of the measures used vary depending on the generating technology. The key financial performance indicators evaluate the Company's financial performance at the enterprise level.

In 2016, OPG adopted Enterprise TGC per MWh as an enterprise-wide measure of operational cost effectiveness. Concurrently, OPG adopted Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets and no longer reports Hydroelectric OM&A expense per MWh. The new performance measures, together with Nuclear TGC per MWh, provide the Company with a single, consistent method of evaluating cost effectiveness across the organization.

Enterprise TGC, Nuclear TGC, Hydroelectric TGC, ROE Excluding AOCI, and the FFO Adjusted Interest Coverage ratio discussed below are not measurements in accordance with US GAAP. They should not be considered as alternative measures to net income or any other measure of performance under US GAAP. However, OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the

Company's strategic imperatives and related objectives. The definition and calculation of Enterprise TGC per MWh, Nuclear TGC per MWh, Hydroelectric TGC per MWh, ROE Excluding AOCI and FFO Adjusted Interest Coverage are found in the section, *Supplementary Non-GAAP Financial Measures*.

Enterprise Total Generating Cost per MWh

Enterprise TGC per MWh is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Nuclear Total Generating Cost per MWh

Nuclear TGC per MWh is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts and expenses ancillary to OPG's nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Hydroelectric Total Generating Cost per MWh

Hydroelectric TGC per MWh is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Nuclear Unit Capability Factor

OPG's nuclear stations are baseload facilities and are not designed for fluctuating production levels to meet peaking demand. The nuclear Unit Capability Factor is a key measure of nuclear station performance. It measures the amount of energy that the unit(s) generated over a period of time, adjusted for externally imposed constraints such as transmission or demand limitations, as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. Capability factors are primarily affected by planned and unplanned outages. By industry definition, capability factors exclude production losses beyond plant management's control, such as grid-related unavailability. The nuclear Unit Capability Factor also excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS is excluded from the measure effective October 15, 2016, when the unit was taken offline as part of the Darlington Refurbishment project.

Hydroelectric Availability

OPG's hydroelectric stations operate as baseload, intermediate, or peaking stations. Hydroelectric Availability is a measure of the reliability of a hydroelectric generating unit. It represents the percentage of time the generating unit is capable of providing service, whether or not it is actually generating electricity, compared to the total time for the respective period.

Thermal Equivalent Forced Outage Rate

Equivalent Forced Outage Rate (EFOR) is an index of the reliability of a generating unit at OPG's thermal stations. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its objective to deliver value to the Shareholder. ROE Excluding AOCI is defined as net income attributable to the Shareholder for the period divided by average equity attributable to the Shareholder excluding AOCI for that period, and is measured over a period of 12 months.

Funds from Operations Adjusted Interest Coverage

The FFO Adjusted Interest Coverage ratio is an indicator of OPG's ability to meet interest obligations from operating cash flow and is consistent with the Company's objective of ensuring availability of cost effective funding. The FFO Adjusted Interest Coverage ratio is defined as FFO before interest divided by adjusted interest expense, and is measured over a period of 12 months.

Other Key Indicators

In addition to production reliability, cost effectiveness, and financial performance indicators, OPG has identified certain environmental and safety performance measures. These measures are discussed under the section, *Core Business, Strategy and Outlook*.

BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary

services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power and other facilities, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to the passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel L&ILW, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Power lease arrangement and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because OPG's costs associated with the Nuclear Liabilities have been included by the OEB in the determination of regulated prices for production from the Pickering and Darlington nuclear generating stations, in accordance with the methodologies applied since the OEB's 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. Brighton Beach operates under an energy conversion agreement between Brighton Beach and Shell Energy North America (Canada) Inc, and the PEC station is operated under the terms of an Accelerated Clean Energy Supply contract with the IESO. OPG's share of the in-service

generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of trading activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the United States (US) market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets, with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and Nanticoke generating stations' sites.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**3,481**	3,245
Fuel expense	**315**	301
Gross margin	**3,166**	2,944
Operations, maintenance and administration	**2,210**	2,196
Depreciation and amortization	**925**	717
Property taxes	**26**	26
Income before other loss, interest, and income taxes	**5**	5
Other loss	**1**	3
Income before interest and income taxes	**4**	2

Income before interest and income taxes from the segment increased to $4 million in 2016, compared to $2 million in 2015. The improvement in earnings of $2 million was primarily due to higher electricity generation in 2016, compared to 2015, which increased revenue from the nuclear base regulated price. The increase in revenue was largely offset by higher OM&A expenses, higher fuel expense, and higher depreciation and amortization expense, excluding amortization expense related to regulatory balances, in 2016, compared to 2015.

Higher nuclear production of 1.1 TWh in 2016, compared to 2015, was primarily due to the planned four-unit VBO in 2015 and a decrease in the number of unplanned outages at the Darlington GS in 2016. This was partially offset by the impact of the increased number of unplanned outage days at the Pickering GS in 2016, and the removal from service of Unit 2 of the Darlington GS in October 2016 as part of the Darlington Refurbishment project.

The increase in OM&A expenses of $14 million in 2016 reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium prices and

higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million primarily due to new assets in service in 2016.

A decrease in non-electricity generation revenue in 2016, compared to 2015, also partially offset the increase in segment earnings. The lower non-electricity generation revenue was mainly attributable to lower detritiation services revenue and lower isotope sales in 2016 and an insurance recovery recognized in 2015.

A higher OEB-authorized rate rider of $10.84/MWh effective from July 1, 2015 to the end of 2016 contributed to the increase in segment revenue in 2016, compared to 2015. In the first half of 2015, OPG received a rate rider of $1.33/MWh. As the rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this increase in revenue was largely offset by an increase in amortization expense related to the regulatory balances.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2016 and 2015 were as follows:

	2016	2015
Unit Capability Factor *(%)* [1]		
Darlington GS	**89.5**	76.9
Pickering GS	**75.2**	79.4

[1] The nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS increased in 2016, compared to 2015, primarily due to the four-unit VBO completed during 2015. In addition, a lower number of unplanned outage days at the Darlington GS during 2016, compared to 2015, also contributed to the improvement in the Unit Capability Factor.

The decrease in the Unit Capability Factor at the Pickering GS in 2016, compared to 2015, was primarily due to a higher number of unplanned outage days at the station in 2016, as a result of emergent discovery work during planned outages.

The definition of the nuclear Unit Capability Factor is found under the heading, *Key Operating and Financial Performance Indicators.*

Regulated – Nuclear Waste Management Segment

	2016	2015
Revenue	**138**	122
Operations, maintenance and administration	**146**	132
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**912**	880
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Loss before interest and income taxes	**(174)**	(186)

Earnings from the segment improved by $12 million in 2016 compared to 2015. The improvement was primarily due to higher earnings from the Nuclear Segregated Funds, partially offset by an increase in accretion expense on the Nuclear Liabilities.

The improvement in Nuclear Segregated Funds earnings was primarily due to an increase in the Used Fuel Segregated Fund earnings due to higher CPI-adjusted rate of return guaranteed by the Province for funding related to the initial 2.23 million used fuel bundles. Pursuant to the ONFA, the guaranteed annual rate of return for that portion of the Used Fuel Segregated Fund is set at 3.25 percent plus the change in the Ontario CPI. This increase in

Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the 2017 ONFA Reference Plan. The 2017 ONFA Reference Plan was approved by the Province in December 2016, and is discussed in the section, *Highlights* under the heading, *Recent Developments*. The accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section. The Nuclear Segregated Funds earnings are reported net of the impact of the Bruce Lease Net Revenue Variance Account.

The higher accretion expense on the Nuclear Liabilities during 2016, compared to 2015, reflected an upward adjustment in the liabilities recognized in December 2015 related to the revised accounting assumptions for the estimated useful lives of OPG's nuclear generating stations. The increased accretion expense was partially offset by the impact of the Bruce Lease Net Revenues Variance Account. The changes in the assumed estimated useful lives of the nuclear stations and the related adjustment to Nuclear Liabilities are discussed further in the section, *Balance Sheet Highlights* under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account*.

Regulated – Hydroelectric Segment

(millions of dollars)	**2016**	**2015**
Revenue [1]	**1,527**	1,619
Fuel expense	**353**	345
Gross margin	**1,174**	1,274
Operations, maintenance and administration	**325**	340
Depreciation and amortization	**225**	282
Property tax	**1**	1
Income before other (income) loss, interest and income taxes	**623**	651
Other (income) loss	**(19)**	3
Income before interest and income taxes	**642**	648

[1] During 2016 and 2015, the Regulated – Hydroelectric segment revenue included incentive payments of $14 million and $26 million, respectively, related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $6 million in 2016, compared to 2015, was primarily due to lower hydroelectric incentive mechanism payments and the income impact of OEB-approved variance accounts. The lower payments under the hydroelectric incentive mechanism were primarily due to the reservoir refurbishment outage at the Sir Adam Beck Pump GS during 2016. The decrease in segment income was partially offset by a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to OPG's December 2014 motion. The decrease in segment income also was partially offset by a year-over-year decrease in OM&A expenses, primarily due to higher costs incurred in 2015 for shoreline remediation work.

The decrease in segment revenues due to the lower OEB-authorized rate rider in 2016, compared to 2015, was largely offset by a corresponding decrease in amortization expense related to the regulatory balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	2016	**2015**
Hydroelectric Availability *(%)*	**89.0**	91.2

The Hydroelectric Availability decreased during 2016, compared to 2015, primarily due to the planned reservoir refurbishment project at the Sir Adam Beck Pump GS. The project was completed in February 2017.

The definition of Hydroelectric Availability is found under the heading, *Key Operating and Financial Performance Indicators*.

Contracted Generation Portfolio Segment

(millions of dollars)	2016	2015
Revenue	**573**	535
Fuel expense	**58**	39
Gross margin	**515**	496
Operations, maintenance and administration	**178**	185
Depreciation and amortization	**75**	72
Accretion on fixed asset removal liabilities	**9**	8
Property taxes	**7**	7
Income from investments subject to significant influence	**(37)**	(39)
Income before other loss, interest, and income taxes	**283**	263
Other loss	**1**	1
Income before interest and income taxes	**282**	262

Income before interest and income taxes increased by $20 million during 2016, compared to 2015. The increase primarily resulted from the higher gross margin, due to increased revenues from the Lower Mattagami River generating stations, the Lennox GS, and the Atikokan GS. Higher revenue from the Lennox GS was primarily due to increased market demand. The increase in revenue from the Atikokan GS reflected the support provided to the electricity system in northwestern Ontario as a result of an outage at a local transformer station from late July 2016 to early September 2016. The year-over-year increase in segment revenue was also due to a provision made in 2015 related to an IESO audit.

The Hydroelectric Availability and the Thermal EFOR for the Contracted Generation Portfolio segment were as follows:

	2016	2015
Hydroelectric Availability *(%)*	**77.3**	88.6
Thermal EFOR *(%)*	**1.6**	11.2

Lower Hydroelectric Availability during 2016, compared to 2015, was primarily due to a higher number of planned outage days at the Kipling and Harmon generating stations on the Lower Mattagami River. During 2016, headgate replacements were made at certain units of the Kipling GS and Harmon GS. In addition, a runner upgrade and rehabilitation work was completed at Unit 2 of the Harmon GS. The lower thermal EFOR in 2016, compared to 2015, was primarily due to an outage in 2015 to perform repair work at the Lennox GS.

The definitions of Hydroelectric Availability and Thermal EFOR are found under the heading, *Key Operating and Financial Performance Indicators*.

Services, Trading, and Other Non-Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**68**	73
Fuel expense	**1**	2
Gross margin	**67**	71
Operations, maintenance and administration	**22**	48
Depreciation and amortization	**32**	29
Accretion on fixed asset removal liabilities	**8**	7
Property taxes	**12**	11
Restructuring	**6**	6
Loss before other loss, interest, and income taxes	**(13)**	(30)
Other loss	**-**	7
Loss before interest and income taxes	**(13)**	(37)

Segment earnings improved by $24 million in 2016 compared to 2015. The losses incurred by the segment in 2015 and 2016 largely reflect the costs associated with the Nanticoke and Lambton generating stations prior to OPG's decisions, in 2015 and November 2016, respectively, to proceed with the stations' decommissioning. These losses are partially offset by OPG's trading activities.

The improvement in earnings in 2016 primarily reflected higher OM&A expenses in 2015, including those incurred related to the Nanticoke GS prior to OPG's decision to proceed with the station's decommissioning, and a provision made in 2015 related to an IESO audit. The year-over-year decrease in OM&A expenses also reflected reduced work programs at the Lambton GS during 2016 due to lower staffing levels used to preserve the station. The preservation activities were discontinued after the announcement to decommission the station. Expenditures incurred in connection with decommissioning activities for the Nanticoke and Lambton generating stations are charged against a previously established decommissioning provision.

During each of 2016 and 2015, OPG recorded a charge against earnings to adjust the scrap value estimates for the Lambton GS. In 2016, this adjustment was offset by dividend income earned from OPG's investment in Hydro One shares, which contributed to the year-over-year improvement in earnings.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies; to undertake major projects; to fund long-term obligations such as contributions to the pension fund; to make payments under the OPEB plans; to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds; and to service and repay long-term debt.

Changes in cash and cash equivalents for 2016 and 2015 are as follows:

(millions of dollars)	**2016**	**2015**
Cash and cash equivalents, beginning of period	**464**	610
Cash flow provided by operating activities	**1,705**	1,465
Cash flow used in investing activities	**(1,807)**	(1,553)
Cash flow used in financing activities	**(176)**	(58)
Net decrease	**(278)**	(146)
Cash and cash equivalents, end of period	**186**	464

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details under the heading, *Overview of Results* in the section, *Highlights*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities in 2016 was $1,807 million, compared to $1,553 million in 2015. The increase was primarily due to higher expenditures on the Darlington Refurbishment project as it transitioned to execution phase, and the acquisition of nine million common shares of Hydro One in April 2016. The increase in cash flow used in investing activities in 2016, compared to 2015, was partially offset by the investment of proceeds from a long-term debt issuance in support of the Peter Sutherland Sr. GS project into a structured deposit note in 2015, and the subsequent receipt of proceeds from this investment on staggered maturity dates throughout 2016. The final maturity date of the deposit note is in April 2017. The acquisition of the Hydro One shares is discussed under the heading *Recent Developments* in the *Highlights* section, as well as in Note 3 of the Company's 2016 audited consolidated financial statements.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, sustaining capital investments across the generating fleet, and hydroelectric development projects including the expansion of the Ranney Falls GS and the completion of Peter Sutherland Sr. GS.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended the expiry date of both tranches from May 2020 to May 2021. As at December 31, 2016, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this

agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plan.

As at December 31, 2016, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As of December 31, 2016, there were outstanding borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

As at December 31, 2016, OPG's long-term debt outstanding was $5,534 million, including $1,103 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes is x.xx percent and x.xx percent, respectively. **[MONITOR]**

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, were as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Other Commitments

Collective Agreements

As of December 31, 2016, OPG had approximately 9,270 regular employees. Most of OPG's regular employees are represented by two unions:

- **The PWU** – This union represents approximately 5,070 OPG employees or approximately 55 percent of OPG's regular workforce as at December 31, 2016. Union membership includes operators, technicians, skilled trades, clerical, and security personnel. The current collective agreement between OPG and the PWU has a three-year term, expiring on March 31, 2018.
- **The Society** – This union represents approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce as at December 31, 2016. Union membership includes supervisors, professional engineers, scientists, and other professionals. The current collective agreement between OPG and The Society has a three-year term, expiring on December 31, 2018.

In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights at OPG facilities. These bargaining rights are established either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. All of these collective agreements currently have multi-year terms, expiring on April 30, 2020.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's audited consolidated financial position using selected balance sheet data as at December 31:

(millions of dollars)	**2016**	**2015**
Property, plant and equipment – net	**20,002**	20,595
The decrease was primarily due to a reduction in asset retirement costs of approximately $1,570 million in 2016 as a result of a reduction in the estimates for the Nuclear Liabilities to reflect the 2017 ONFA Reference Plan cost estimates. The decrease was partially offset by capital expenditures on the Darlington Refurbishment and other projects, net of depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**15,984**	15,136
The increase was primarily due to earnings on the Nuclear Segregated Funds and contributions to the Used Fuel Segregated Fund, partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded to the lower underlying obligations reflected in the updated ONFA reference plan and reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Available-for-sale securities	**212**	-
The balance as at December 31, 2016 represents the fair value of the nine million Hydro One shares acquired in April 2016, as discussed under the heading *Recent Developments* in the *Highlights* Section.		
Regulatory assets and liabilities – net *(current and non-current portions)*	**5,545**	5,808
The decrease was primarily due to the amortization of regulatory balances recovered through rate riders in effect during 2016 and an increase in regulatory liabilities resulting from a change in the estimated useful lives of OPG's nuclear stations at the end of 2015, as discussed under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account* below. This was partially offset by amounts deferred in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and other variance and deferral accounts during the year.		
Short-term debt	**2**	225
The decrease was due to the maturity of external commercial paper outstanding under LME's commercial paper program.		
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169
The decrease was primarily due to a reduction of approximately $1,570 million in the estimates for the Nuclear Liabilities at the end of 2016 to reflect the 2017 ONFA Reference Plan cost estimates, partially offset by accretion expense during the year.		
Pension liabilities	**3,012**	2,597
The increase was primarily due to the re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as discussed in the section, *Changes In Accounting Policies* under the heading, *Pension and Other Post-Employment Benefits.*		

Impact of Changes in Station End-of-Life Dates Deferral Account

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense arising from the changes in the estimated useful lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG has recognized a regulatory liability of $71 million related to the balance in the deferral account. Together with the Bruce Lease Net Revenues Variance Account discussed below, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account offset the decrease in depreciation expense in 2016, compared to 2015, as a result of the changes in estimated useful lives of OPG's nuclear stations effective December 31, 2015.

The changes to the estimated useful lives of OPG's nuclear generating station effective December 31, 2015, for accounting purposes, were as follows:

- the average service lives of the Bruce A GS and Bruce B GS were extended from 2048 to 2052 and from 2019 to 2061, respectively, to reflect the estimated end-of-life dates reflected in the updated refurbishment agreement between the IESO and Bruce Power, which was announced in December 2015
- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015
- the average service life of the Pickering GS was extended by less than one year.

To reflect the above changes, OPG recognized a total increase of $2,330 million in the Nuclear Liabilities and a corresponding increase in the related asset retirement costs, effective December 31, 2015. These increases were primarily due to the changes in the estimated useful life of the Bruce B GS. The nuclear asset retirement obligations (ARO) associated with the Pickering GS and Darlington GS was impacted by the changes to the Bruce nuclear generating stations' useful lives because the costs of the fleet-wide waste management programs are shared by all of OPG's nuclear stations based on used nuclear fuel and waste volumes. Consistent with the changes in the end-of-life dates for the Bruce nuclear generating stations and the December 2015 amendments to the Bruce Lease in connection with the Province's endorsement of Bruce Power's refurbishment plans, the term of the Bruce Lease for accounting purposes also was extended, in line with the refurbishment plans for these stations.

The impact of the above changes on OPG's revenues and costs related to the Bruce nuclear generating stations effective January 1, 2016 is recorded in the Bruce Lease Net Revenues Variance Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's consolidated financial statements or are recorded in the Company's consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

Guarantees

As part of normal business, OPG and certain of its subsidiaries and joint ventures enter into various agreements to provide financial or performance assurance to third parties. Such agreements include guarantees, standby Letters of Credit and surety bonds. For more details on OPG's guarantees, refer to Note 15 of OPG's audited consolidated financial statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies, including the impact of major recent accounting pronouncements, are outlined in Note 3 of the audited consolidated financial statements. Certain of these policies are recognized as critical accounting policies by virtue of the subjective and complex judgments and estimates required around matters that are inherently uncertain and could result in materially different amounts being reported under different conditions or assumptions. The critical accounting policies and estimates that affect OPG's US GAAP consolidated financial statements are highlighted below.

Exemptive Relief for Reporting under US GAAP

As required by *Ontario Regulation 395/11,* as amended, under the FAA, OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG has also received exemptive relief from the OSC from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board (IASB) for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

As a result of OPG's 2011 decision to adopt US GAAP, as required by the FAA regulation, OPG's earlier plan to convert to IFRS, effective January 1, 2012, was discontinued. OPG had substantively completed its IFRS conversion project, which included separate diagnostic, development, and implementation phases, when it suspended the project. If a future transition to IFRS for the purposes of OPG's consolidated financial statements is required, conversion work can be effectively restarted with sufficient lead time to evaluate and conclude on changes that occurred subsequent to the decision to suspend the project. OPG continues to monitor the IASB's current standard-setting project related to entities with rate-regulated activities and is evaluating alternatives with respect to the Company's future financial reporting.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the OEB.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998*, the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the

future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05.* The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures for its pension and OPEB plans. It is the Company's position that this decision by the OEB did not constitute a change in the basis of OPG's rate recovery of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices, or in an OEB-authorized deferral or variance account for future recovery, as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account to record the difference between OPG's actual pension and OPEB costs for the regulated business determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million, which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the above noted consultation process.

See Notes 3, 5, 8, 9, and 11 of OPG's 2016 audited consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or payable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its rate regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and in respect of investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

The Company has recognized net deferred income tax liabilities of $829 million as at December 31, 2016 (2015 – $880 million).

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset, based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

The accounting estimates related to end-of-life assumptions for PP&E and intangible assets require significant management judgment, including consideration of various operating, technological, and other factors. OPG reviews the estimated useful lives for its PP&E and intangible assets on a regular basis.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

Various assumptions and accounting estimates are required to determine whether an impairment loss should be recognized and, if so, the value of such loss. This includes factors such as short-term and long-term forecasts of prices for electricity generation under applicable revenue mechanisms, the demand for and supply of electricity, inflation, fuel prices, capital and operating expenditures, and estimated useful service lives of the assets.

The carrying value of investments accounted for under the equity method are reviewed for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Segregated Funds based on approved ONFA reference plans. Costs for L&ILW management and used fuel storage incurred during station operation are not funded by the Nuclear Segregated Funds. They are funded through the Company's operating cash flow or other sources of liquidity.

Decommissioning Segregated Fund

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the earnings it recognizes in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded.

The amount due to the Province in respect of the Decommissioning Segregated Fund could be reduced in subsequent periods in the event that the fund earns less than is target rate of return, a new ONFA reference plan is approved with a higher underlying liability, or the amount of the underfunding in the Used Fuel Segregated Fund increases.

When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets.

Used Fuel Segregated Fund

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined in the ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return on the Used Fuel Segregated Fund and the actual market return determined based on the fair value of the fund's assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount OPG would pay to, or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions attributed to the used fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province has the right at any time to access the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. Accordingly, when the Used Fuel Segregated Fund is overfunded, OPG limits the earnings it recognizes int he consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the underlying liability based on the most recently approved ONFA reference plan. In accordance with the ONFA, OPG does not have a right to direct any amounts from the Used Fuel Segregated Fund to the Decommissioning Segregated Fund.

Provincial Guarantee

In accordance with the *Nuclear Safety and Control Act* (Canada), the CNSC requires OPG to have sufficient funds available to discharge the current nuclear waste management and nuclear decommissioning liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the CNSC, on behalf of OPG, for any shortfall between the CNSC financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee equal to 0.5 percent of the amount of the Provincial Guarantee. The

current value of the Provincial Guarantee of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016. The CNSC process requires the CNSC financial guarantee requirement to be updated once every five years. OPG is currently updating the CNSC financial quarantee requirement for the 2018-2022 period and expects to file it with the CNSC in the first half of 2017. **[MONITOR]**

Pension and Other Post-Employment Benefits

The determination of OPG's pension and OPEB costs and obligations is based on accounting policies and assumptions, as discussed below.

Accounting Policy

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor) for each plan is amortized over the expected average remaining service life of the employees covered by the plan, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on its consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation, on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net

of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as amortization components of pension and OPRB costs as described above.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Accounting Assumptions

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost, and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses.

The discount rates, which are representative of the AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. In 2016 and prior years, benefit costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. A lower discount rate increases the benefit obligations and increases benefit costs. The weighted-average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

Starting in 2017, OPG expects to change the method used to estimate the current service and interest cost components of pension and OPEB costs. OPG expects to adopt a full yield curve approach in the estimation of these components of pension and OPEB cost by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Making this change will improve the correlation between projected benefit cash flows and the corresponding yield curve spot rates, and provide a more precise measurement of service and interest costs. This change does not affect the measurement of the total benefit obligations, as the change in the current service and interest components of the costs from the previous method will be offset by a corresponding change in the actuarial (gain) loss recorded in AOCI. OPG will account for this change as a change in estimate, prospectively starting in 2017. With an upward sloping yield curve and the pattern of OPG's estimated future benefit cash flows, the adoption of the full yield curve approach is expected to materially lower OPG's current service and interest cost components, reducing the overall pension and OPEB costs in the initial years following adoption.

The expected rate of return on plan assets is determined based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined under the heading, *Contractual and Commercial Commitments,* in the section *Liquidity and Capital Resources*. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation and assumptions as at December 31, 2016. As part of the valuation, the plans' demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The deficit for the registered pension plan, for accounting purposes, increased from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

Asset Retirement Obligation

OPG recognized ARO for fixed asset removal and nuclear waste management liabilities, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The ARO is comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating plant facilities and other facilities. Costs are expected to be incurred for activities such as preparation for safe storage and safe storage of nuclear stations, dismantlement, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel bundles and L&ILW material. The liabilities associated with the decommissioning of the nuclear generating stations and the long-term management of used nuclear fuel comprise the most significant amounts of the total obligation.

The nuclear decommissioning liability includes the estimated costs of closing the nuclear stations after the end of their service lives, which includes preparation and placement of the stations into a safe state condition followed by an assumed 30-year safe store period prior to station dismantlement and site restoration. Activities associated with the placement of stations into a safe state condition include de-fueling and de-watering of the nuclear reactors. Under the terms of the lease agreement with Bruce Power and as required by the CNSC, OPG is responsible for the nuclear waste management and nuclear decommissioning obligations associated with the Bruce nuclear generating stations. Pursuant to the lease agreement, Bruce Power must return the two Bruce stations to OPG together, in a de-fueled and de-watered state. These de-watering and de-fueling costs are not part of OPG's ARO.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the obligation for these costs include an L&ILW DGR facility to be constructed and operated by OPG, as discussed under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section. To estimate the liability for nuclear used fuel management, OPG has adopted an approach consistent with the Adaptive Phased Management concept approved by the Government of

Canada, which assumes a deep geologic repository or the long-term management of Canada's nuclear used fuel waste. The NWMO is responsible for the design and implementation of Canada's plan for the long-term management of used nuclear fuel.

The following costs are recognized as a liability on OPG's consolidated balance sheets:

- the present value of the costs of decommissioning the nuclear and thermal production facilities and other facilities after the end of their useful lives
- the present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed lives of the stations
- the present value of the variable cost portion of nuclear waste management programs taking into account waste volumes generated to date.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs including construction of assumed waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, decommissioning strategy, and the technology employed may result in significant changes to the value of the accrued liabilities. With programs of such long-term duration and the evolving technology to handle nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the costs for these programs. These costs may increase or decrease over time.

The estimates for the Nuclear Liabilities are reviewed on an ongoing basis as part of the overall nuclear waste management program. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically, at least once every five years, in line with the required ONFA reference plan update process. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of a net increase in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of a net decrease in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets.

The most recent comprehensive update of the baseline cost estimates for the Nuclear Liabilities is contained in the approved 2017 ONFA Reference Plan, and was completed in the fourth quarter of 2016. The update resulted in a decrease of approximately $1,570 million in the Nuclear Liabilities as at December 31, 2016, which was determined using a discount rate of 4.95 percent. The overall reduction in OPG's nuclear waste management and nuclear decommissioning obligations was due mainly to a decrease in cost estimates to reflect a proposed new, more cost effective container design and engineered barrier concept to house used nuclear fuel for disposal, updated cost escalation rates for all programs, and a later expected in-service date for the NWMO's planned deep geologic repository for the long-term permanent disposal of Canada's used nuclear fuel. These decreases were partly offset by higher cost estimates related to decommissioning activities, primarily due to an improved definition of work required during the preparation for safe storage after station shutdown and a higher volume of waste expected to be generated during decommissioning. Cost escalation rates used to estimate future undiscounted cash flows reflected in the December 31, 2016 adjustment to the Nuclear Liabilities ranged from 2.0 percent to 3.4 percent.

Commented [AJ1]: Was the discount rate not 5.15%

The December 31, 2016 adjustment to the Nuclear Liabilities and associated asset retirement costs did not impact OPG's income for 2016. The estimated impact of this adjustment on 2017 expenses, before the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account, includes a decrease to depreciation expense of approximately $8 million, a decrease to accretion expense of approximately $78 million, and a combined decrease in used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as they are expected to be largely offset by

the OEB approved variance and deferral accounts, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to Ontario Regulation 53/05. It records the revenue requirement impact associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years.

The liability for nuclear fixed asset removal and nuclear waste management on a present value basis as at December 31, 2016 was $19,103 million (2015 – $19,792 million). As at December 31, 2016, the undiscounted cash flows of expenditures for OPG's Nuclear Liabilities in 2016 dollars are as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Expenditures for nuclear fixed asset removal and nuclear waste management [1]	354	360	386	429	465	39,296	41,290

[1] The majority of the expenditures are expected to be reimbursed by the Nuclear Segregated Funds established by the ONFA. Any contributions required under the ONFA are not included in these undiscounted cash flows. Accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The liability for non-nuclear fixed asset removal was $381 million as at December 31, 2016 (2015 – $377 million). This liability primarily represents the present value of estimated costs of decommissioning OPG's thermal generating stations at the end of their service lives. The liability reflects third party cost estimates based on an in-depth review of plant sites and an assessment of required clean-up and restoration activities. For the purpose of measuring the liability, asset removal activities are assumed to take place approximately over the next one to 15 years. The amount of undiscounted estimated future cash flows associated with the thermal liabilities is approximately $500 million. With the decisions taken in 2015 and 2016 to decommission the Nanticoke and Lambton generating stations, respectively, OPG expects to review the decommissioning liability estimates for these sites. Any adjustments as a result of a change in the liability estimates for these stations will be recorded in net income in the period of change.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model.

The fair value of financial assets and liabilities for which quoted prices in an active market are available, including exchange traded derivatives and other financial instruments, are determined directly from those quoted market prices.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the

use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that may affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If the valuation technique or model is not based on observable market data, specific valuation techniques are used, primarily based on recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

OPG's use of financial instruments exposes the Company to certain risks, including credit risk, foreign currency risk and interest rate risk. A discussion of how OPG manages these and other risks is found under the section, *Risk Management*.

Variable Interest Entities

OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated. As at December 31, 2016, PSS Generating Station Limited Partnership was classified as a variable interest entity because it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership. Refer to Note 3 of OPG's 2016 audited consolidated financial statements for further details.

Recent Accounting Pronouncements

The recent US GAAP accounting pronouncements related to revenue recognition, leases, and financial instruments are described below. Other recent accounting pronouncements applicable to OPG are outlined in Note 3 of the audited consolidated financial statements.

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact that the new standard will have on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

RISK MANAGEMENT

Overview

OPG faces various risks that could significantly impact the achievement of its strategic imperatives. The objective of risk management is to identify and mitigate these risks, and to preserve and increase the value of the Shareholder's investment in the Company.

Risk Governance Structure

The Audit and Risk Committee of OPG's Board of Directors assists the Board of Directors in fulfilling its oversight responsibilities for matters relating to the identification and management of the Company's key business risks. An Executive Risk Committee (ERC), which is comprised of business unit leaders and the Chief Risk & Audit Executive (CRAE), assists the Audit and Risk Committee in fulfilling its governance and oversight responsibilities related to OPG's risk management activities.

Risk Management Activities

OPG faces a wide array of risks as a result of its business operations. OPG's Enterprise Risk Management (ERM) framework is designed to identify and evaluate risks on the basis of their potential impact on the Company's capacity to achieve specific strategic imperatives and business plan objectives.

A centralized ERM group led by the CRAE coordinates the quarterly risk management reporting activities. The activities begin with business units identifying, reviewing, and assessing risks that could prevent achievement of their objectives. The ERM group reviews, validates, and consolidates this information and prioritizes risks based on their potential to impact OPG's overall strategic imperatives. The ERM group also assesses external developments that may have implications on the corporate risk profile and facilitates the identification and assessment of emerging risks. The ERC then reviews and validates significant changes in the top risks that may impact OPG's ability to achieve its strategic imperatives, as well as any emerging risks that have been identified. The results of the ERC review and significant changes in the enterprise risk profile are reviewed by the Audit and Risk Committee.

In order to maintain an appropriate balance between risk and return, senior management sets limits for the market risk, credit risk and energy trading activities of the Company. Senior management also establishes risk management policies and processes to ensure compliance with such limits.

The key risks to OPG's strategic imperatives are briefly described below.

Risks to Achieving Operational Excellence

OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance.

Operational risks are the risks inherent in the operation of electricity generating facilities. These risks can lead to interruptions in the operations of generating stations affecting future production. The operational risks of a station are generally a function of its age, human performance, and the technology used.

Nuclear Generating Stations

Operating an aging nuclear fleet exposes OPG to unique risks such as unplanned outages, an increase in operating costs, and risks associated with nuclear waste management operations.

Operating nuclear stations exposes OPG to unique risks, such as greater-than-anticipated deterioration of station components and systems, risks associated with the nuclear industry, supply chain and vendor quality, risks related to the handling, storage and disposal of nuclear waste, and the risk of a nuclear accident. The primary implications of these risks include additional safety requirements, potentially lower than expected generation and revenues, and potentially higher operating costs.

The uncertainty associated with production by OPG's Canadian Deuterium Uranium nuclear generating units is primarily driven by the condition of station components and systems, which are all subject to the effects of aging. Fuel channels are expected to be the most life-limiting component affecting station end-of-life. Another significant factor identified to date includes degradation of primary heat transport pump motors at the Darlington GS. Additionally, there are fuel handling performance challenges at both the Darlington GS and Pickering GS. To respond to these risks, OPG continues to monitor performance, implement extensive inspection and maintenance programs, identify corrective actions and undertake projects required to operate reliably and within design parameters.

Deterioration of station components may progress in an unexpected manner, resulting in the need to increase monitoring, conduct extensive repairs, or undertake additional remedial measures. To maintain a safe operating margin, a nuclear unit could be derated resulting in reduced generation. When an unexpected condition first appears, a specific monitoring program is established. The primary impact of these conditions on OPG is an increase in the long-term cost of operations. The associated mitigation may create additional outage work, increasing the number of outages or extending planned outages.

Pickering Extended Operations to 2024

In January 2016, the Province of Ontario announced its approval of OPG's plan to pursue the continued safe and reliable operation of the Pickering GS to 2024. Under OPG's plan, all six operating units at the Pickering GS would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The current operating licence for the Pickering GS, which expires in August 2018, was issued in 2013 assuming that the station would shut down in 2020.

Inability to achieve Pickering extended operations as planned would result in a reduction of OPG's future generation revenue and cash flows and lead to the advancement of shutdown and station decommissioning expenditures.

Risk factors for continued operation of the Pickering units include the discovery of unexpected conditions, equipment failures, the state of critical plant components that are reaching end-of-life, and a requirement for significant plant modifications. To mitigate these risks, OPG continues to undertake a number of activities, including the following:

- work to confirm achievability of fuel channel life necessary to enable extended operations
- component condition assessments to identify the work required to support the extended operation of the station
- modification of the operating and maintenance strategy to support continued operation of the station.

Over the remaining lifespan of the station, risks such as performance of the fuel handling system, challenges with parts procurement, and a shortage of qualified human resources may challenge operational excellence at the Pickering GS. OPG is addressing these risks by taking appropriate actions, including undertaking fuel handling reliability improvements, equipment modifications and targeted investments in plant systems and components, supply chain initiatives, and developing workforce planning and resourcing strategies.

Nuclear Waste Management

The process of generating electricity by nuclear generating stations produces nuclear waste. As required by the CNSC, OPG is accountable for the management of used fuel and L&ILW, and decommissioning of its nuclear stations and waste management facilities, including the stations on lease to Bruce Power. Currently, there are no licenced facilities in Canada for the permanent disposal of nuclear used fuel or L&ILW. The risks to OPG's proposed L&ILW DGR for the safe long-term management of L&ILW are discussed below, under the heading, *Deep Geologic Repository for Low and Intermediate Level Waste* in the section *Risks to Achieving Project Excellence*.

The NWMO has developed a process for moving forward with Adaptive Phased Management as the long-term solution for Canada's nuclear fuel waste. The Adaptive Phased Management plan contemplates the eventual long-term permanent disposal of radioactive nuclear fuel waste in a deep geologic repository. The NWMO is in the process of undertaking a multi-year site selection process for the used fuel deep geologic repository.

In the interim, OPG is storing and managing L&ILW at the WWMF site and used fuel at its nuclear generating station sites.

Nuclear Regulatory Requirements

The uncertainty associated with nuclear regulatory requirements is primarily driven by plant aging, changes to technical codes, and challenges raised by the public at regulatory hearings, particularly in the areas of safety, environment and emergency preparedness. Addressing these requirements could add to the cost of operations, and in some instances, may result in a reduction or elimination of the productive capacity of a station, earlier than planned replacement of a station component or additional requirements for waste management. Additionally, the operations of nuclear stations are often directly impacted by circumstances or events that occur at other nuclear stations globally. These circumstances or events may lead to CNSC regulatory changes with a significant impact on the cost and future operation of OPG's nuclear fleet.

In December 2015, the CNSC granted the station a 10-year operating licence, valid until November 30, 2025. The new licence spans most of the planned duration of the Darlington Refurbishment project, which provides greater regulatory stability and reduces regulatory risk. As discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Nuclear Operations*, the plan to extend Pickering operations to 2024 is subject to the CNSC's approval of the Pickering licence renewal application and other regulatory requirements as set out by the CNSC.

In January 2014, the federal government introduced Bill C-22 which contains a new *Nuclear Liability and Compensation Act* (NLCA). This bill received Royal Assent in February 2015, and the NLCA came into effect on January 1, 2017. The NLCA requires all operators of nuclear generating stations in Canada to maintain specified amounts of nuclear liability insurance purchased from a federal government approved insurer or other equivalent forms of financial security approved by the federal government. The NLCA increases OPG's nuclear liability limit from $75 million to an initial $650 million, with successive annual increases to $750 million, $850 million, and $1 billion. OPG has met this requirement for the $650 million liability limit required by the NLCA for 2017 and is assessing the availability and premium cost of coverage for the $750 million liability limit required for 2018.

Hydroelectric Generating Stations

OPG's hydroelectric generation is exposed to risks associated with water flows, the age of plant and equipment,surplus baseload generation conditions, and dam safety requirements.

The extent to which OPG can operate its hydroelectric generation facilities depends upon the availability of water. Significant variability in weather, including impacts of climate change, could affect water flows. For OPG's regulated hydroelectric generation, the financial impact of variability in electricity production due to differences between the forecast water conditions underpinning the hydroelectric regulated prices and the actual water conditions are captured in an OEB-approved regulatory variance account.

OPG's hydroelectric generating stations have an average age of approximately 80 years, with the majority of the hydroelectric generating equipment being over 50 years old. The condition of the equipment and civil components resulting from the age of these components requires OPG to plan potentially significant work to mitigate risks to the reliability of some hydroelectric generating stations. OPG manages these risks by performing inspection and maintenance of critical components and by reviewing mitigating actions. In addition, OPG conducts detailed engineering reviews and station condition assessments on an ongoing basis. These reviews and assessments help to identify future work required to sustain and, as appropriate, upgrade a station.

SBG has, and will continue to be, an issue in Ontario when electricity supply exceeds demand. To manage SBG conditions, the IESO may require OPG to reduce hydroelectric generation and spill water. A regulatory variance account authorized by the OEB helps to mitigate the financial impact of spill due to SBG conditions for OPG's regulated hydroelectric generating stations. The Company anticipates a declining trend in SBG for its hydroelectric assets due to reduced nuclear availability resulting from the refurbishment of the Darlington GS, future refurbishment of the Bruce generating stations, and the eventual shutdown of the Pickering GS.

The hydroelectric business operates 238 dams across Ontario. Dam safety legislation does not currently exist in the province. Technical guidelines which were published by the MNRF represent the government standards for dam safety. In general, OPG's practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the MNRF technical guidelines. OPG continues to develop a new risk-informed approach in cooperation with the MNRF to prioritize the outcomes of dam safety assessments. OPG could eventually incur additional costs for certain dams that it operates in order to comply with any new requirements.

People and Culture

OPG's operations could be affected if skilled human resources are not available or aligned with its talent requirements.

The development of new leaders and retention of staff in critical roles across OPG is a key factor to OPG's success. Another success factor is related to the effective transfer of knowledge from those in critical positions throughout the organization to future leaders. The risk associated with the alignment and/or availability of skilled and experienced resources continues to exist for OPG in specific areas, including leadership and project management positions. To mitigate this risk, OPG continues to focus on succession planning, leadership development and knowledge management programs to improve the capability of its workforce. There is also a continued risk of a mismatch between attrition levels and the resource requirements to meet OPG's future business needs.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification, which requires a long-term outlook to workforce planning.

To mitigate the above risks, OPG is developing an organization-wide workforce planning and resourcing strategies and has established ongoing monitoring processes to reassess risks, challenges and opportunities related to staffing on a regular basis. OPG expects to meet the human resource needs of the business by developing existing employees and hiring in specific areas, while continuing to leverage attrition through realignment of work and streamlining of processes, where appropriate.

As of December 31, 2016, approximately 90 percent of OPG's regular labour force was represented by a union. OPG's current collective agreements with the PWU and The Society expire on March 31, 2018 and December 31, 2018, respectively, while all 19 collective agreements with craft unions expire on April 30, 2020. As a result of these agreements, OPG considers the likelihood of a labour disruption in the near future to be significantly reduced.

Health and Safety

OPG's operations involve inherent occupational safety risks and hazards.

OPG's operations involve inherent occupational safety risks and hazards that could impact the achievement of the Company's health and safety goals. OPG is committed to continuous improvement and achievement of its ultimate goal of zero injuries through a formal enterprise-wide safety management system, integrated at the operating site level, and by continuing to foster a strong health and safety culture among its employees and contractors. The safety management system serves to focus the Company on proactively managing safety risks and hazard exposures to employees and contractors. In 2016, OPG launched the organization-wide "iCare Enough to Act" initiative aimed at renewing employees' and contractors' commitments to their own and each other's safety and well-being.

Cyber Security

OPG's ability to operate effectively is, in part, dependent on the efficient operation and management of the Company's complex information technology and industrial control systems in a secure, vigilant, and resilient manner that minimizes cyber risks. Cyber security incidents may have an adverse impact on OPG's reputation, energy production, and public and employee safety.

Cyber security incidents have been on the rise for the past few years and this trend is only expected to intensify as organizations' reliance on technology increases. OPG has strategies in place to prepare for, respond to, and recover from cyber security incidents. OPG continuously monitors, assesses, and improves the effectiveness of its strategies and program considering leading industry practices and remains proactive in information and intelligence sharing to learn and adapt to the changing cyber environment.

As a registered Ontario market participant, OPG is accountable to comply with all applicable reliability obligations. Within the context of the Ontario regulatory framework, OPG is a registered generator, and is responsible for complying with the associated reliability standards. These standards apply to the relevant Bulk Electric System (BES) elements specified under North American Electric Reliability Corporation (NERC) and the relevant Bulk Power System (BPS) facilities as determined by the Northeast Power Coordinating Council. In addition, OPG's nuclear cyber assets are subject to CNSC licensing conditions and regulatory requirements. For other cyber assets not subject to applicable regulatory requirements, OPG has adopted a risk-based approach based on the National Institute of Standards and Technology Cybersecurity Framework to manage its cyber security.

To mitigate cyber risks, OPG's cyber security program focuses on educating employees, contractors, and vendors, improving processes, and upgrading technology infrastructure. In particular, OPG's program focuses on the following:

1. Complying with regulatory requirements and applicable laws
2. Improving its cyber security protection and detection capabilities to reduce known or potential exposures by engaging the services of external experts to evaluate the security of its information technology infrastructure and controls
3. Adopting industry leading practices to reduce third party cyber security risks through enhanced vendor risk assessments, introducing cyber security requirements into commercial agreements, and enhanced governance
4. Improving and exercising its incident response, recovery capability, and business continuity plans to minimize the business impact of an incident
5. Increasing the cyber security awareness and training level of its workforce through mandatory annual cyber security awareness training, specialized training for cyber specialists, social engineering tests, and periodic company-wide communications on relevant cyber security topics.

The oversight responsibility of the Audit and Risk Committee of OPG's Board of Directors over the Company's risk management activities includes the review of a semi-annual update from management on the Company's cyber security position and programs.

Suppliers

Non-performance by strategic suppliers or an inability to diversify the supplier base could adversely impact operating and project performance, financial results and reputation of OPG.

OPG's ability to operate effectively is in part dependent upon timely access to equipment, materials, and service suppliers. Loss of key equipment, materials, and service suppliers, particularly for the nuclear business, could affect OPG's ability to operate effectively and/or to execute major development projects or other capital investment programs. OPG mitigates this risk, to the extent possible, through contract negotiations, contract terms, vendor monitoring, diversification of supplier base, and business continuity plans.

Business Continuity and Emergency Management

Natural, technological or human-caused hazards may impact OPG's business continuity.

OPG is exposed to potential or actual incidents or developments resulting from extreme temperatures, precipitation, wind conditions or other natural disasters, and technological or human-caused hazards; to significant events against which it is not fully insured or indemnified; or to parties that fail to meet their indemnification obligations. These incidents have the potential to disrupt operations resulting in decreased generation revenue or additional costs to repair damages and restore operations.

OPG's business continuity program provides a framework to build resilience into critical business processes by facilitating development of risk response plans and business continuity exercises. OPG's emergency management

program is designed to ensure that the Company can manage an emergency in a timely and effective manner. OPG's plans and implementation procedures identify immediate response actions to be taken to protect the health and safety of employees and the public, and to limit the impact of the crisis on site security, production capability, and the environment. The program elements are designed to meet legal and regulatory requirements.

Risks to Achieving Project Excellence

The risks associated with the cost, schedule, technical and contractor performance aspects of the major projects could adversely impact OPG's financial performance and its corporate reputation.

OPG is undertaking several capital intensive projects with significant investments. There may be an adverse effect on the Company if it is unable to: obtain necessary approvals; raise the necessary funds; effectively manage the projects on time and on budget; or fully recover capital costs and earn an appropriate return on investment in a timely manner. These projects may also have a significant impact on OPG's borrowing capacity and credit rating. Some projects may be ultimately reassessed as being uneconomic. The risks associated with OPG's current major projects are described below.

Darlington Refurbishment

OPG is responsible for the management of the Darlington Refurbishment project, including the project's budget and schedule, and continues to systematically manage all of the risks associated with the project through robust risk management practices. There are financial and reputational risk exposures for OPG if actual costs exceed the budget or if OPG does not meet the project schedule. In addition, failure to achieve the objectives of the refurbishment project may result in future forced outages and more complex planned outages, potentially impacting the post-refurbishment performance or useful life of the station. Failure to carry out the refurbishment of the first unit as planned may result in not proceeding with the refurbishment of the remaining units, which, together with the end of commercial operations at the Pickering GS, could result in most of OPG's nuclear units shutting down by the early to mid 2020s.

There are a number of specific risks that OPG is managing and mitigating in relation to the Darlington Refurbishment project, which include OPG and vendor performance risks, delay or productivity risks, financial risks related to escalation of costs, technical risks such as equipment conditions resulting in additional scope, and execution risks such as failure to manage foreign material exclusion from the heat transport system that could lead to post refurbishment operational risks.

To mitigate the above risks and to build on major lessons learned from other nuclear refurbishments and large scale, complex projects, OPG engaged in an extensive five-year project planning phase in order to determine the project scope, rigorously estimate costs in keeping with best practices, and incorporate lessons learned from other nuclear refurbishments. In order to fully define the scope and material requirements for the project, the planning phase included the completion of detailed designs before proceeding with the execution of the unit refurbishments. Further risk mitigation has been implemented through the construction of a full scale model training reactor, which allows for simulations and training for unit refurbishment execution tasks.

A large portion of the costs for the Darlington Refurbishment project is being paid to contractors and suppliers, including vendors that will engineer, procure, and construct components of the project. There is a risk that, as the volume of work increases significantly, vendor capability, capacity, and performance shortfalls may impact project objectives and deliverables. OPG's risk management strategy aims to ensure that contractors are held accountable and appropriate off-ramps are in place. In mitigating its overall financial risk, OPG utilizes a contracting strategy that aims to share the risk with key vendors in a cost effective manner, where appropriate. There is also an increased risk of contractor initiated safety events, which may impact OPG's reputation. Mitigating actions include collaborative execution phase planning, an enhanced human performance program, active risk management, increased field presence by supervisory staff, and assisting vendors in removing barriers to work. OPG also is managing other

ongoing risks that could potentially impact the project, including those related to continuity of skilled leaders within OPG and its vendor partners, as well as the availability of technical resources to support the project through execution.

Independent, third-party oversight has been established for the execution phase of the project, for both the project executive team and OPG's Board of Directors. The Ontario Ministry of Energy has also retained an external advisor to provide oversight of the project, reporting to the Minister of Energy.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG, with the support of Bruce County municipalities, is proposing to construct and operate a deep geologic repository as the preferred solution for the safe long-term management of L&ILW. While broad local community support for the proposed L&ILW DGR is stable, there are pockets of opposition. OPG is currently awaiting a decision on the EA for the project by the federal Minister of Environment and Climate Change, before the issuance of the site preparation and construction licence may proceed. There is a risk of delay to the EA approval and/or the issuance of the site preparation and construction licence from potential political or legal challenges. OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR.

Other Development Projects

Projects that are in the initial development stages are subject to schedule delays or possible cancellation due to unforeseen delays in receiving permits or approvals, or establishing sufficient certainty regarding project cost recovery through revenue mechanisms, which may involve various external stakeholders. OPG attempts to mitigate these risks through early involvement and regular communication with applicable government agencies, close consultation with external stakeholders and ongoing monitoring of contractor compliance relative to permits. Projects in the execution phase are subject to inherent risks related to performance against approved budgets and schedules. Mitigating activities for the risks include performing detailed engineering designs before proceeding with execution, engaging qualified and experienced vendors, and effectively monitoring and controlling performance.

Development projects also could be faced with increasing costs for equipment and construction that could impact their economic viability. OPG continuously monitors such trends in costs in order to identify emerging issues and seeks to manage and limit cost increases through contracting strategies, where possible.

Risks to Maintaining Financial Strength

Risks related to rate regulation, financial markets, and long-term obligations could significantly impact OPG's financial performance. The Company is also exposed to risks such as weak electricity demand, displacement of generation by competitors and financial risk associated with energy trading.

There is a risk that future regulated prices will not allow OPG to consistently achieve financial performance that is commensurate with that of a commercial enterprise. OPG is exposed to a number of other significant financial risks, many of which arise due to decreasing demand for electricity, competing energy sources, OPG's exposure to volatility in commodity and equity markets and interest rate fluctuations. This includes the Company's pension and OPEB obligations and costs that are impacted by market and interest rate fluctuations. OPG manages this complex array of risks with a view to reduce the uncertainty and/or mitigate the potential unfavourable impact on the Company's financial results.

Rate Regulation

Significant uncertainties remain regarding the outcome of rate and generic proceedings impacting OPG's rate regulated operations.

There is an inherent risk that regulated prices established by the OEB may not provide for the recovery of all actual costs that will be incurred by OPG's regulated operations or allow the regulated operations to earn an appropriate

rate of return. This could occur if, in setting regulated prices, the OEB makes adjustments to forecasts submitted by OPG, if actual production and costs significantly differ from the forecasts approved by the OEB, or if OPG is unable to achieve additional efficiencies to meet the OEB-approved stretch factors included in regulated prices under incentive ratemaking. Differences between OPG's actual and forecast production and costs could be due to factors such as outages or project execution risks. In providing evidence in support of its applications for regulated prices, OPG aims to clearly demonstrate to the OEB that the costs for the regulated operations are reasonable, being prudently incurred and should be fully recovered.

Certain differences between elements of OEB-approved revenue requirements and OPG's actual results are recorded in OEB-approved variance and deferral accounts for future review by the OEB, including a number of the variance and deferral accounts that are subject to an OEB prudence review. There is inherent uncertainty associated with the outcomes of future proceedings for the clearance of these balances.

Proposed Incentive Regulation Ratemaking Methodologies

In May 2016, OPG submitted a 5-year application to the OEB for new regulated prices effective January 1, 2017, on the basis of an incentive regulation rate making methodology for the hydroelectric operations and a custom incentive regulation ratemaking framework for the nuclear operations. If accepted by the OEB, both approaches would result in greater decoupling of OPG's revenues for the regulated operations from their costs. The OEB's decision on OPG's application is expected in the second half of 2017.

Effective Date of New Regulated Prices

There are inherent uncertainties regarding the effective date that the OEB will establish for the new regulated prices. OPG has requested January 1, 2017 as the effective date. The OEB's decision on the effective date and the timing of the decision issuance could have a significant impact on OPG's 2017 results. Until the OEB's decision is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017.

Nuclear Rate Smoothing Proposal

Consistent with *Ontario Regulation 53/05*, OPG's May 2016 application includes a nuclear rate smoothing proposal, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. There is an inherent risk that the magnitude of the deferral ordered by the OEB will result in regulated prices that do not provide sufficient cash flow to the Company for meeting its financial objectives in an optimal manner, including ensuring sufficient liquidity, cost effectively funding the Darlington Refurbishment project and other expenditures, and maintaining the Company's investment grade credit rating. Maintaining adequate levels of credit metrics will support OPG's investment grade credit rating. As such, OPG has advanced credit metrics as a key criterion for the OEB to apply in determining the smoothed nuclear base rates.

Recovery of Pension and OPEB Costs

The OEB is currently conducting a consultation in the gas and electricity sectors to develop standard principles to guide the OEB's review of pension and OPEB costs for rate-regulated utilities, including establishing appropriate regulatory mechanisms for cost recovery. The OEB's November 2014 decision establishing OPG's existing regulated prices indicated that a change in the recovery methodology for OPG's pension and OPEB costs from the accrual basis, if required, would be addressed in OPG's next rate proceeding, having been informed by the outcome of the OEB's generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The decision also stated that the future recovery, if any, of amounts recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account authorized by that decision also would be subject to the outcome of the generic proceeding. As such, the outcome of the current consultation could have a material impact on OPG's ability to recover the balance in

the Pension & OPEB Cash Versus Accrual Differential Deferral Account and full pension and OPEB costs in the future. This would have significant adverse implications on OPG's future financial results. OPG is participating in the OEB consultation and has advanced its position in support of the appropriateness of using the accrual basis for cost recovery purposes.

Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds

Changes in cost estimates or strategies for nuclear waste management and nuclear facilities decommissioning obligations could impact OPG's future contributions to the Nuclear Segregated Funds to cover these obligations.

As required by the CNSC, OPG is responsible for the management of used nuclear fuel and L&ILW and the decommissioning of its nuclear stations and waste management facilities. The cost estimates for OPG's nuclear waste management and decommissioning obligations are based on multiple underlying assumptions and estimates that are inherently uncertain and may evolve over time. The assumptions include station end-of-life dates, waste volumes, waste disposal methods, the timing of construction of assumed waste disposal facilities, waste packaging systems, decommissioning strategy, and financial indicators. To address the inherent uncertainty, OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates at least once every five years, in line with the required ONFA Reference Plan update process.

The most recent comprehensive update of the nuclear waste management and decommissioning obligations was performed as part the 2017 ONFA Reference Plan approved by the Province in December 2016. An approved ONFA Reference Plan determines OPG's contributions to the Nuclear Segregated Funds. The changes in contribution levels are impacted by changes in the values of the Nuclear Segregated Funds as well as changes in the associated nuclear waste management and nuclear facilities decommissioning obligations. Based on the 2017 ONFA Reference Plan, no contributions are currently required to the Nuclear Segregated Funds. Contributions may be required in the future should the Nuclear Segregated Funds be in an underfunded position relative to the funding requirement of a new approved reference plan.

Financial Markets

The market value of investments held by OPG's Nuclear Segregated Funds and registered pension plan could be significantly affected by changes in various market factors such as equity prices, interest rates, inflation, and commodity prices.

Nuclear Segregated Funds Market Risk

Investments in the Nuclear Segregated Funds are allocated to certain asset classes including fixed income securities, domestic and international equity securities, pooled funds, infrastructure, agriculture and real estate. These funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, in order to fund the expenditures associated with the long-term management of used fuel and L&ILW after station shutdown, and the decommissioning of OPG's nuclear stations and waste management facilities. The rates of return earned on these segregated funds are subject to various factors including the current and future financial market conditions, which are inherently uncertain. The asset mix of the funds is determined jointly by OPG and the Province in accordance with the ONFA.

For the Used Fuel Segregated Fund, the Province guarantees the annual rate of return at 3.25 percent plus the change in the Ontario CPI, as defined by the ONFA, for the portion of the fund attributed to the first 2.23 million nuclear fuel bundles. As such, a change in the portion of the fund's value attributed to the first 2.23 million bundles impacts OPG's earnings to the extent of changes in the Ontario CPI. OPG is subject to the market risk for the investment of funds set aside in the Used Fuel Segregated Fund for incremental bundles in excess of 2.23 million.

In accordance with the cost recovery methodology established by the OEB, the performance of the portion of the Nuclear Segregated Funds attributed to the nuclear generating stations leased to Bruce Power has been subject to the Bruce Lease Net Revenues Variance Account. The variance account partially mitigates rate of return risk related to the Nuclear Segregated Funds, as it captures the differences between actual and forecast earnings from the Nuclear Segregated Funds related to these stations. Forecast earnings are those approved by the OEB in setting nuclear regulated prices. OPG is exposed to rate of return risk related to the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodology. The income statement impact of rate of return risk is reduced when the Nuclear Segregated Funds are in a fully funded position.

Post-Employment Benefit Obligations Risk

OPG's post-employment benefit obligations include pension, group life insurance, health care benefits, and LTD benefits. OPG's post-employment benefit obligations and costs, and pension plan contributions could be materially affected in the future by numerous factors, including: changes in discount rates, inflation rates, and other actuarial assumptions; future investment returns; experience gains and losses; the funded status of the pension plans; changes in benefits; changes in the regulatory environment including potential changes to the *Pension Benefits Act* (Ontario); changes in OPG's operations; and the measurement uncertainty incorporated into the actuarial valuation process.

The OPG registered pension plan, which covers most of OPG's employees and retirees, is a contributory defined benefit plan that is indexed to inflation. Contributions to the OPG registered pension plan are determined by actuarial valuations, which are filed with the appropriate regulatory authorities at least every three years. The most recent actuarial valuation of the OPG registered pension plan, covering the three-year period to the end of 2018, was completed as of January 1, 2016. There is an inherent risk that future actuarial valuations could increase OPG's funding requirements due to market and economic-related conditions. A significant decline in the financial markets could trigger an immediate requirement to update the actuarial valuation based on declines in the funded status. OPG continues to assess the requirements for contributions to the registered pension plan, including the timing of future actuarial valuations. The next actuarial valuation of the OPG registered plan must have an effective date no later than January 1, 2019. OPG's OPEB obligations are not funded and the associated employee benefits are paid from cash flow provided by operating activities or other sources of liquidity.

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017	2018	2019
Estimated fuel requirements hedged[1]	75%	76%	65%

[1] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars (USD). To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at December 31, 2016, OPG had total foreign exchange contracts outstanding with a notional value of USD $9 million.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. During 2016, the VaR utilization ranged between nil and $1.5 million, compared to between nil and $1.5 million in 2015.

Credit

Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

The Company's credit risk exposure is a function of its electricity sales, trading and hedging activities, treasury activities including investing, and commercial transactions with various suppliers of goods and services. OPG's credit risk exposure relating to electricity sales is considered low as the majority of sales are through the IESO-administered spot market. The IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market.

Other major components of OPG's credit risk exposure include those associated with vendors that are contracted to provide services or products. OPG manages its exposure to various suppliers or counterparties by evaluating their financial condition and ensuring that the Company holds appropriate collateral or other forms of security.

The following table summarizes OPG's credit exposure to all counterparties from electricity transactions and trading as at December 31, 2016:

Credit Rating [1]	Number of Counterparties [2]	Potential Exposure [3] *(million of dollars)*	Potential Exposure for Largest Counterparties: Number of Counterparties	Potential Exposure for Largest Counterparties: Counterparty Exposure *(millions of*
Investment grade	11	11	5	9
IESO[4]	1	421	1	422
Total	12	432	6	431

[1] Credit ratings are based on OPG's own analysis, taking into consideration external rating agency analysis where available, as well as recognizing explicit credit support provided through parental guarantees, Letters of Credit or other forms of security.

[2] OPG's counterparties are defined on the basis of individual master agreements.

[3] Potential exposure is OPG's statistical assessment of maximum exposure over the life of each transaction at a 95 percent confidence interval.

[4] Credit exposure is an estimate of the receivable amount arising from OPG's electricity sales into the IESO market. The credit exposure and associated receivable vary each month based on electricity sales. The monthly receivable from the IESO is typically paid to OPG in the subsequent month as per the IESO payment schedule.

Liquidity

Rising liquidity requirements can impact OPG's capital investment projects and ability to meet financial obligations.

OPG operates in a capital intensive business. Significant financial resources are required to fund major development and other capital improvement projects, including the Darlington Refurbishment project. In addition, the Company has other significant disbursement requirements including pension contributions, payments towards OPEB and other benefit plans, expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, debt maturities with the OEFC, and investments in new generating capacity and other business growth opportunities. OPG must ensure that it has the financial capacity and sufficient access to cost effective financing sources to fund its capital requirements and other disbursements. In support of this objective, OPG utilizes multiple sources and forecasts availability of funds, actively monitors funding requirements, and is focused on maintaining its investment grade credit rating. A discussion of corporate liquidity is included under the section, *Liquidity and Capital Resources*.

Contracted Generation

OPG may incur costs if its contracted generating assets do not meet performance targets as specified in the ESAs with the IESO or other long-term contracts. There is also a risk that, upon expiry, subsequent ESAs may not be available.

The Company's generating stations operating under ESAs with the IESO or other long-term contracts are subject to availability and production targets specified in their respective contracts. OPG could incur charges and other costs if these facilities fail to operate at required capacity or production levels, as required. This risk is mitigated through the implementation of maintenance, capital investment and other programs, as appropriate.

OPG's owned and co-owned thermal generating stations operate under ESAs with the IESO or other long-term agreements. In December 2016, the Ontario and Quebec governments signed an electricity trade agreement that will allow Ontario to import up to 2 TWh of hydroelectric power from Quebec annually from 2017 to 2023. This is expected to replace some gas-fired generation in Ontario. While OPG expects that its thermal generating stations will continue to provide capacity to the market over the term of the respective agreements, there is a risk that, upon expiry of the current agreements, subsequent contracts for these stations may not be available or may not be available on financially viable terms.

Ontario Electricity Market

Ontario electricity market conditions could impact OPG's revenue and operations.

OPG's revenue can be impacted by external factors related to the electricity market including: the entrance of new participants into the Ontario market; the competitive actions of market participants; Ontario electricity demand; changes in the regulatory environment; and wholesale electricity prices in the interconnected markets.

The structure of the Ontario electricity market is subject to regulation and market rules, changes to which may affect OPG's revenue. The Province, the IESO, the OEB, or another entity or regulatory body may change or institute regulations or rules that can impact OPG's capability to generate revenue or ability to recover appropriate costs and earn a return on the assets.

Ownership by the Province

OPG's commitment to maximize the return on the Shareholder's investment in the Company may compete with the obligation of the Shareholder to respond to a broad range of matters in its role as the Government of Ontario.

The Province owns all of OPG's issued and outstanding common shares. Accordingly, the Province, as represented by the Ontario Ministry of Energy, has the authority to make appointments to OPG's Board of Directors. OPG could be subject to Shareholder direction, under Section 108 of the OBCA, that can directly influence major decisions including those related to project development, timing and strategy of applications for regulated prices, asset divestitures, financing and capital structure, that could require OPG to undertake activities that result in increased expenditures, or that reduce revenues or cash flows relative to the business activities or strategies that would have otherwise been undertaken. In addition, the obligation of OPG's Shareholder to respond to a broad range of matters in its role as the Government of Ontario may compete with OPG's commitment to maximize the return on the Shareholder's investment in the Company. This includes, but is not limited to, the Province's response to mitigate the impact of rising electricity prices on consumers.

Government Legislation and Regulation Change

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on the Company's operations and financial position.

OPG's core business and strategy may be impacted by changes in federal and provincial legislation and regulations. Matters that are subject to regulation include, among others, rate regulation, electricity generating operations, nuclear waste management and nuclear decommissioning, and taxation. Regulatory bodies may change or enact regulations or rules, such as new nuclear fitness for duty requirements, that could increase OPG's costs, decrease OPG's revenue, or limit the Company's ability to recover appropriate costs or earn a return on the assets.

Since legal requirements are subject to change and to interpretation, OPG is unable to predict the impact of such changes on the Company and its operations. To mitigate legislative risks, OPG continues to monitor and actively engage with the federal and provincial governments in order to determine if future legislation will impact the Company.

Risks to Maintaining Social Licence

OPG is exposed to risks associated with its social licence and public profile due to changes in the opinions of various stakeholders, including local communities, Ontario customers, government agencies, and Indigenous Communities. Additionally, inability to achieve operational excellence and project excellence safely and reliably and to maintain financial strength could impact OPG's social licence.

Maintaining public trust and meeting stakeholders and Indigenous communities' expectations are critical to OPG's success. OPG focuses on building and maintaining its social licence and corporate reputation through safe, reliable,

environmentally-responsible operations as well as corporate citizenship initiatives across the province. The inability to maintain safe, reliable operations could negatively impact OPG's reputation and result in a loss of public support.

OPG has transparent governance practices and works continuously towards effective communication and consultation with Indigenous communities and stakeholders. Efforts to reinforce OPG's social licence include various media campaigns that highlight the Company's contribution as a clean power generator with a commitment to safety, environment and community partnerships. OPG undertakes various assurance and risk management activities to effectively manage the risks to its social licence and corporate reputation. Issue management and response plans are developed to address specific concerns as they arise.

Indigenous Communities

The quality of OPG's relationships and the outcome of negotiations with Indigenous communities may impact OPG's project and financial performance, as well as its social licence to operate.

OPG may be subject to claims by Indigenous communities. These claims stem from projects and generation development related to the operations of OPG and historic operations of OPG's predecessor company, Ontario Hydro, which may have impacted the Aboriginal and/or Treaty rights of Indigenous communities.

OPG has an Indigenous Relations Policy, which sets out the Company's commitment to proactively build and maintain positive relationships with Indigenous communities. OPG has been successful in resolving a number of past grievances by Indigenous communities. However, the outcome of the ongoing and any future negotiations depends on a number of factors, including legislation and regulations and precedents created by court rulings, which are subject to change over time. OPG pursues generation-related developments in partnerships with Indigenous communities on the basis of long-term mutually beneficial commercial arrangements.

Environmental Risks

OPG may be subject to orders or charges if it is not in compliance with applicable environmental laws. Changes in environmental regulatory requirements can result in existing operations being in a state of non-compliance, a potential inability to comply, and potential costs and liabilities for OPG.

Changes to environmental laws could create compliance risks and result in potential liabilities that may be addressed by the installation of control technologies, development of new processes, allowances or offsets, or constraints on electricity production. A failure to comply with applicable environmental laws may result in enforcement actions, including the potential for orders or charges. In addition, some of OPG's activities have the potential to impair natural habitat, damage aquatic or terrestrial plant and wildlife, or cause contamination to land or water that may require remediation. There is also a risk that OPG may incur additional costs to meet heritage conservation program requirements under the *Ontario Heritage Act*.

Potential environmental regulatory changes being managed as risks by the Company include electricity production constraints and water flow management requirements to protect fish and fish habitat, expanded fish passage requirements, and lower drinking and ground water tritium concentration standards. These changes could impact plant operations and increase costs. OPG continues to monitor and address risks associated with changes to environmental laws and regulatory requirements. There were no significant changes to environmental legislation applicable to OPG during 2016.

OPG recognizes that efforts are required to plan for the effects of climate change and has identified climate change adaptation as a strategic issue for the company. OPG monitors developments in climate science, adaptation activities, and potential changes to policy and regulatory requirements. OPG continues to work with stakeholders to better define adaptation requirements through analysis and understanding of climate change impacts on watersheds and electricity supply and demand. Once adaptation requirements are better known, a risk-based analysis will help OPG determine the extent of efforts it will undertake to reduce the impact of climate change on its operations.

A carbon cap and trade program became effective in Ontario in January 2017. The program is not expected to have a material adverse economic impact on OPG due to the Company's low GHG emitting generating fleet. Further details can be found under the heading, *Environmental Performance*, in the section, *Core Business, Strategy and Outlook*.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		2015	
(millions of dollars)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**15**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,070**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

Management, including the President and Chief Executive Officer (President and CEO) and the Chief Financial Officer (CFO), are responsible for maintaining Disclosure Controls and Procedures (DC&P) and Internal Controls over Financial Reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements in accordance with US GAAP.

There were no other changes in OPG's ICOFR during the year ended December 31, 2016 that have materially affected or are reasonably likely to materially affect OPG's ICOFR.

Management, including the President and CEO and the CFO, concluded that, as of December 31, 2016, OPG's DC&P and ICOFR (as defined in National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings*) were effective.

FOURTH QUARTER

Discussion of Results

(millions of dollars) (unaudited)	Three Months Ended December 31 2016	2015
Revenue	**1,388**	1,312
Fuel expense	**186**	175
Gross margin	**1,202**	1,137
Operations, maintenance and administration	**686**	788
Depreciation and amortization	**316**	354
Accretion on fixed asset removal and nuclear waste management liabilities	**233**	223
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(126)**	(169)
Income from investments subject to significant influence	**(9)**	(9)
Property taxes	**11**	11
Restructuring	**6**	5
Income (loss) before other loss, interest, and income taxes	**85**	(66)
Other loss	**6**	12
Income (loss) before interest and income taxes	**79**	(78)
Net interest expense	**28**	44
Income (loss) before income taxes	**51**	(122)
Income tax expense (recovery)	**59**	(22)
Net loss	**(8)**	(100)
Net loss attributable to the Shareholder	**(13)**	(101)
Net income attributable to non-controlling interest	**5**	1

Net loss attributable to the Shareholder for the fourth quarter was $13 million, compared to a net loss of $101 million for the same quarter in 2015.

Income before interest and income taxes was $79 million during the fourth quarter of 2016, an increase of $157 million compared to loss before interest and income taxes of $78 million during the same period in 2015. The following summarizes the significant factors which caused the variance:

Significant factors that increased income before other loss, interest and income taxes:

- Lower number of outage days increased nuclear generation by 2.2 TWh during the fourth quarter in 2016, compared to the same period in 2015, primarily due to the four-unit Darlington VBO that was completed on October 30, 2015 and a lower number of unplanned outage days at the Darlington GS. The increase in nuclear generation resulted in an increase in revenue from the nuclear base regulated price of approximately $130 million.
- Lower OM&A expenses of $77 million in the Regulated – Nuclear Generation segment primarily due to increased outage activities in 2015, including the Darlington VBO.

Significant factors that decreased income before other loss, interest and income taxes:

- Decrease in earnings from the Nuclear Segregated Funds of $43 million during the fourth quarter of 2016, compared to the same quarter in 2015, mainly due to an accounting adjustment recorded during the fourth quarter of 2016 to limit the funds asset values recognized on OPG's consolidated balance sheet to the lower underlying obligations as reflected in the 2017 ONFA Reference Plan.
- Higher accretion expense of $10 million, reflecting the increase in the Nuclear Liabilities recognized in December 2015 in connection with the changes in the estimated useful life assumptions for OPG's nuclear stations, net of the impact of the Bruce Lease Net Revenues Variance Account.

The increase in income tax expense during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets in 2016.

Average Sales Prices

The average sales price for the Regulated – Nuclear Generation segment during the fourth quarter of 2016 was 6.9 ¢/kWh, compared to 7.0 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of an OEB-authorized nuclear rate rider of $1.33/MWh related to the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment during the fourth quarter of 2016 was 4.5 ¢/kWh, compared to 4.8 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of a rate rider of $6.04 per MWh related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014.

The income impact of changes in revenue from rate riders was largely offset by changes in amortization expense related to regulatory balances.

Electricity Generation

OPG's electricity generation for the three months ended December 31, 2016 and 2015 was as follows:

	Three Months Ended December 31	
(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**11.0**	8.8
Regulated – Hydroelectric	**6.7**	7.3
Contracted Generation Portfolio [1]	**0.6**	0.7
Total OPG electricity generation	**18.3**	16.8
Total electricity generation by all other generators in Ontario [2]	**18.9**	19.6

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The increase in OPG's electricity generation of 1.5 TWh during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher electricity generation of 2.2 TWh from the Regulated – Nuclear Generation segment as a result of fewer outage days at the Darlington GS during the fourth quarter of 2016, which was primarily due to the Darlington VBO that occurred during the fourth quarter of 2015. The increase in generation was partially offset by reduced generation from the Regulated – Hydroelectric Segment of 0.6 TWh, primarily due to lower water flows in eastern Ontario during the fourth quarter of 2016.

Ontario's electricity demand as reported by the IESO was 33.2 TWh during the fourth quarter of 2016, compared to 32.7 TWh during the fourth quarter of 2015.

Liquidity and Capital Resources

Cash flow provided by operating activities during the three months ended December 31, 2016 was $437 million, compared to $111 million for the same period in 2015. The increase in cash flow was primarily due to higher generation revenue receipts, lower pension plan contributions and lower OM&A expenditures during the fourth quarter of 2016. Higher generation revenue receipts reflected higher nuclear generation in the fourth quarter of 2016, compared to the same period in 2015.

Cash flow used in investing activities during the three months ended December 31, 2016 was $497 million, compared to $571 million during the same period in 2015. The decrease was primarily due to partial maturity, in the fourth quarter of 2016, of a structured deposit note invested in the fourth quarter of 2015, partially offset by higher expenditures for the Darlington Refurbishment project. The deposit note invested proceeds from the long-term debt issued in support of the Peter Sutherland Sr. GS project in October 2015.

Cash flow used by financing activities during the three months ended December 31, 2016 was $180 million, compared to cash flow provided in financing activities of $356 million for the same period in 2015. The decrease in cash flow provided by financing activities was due to the net repayment of short-term notes and lower net issuance of long-term debt in the fourth quarter of 2016.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected annual financial information for the last three years and financial information for each of the eight most recently completed quarters. This information is derived from OPG's unaudited interim consolidated financial statements and the audited consolidated financial statements, and has been prepared in accordance with US GAAP.

Annual Financial Information

(millions of dollars – except where noted)	**2016**	**2015**	**2014**
Revenue	**5,653**	5,476	4,963
Income before extraordinary item attributable to the Shareholder	**436**	402	561
Net income attributable to the Shareholder	**436**	402	804
Net income per common share before extraordinary item *(dollars)*	**$1.70**	$1.57	$2.19
Net income per common share *(dollars)*	**$1.70**	$1.57	$3.14
Total assets	**44,372**	44,250	41,645
Total long-term liabilities	**31,460**	32,404	30,483
Common shares outstanding *(millions)*	**256.3**	256.3	256.3

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**2016 Quarters Ended**				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	**1,388**	**1,400**	**1,387**	**1,478**	**5,653**
Net (loss) income	**(8)**	**198**	**135**	**128**	**453**
Less: Net income attributable to non-controlling interest	**5**	**4**	**3**	**5**	**17**
Net (loss) income attributable to the Shareholder	**(13)**	**194**	**132**	**123**	**436**
Per common share, attributable to the Shareholder *(dollars)*	**($0.05)**	**$0.76**	**$0.51**	**$0.48**	**$1.70**

Quarterly Financial Information

(millions of dollars – except where noted) (unaudited)	2015 Quarters Ended				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	1,312	1,426	1,383	1,355	5,476
Net (loss) income	(100)	85	193	239	417
Less: Net income attributable to non-controlling interest	1	5	4	5	15
Net (loss) income attributable to the Shareholder	(101)	80	189	234	402
Per common share, attributable to the Shareholder *(dollars)*	($0.39)	$0.31	$0.74	$0.91	$1.57

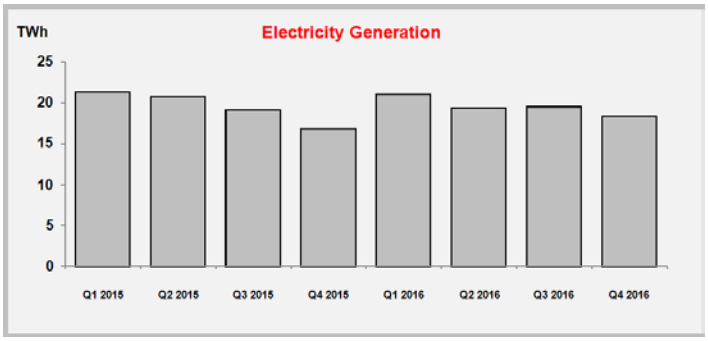
Trends

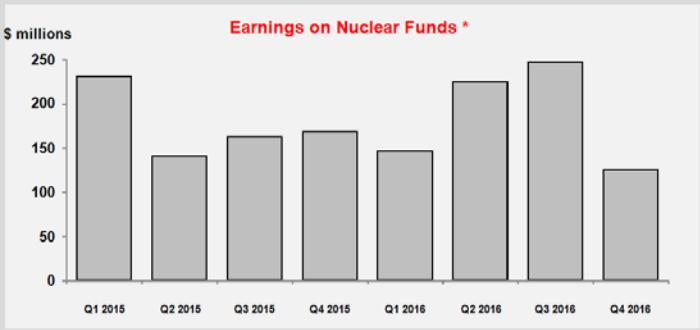
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues are higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of foregone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington VBO, which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items which affected net income (loss) in certain quarters above are described below:

- A gain of $22 million recorded during the first quarter of 2016 reflecting the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to Niagara Tunnel project expenditures.
- Lower earnings of $16 million during the first quarter of 2015, compared to the same quarter in 2016, in the Contracted Generation Portfolio segment, primarily as a result of a provision made in that quarter related to an IESO audit.
- Higher OM&A expenses of $105 million for the Regulated – Nuclear Generation segment during the first half of 2016, compared to the same period in 2015, primarily resulting from an increase in planned outage activities and the timing of planned outage activities during the year.
- Lower OM&A expenses of $91 million for the Regulated – Nuclear Generation segment during the last half of 2016, compared to the same period in 2015, primarily as a result of the VBO at the Darlington GS in the third and fourth quarters of 2015.

Additional information about OPG, including its audited consolidated financial statements and notes thereto, can be found on SEDAR at www.sedar.com.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow from operations, or any other measure in accordance with US GAAP, but as an indicator of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period.

ROE Excluding AOCI is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**436**	402
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,442**	10,023
ROE Excluding AOCI *(percent)*	**4.2**	4.0

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
FFO before interest		
Cash flow provided by operating activities	**1,705**	1,465
Add: Interest paid	**269**	269
Less: Interest capitalized to fixed and intangible assets	**(141)**	(102)
Add: Changes to non-cash working capital balances	**(68)**	100
FFO before interest	**1,765**	1,732
Adjusted interest expense		
Net interest expense	**120**	180
Add: Interest income	**7**	9
Add: Interest capitalized to fixed and intangible assets	**141**	102
Add: Interest related to regulatory assets and liabilities	**30**	2
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**45**	53
Adjusted interest expense	**343**	346
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.0

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Enterprise TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Enterprise TGC		
Total OM&A expenses	**2,747**	2,783
Total fuel expense	**727**	687
Total capital expenditures	**1,704**	1,376
Less: Darlington Refurbishment capital and non-capital costs	**(1,022)**	(707)
Less: Other generation development project capital and OM&A costs	**(162)**	(197)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**62**	250
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(55)
Add: Hydroelectric gross revenue charge due to electricity foregone due to SBG conditions	**49**	34
Less: OM&A expenses ancillary to electricity generation business	**(24)**	(27)
Other adjustments	**(25)**	(46)
	3,989	4,098
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**78.2**	78.0
Add: Electricity generation foregone due to SBG conditions	**4.7**	3.2
	82.9	81.2
Enterprise TGC per MWh *($/MWh)* [1]	**48.10**	**50.46**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Nuclear TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**2,210**	2,196
Regulated – Nuclear Generation fuel expense	**315**	301
Regulated – Nuclear Generation capital expenditures	**1,338**	1,023
Less: Darlington Refurbishment capital and OM&A costs	**(1,022)**	(708)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**81**	230
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(62)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(6)**	(6)
Other adjustments	**(8)**	(28)
	2,841	2,946
Nuclear electricity generation *(TWh)*	**45.6**	44.5
Nuclear TGC per MWh *($/MWh)* [1]	**62.30**	66.20

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Hydroelectric TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**325**	340
Regulated – Hydroelectric Generation fuel expense	**353**	345
Contracted Generation Portfolio OM&A expenses	**178**	185
Contracted Generation Portfolio fuel expense	**58**	39
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**333**	311
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(158)**	(197)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(177)**	(163)
(Less) Add: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(24)**	18
Add: Hydroelectric gross revenue charge and water rental payments due to electricity generation foregone due to SBG conditions	**49**	34
Other adjustments	**(1)**	-
	936	912
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**29.5**	30.4
Contracted Generation Portfolio electricity generation	**3.1**	3.1
Add: Hydroelectric electricity generation foregone due to SBG conditions	**4.7**	3.2
Less: Non-hydroelectric electricity generation of the Contracted Generation Portfolio	**(0.7)**	(0.6)
	36.6	36.1
Hydroelectric TGC per MWh *($/MWh)*[1]	**25.57**	25.26

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

For further information, please contact: Investor Relations 416-592-6700

1-866-592-6700

investor.relations@opg.com

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www.sedar.com

ONTARIO POWER GENERATION INC.

CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2016

[DRAFT]

STATEMENT OF MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL INFORMATION

Ontario Power Generation Inc.'s (OPG) management is responsible for the presentation and preparation of the annual consolidated financial statements and Management's Discussion and Analysis (MD&A).

The consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States Securities and Exchange Commission for annual financial statements. The MD&A has been prepared in accordance with the requirements of securities regulators, including National Instrument 51-102 of the Canadian Securities Administrators and its related published requirements.

The consolidated financial statements and information in the MD&A necessarily include amounts based on informed judgments and estimates of the expected effects of current events and transactions with appropriate consideration to materiality. Something is considered material if it is reasonably expected to have a significant impact on the Company's earnings, cash flow, value of an asset or liability, or reputation. In addition, in preparing the financial information, we must interpret the requirements described above, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect the reported information. The MD&A also includes information regarding the impact of current transactions and events, sources of liquidity and capital resources, operating trends, and risks and uncertainties. Actual results in the future may differ materially from our present assessment of this information because future events and circumstances may not occur as expected.

In meeting our responsibility for the reliability of the financial information, we maintain and rely on a comprehensive system of internal controls and internal audits, including organizational and procedural controls and internal controls over financial reporting. Our system of internal controls includes: written communication of our policies and procedures governing corporate conduct and risk management; comprehensive business planning; effective segregation of duties; delegation of authority and personal accountability; careful selection and training of personnel; and accounting policies, which we regularly update. This structure ensures appropriate internal controls over transactions, assets and records. We also regularly test internal controls. These controls and testing are designed to provide us with reasonable assurance that the financial records are reliable for preparing financial statements and other financial information, assets are safeguarded against unauthorized use or disposition, liabilities are recognized, and we are in compliance with all regulatory requirements.

Management, including the President and Chief Executive Officer (CEO) and the Chief Financial Officer (CFO), is responsible for maintaining disclosure controls and procedures (DC&P) and internal controls over financial reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements in accordance with US GAAP.

An evaluation of the effectiveness of the design and operation of OPG's DC&P and ICOFR was conducted as of December 31, 2016. Accordingly, we, as OPG's President and CEO and CFO, will certify OPG's annual disclosure documents filed with the Ontario Securities Commission, which includes attesting to the design and effectiveness of OPG's DC&P and ICOFR.

The Board of Directors, based on recommendations from its Audit and Risk Committee, reviews and approves the consolidated financial statements and the MD&A, and oversees management's responsibilities for the presentation and preparation of financial information, maintenance of appropriate internal controls, management and control of major areas of financial risk, and assessment of significant and related party transactions.

The consolidated financial statements have been audited by Ernst & Young LLP, independent external auditors appointed by the Board of Directors. The Independent Auditors' Report outlines the auditors' responsibilities and the scope of their examination and their opinion on OPG's consolidated financial statements. The independent external auditors, as confirmed by the Audit and Risk Committee, had direct and full access to the Audit and Risk Committee, with and without the presence of management, to discuss their audit and their findings therefrom, as to the integrity of OPG's financial reporting and the effectiveness of the system of internal controls.

Jeff Lyash
President and Chief Executive Officer

Ken Hartwick
Senior Vice President, Finance, Strategy, Risk and Chief Financial Officer

March 10, 2017

INDEPENDENT
AUDITORS' REPORT

To the Shareholder of Ontario Power Generation Inc.

We have audited the accompanying consolidated financial statements of Ontario Power Generation Inc., which comprise the consolidated balance sheets as at December 31, 2016 and 2015, and the consolidated statements of income, comprehensive income, cash flows, and changes in shareholder's equity for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with United States generally accepted accounting principles, and for such internal controls as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Ontario Power Generation Inc. as at December 31, 2016 and 2015 and the results of its operations and its cash flows for the years then ended in accordance with United States generally accepted accounting principles.

Toronto, Canada

March 10, 2017

Ernst & Young LLP

Chartered Professional Accountants,
Licensed Public Accountants

CONSOLIDATED STATEMENTS OF INCOME

Years Ended December 31 *(millions of dollars except where noted)*	**2016**	**2015**
Revenue *(Note 16)*	**5,653**	5,476
Fuel expense *(Note 16)*	**727**	687
Gross margin *(Note 16)*	**4,926**	4,789
Expenses *(Note 16)*		
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization *(Note 4)*	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities *(Note 8)*	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (gains) losses, interest and income taxes	**724**	703
Other (gains) losses *(Note 16)*	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense *(Note 7)*	**120**	180
Income before income taxes	**621**	509
Income tax expense *(Note 9)*	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest	**17**	15
Basic and diluted net income per common share *(dollars)*	**1.70**	1.57
Common shares outstanding *(millions)*	**256.3**	256.3

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Years Ended December 31 *(millions of dollars)*	2016	2015
Net income	**453**	417
Other comprehensive income, net of income taxes *(Note 10)*		
Actuarial (loss) gain and past service costs on re-measurement of liabilities for pension and other post-employment benefits [1]	**(6)**	148
Reclassification to income of amounts related to pension and other post-employment benefits [2]	**12**	18
Net loss on derivatives designated as cash flow hedges [3]	**-**	(5)
Reclassification to income of losses on derivatives designated as cash flow hedges [4]	**19**	16
Unrealized loss on available-for-sale securities [5]	**(1)**	-
Other comprehensive income	**24**	177
Comprehensive income	**477**	594
Comprehensive income attributable to the Shareholder	**460**	579
Comprehensive income attributable to non-controlling interest	**17**	15

[1] Net of income tax recoveries of $2 million and income tax expenses of $49 million for 2016 and 2015, respectively.

[2] Net of income tax expenses of $4 million and $7 million for 2016 and 2015, respectively.

[3] Net of income tax recoveries of nil and $2 million for 2016 and 2015, respectively.

[4] Net of income tax expenses of $2 million for each of 2016 and 2015.

[5] Net of income tax expenses of nil for each of 2016 and 2015.

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years Ended December 31 *(millions of dollars)*	2016	2015
Operating activities		
Net income	**453**	417
Adjust for non-cash items:		
Depreciation and amortization *(Note 4)*	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities *(Note 8)*	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(746)**	(704)
Pension and other post-employment benefit costs *(Note 11)*	**464**	483
Deferred income taxes and other accrued charges	**(36)**	23
Mark-to-market on derivative instruments	**3**	(218)
Provision for used nuclear fuel and low and intermediate level waste	**118**	117
Regulatory assets and liabilities	**(170)**	141
Provision for materials and supplies	**42**	28
Other (gains) losses	**(17)**	14
Other	**(8)**	5
	2,289	2,301
Contributions to nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(150)**	(143)
Expenditures on fixed asset removal and nuclear waste management *(Note 8)*	**(275)**	(218)
Reimbursement of expenditures on nuclear fixed asset removal and nuclear waste management *(Note 8)*	**70**	76
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans *(Note 11)*	**(363)**	(480)
Expenditures on restructuring	**(6)**	(16)
Distributions received from investments subject to significant influence	**52**	51
Net changes to other long-term assets and liabilities	**20**	(6)
Net changes to non-cash working capital balances *(Note 17)*	**68**	(100)
Cash flow provided by operating activities	**1,705**	1,465
Investing activities		
Purchase of available-for-sale securities	**(213)**	-
Investment in deposit note *(Note 6)*	**-**	(180)
Proceeds from deposit note *(Note 6)*	**110**	-
Net proceeds from sale of property, plant and equipment	**-**	3
Investment in property, plant and equipment and intangible assets *(Note 16)*	**(1,704)**	(1,376)
Cash flow used in investing activities	**(1,807)**	(1,553)
Financing activities		
Issuance of long-term debt *(Note 6)*	**334**	245
Repayment of long-term debt *(Note 6)*	**(273)**	(503)
Settlement of cash flow hedges	**-**	(9)
Distribution to non-controlling interest	**(14)**	(16)
Issuance of short-term notes *(Note 7)*	**3,108**	2,628
Repayment of short-term notes *(Note 7)*	**(3,331)**	(2,403)
Cash flow used in financing activities	**(176)**	(58)
Net decrease in cash and cash equivalents	**(278)**	(146)
Cash and cash equivalents, beginning of year	**464**	610
Cash and cash equivalents, end of year	**186**	464

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 *(millions of dollars)*	2016	2015
Assets		
Current assets		
Cash and cash equivalents	**186**	464
Available-for-sale securities *(Note 18)*	**212**	-
Receivables from related parties *(Note 18)*	**429**	545
Nuclear fixed asset removal and nuclear waste management funds *(Notes 8 and 16)*	**24**	15
Fuel inventory *(Note 16)*	**310**	344
Materials and supplies *(Note 16)*	**100**	96
Regulatory assets *(Note 5)*	**-**	628
Prepaid expenses	**200**	92
Other current assets *(Notes 4 and 6)*	**282**	206
	1,743	2,390
Property, plant and equipment *(Notes 4, 15, and 16)*	**29,319**	29,469
Less: accumulated depreciation	**9,317**	8,874
	20,002	20,595
Intangible assets *(Notes 4 and 16)*	**503**	476
Less: accumulated amortization	**404**	378
	99	98
Other assets		
Nuclear fixed asset removal and nuclear waste management funds *(Notes 8 and 16)*	**15,960**	15,121
Long-term materials and supplies *(Note 16)*	**345**	337
Regulatory assets *(Note 5)*	**5,855**	5,240
Investments subject to significant influence *(Note 19)*	**321**	336
Other long-term assets *(Note 6)*	**47**	133
	22,528	21,167
	44,372	44,250

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 *(millions of dollars)*	2016	2015
Liabilities		
Current liabilities		
Accounts payable and accrued charges *(Note 18)*	**1,164**	1,199
Short-term debt *(Note 7)*	**2**	225
Deferred revenue due within one year	**12**	12
Long-term debt due within one year *(Note 6)*	**1,103**	273
Income taxes payable	**123**	66
Regulatory liabilities *(Note 5)*	**-**	26
	2,404	1,801
Long-term debt *(Note 6 and 18)*	**4,417**	5,186
Other liabilities		
Fixed asset removal and nuclear waste management liabilities *(Notes 8 and 16)*	**19,484**	20,169
Pension liabilities *(Note 11)*	**3,012**	2,597
Other post-employment benefit liabilities *(Note 11)*	**2,897**	3,085
Long-term accounts payable and accrued charges	**213**	207
Deferred revenue	**298**	246
Deferred income taxes *(Note 9)*	**829**	880
Regulatory liabilities *(Note 5)*	**310**	34
	27,043	27,218
Equity		
Common shares *(Note 14)* [1]	**5,126**	5,126
Retained earnings	**5,534**	5,098
Accumulated other comprehensive loss *(Note 10)*	**(295)**	(319)
Equity attributable to the Shareholder	**10,365**	9,905
Equity attributable to non-controlling interest *(Note 21)*	**143**	140
Total equity	**10,508**	10,045
	44,372	44,250

[1] 256,300,010 common shares outstanding at a stated value of $5,126 million as at December 31, 2016 and 2015.

Commitments and Contingencies *(Notes 6, 9, 11, and 15)*

See accompanying notes to the consolidated financial statements

On behalf of the Board of Directors:

Bernard Lord
Board Chair

M. George Lewis
Director

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Common shares *(Note 14)*	**5,126**	5,126
Retained earnings		
Balance at beginning of year	**5,098**	4,696
Net income attributable to the Shareholder	**436**	402
Balance, end of year	**5,534**	5,098
Accumulated other comprehensive loss, net of income taxes *(Note 10)*		
Balance at beginning of year	**(319)**	(496)
Other comprehensive income	**24**	177
Balance, end of year	**(295)**	(319)
Equity attributable to the Shareholder	**10,365**	9,905
Equity attributable to non-controlling interest *(Note 21)*		
Balance at beginning of year	**140**	141
Distribution to non-controlling interest	**(14)**	(16)
Net income attributable to non-controlling interest	**17**	15
Balance, end of year	**143**	140
Total equity	**10,508**	10,045

See accompanying notes to the consolidated financial statements

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2016 and 2015

1. DESCRIPTION OF BUSINESS

Ontario Power Generation Inc. (OPG or the Company) was incorporated on December 1, 1998 pursuant to the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (the Province or the Shareholder). OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario.

2. BASIS OF PRESENTATION

These consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States (US) Securities and Exchange Commission for annual financial statements.

As required by *Ontario Regulation 395/11,* as amended, under the Financial Administration Act (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG has also received exemptive relief from the Ontario Securities Commission (OSC) from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant, or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

All dollar amounts are presented in Canadian dollars, except in tabular format where noted. Certain of the 2015 comparative amounts have been reclassified from financial statements previously presented to conform to the 2016 consolidated financial statement presentation.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Consolidation

The consolidated financial statements of the Company include the accounts of OPG and its majority-owned subsidiaries, and a variable interest entity (VIE) where OPG is the primary beneficiary. All significant intercompany balances and intercompany transactions have been eliminated on consolidation.

Where OPG does not control an investment, but has significant influence over operating and financing policies of the investee, the investment is accounted for under the equity method. OPG co-owns the Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS) with TransCanada Energy Ltd. and co-owns the Brighton Beach gas-fired combined cycle generating station (Brighton Beach) with ATCO Power Canada Ltd. OPG accounts for its 50 percent ownership interest in each of these jointly controlled entities using the equity method.

Variable Interest Entities

OPG performs ongoing analysis to assess whether it holds any VIEs. VIEs of which OPG is deemed to be the primary beneficiary are consolidated. The primary beneficiary of a VIE has both the power to direct the activities of the entity that most significantly impact its economic performance and the obligation to absorb losses of the entity that could potentially be significant to the Company. In circumstances where OPG is not deemed to be the primary beneficiary, the VIE is not recorded in OPG's consolidated financial statements.

In 2002, OPG and other Canadian nuclear waste producers established the Nuclear Waste Management Organization (NWMO) in accordance with the *Nuclear Fuel Waste Act* (NFWA). The primary long-term mandate of the NWMO is to implement an approach to address the long-term management of used nuclear fuel. In addition to the above mandate, the NWMO provides project management services for OPG's proposed Deep Geologic Repository (DGR) for the long-term management of low and intermediate level waste (L&ILW) and other nuclear lifecycle liability management services. OPG has the majority of voting rights at the NWMO Board of Directors' and members' level. The NFWA requires the nuclear fuel waste owners to establish and make payments into trust funds for the purpose of funding the implementation of the long-term nuclear used fuel management plan. OPG provides over 90 percent of NWMO's funding, primarily towards the design and implementation of Canada's Adaptive Phased Management plan for the long-term management of nuclear used fuel. As a result, OPG is expected to absorb a majority of the NWMO's expected losses through future funding in the event of any shortfall. Therefore, OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated.

As at December 31, 2016, PSS Generating Station Limited Partnership (PSS or the Partnership) was classified as a VIE because it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership.

Use of Management Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefit (OPEB) balances, asset retirement obligations (AROs), income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments and investments in segregated funds, depreciation and amortization expenses, valuation of the nuclear fixed assets and nuclear waste management funds, and inventories. Actual results may differ significantly from these estimates.

Cash and Cash Equivalents and Short-Term Investments

Cash and cash equivalents include cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments and classified as current assets. These securities are valued at the lower of cost and market.

Inventories

Inventories, consisting of fuel and materials and supplies, are measured at the lower of cost and net realizable value. Cost is determined as weighted average cost for fuel inventory and average cost for materials and supplies.

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to operations, maintenance and administration (OM&A) expenses when incurred. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis, except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis. As at December 31, 2016, the amortization periods of PP&E and intangible assets are as follows:

Nuclear generating stations and major components	15 to 74 years [1]
Thermal generating stations and major components	5 to 50 years
Hydroelectric generating stations and major components	10 to 100 years
Administration and service facilities	10 to 50 years
Computers, and transport and work equipment assets – declining balance	12% to 40% per year
Major application software	5 years
Service equipment	5 to 10 years

[1] As at December 31, 2016, the end of station life for depreciation purposes for the Darlington, Pickering, and Bruce A and B nuclear generating stations ranged between 2020 and 2061. Major components are depreciated over the lesser of the station life and the life of the components.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

The carrying value of investments accounted for under the equity method are reviewed annually for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the Ontario Energy Board (OEB).

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998,* the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB are classified as current if they are expected to be recovered from, or refunded to, customers within 12 months of the end of the reporting period, based on recovery or repayment periods authorized by the OEB. All other regulatory asset and liability balances are classified as non-current on the consolidated balance sheets.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in accumulated other comprehensive income (AOCI) in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans. The regulatory asset is reversed as underlying unamortized balances are amortized as components of the benefit cost.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures on its pension and OPEB plans. It is the Company's position that this decision by the OEB does not constitute a change in the basis of rate recovery for OPG's of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices or in an OEB-authorized deferral or variance account for future recovery as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account to record the difference between OPG's actual pension and OPEB costs for the regulated business

determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the above noted consultation process.

See Notes 5, 8, 9, and 11 to these consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Revenue Recognition

All of OPG's electricity generation is offered into the real-time energy spot market administered by the Independent Electricity System Operator (IESO). Revenue is recognized as electricity is generated and metered to the IESO.

Revenue Recognition – Regulated Generation

Energy revenue generated from OPG's regulated facilities is based on regulated prices determined by the OEB that currently include a base regulated price and rate riders for the recovery or repayment of approved variance and deferral account balances.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base is a regulatory construct that, for OPG, represents the average net level of investment in regulated fixed and intangible assets in-service and an allowance for working capital. The revenues from the regulated hydroelectric facilities are also subject to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The rate riders in effect during 2016 were established by the OEB in its October 2015 order based on OPG's application to recover balances in most of the authorized variance and deferral accounts as at December 31, 2014. The rate riders in effect during 2015 included those established by the OEB in 2014 in conjunction with the base regulated prices in effect since November 1, 2014 and those authorized by the OEB in October 2015 based on OPG's application to recover the December 31, 2014 balances. The OEB-authorized variance and deferral accounts are discussed in Note 5 to these consolidated financial statements.

Revenue Recognition – Non-regulated Generation and Other Revenue

The electricity generation from OPG's non-regulated assets receives the Ontario electricity spot market price, except where an energy supply agreement (ESA) with the IESO or another contractual agreement is in place. As at December 31, 2016, most of OPG's operating non-regulated assets are subject to an ESA. Revenue from the generating stations subject to an ESA is recognized in accordance with the terms of the agreement. Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO is substituted as the counterparty of the ESAs or other agreements that were previously executed with the OPA.

OPG also sells into, and purchases from, interconnected markets of other provinces and the northeast and midwest regions of the US. All contracts that are not designated as hedges are recorded in the consolidated balance sheets at market value, with gains or losses recorded in the consolidated statements of income. Gains and losses on energy trading contracts (including those to be physically settled) are recorded on a net basis in the consolidated statements of income. Accordingly, power purchases of $19 million were netted against revenue in 2016 (2015 – $75 million).

OPG derives non-energy revenue under the terms of a lease arrangement and associated agreements with Bruce Power L.P. (Bruce Power) related to the Bruce nuclear generating stations. This includes lease revenue and revenue from heavy water sales, detritiation services and waste management services. OPG's net revenues from the lease of the Bruce stations and related agreements, including a portion of heavy water sales, are credited to customers and have therefore reduced regulated prices for the generation from the nuclear facilities owned and operated by OPG. The minimum lease payments are recognized in revenue on a straight-line basis over the term of the lease.

In addition, non-energy revenue includes isotope sales, real estate rentals and other service revenues. Revenues from these activities are recognized as services are provided, or as products are delivered.

Fixed Asset Removal and Nuclear Waste Management Liabilities

OPG recognizes AROs for fixed asset removal and nuclear waste management, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The liabilities are initially recorded at their estimated fair value, which is based on a discounted value of the expected costs to be paid.

On an ongoing basis, the liabilities for nuclear fixed asset removal and nuclear waste management (Nuclear Liabilities) are increased by the present value of the incremental (variable) cost portion for the nuclear waste generated each year, with the corresponding amounts charged to operating expenses. Variable expenses relating to low and intermediate level nuclear waste are charged to OM&A expenses. Variable expenses relating to the management and storage of nuclear used fuel are charged to fuel expense. The liabilities may also be adjusted due to any changes in the estimated amount or timing of the underlying future cash flows, with any resulting changes in the related asset retirement costs capitalized as part of the carrying amount of the related fixed assets. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the originally estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of increases in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of decreases in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets. Upon settlement of the liabilities, a gain or loss would be recorded.

Accretion arises because the fixed asset removal and nuclear waste management liabilities are reported on a net present value basis. Accretion expense is the increase in the carrying amount of the liabilities due to the passage of time.

The asset retirement cost is capitalized by increasing the carrying value of the related fixed assets. The capitalized cost is depreciated over the remaining service life of the related fixed assets and is included in depreciation and amortization expenses.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG established a Used Fuel Segregated Fund and a Decommissioning Segregated Fund (together the Nuclear Segregated Funds). The Used Fuel Segregated Fund is intended to fund expenditures associated with the long-term management of radioactive used nuclear fuel bundles, while the Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the nuclear stations are shut down. OPG maintains the Nuclear Segregated Funds in third-party custodial and trust accounts that are segregated from the rest of OPG's assets.

OPG's investments in the Nuclear Segregated Funds and the corresponding amounts payable to/receivable from the Province are classified as held-for-trading. The Nuclear Segregated Funds are measured at fair value based on the bid prices of the underlying equity and fixed income securities, and, in the case of the alternative investment portfolio, using appropriate valuation techniques as outlined in Note 13 to these consolidated financial statements, with realized and unrealized gains and losses recognized in OPG's consolidated statements of income.

Derivatives

All derivatives, including embedded derivatives that must be separately accounted for, generally are classified as held-for-trading and recorded at fair value in the consolidated balance sheets. Transaction costs are expensed as incurred for financial instruments classified or designated as held-for-trading.

Derivatives qualify for hedge accounting if they meet stringent documentation requirements, and if the derivative instrument that is designated as a hedge is expected to effectively hedge the identified risk throughout the life of the hedged item. At the inception of a hedging relationship, OPG documents the relationship between the hedging instrument and the hedged item, its risk management objective, and its strategy for undertaking the hedge. A documented assessment is made, both at the inception of a hedge and on an ongoing basis, of whether or not the derivatives that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

All derivative contracts not designated as hedges are recorded on the consolidated balance sheets as derivative assets or liabilities at fair value with changes in the fair value recorded in the revenue of the Services, Trading, and Other Non-Generation segment. Refer to Note 12 for a discussion of OPG's risk exposures and the derivative instruments used to manage these risks.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model. OPG uses a fair value hierarchy, grouping assets and liabilities into three levels based on the relative objectivity of the inputs used to measure fair value, with Level 1 representing the most objective. Refer to Note 13 for a discussion of fair value measurements and the fair value hierarchy.

Investments in Equity Securities

Available-for-sale (AFS) securities are measured at fair value with unrealized gains and losses due to changes in fair value recognized in other comprehensive income (OCI). Realized gains and losses are included in net income when the shares are sold or awarded. Related transaction costs are expensed as incurred, and dividend income is included in net income in the period dividends are declared. Equity securities are initially measured at the transaction price.

Research and Development

Research and development costs are expensed as incurred. Research and development costs incurred to discharge long-term obligations, such as the Nuclear Liabilities, for which specific provisions have already been made, are charged to the related liability.

Leases

Leases are evaluated and classified as either operating or capital leases for financial reporting purposes. Capital leases, which transfer substantially all of the risks and benefits incidental to ownership of the leased item, are capitalized at the inception of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Capital leases are depreciated over the shorter of the estimated useful life of the asset and the lease term.

Leases where the lessor retains substantially all the risks and benefits incidental to ownership of the asset are classified as operating leases. Operating lease payments, other than contingent rentals, are recognized as an expense in the consolidated statements of income on a straight-line basis over the lease term. Where the amount of rent expense recognized is different from the actual operating lease payment, other than contingent rentals, the difference is deferred and included as assets or liabilities on the consolidated balance sheets.

Pension and Other Post-Employment Benefits

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post-retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective

benefit obligations is accumulated and amortized over future periods; for LTD benefits, the impact of these updates and differences is immediately recognized as OPEB costs in the period incurred.

The discount rates, which are representative of AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure, and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments, and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor), is amortized over the expected average remaining service life of the employees, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on the consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in OCI, net of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as components of pension and OPRB costs as described above.

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the amounts reclassified from AOCI into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the Ontario Electricity Financial Corporation (OEFC). These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or payable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized income tax benefits as income tax expense.

Changes in Accounting Policies and Estimates

Change in Nuclear Liabilities Estimate

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for Nuclear Liabilities as at December 31, 2016 was finalized as part of the required process to update the Reference Plan under the ONFA between OPG and the Province. The update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities, with a corresponding decrease to the asset retirement costs capitalized as part of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear decommissioning at least once every five years, in line with the required ONFA Reference Plan update process.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. These changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account established by the OEB pursuant to *Ontario Regulation 53/05*, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices. The estimated impact on 2017 expenses, before regulatory deferrals, includes a decrease to depreciation expense of approximately $8 million**,** a decrease to accretion expense of approximately $78 million in 2017, and a combined decrease in used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million**.** Under the current OEB-approved cost recovery methodologies, these changes are not expected to materially affect OPG's income in 2017, as they are expected to be largely offset by the OEB-approved variance and deferral accounts, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to *Ontario Regulation 53/05*. It records the revenue requirement impact

associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the amount due to the Province. This accounting adjustment represented the overfunded position of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 relative to the value of the corresponding life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province, because OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and because any excess funding in the Nuclear Segregated Funds upon termination of the ONFA accrues to the Province. Of the $88 million reduction in the Nuclear Segregated Funds assets, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

Pension and Other Post-Employment Benefits

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined under the heading, *Contractual and Commercial Commitments,* in Note 15 Commitments and Contingencies. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation, and assumptions as at December 31, 2016. As part of the valuation, the plan's demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The weighted average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

The deficit for the registered pension plan increased, for accounting purposes, from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million).

Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

OEB's Decision on OPG's December 2014 Motion

In January 2016, OEB issued its decision on OPG's December 2014 motion that requested the OEB to review and vary parts of its November 2014 decision, including the disallowed Niagara Tunnel project capital costs. In its January 2016 decision, the OEB reversed a portion of the November 2014 Niagara Tunnel capital cost disallowance and established a new variance account to record the revenue requirement impact of the reversed disallowance effective November 1, 2014. The November 2014 disallowance resulted in a write off of capital costs in the fourth quarter of 2014. To recognize the expected future recovery of the reversed portion of the disallowance and related revenue requirement impact to March 31, 2016, during the first quarter of 2016, OPG recorded an increase to property, plant and equipment and a corresponding gain of $22 million, and a regulatory asset of $3 million related to the balance in the variance account, in accordance with Accounting Standards Codification (ASC) Topic 980, *Regulated Operations*.

Recent Accounting Pronouncements

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact that the new standard will have on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the AFS classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of other comprehensive income. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One Limited (Hydro One) share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

Intra-Entity Transfers of Assets Other than Inventory

In October 2016, the FASB issued ASU No. 2016-16, *Income* Taxes, where entities will be required to recognize the income tax effects of certain intercompany transfers of assets as an income tax expense or benefit in the period the transaction occurs. This is different from current standards where entities are required to defer the income tax effects until that asset has been sold to a third party or otherwise recognized. OPG is required to adopt this ASU on January 1, 2018. The amendments in this ASU should be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. OPG expects to record a cumulative-effect adjustment to the 2018 opening retained earnings of a debit of $7 million.

Significant Accounting Standard Update Adopted

Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share

In May 2015, the FASB issued ASU No. 2015-07, *Fair Value Measurement (Topic 820) – Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent)*. Under the new guidance, investments measured at net asset value (NAV), which have been elected under the guidance as a practical expedient for fair value, are excluded from the fair value hierarchy. Removing investments measured using the practical expedient from the fair value hierarchy is intended to eliminate the diversity in practice that currently exists with respect to the categorization of these investments. The only criterion for categorizing investments in the fair value hierarchy is the observability of the inputs. OPG has adopted the updates to ASC Topic 820, *Fair Value Measurement* in 2016. The changes in disclosures required under this update are reflected in Notes 11 and 13.

4. PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND DEPRECIATION AND AMORTIZATION

Depreciation and amortization expenses, including amounts recognized in regulatory variance and deferral accounts authorized by the OEB, for the years ended December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Depreciation	**602**	617
Amortization of intangible assets	**27**	20
Amounts recognized in regulatory variance and deferral accounts	**26**	(1)
Amortization of regulatory assets and liabilities *(Note 5)*	**602**	464
	1,257	1,100

Property, plant and equipment as at December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Nuclear generating stations	**11,057**	11,999
Regulated hydroelectric generating stations	**9,430**	9,351
Contracted generation portfolio generating stations	**3,751**	3,713
Other property, plant and equipment	**1,598**	1,839
Construction in progress	**3,483**	2,567
	29,319	29,469
Less: accumulated depreciation		
Generating stations	**7,948**	7,359
Other property, plant and equipment	**1,369**	1,515
	9,317	8,874
	20,002	20,595

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. An active program to locate a buyer was initiated in October 2016. As such, in the fourth quarter of 2016, OPG reclassified the assets' net book value of approximately $93 million (December 31, 2015 – $96 million) out of property, plant and equipment and into Other current assets in the Services, Trading, and Other Non-Generation segment. Depreciation on the assets ceased in the fourth quarter of 2016. In December 2016, a purchase and sale agreement was executed and the disposition is expected to close during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be recognized in the second quarter of 2017 when the transaction is expected to be completed. Pursuant to the December 2015 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act 2014*, OPG is required to transfer a portion of the proceeds of disposition into the Province's Consolidated Revenue Fund.

Construction in progress as at December 31 consists of the following:

(millions of dollars)	**2016**	**2015**
Darlington Refurbishment	**2,563**	1,868
Peter Sutherland Sr. GS	**236**	95
Other	**684**	604
	3,483	2,567

Interest capitalized to construction and development in progress at an average rate of five percent during 2016 (2015 – five percent) was $141 million (2015 – $102 million).

Intangible assets as at December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Nuclear generating stations	**122**	118
Regulated hydroelectric generating stations	**7**	4
Contracted generation portfolio generating stations	**4**	5
Computer software and other intangible assets	**350**	321
Development in progress	**20**	28
	503	476
Less: accumulated amortization		
Generating stations	**120**	115
Computer software and other intangible assets	**284**	263
	404	378
	99	98

The estimated aggregate amortization expense for each of the five succeeding years for intangible assets in service as at December 31, 2016 is as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**
Amortization expense	24	21	20	8	2

5. REGULATORY ASSETS AND LIABILITIES

In December 2014, OPG filed an application with the OEB to recover approximately $1.8 billion in December 31, 2014 balances in most of its authorized regulatory variance and deferral accounts. The recovery of the amount sought was approved by the OEB in 2015.

In October 2015, the OEB issued an order implementing its 2015 decisions on OPG's application. The order authorized OPG to recover $933 million over the period from October 1, 2015 to December 31, 2016 through new rate riders for generation from all of OPG's regulated nuclear and regulated hydroelectric facilities during this period, as shown below. The remaining approved balances will be subject to recovery after 2016.

($/Megawatt hour)	**Nuclear**	**Hydroelectric**
2015/2016 rate riders	10.84	3.19
2015/2016 interim period rate riders [1]	2.17	0.64
Rate riders for the period from October 1, 2015 to December 31, 2016	13.01	3.83

[1] The new riders were made effective July 1, 2015 and implemented effective October 1, 2015 by the OEB. The interim period rate riders were authorized by the OEB to allow for the recovery of the new riders for the period from July 1, 2015 to September 30, 2015. The revenue for the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The income impact of the revenue accrual was largely offset by a corresponding increase in amortization expense related to regulatory assets and liabilities for deferral and variance accounts.

In 2016, OPG recorded amortization of the regulatory assets and liabilities for the deferral and variance account balances approved for disposition on a straight-line basis, based on recovery or repayment periods authorized by the OEB's October 2015 order. In 2015, OPG recorded such amortization on a straight-line basis based on balances and recovery or repayment periods authorized by the OEB's December 2014 and October 2015 orders.

Any shortfall or over-recovery of the approved balances due to differences between actual and forecast production are recorded in the authorized Nuclear Deferral and Variance Over/Under Recovery Variance Account and the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account to be collected from, or refunded to, customers in the future.

The OEB's October 2015 order also approved the continuation of previously authorized variance and deferral accounts, including those authorized pursuant to *Ontario Regulation 53/05*.

Where authorized by the OEB, OPG recorded interest on the unamortized balances in the applicable variance and deferral accounts at the OEB-prescribed rates of 1.10 percent per annum for the period from April 1, 2015 to December 31, 2016 and 1.47 percent per annum for the period from January 1, 2015 to March 31, 2015.

The regulatory assets and liabilities recorded as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Regulatory assets		
Variance and deferral accounts authorized by the OEB		
Pension and OPEB Cost Variance Account	**716**	865
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 11)*	**497**	315
Hydroelectric Surplus Baseload Generation Variance Account	**210**	114
Bruce Lease Net Revenues Variance Account	**95**	95
Nuclear Deferral and Variance Over/Under Recovery Variance Account	**74**	82
Other variance and deferral accounts	**33**	243
	1,625	1,714
Pension and OPEB regulatory asset *(Note 11)*	**3,392**	3,362
Deferred Income Taxes *(Note 9)*	**838**	792
Total regulatory assets	**5,855**	5,868
Less: current portion	**-**	628
Non-current regulatory assets	**5,855**	5,240
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Capacity Refurbishment Variance Account	**102**	-
Other variance and deferral accounts	**208**	60
Total regulatory liabilities	**310**	60
Less: current portion	**-**	26
Non-current regulatory liabilities	**310**	34

The changes in the regulatory assets and liabilities during 2016 and 2015 are as follows:

(millions of dollars)	**Pension and OPEB Cost Variance**	**Pension & OPEB Cash vs Accrual Differential Deferral**	**Hydro-electric Surplus Baseload Generation Variance**	**Bruce Lease Net Revenues Variance**	**Nuclear Deferral and Variance Over/Under Recovery Variance**	**Capacity Refurb-ishment Variance**	**Other Variance and Deferral (net)**	**Pension and OPEB Regula-tory Asset**	**Deferred Income Taxes**
Net regulatory assets January 1, 2015	939	36	67	315	56	190	320	4,363	861
Increase (decrease)	-	279	82	(149)	44	(68)	3	(1,001)	(69)
Interest	-	-	-	-	1	2	1	-	-
Amortization	(74)	-	(35)	(71)	(19)	(124)	(141)	-	-
Net regulatory assets December 31, 2015	865	315	114	95	82	-	183	3,362	792
Increase (decrease)	**-**	**182**	**126**	**143**	**29**	**(36)**	**(184)**	**30**	**46**
Interest	**-**	**-**	**2**	**-**	**1**	**-**	**-**	**-**	**-**
Amortization	**(149)**	**-**	**(32)**	**(143)**	**(38)**	**(66)**	**(174)**	**-**	**-**
Net regulatory assets December 31, 2016	**716**	**497**	**210**	**95**	**74**	**(102)**	**(175)**	**3,392**	**838**

Pension and OPEB Cost Variance Account

As authorized by the OEB, for the period from March 1, 2011 to October 30, 2014, the Pension and OPEB Cost Variance Account recorded the differences between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and related tax impacts, and corresponding forecast amounts reflected in the regulated prices then in effect. In its November 2014 decision, the OEB determined that the pension and OPEB amounts reflected in OPG's new regulated prices effective November 1, 2014 would be limited to the Company's estimated minimum contributions to its registered pension plan and a forecast of OPG's expenditures on the OPEB and supplementary pension plans. As such, the OEB ordered the Pension and OPEB Cost Variance Account to record only amortization beginning on November 1, 2014.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of 10/12 of the account balance as at December 31, 2012 over a 144-month period to December 31, 2024. Amounts recorded in the account in 2013 and 2014 were approved for recovery over a 72-month period to June 30, 2021 by the OEB's October 2015 order.

Pension & OPEB Cash Versus Accrual Differential Deferral Account

In its November 2014 decision and December 2014 order, the OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Effective November 1, 2014, this deferral account records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis under US GAAP and OPG's corresponding actual cash expenditures for these plans. The balance in the account as at December 31, 2016 represents the excess of costs calculated using the accrual basis over the cash basis for the period from November 1, 2014 to December 31, 2016. The Company has recognized the amount set aside in the deferral account as a regulatory asset.

The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of the generic OEB proceeding on the regulatory treatment and recovery of pension and OPEB costs. The OEB's consultation process to develop standard principles to guide its review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery, began in May 2015. OPG is participating in the consultation. In July 2016, the OEB held a public stakeholder forum as part of the consultation. In September 2016, OPG made a written submission of its position on the matter with the OEB. OEB's consultation process remains ongoing.

Hydroelectric Surplus Baseload Generation Variance Account

The Hydroelectric Surplus Baseload Generation Variance Account records the impact of foregone production at OPG's regulated hydroelectric facilities due to surplus baseload generation conditions. The variance account was authorized by the OEB effective March 1, 2011 for the regulated hydroelectric facilities prescribed for rate regulation prior to 2014, and effective November 1, 2014 for the applicable regulated hydroelectric facilities prescribed for rate regulation effective in 2014.

In its November 2014 decision and December 2014 order, the OEB approved the recovery of the account balance as at December 31, 2013 over a 12-month period beginning on January 1, 2015. The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 over an 18-month period from July 1, 2015 to December 31, 2016. OPG's May 2016 application to the OEB included a request to recover the balance in this account as at December 31, 2015 less amounts approved in the OEB's October 2015 order.

Bruce Lease Net Revenues Variance Account

In accordance with *Ontario Regulation 53/05*, the OEB is required to include the difference between OPG's revenues and costs associated with its ownership of the two nuclear stations on lease to Bruce Power in the determination of the regulated prices for production from OPG's regulated nuclear facilities. The OEB established a variance account

that captures differences between OPG's revenues and costs related to the Bruce nuclear generating stations and the corresponding forecasts included in approved nuclear regulated prices.

In 2013, the OEB ordered the portion of the balance in the Bruce Lease Net Revenues Variance Account related to the impact of the derivative liability embedded in the terms of the Bruce Lease in effect prior to December 2015 to be recovered on the basis of OPG's expected rent rebate payments to Bruce Power and associated income tax impacts. The OEB's October 2015 order reaffirmed this approach. In December 2015, as a result of amendments to the Bruce Lease, OPG reversed the derivative liability, with a corresponding reduction to the regulatory asset for this account. Amounts collected from customers for the derivative liability for periods after its reversal are subject to refund in the future and recognized as a regulatory liability as part of the variance account balance.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of the non-derivative portion of the account balance as at December 31, 2012 over a 48-month period ending December 31, 2016. The non-derivative portion of amounts recorded in the account in 2013 and 2014 was approved for recovery over an 18-month period from July 1, 2015 to December 31, 2016 by the OEB's October 2015 order. The balance in this account as at December 31, 2016 therefore reflects the cumulative variances in net revenues related to the non-derivative portion of the account between January 1, 2015 and December 2016, partially offset by the refund to ratepayers for the derivative cancellation in 2015.

Nuclear Deferral and Variance Over/Under Recovery Variance Account

The Nuclear Deferral and Variance Over/Under Recovery Variance Account records any shortfall or over-recovery of the approved variance and deferral account balances due to differences between actual and forecast nuclear production. The account also captures transfer of balances remaining in other variance and deferral accounts as they expire. The balance in the account will be collected from, or refunded to, customers following OPG's next application to the OEB.

The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 over an 18-month period from July 1, 2015 to December 31, 2016. OPG's May 2016 application to the OEB included a request to recover the balance in this account as at December 31, 2015 less amounts approved in the OEB's October 2015 order.

Capacity Refurbishment Variance Account

Pursuant to *Ontario Regulation 53/05*, the OEB has authorized the Capacity Refurbishment Variance Account (CRVA). The account captures variances from the forecasts reflected in the regulated prices for capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to one or more of the regulated facilities. The balance in the account as at December 31, 2016 includes variances related to the refurbishment of the Darlington nuclear generating station, life extension initiatives at the Pickering nuclear generation station, and other projects.

OPG determines amounts to be recovered from, or refunded to, customers with respect to variances in capital costs as the difference from forecast depreciation expense and cost of capital associated with the in-service capital reflected in the regulated prices and associated income tax effects. The cost of capital amount in the account is calculated using the weighted average cost of capital, including a return on equity, as approved by the OEB in determining the regulated prices. In accordance with US GAAP, in recognizing a regulatory asset for the CRVA, OPG limits the portion of cost of capital additions recognized as a regulatory asset to the amount calculated using the average rate of capitalized interest applied to construction and development in progress.

The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 less amounts approved in the OEB's December 2014 order over an 18-month period from July 1, 2015 to December 31, 2016. In setting new regulated prices effective November 1, 2014, the OEB approved the recovery of the December 31, 2013 nuclear capital and hydroelectric portions of the account balance, totaling $119 million, over a 12-month period beginning on January 1, 2015.

Other Variance Accounts

Regulatory assets

As at December 31, 2016 and 2015, regulatory assets for other variance and deferral accounts included amounts for Nuclear Liability Deferral Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Development Variance Account, and the Pickering Life Extension Depreciation Variance Account.

The Nuclear Liability Deferral Account is authorized in connection with changes to OPG's liabilities for nuclear used fuel management and nuclear decommissioning and L&ILW management associated with the nuclear facilities owned and operated by OPG, which are comprised of the Pickering and Darlington nuclear generating stations. The deferral account records the revenue requirement impact associated with the changes in these liabilities arising from an approved reference plan, in accordance with the terms of the ONFA.

The Hydroelectric Deferral and Variance Over/Under Recovery Variance Account records any shortfall or over-recovery of the approved variance and deferral account balances due to differences between actual and forecast hydroelectric production. The account also captures transfer of balances remaining in other variance and deferral accounts as they expire. The balance in the account will be collected from, or refunded to, customers following OPG's next application to the OEB.

The Nuclear Development Variance Account records variances between the actual non-capital costs incurred and firm financial commitments made in the course of planning and preparation for the development of proposed new nuclear generation facilities and the corresponding forecasts reflected in the regulated prices approved by the OEB.

The Pickering Life Extension Depreciation Variance Account balance was recorded wholly during the period from November 1, 2014 to December 31, 2014. This balance represents an offset to the customer credit for the reduction in depreciation expense for the Pickering nuclear generating station that was reflected both as a reduction to the base regulated prices effective November 1, 2014 and the nuclear rate rider in effect during 2014. The regulatory asset for this balance was fully amortized during the year ended December 31, 2016 based on the recovery periods authorized by the OEB.

As at December 31, 2016, regulatory assets for other variance and deferral accounts also included the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account. This account was established in the OEB's January 2016 decision in which it reversed a portion of the November 2014 Niagara Tunnel Capital cost disallowance. This account records the revenue requirement impact of the reversed disallowance effective November 1, 2014. To recognize the expected future recovery of the reversed portion of the disallowance, OPG recorded an increase to property, plant and equipment and a corresponding gain of $22 million during 2016 in accordance with ASC Topic 980, *Regulated Operations*. As at December 31, 2016, OPG also recorded a regulatory asset of $3 million related to the balance in the variance account.

As at December 31, 2015, regulatory assets for other variance and deferral accounts also included the Pension & OPEB Cash Payment Variance Account.

Regulatory liabilities

As at December 31, 2016 and 2015, regulatory liabilities for other variance and deferral accounts included amounts for the Hydroelectric Water Conditions Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account.

The Hydroelectric Water Conditions Variance Account captures the impact of differences in regulated hydroelectric electricity production due to differences between forecast water conditions underlying the production forecast approved by the OEB in setting regulated hydroelectric prices, and the actual water conditions.

The Ancillary Services Net Revenue Variance Account was authorized by the OEB to capture differences between actual nuclear and regulated hydroelectric ancillary services net revenue and the forecast amounts of such revenue approved by the OEB in setting regulated prices.

The Income and Other Taxes Variance Account includes deviations in income taxes for the regulated business, from those approved by the OEB in setting regulated prices, caused by changes in tax rates and rules, as well as reassessments.

The Hydroelectric Incentive Mechanism Variance Account records a credit to customers equal to 50 percent of OPG's hydroelectric incentive mechanism revenues above a specified threshold for the regulated hydroelectric facilities.

In its November 2014 decision and December 2014 order, the OEB approved the recovery or repayment of certain of the account balances of the other variance accounts as at December 31, 2013 over a 12-month period beginning on January 1, 2015. In its October 2015 order, the OEB approved the recovery or repayment of the majority of the account balances of the other variance and deferral accounts as at December 31, 2014, less amounts approved in the December 2014 order, over an 18-month period from July 1, 2015 to December 31, 2016.

As at December 31, 2016, regulatory liabilities for other variance and deferral accounts also included the Impact Resulting from Changes in Station-End-of-Life Deferral Account. In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of the changes to the nuclear fixed asset removal and nuclear waste management liabilities and depreciation expense arising from the changes in the estimated useful lives of the Company's nuclear stations, for accounting purposes, implemented effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station-End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG recognized a regulatory liability of $71 million related to the balance in the deferral account.

In addition, as at December 31, 2016, the regulatory liabilities also included the Pension & OPEB Cash Payment Variance Account. This account records, effective November 1, 2014, the difference between OPG's actual contributions to its registered pension plan and expenditures on its OPEB and supplementary pension plans for the regulated business, and the corresponding amounts reflected in the regulated prices.

Pension and OPEB Regulatory Asset

The Pension and OPEB Regulatory Asset represents unamortized amounts in respect of OPG's pension and OPEB plans that have been recognized in OCI and not yet reclassified into the amortization component of the benefit costs in respect of these plans. These amounts are expected to be recovered from customers through future regulated prices. The regulatory asset is reversed as underlying unamortized balances are amortized as components of benefit costs. Refer to Note 3 for a detailed discussion of the rate recovery methodology for pension and OPEB costs under the heading, *Rate Regulated Accounting*. The AOCI amounts related to pension and OPEB plans are presented in Note 11.

Deferred Income Taxes

OPG is required to record a regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities. In addition, OPG is required to recognize a deferred income tax liability or asset for the regulatory asset or liability for the amount of deferred income taxes expected to be included in future regulated prices and paid to or recovered from customers. Income taxes are discussed in Note 9.

6. LONG-TERM DEBT

Long-term debt consists of the following as at December 31: [1]

(millions of dollars)	**2016**	**2015**
Notes payable to the OEFC		
Senior Notes [2]		
4.91% due 2016	**-**	270
5.35% due 2017	**900**	900
5.27% due 2018	**395**	395
5.44% due 2019	**365**	365
4.56% due 2020	**660**	660
4.28% due 2021	**185**	185
3.30% due 2022	**150**	150
3.12% due 2023	**40**	40
3.04% due 2026	**50**	-
5.07% due 2041	**300**	300
4.36% due 2042	**200**	200
4.03% due 2046	**50**	-
UMH Energy Partnership [3]		
Senior Notes		
7.86% due to 2041	**184**	187
PSS Generating Station Limited Partnership [4]		
Senior Notes		
4.90% due to 2067	**245**	245
Lower Mattagami Energy Limited Partnership [5]		
Senior Notes		
2.35% due 2017	**200**	200
4.46% due 2021	**225**	225
3.53% due 2024	**200**	200
2.40% due 2026	**220**	-
5.26% due 2041	**250**	250
5.05% due 2043	**200**	200
4.26% due 2046	**275**	275
4.26% due 2052	**225**	225
Other	**15**	-
	5,534	5,472
Less: bond issuance fees	**(14)**	(13)
Less: due within one year	**(1,103)**	(273)
Long-term debt	**4,417**	5,186

[1] The interest rates disclosed reflect the effective interest rate of the debt.

[2] OEFC senior debt is entitled to receive, in full, amounts owing in respect of the senior debt and is pari passu to the Lower Mattagami Energy Limited Partnership senior notes.

[3] These notes are secured by the assets of the Upper Mattagami and Hound Chute project. Principal repayments of $3 million per year are made on a semi-annual basis until maturity in 2041, at which time the remaining principal balance of $116 million becomes due.

[4] These notes are secured by the assets of the Peter Sutherland Sr. GS project. The notes have an interest-only feature until 2025 and will be amortized with blended semi-annual principal and interest payments thereafter until maturity in 2067, at which time the remaining principal balance of $49 million becomes due.

[5] These notes are secured by the assets of the Lower Mattagami River project, including existing and new operating facilities, and are recourse to OPG until the recourse release date. These notes rank pari passu to the OEFC senior notes.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As at December 31, 2016, there were outstanding borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016,

OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

Interest paid in 2016 was $269 million (2015 – $269 million), of which $261 million (2015 – $261 million) relates to interest paid on long-term debt.

In the fourth quarter of 2015, PSS, a subsidiary of OPG, issued long-term debt totalling $245 million in support of the Peter Sutherland Sr. GS project. The majority of the debt proceeds, totalling $180 million, were invested in a structured deposit note with staggered maturity dates ranging from January 2016 to April 2017. As at December 31, 2016, $70 million was reported as Other current assets on the consolidated balance sheets, based on the terms of the deposit note. As at December 31, 2015, $110 million was reported as Other current assets and $70 million as Other long-term assets.

In October 2016, Lower Mattagami Energy Limited Partnership (LME) issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes is x.xx percent and x.xx percent, respectively. **[MONITOR]**

A summary of the contractual maturities of all long-term borrowings outstanding as at December 31, 2016, by year, is as follows:

(millions of dollars)	
2017	**1,103**
2018	**398**
2019	**368**
2020	**663**
2021	**413**
Thereafter	**2,589**
	5,534

The book value of the pledged assets as at December 31, 2016 was $3,510 million (2015 – $3,520 million).

7. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended both tranches to May 2021. As at December 31, 2016 and 2015, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, the LME maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for the LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program (2015 – $225 million). There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016 and 2015.

As at December 31, 2016, OPG maintained $25 million of short-term, uncommitted overdraft facilities and $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included

$349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016 and 2015, there were Letters of Credit outstanding under this agreement of $150 million which were issued in support of OPG's supplementary pension plan.

In October 2014, UMH Energy Partnership entered into an $8 million short-term, uncommitted overdraft facility and $16 million of irrevocable, standby Letters of Credit facilities in support of its operations. As at December 31, 2016, total Letters of Credit of $14 million had been issued under these facilities.

The following table summarizes the net interest expense for the years ended December 31:

(millions of dollars)	**2016**	**2015**
Interest on long-term debt	**290**	285
Interest on short-term debt	**8**	8
Interest income	**(7)**	(9)
Interest capitalized to property, plant and equipment and intangible assets	**(141)**	(102)
Interest related to regulatory assets and liabilities [1]	**(30)**	(2)
Net interest expense	**120**	180

[1] Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Bruce Lease Net Revenues Variance Account, the Capacity Refurbishment Variance Account, and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

8. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES AND FUNDS

The liabilities for fixed asset removal and nuclear waste management on a present value basis consist of the following as at December 31:

(millions of dollars)	**2016**	**2015**
Liability for nuclear used fuel management	**11,292**	12,793
Liability for nuclear decommissioning and L&ILW waste management	**7,811**	6,999
Liability for non-nuclear fixed asset removal	**381**	377
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169

The changes in the fixed asset removal and nuclear waste management liabilities for the years ended December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Liabilities, beginning of year	**20,169**	17,028
Increase in liabilities due to accretion [1]	**1,024**	906
(Decrease) increase in liabilities reflecting changes to the estimated useful lives of nuclear generating stations *(Note 3)*	**(1,567)**	2,330
Increase in liabilities due to nuclear used fuel and nuclear waste management expenses and other expenses [1]	**133**	123
Liabilities settled by expenditures on fixed asset removal and nuclear waste management	**(275)**	(218)
Liabilities, end of year	**19,484**	20,169

[1] Amounts shown exclude the impact of regulatory variance and deferral accounts.

OPG's fixed asset removal and nuclear waste management liabilities are comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating facilities, and other facilities. Costs will be incurred for activities such as preparation for safe storage, dismantling, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel and L&ILW material.

The determination of the accrual for fixed asset removal and nuclear waste management costs requires significant assumptions since these programs are long-term in nature. The most recent comprehensive update of the cost estimates for the nuclear decommissioning and nuclear waste management liabilities is contained in the approved 2017 ONFA Reference Plan, which covers the 2017-2021 period.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years. The estimates for the Nuclear Liabilities include cash flow estimates for decommissioning the nuclear stations for approximately 40 years after stations are shut down and to 2088 for placement of used fuel into the long-term disposal repository, followed by extended monitoring.

The significant assumptions underlying operational, technical, and economic factors used in the calculation of the accrued Nuclear Liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the nuclear waste programs including construction of waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, or the technology employed may result in significant changes to the value of the accrued liabilities. With programs of this duration and the evolving technology to handle the nuclear waste, there is a significant degree of uncertainty surrounding the measurement of the costs for these long-term programs. These costs may increase or decrease over time.

Liability for Nuclear Used Fuel Management Costs

The liability for nuclear used fuel management represents the cost of managing the highly radioactive used nuclear fuel bundles. The federal NFWA, proclaimed into force in 2002, required that Canada's nuclear fuel waste owners form a nuclear waste management organization, and that each waste owner establish a trust fund for used fuel management costs. This organization, the NWMO, is responsible for the design and implementation of Canada's plan for the long-term management of nuclear used fuel waste. To estimate its liability for nuclear used fuel management costs, OPG has adopted a conservative approach consistent with the Adaptive Phased Management concept approved by the Government of Canada, which assumes a deep geologic repository as part of the long-term management of nuclear used fuel, with an in-service date of 2043 at the earliest.

Liability for Nuclear Decommissioning and L&ILW Management Costs

The liability for nuclear decommissioning and L&ILW management represents the estimated costs of decommissioning the nuclear generating stations after the end of their service lives, as well as the cost of managing L&ILW generated by the stations. The significant assumptions used in estimating future nuclear fixed asset removal costs include a deferred dismantlement basis for decommissioning of the stations, whereby the reactors will remain in a safe state condition for a 30-year period prior to an approximate 10-year dismantlement period.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the accrued costs for the management of L&ILW include an L&ILW DGR. Agreement was previously reached with local municipalities for OPG to develop a deep geologic repository for the long-term management of L&ILW adjacent to OPG's Western Waste Management Facility. OPG has suspended design activities for the L&ILW DGR pending receipt of the site preparation and construction licence.

Liability for Non-Nuclear Fixed Asset Removal Costs

The liability for non-nuclear fixed asset removal primarily represents the estimated costs of decommissioning OPG's thermal generating stations at the end of their services lives. The liability is based on third-party cost estimates after an in-depth review of plant sites and an assessment of required clean-up and restoration activities, completed in 2011 for most of the thermal generating stations. For the purpose of measuring the liability, asset removal activities are estimated to take place over the next one to 15 years. As at December 31, 2016, the liability for non-nuclear fixed asset removal was $381 million (2015 – $377 million).

Ontario Nuclear Funds Agreement

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Segregated Funds based on the approved ONFA Reference Plan in effect.

OPG makes quarterly payments to the Used Fuel Segregated Fund over the life of its nuclear generating stations, as specified in the ONFA, including contributions to the NFWA Trust (the Trust). The Trust forms part of the Used Fuel Segregated Fund, and contributions to the Trust, as required by the NFWA, may be applied towards OPG's ONFA payment obligations. Required funding for 2016 under the ONFA was $150 million (2015 – $143 million). In 2016, OPG completed a comprehensive update of the estimate for its obligations for nuclear waste management and nuclear decommissioning, in line with the required reference plan update process under the ONFA. The results of the update were reflected in a new ONFA reference plan, for years 2017 to 2021, as well as an adjustment reducing the asset retirement obligation carried on OPG's consolidated balance sheet as at December 31, 2016. The 2017-2021 ONFA reference plan was approved by the Province in December 2016, with an effective date of January 1, 2017 (the 2017 ONFA Reference Plan). Based on the funded status of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund reflecting the revised, overall lower life cycle liability estimates per the 2017 ONFA Reference Plan, no contributions to the Nuclear Segregated Funds are required starting in 2017. Contributions may be required in the future should either or both of the funds be in an underfunded position when a new reference plan is prepared.

The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge the current nuclear decommissioning and waste management liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the Canadian Nuclear Safety Commission (CNSC) since 2003, on behalf of OPG. The Provincial Guarantee provides for any shortfall between the CNSC consolidated financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount of the Provincial Guarantee. The current value of the Provincial Guarantee amount of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016.

The investments in the Nuclear Segregated Funds include a diversified portfolio of equities and fixed income securities that are invested across geographic markets, as well as investments in infrastructure, real estate, and agriculture. The Nuclear Segregated Funds are invested to fund long-term liability requirements and, as such, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While short-term fluctuations in market value will occur, managing the long-term return of the Nuclear Segregated Funds remains the primary goal. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Decommissioning Segregated Fund

OPG bears the risk and liability for cost estimate changes and fund earnings in the Decommissioning Segregated Fund. As at December 31, 2016 and December 31, 2015, the Decommissioning Segregated Fund was in an overfunded position.

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund, which is the excess of the fair market value of the Decommissioning Segregated Fund assets over the estimated completion costs, as per the most recently approved ONFA Reference Plan. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the earnings recognized in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus, that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded. Based on the 2017 ONFA Reference Plan, the Used Fuel Segregated Fund was in an overfunded position as at December 31, 2016. As a result, the Decommissioning Segregated Fund balance was reduced by amounts due to the Province. When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets. The payable to the Province may be reduced in subsequent periods in the event that the Decommissioning Segregated Fund earns less than its target rate of return or in the event that a new ONFA Reference Plan is approved with a higher estimated decommissioning liability.

The Province's right to any excess funding in the Decommissioning Segregated Fund upon termination of the ONFA results in OPG capping its annual earnings generally at 3.25 percent plus the long-term Ontario Consumer Price Index (CPI) specified in the most recently approved ONFA Reference Plan, which is the rate of growth in the liability for the estimated completion cost, as long as the Decommissioning Segregated Fund is in an overfunded status of less than 120 percent.

Used Fuel Segregated Fund

OPG is responsible for the risk and liability of cost increases for used fuel waste management under the ONFA, subject to specified graduated liability thresholds, which limit OPG's total financial exposure for the first 2.23 million nuclear used fuel bundles at approximately $15 billion in present value dollars as at December 31, 2016. The graduated liability thresholds do not apply to incremental used fuel bundles beyond 2.23 million.

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined by ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return and the actual market return determined based on the fair value of the fund assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount OPG would pay to or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions for fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province, has the right at any time to access

the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. As at December 31, 2016, the Used Fuel Segregated Fund was overfunded in accordance with the 2017 ONFA Reference Plan. As such, the fund balances are reduced by amounts due to the Province.

Nuclear Segregated Funds

The nuclear fixed asset removal and nuclear waste management funds as at December 31 consist of the following:

(millions of dollars)	Fair Value 2016	2015
Decommissioning Segregated Fund	**8,317**	7,834
Due to Province – Decommissioning Segregated Fund	**(1,477)**	(1,285)
	6,840	6,549
Used Fuel Segregated Fund [1]	**11,082**	10,290
Due to Province – Used Fuel Segregated Fund	**(1,938)**	(1,703)
	9,144	8,587
Total Nuclear Segregated Funds	**15,984**	15,136
Less: current portion	**24**	15
Non-current Nuclear Segregated Funds	**15,960**	15,121

[1] The Ontario NFWA Trust represented $3,688 million as at December 31, 2016 (2015 – $3,409 million) of the Used Fuel Segregated Fund on a fair value basis.

Commented [AJ1]: Slight variance from $8,309 presented in the 2017 approved reference plan

Commented [AJ2]: Due to Province in January submission is 1,913. Is this due to cash vs. accrual account variance?

Commented [AJ3]: 9,154 is the approved Reference Plan amount, again cash vs. accrual here?

The fair value of the securities invested in the Nuclear Segregated Funds as at December 31 is as follows:

(millions of dollars)	Fair Value 2016	2015
Cash and cash equivalents and short-term investments	**354**	343
Alternative investments	**1,989**	1,620
Pooled funds	**1,330**	1,311
Marketable equity securities	**9,503**	8,621
Fixed income securities	**6,181**	6,219
Net receivables/payables	**42**	10
	19,399	18,124
Due to Province	**(3,415)**	(2,988)
	15,984	15,136

The historical cost, gross unrealized aggregate appreciation and depreciation of investment, gross unrealized foreign exchange gains, and fair value of the Nuclear Segregated Funds as at December 31, 2016 and 2015 are summarized as follows:

	2016		
(millions of dollars)	**Decommissioning Segregated Fund**	**Used Fuel Segregated Fund**	**Total**
Historical cost	**6,896**	**9,385**	**16,281**
Gross unrealized gains (losses)			
Aggregate appreciation	**1,326**	**1,564**	**2,890**
Aggregate depreciation	**(165)**	**(222)**	**(387)**
Foreign exchange	**260**	**355**	**615**
	8,317	**11,082**	**19,399**
Due to Province	**(1,477)**	**(1,938)**	**(3,415)**
Total fair value	**6,840**	**9,144**	**15,984**
Less: current portion	**16**	**8**	**24**
Non-current fair value	**6,824**	**9,136**	**15,960**

	2015		
(millions of dollars)	**Decommissioning Segregated Fund**	**Used Fuel Segregated Fund**	**Total**
Historical cost	6,608	8,819	15,427
Gross unrealized gains (losses)			
Aggregate appreciation	1,098	1,283	2,381
Aggregate depreciation	(297)	(383)	(680)
Foreign exchange	425	571	996
	7,834	10,290	18,124
Due to Province	(1,285)	(1,703)	(2,988)
Fair value	6,549	8,587	15,136
Less: current portion	5	10	15
Non-current fair value	6,544	8,577	15,121

Net realized and unrealized gains or losses from investments for the years ended December 31, 2016 and 2015 are summarized as follows:

(millions of dollars)	2016 Decommissioning Segregated Fund	2016 Used Fuel Segregated Fund	2016 Total
Net realized gains			
Realized gains excluding foreign exchange	**84**	**180**	**264**
Realized foreign exchange gains	**30**	**41**	**71**
Net realized gains	**114**	**221**	**335**
Net unrealized gains			
Unrealized gains excluding foreign exchange	**360**	**442**	**802**
Unrealized foreign exchange losses	**(165)**	**(216)**	**(381)**
Net unrealized gains	**195**	**226**	**421**

(millions of dollars)	2015 Decommissioning Segregated Fund	2015 Used Fuel Segregated Fund	2015 Total
Net realized gains			
Realized gains	159	221	380
Realized foreign exchange gains	56	71	127
Net realized gains	215	292	507
Net unrealized gains			
Unrealized losses	(267)	(367)	(634)
Unrealized foreign exchange gains	335	439	774
Net unrealized gains	68	72	140

The change in the Nuclear Segregated Funds for the years ended December 31 is as follows:

(millions of dollars)	Fair Value 2016	2015
Decommissioning Segregated Fund, beginning of year	**6,549**	6,246
Increase in fund due to return on investments	**505**	507
Decrease in fund due to reimbursement of eligible expenditures	**(22)**	(19)
Increase in due to Province	**(192)**	(185)
Decommissioning Segregated Fund, end of year	**6,840**	6,549
Used Fuel Segregated Fund, beginning of year	**8,587**	8,133
Increase in fund due to contributions made	**150**	143
Increase in fund due to return on investments	**690**	642
Decrease in fund due to reimbursement of eligible expenditures	**(48)**	(57)
Increase in due to Province	**(235)**	(274)
Used Fuel Segregated Fund, end of year	**9,144**	8,587

The earnings from the Nuclear Segregated Funds during 2016 and 2015 were impacted by the Bruce Lease Net Revenues Variance Account authorized by the OEB. The earnings on the Nuclear Segregated Funds for the years ended December 31 are as follows:

(millions of dollars)	2016	2015
Decommissioning Segregated Fund	**313**	322
Used Fuel Segregated Fund	**455**	368
Bruce Lease Net Revenues Variance Account	**(22)**	14
Total earnings	**746**	704

9. INCOME TAXES

OPG follows the liability method of accounting for income taxes. The Company records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities.

A reconciliation between the statutory and the effective rate of income taxes is as follows:

(millions of dollars)	**2016**	**2015**
Income before income taxes	**621**	509
Combined Canadian federal and provincial statutory enacted income tax rates	**26.5%**	26.5%
Statutory income tax rates applied to accounting income	**165**	135
Increase (decrease) in income taxes resulting from:		
Impact of rate regulated accounting	**65**	29
Scientific Research and Experimental Development investment tax credits	**(42)**	(55)
Manufacturing and processing credit	**(9)**	(8)
Other	**(11)**	(9)
	3	(43)
Income tax expense	**168**	92
Effective rate of income taxes	**27.0%**	18.1%

Significant components of the income tax expense are presented in the table below:

(millions of dollars)	**2016**	**2015**
Current income tax expense:	**204**	59
Deferred income tax (recovery) expense:	**(36)**	33
Income tax expense	**168**	92

The income tax effects of temporary differences that give rise to deferred income tax assets and liabilities as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Deferred income tax assets:		
Fixed asset removal and nuclear waste management liabilities	**4,861**	5,032
Other liabilities and assets	**1,813**	1,699
	6,674	6,731
Deferred income tax liabilities:		
Property, plant and equipment and intangible assets	**(1,807)**	(2,119)
Nuclear fixed asset removal and nuclear waste management funds	**(3,996)**	(3,784)
Other assets and liabilities	**(1,700)**	(1,708)
	(7,503)	(7,611)
Net deferred income tax liabilities	**(829)**	(880)

During 2016, OPG recorded an increase in the deferred income tax liability for the income taxes that are expected to be recovered or refunded through regulated prices charged to customers of $46 million (2015 – a decrease of $69 million). Since these deferred income taxes are expected to be refunded through future regulated prices, OPG recorded a corresponding increase to the regulatory asset for deferred income taxes. As a result, the deferred income tax expense for 2016 and 2015 was not impacted.

The following table summarizes the deferred income tax liabilities recorded for the rate regulated operations that are expected to be recovered through future regulated prices:

(millions of dollars)	**2016**	**2015**
January 1:		
Deferred income tax liabilities on temporary differences related to regulated operations	**592**	644
Deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liability	**200**	217
	792	861
Changes during the year:		
Increase (decrease) in deferred income tax liabilities on temporary differences related to regulated operations	**35**	(52)
Increase (decrease) in deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liability	**11**	(17)
Balance as at December 31	**838**	792

The tax benefit associated with an income tax position is recognized only when it is more likely than not that such a position will be sustained upon examination by the taxing authorities based on the technical merits of the position. The current and deferred income tax benefit is equal to the largest amount, considering possible settlement outcomes, that is greater than 50 percent likely of being realized upon settlement with the taxing authorities.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(millions of dollars)	**2016**	**2015**
Unrecognized tax benefits, beginning of year	**72**	79
Additions based on tax positions related to the current year	**19**	16
Additions for tax positions of prior years	**2**	7
Reductions for tax positions of prior years	**(16)**	(14)
Other	**-**	(16)
Unrecognized tax benefits, end of year	**77**	72

As at December 31, 2016, OPG's unrecognized tax benefits were $77 million (2015 – $72 million), excluding interest and penalties, all of which, if recognized, would affect OPG's effective tax rate. Changes in unrecognized tax benefits over the next 12 months cannot be predicted with certainty.

OPG recognizes interest and penalties related to unrecognized tax benefits as income tax expense. As at December 31, 2016, OPG had recorded interest on unrecognized tax benefits of $8 million (2015 – $7 million). OPG considers its significant tax jurisdiction to be Canada. OPG remains subject to income tax examination for years after 2012.

OPG paid $98 million in income taxes (net of tax refunds) during 2016 (2015 – $47 million).

10. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of Accumulated Other Comprehensive Loss (AOCL), net of income taxes, during the years December 31, 2016 and 2015 are as follows:

	2016			
(millions of dollars)	**Unrealized Gains and Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities[1]**	**Total [1]**
AOCL, beginning of year	**(106)**	**(213)**	**-**	**(319)**
Actuarial loss on re-measurement of liabilities for pension and OPEB	**-**	**(6)**	**-**	**(6)**
Unrealized loss on available-for-sale securities	**-**	**-**	**(1)**	**(1)**
Amounts reclassified from AOCL	**19**	**12**	**-**	**31**
OCI for the year	**19**	**6**	**(1)**	**24**
AOCL, end of year	**(87)**	**(207)**	**(1)**	**(295)**

[1] All amounts are net of income taxes.

	2015		
(millions of dollars)	**Unrealized Gains and Losses on Cash Flow Hedges [1]**	**Pension and OPEB[1]**	**Total [1]**
AOCL, beginning of year	(117)	(379)	(496)
Net loss on cash flow hedges	(5)	-	(5)
Actuarial gain on re-measurement of liabilities for pension and OPEB	-	148	148
Amounts reclassified from AOCL	16	18	34
OCI for the year	11	166	177
AOCL, end of year	(106)	(213)	(319)

[1] All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the years ended December 31, 2016 and 2015 are as follows:

	Amount Reclassified from AOCL		
(millions of dollars)	**2016**	**2015**	**Statement of Income Line Item**
Amortization of losses from cash flow hedges			
Losses	**21**	18	Net interest expense and fuel expense
Income tax recovery	**(2)**	(2)	Income tax expense
	19	16	
Amortization of amounts related to pension and OPEB			
Actuarial losses and past service costs	**16**	25	See (1) below
Income tax recovery	**(4)**	(7)	Income tax expense
	12	18	
Total reclassifications for the year	**31**	34	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 11 for additional details).

11. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

Fund Assets

The OPG registered pension fund investment guidelines are stated in an approved Statement of Investment Policies and Procedures (SIPP). The SIPP is reviewed and approved by the Audit and Risk Committee of OPG's Board of Directors at least annually and includes a discussion of investment objectives and expectations, asset mix and rebalancing, and the basis for measuring the performance of the pension fund assets.

In accordance with the SIPP, investment allocation decisions are made with a view to achieve OPG's objective of meeting obligations of the plan as they come due. The pension fund assets are invested in four categories of asset classes. The first category is liability hedging assets which are intended to hedge the inflation and interest rate sensitivity of the plan liabilities. The second category is return enhancing assets which are intended to obtain higher investment returns compared to the returns expected for liability hedging assets. The third category is real assets which offer exposure to the combined characteristics of liability hedging and return enhancing assets. The fourth category is return diversifying strategies, which are intended to improve the overall return of the pension fund while mitigating the downside market risk.

To achieve the above objective, OPG has adopted the following target strategic asset allocation:

	Target
Asset Class	
Liability Hedging Assets	34%
Return Enhancing Assets	31%
Real Assets	20%
Return on Diversifying Assets	15%

The plan may enter into derivative securities, such as interest rate swaps and forward foreign exchange contracts, for risk management purposes, where such activity is consistent with the plan's investment objectives.

Significant Concentrations of Risk in Fund Assets

The assets of the pension fund are diversified to limit the impact of any individual investment. The pension fund is diversified across multiple asset classes. Fixed income securities are diversified among Canadian government bonds, government agency bonds, real return bonds, corporate bonds, and an interest rate overlay hedging program, which is disclosed under pooled funds. Equity securities are diversified across Canadian, US, and non-North American stocks. There are also real estate, infrastructure, and agriculture portfolios that represent approximately 12 percent of the total pension fund assets as at December 31, 2016. Investments in the above asset classes are further diversified across funds, investment managers, strategies, vintages, sectors and geographies, depending on the specific characteristics of each asset class.

Credit risk with respect to the pension fund's fixed income securities is managed by risk tolerance guidelines, which requires that fixed income securities comply with various investment constraints that ensure prudent diversification and prescribed minimum required credit rating quality. Credit risk, as it relates to the pension fund's derivatives, is managed through the use of International Swap and Derivatives Association documentation and counterparty management performed by the fund's investment managers.

Risk Management

Risk management oversight with respect to the pension fund includes, but is not limited to, the following activities:

- Periodic asset/liability management and strategic asset allocation studies
- Monitoring of funding levels and funding ratios
- Monitoring compliance with asset allocation guidelines and investment management agreements
- Monitoring asset class performance against asset class benchmarks
- Monitoring investment manager performance against benchmarks

- Monitoring of risk tolerance guidelines

Expected Rate of Return on Plan Assets

The expected rate of return on plan assets is based on the fund's asset allocation, as well as the return expectations considering long-term historical risks and returns associated with each asset class within the plan portfolio. The asset management decisions consider the economic liabilities of the plan.

Fair Value Measurements

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities. Refer to Note 13 for a detailed discussion of fair value measurements and the fair value hierarchy.

The following tables present pension plan assets measured at fair value in accordance with the fair value hierarchy:

	December 31, 2016			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	**690**	**-**	**-**	**690**
Fixed income				
Corporate debt securities	**-**	**407**	**-**	**407**
Government bonds	**-**	**3,483**	**-**	**3,483**
Equities				
Canadian	**1,451**	**291**	**-**	**1,742**
US	**1,495**	**-**	**-**	**1,495**
Non-North American	**1,643**	**-**	**-**	**1,643**
Pooled funds	**118**	**413**	**-**	**531**
Other	**(2)**	**-**	**-**	**(2)**
	5,395	**4,594**	**-**	**9,989**
Investments measured at NAV [1]				**3,865**
				13,854 [2]

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.
[2] The table above excludes pension fund receivables and payables.

	December 31, 2015			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	374	-	-	374
Short-term investments	-	1	-	1
Fixed income				
Corporate debt securities	-	392	-	392
Government bonds	-	3,794	-	3,794
Equities				
Canadian	1,547	-	-	1,547
US	1,786	-	-	1,786
Non-North American	1,992	-	-	1,992
Pooled funds	37	147	-	184
Other	1	-	-	1
	5,737	4,334	-	10,071
Investments measured at NAV [1]				3,079
				13,150 [2]

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.
[2] The table above excludes pension fund receivables and payables.

During the years ended December 31, 2016 and 2015, there were no transfers between Level 1 and Level 2.

Plan Costs and Liabilities

Details of OPG's pension and OPEB obligations, pension fund assets and costs are presented in the following tables:

	Registered and Supplementary Pension Plans		Other Post-Employment Benefits	
	2016	**2015**	**2016**	**2015**
Weighted Average Assumptions – Benefit Obligations at Year-End				
Rate used to discount future benefits	**3.90%**	4.10%	**3.94%**	4.13%
Salary schedule escalation rate - initial rate [1]	**1.80%**	1.60%	**1.80%**	1.60%
- thereafter	**2.50%**	2.50%	**2.50%**	2.50%
Rate of cost of living increase to pensions	**2.00%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**5.90%**	6.00%
Ultimate health care trend rate	**n/a**	n/a	**4.32%**	4.33%
Year ultimate health care trend rate reached	**n/a**	n/a	**2030**	2030
Rate of increase in disability benefits	**n/a**	n/a	**2.00%**	2.00%

[1] Per year to December 31, 2021.

	Registered and Supplementary Pension Plans		Other Post-Employment Benefits	
	2016	**2015**	**2016**	**2015**
Weighted Average Assumptions – Costs for the Year				
Expected return on plan assets, net of expenses	**6.00%**	6.25%	**n/a**	n/a
Rate used to discount future benefits	**4.10%**	4.00%	**4.13%**	4.03%
Salary schedule escalation rate - initial rate [1]	**1.60%**	2.00%	**1.60%**	2.00%
- thereafter	**2.50%**	2.50%	**2.50%**	2.50%
Rate of cost of living increase to pensions	**2.00%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**6.00%**	6.09%
Ultimate health care trend rate	**n/a**	n/a	**4.33%**	4.33%
Year ultimate health care trend rate reached	**n/a**	n/a	**2030**	2030
Rate of increase in disability benefits	**n/a**	n/a	**2.00%**	2.00%
Expected average remaining service life for employees (years)	**12**	12	**13**	13

[1] 1.60% per year to December 31, 2021; 2.00% per year to December 31, 2020.

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Components of Cost Recognized						
Current service costs	**277**	320	**7**	7	**67**	71
Interest on projected benefit obligation	**634**	630	**12**	13	**133**	127
Expected return on plan assets, net of expenses	**(734)**	(717)	**-**	-	**-**	-
Amortization of past service costs [1]	**-**	-	**-**	-	**1**	-
Amortization of net actuarial loss [1]	**192**	292	**4**	6	**19**	27
Recognition of LTD net actuarial (gain) loss	**-**	-	**-**	-	**(52)**	7
Costs recognized [2]	**369**	525	**23**	26	**168**	232

[1] The amortization of past service costs and net actuarial loss was recognized as an increase to OCI. This increase was partially offset by the impact of the Pension and OPEB Regulatory Asset discussed in Note 5.

[2] Excludes the impact of regulatory variance and deferral accounts discussed in Note 5.

Total benefit costs, including the impact of the Pension & OPEB Cash Payment Variance Account and the Pension & OPEB Cash Versus Accrual Differential Deferral Account, for the years ended December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Registered pension plans	**369**	525
Supplementary pension plans	**23**	26
Other post-employment benefits	**168**	232
Pension & OPEB Cash Payment Variance Account *(Note 5)*	**86**	(21)
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 5)*	**(182)**	(279)
Pension and other post-employment benefit costs	**464**	483

The pension and OPEB obligations and the pension fund assets measured as at December 31 are as follows:

	Registered Pension Plans		**Supplementary Pension Plans**		**Other Post-Employment Benefits**	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Change in Plan Assets						
Fair value of plan assets at beginning of year	**13,160**	12,407	**-**	-	**-**	-
Contributions by employer	**255**	362	**15**	24	**93**	94
Contributions by employees	**85**	72	**-**	-	**-**	-
Actual return on plan assets, net of expenses	**714**	1,151	**-**	-	**-**	-
Benefit payments	**(708)**	(832)	**(15)**	(24)	**(93)**	(94)
Fair value of plan assets at end of year	**13,506**	13,160	**-**	-	**-**	-
Change in Projected Benefit Obligations						
Projected benefit obligations at beginning of year	**15,475**	15,669	**299**	317	**3,188**	3,143
Employer current service costs	**277**	320	**7**	7	**67**	71
Contributions by employees	**85**	72	**-**	-	**-**	-
Interest on projected benefit obligation	**634**	630	**12**	13	**133**	127
Benefit payments	**(708)**	(832)	**(15)**	(24)	**(93)**	(94)
Past service costs	**-**	-	**-**	-	**-**	5
Net actuarial loss (gain)	**436**	(384)	**33**	(14)	**(303)**	(64)
Projected benefit obligations at end of year	**16,199**	15,475	**336**	299	**2,992**	3,188
Funded status – deficit at end of year	**(2,693)**	(2,315)	**(336)**	(299)	**(2,992)**	(3,188)

The following table provides the pension and OPEB liabilities and their classification on the consolidated balance sheets as at December 31:

	Registered Pension Plans		**Supplementary Pension Plans**		**Other Post-Employment Benefits**	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Current liabilities	**-**	-	**(17)**	(17)	**(95)**	(103)
Non-current liabilities	**(2,693)**	(2,315)	**(319)**	(282)	**(2,897)**	(3,085)
Total liabilities	**(2,693)**	(2,315)	**(336)**	(299)	**(2,992)**	(3,188)

The accumulated benefit obligations for the registered pension plans and supplementary pension plans as at December 31, 2016 are $14,909 million and $293 million, respectively (2015 – $14,327 million and $267 million, respectively). The accumulated benefit obligation differs from the projected benefit obligation in that the accumulated benefit obligation includes no assumption about future compensation levels.

The following table provides the components of OPG's OCI related to pension and OPEB plans and the offsetting Pension and OPEB Regulatory Asset as discussed in Note 5 for the years ended December 31, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Changes in plan assets and benefit obligations recognized in OCI						
Current year net actuarial loss (gain)	**456**	(818)	**33**	(14)	**(251)**	(71)
Current year past service costs	**-**	-	**-**	-	**-**	5
Amortization of net actuarial loss	**(192)**	(292)	**(4)**	(6)	**(19)**	(27)
Amortization of past service costs	**-**	-	**-**	-	**(1)**	-
Total decrease (increase) in OCI	**264**	(1,110)	**29**	(20)	**(271)**	(93)
Less: Increase (decrease) in Pension and OPEB Regulatory Asset*(Note 5)*	**253**	(916)	**27**	(15)	**(250)**	(70)
Net decrease (increase) in OCI (pre-tax)	**11**	(194)	**2**	(5)	**(21)**	(23)

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset that have not yet been recognized as components of benefit costs as at December 31, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Unamortized amounts recognized in AOCL						
Past service costs	**-**	-	**-**	-	**5**	6
Net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Total recognized in AOCL	**3,287**	3,023	**106**	77	**275**	546
Less: Pension and OPEB Regulatory Asset *(Note 5)*	**3,039**	2,786	**100**	73	**253**	503
Net recognized in AOCL (pre-tax)	**248**	237	**6**	4	**22**	43

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset as at December 31 (included in the table above) that are expected to be amortized as components of benefit costs and recognized as increases to OCI and reductions in the Pension and OPEB Regulatory Asset, in 2017, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post-Employment Benefits
Past service costs	**-**	**-**	**1**
Net actuarial loss	**183**	**6**	**-**
Total increase in AOCL	**183**	**6**	**1**
Less: Estimated decrease in Pension and OPEB Regulatory Asset	**170**	**6**	**1**
Net increase in AOCL (pre-tax)	**13**	**-**	**-**

Based on the most recently filed actuarial valuation, for funding purposes, of the OPG registered pension plan, as at January 1, 2016, there was an unfunded liability on a going-concern basis of $485 million and a deficiency on a hypothetical wind-up basis of $7,347 million. The funded status to be determined in the next filed funding valuation, which must have an effective date no later than January 1, 2019, could be significantly different. For 2017, OPG's required contribution to its registered pension plan is expected to be $248 million. The amount of OPG's additional,

voluntary contribution, if any, is revisited from time to time. OPG will continue to assess the requirements for contributions to the pension plan.

The supplementary pension plans are not funded, but are secured by Letters of Credit totalling $349 million as at December 31, 2016 (2015 – $345 million).

Estimated future benefit payments to participants in the pension and OPEB plans based on the assumptions used to measure the benefit obligations as at December 31, 2016 are as follows:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post-Employment Benefits
2017	687	18	95
2018	759	18	98
2019	750	18	101
2020	767	19	105
2021	795	19	108
2022 through 2026	4,218	102	613

A one percent increase or decrease in the health care trend rate would result in an increase in the current service and interest components of the 2016 OPEB costs of $45 million (2015 – $45 million) or a decrease in the service and interest components of the 2016 OPEB costs of $33 million (2015 – $33 million). A one percent increase or decrease in the health care trend rate would result in an increase in the projected OPEB obligation as at December 31, 2016 of $560 million (2015 – $584 million) or a decrease in the projected OPEB obligation as at December 31, 2016 of $426 million (2015 – $446 million).

12. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect the Company's assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the IESO-administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at December 31, 2016 was less than $1 million. OPG's fair value derivatives totalled a net liability of $24 million as at December 31, 2016 (2015 – $2 million).

The following table shows the amount related to derivatives recorded in AOCL and income for the years ended December 31:

(millions of dollars)	**2016**	**2015**
Cash flow hedges (recorded in AOCL)		
Losses in OCI	**-**	(7)
Reclassification of losses to net interest expense	**21**	20
Reclassification of gains to fuel expense	**-**	(2)
Commodity derivatives (recorded in income)		
Realized losses in revenue	**(12)**	(16)
Unrealized losses in revenue	**(3)**	(7)
Embedded derivative (recorded in income)		
Unrealized gains in revenue [1]	**-**	225

[1] Excludes the impact of the Bruce Lease Net Revenues Variance Account.

Existing net losses of $20 million deferred in AOCL as at December 31, 2016 are expected to be reclassified to net income within the next 12 months.

13. FAIR VALUE MEASUREMENTS

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial assets and liabilities into three levels, based on the inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The fair value of financial instruments traded in active markets is based on quoted market prices at the consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The Company is required to determine the fair value of all its financial instruments. The following is a summary of OPG's financial instruments as at December 31:

	Fair Value		Carrying Value [1]		
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**Balance Sheet Line Item**
Nuclear Segregated Funds (includes current portion)	**15,984**	15,136	**15,984**	15,136	Nuclear fixed asset removal and nuclear waste management funds
Investment in Hydro One shares	**212**	-	**212**	-	Available-for-sale securities
Payable related to cash flow hedges	**(48)**	(56)	**(48)**	(56)	Long-term accounts payable and accrued charges
Long-term debt (includes current portion)	**(6,033)**	(5,978)	**(5,520)**	(5,459)	Long-term debt
Other financial instruments	**(18)**	6	**(18)**	6	Various

[1] The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other current assets, short-term debt, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs.

The following tables present financial assets and financial liabilities measured at fair value in accordance with the fair value hierarchy as at December 31, 2016 and 2015:

	December 31, 2016			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**5,602**	**4,394**	**-**	**9,996**
Investments measured at NAV [1]				**1,086**
				11,082
Due to Province				**(1,938)**
Used Fuel Segregated Fund, net				**9,144**
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**4,171**	**3,243**	**-**	**7,414**
Investments measured at NAV [1]				**903**
				8,317
Due to Province				**(1,477)**
Decommissioning Segregated Fund, net				**6,840**
Investment in available-for-sale securities	**212**	**-**	**-**	**212**
Other financial assets	**6**	**2**	**9**	**17**
Liabilities				
Other financial liabilities	**(29)**	**(6)**	**-**	**(35)**

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

(millions of dollars)	December 31, 2015 Level 1	Level 2	Level 3	Total
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	5,114	4,293	-	9,407
Investments measured at NAV [1]				883
				10,290
Due to Province				(1,703)
Used Fuel Segregated Fund, net				8,587
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	3,870	3,227	-	7,097
Investments measured at NAV [1]				737
				7,834
Due to Province				(1,285)
Decommissioning Segregated Fund, net				6,549
Other financial assets	14	4	16	34
Liabilities				
Other financial liabilities	(18)	(8)	(2)	(28)

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

During the year ended December 31, 2016, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3:

(millions of dollars)	Other financial instruments
Opening balance, January 1, 2016	**14**
Unrealized losses included in revenue	**1**
Realized losses included in revenue	**(12)**
Purchases	**6**
Closing balance, December 31, 2016	**9**

Nuclear Segregated Funds

The fair value of the investments within the Nuclear Segregated Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Segregated Funds that are reported on the basis of NAV as at December 31, 2016:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Infrastructure	**1,205**	**648**	**n/a**	**n/a**
Real Estate	**713**	**406**	**n/a**	**n/a**
Agriculture	**71**	**128**	**n/a**	**n/a**
Pooled Funds				
Short-term Investments	**34**	**n/a**	**Daily**	**1 - 5 Days**
Fixed Income	**553**	**n/a**	**Daily**	**1 - 5 Days**
Equity	**743**	**n/a**	**Daily**	**1 - 5 Days**
Total	**3,319**	**1,182**		

The fair value of the pooled funds is classified as Level 2. Infrastructure, real estate and agriculture investments are measured using NAV as a practical expedient for determining their fair value.

Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

Real Estate

This class includes investments in institutional-grade real estate property. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests to another party, as stipulated in the partnership agreement. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements.

Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations, and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally

managed portfolios. The fair value of the investments in this class has been estimated using the NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

14. COMMON SHARES

As at December 31, 2016 and 2015, OPG had 256,300,010 common shares issued and outstanding at a stated value of $5,126 million. OPG is authorized to issue an unlimited number of common shares without nominal or par value. Any issue of new shares is subject to the consent of OPG's shareholder.

15. COMMITMENTS AND CONTINGENCIES

Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered by June 30, 2017, as required by the timetable.

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at December 31, 2016, the total amount of guarantees OPG provided to these entities was $83 million (2015 – $81 million). OPG may terminate some of these guarantees within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at December 31, 2016, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, were as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

Lease Commitments

The Company leases the Bruce A and Bruce B nuclear generating stations to Bruce Power. Under the lease, as amended in December 2015, Bruce Power has options to renew the lease up to the end of 2064. As per *Ontario Regulation 53/05* pursuant to the *Ontario Energy Board Act, 1998*, the difference between OPG's revenues, including lease revenues, and costs, including depreciation expense, associated with its ownership of the Bruce A and B nuclear generating stations is included in the determination of OPG's nuclear regulated prices established by the OEB. These revenues and costs are determined on the basis of the manner in which they are recognized in OPG's consolidated financial statements. As the assets on lease to Bruce Power are not prescribed facilities under *Ontario Regulation 53/05*, the net book value of the assets is not included in the regulated rate base. The net book value of property, plant and equipment on lease to Bruce Power as at December 31, 2016 was $2,986 million (2015 – $4,400 million).

Collective Bargaining Agreements

As at December 31, 2016, the Power Workers' Union (PWU) represented approximately 5,070 OPG regular employees or approximately 55 percent of OPG's regular workforce. The previous collective agreement between OPG and the PWU expired on March 31, 2015. In May 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on March 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each year of the agreement.

As at December 31, 2016, The Society of Energy Professionals (The Society) represented approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce. The governing collective agreement between OPG and The Society expired on December 31, 2015. In November 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on December 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each of the first two years of the agreement.

The changes to both collective agreements will provide existing employees with lump-sum payments for each of the first two years of the contract and eligibility to annually receive shares in Hydro One for up to 15 years starting in year three of the contract, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service.

16. BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel and low and intermediate level wastes, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Lease and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because the costs associated with the Nuclear Liabilities are included by the OEB in the determination of regulated prices for production from OPG's Pickering and Darlington nuclear generating stations, in accordance with the methodologies applied since the OEB's 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. OPG's share of the in-service generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of these activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the US market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and the Nanticoke generating stations' sites.

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The service fee included in OM&A expenses by segment in 2016 and 2015 was as follows:

(millions of dollars)	2016	2015
Regulated – Nuclear Generation	**34**	33
Regulated – Hydroelectric	**7**	6
Contracted Generation Portfolio	**4**	4
Reduction to Services, Trading, and Other Non-Generation	**45**	43

Segment Income (Loss) for the Year Ended December 31, 2016 *(millions of dollars)*	**Nuclear Generation**	**Regulated Nuclear Waste Manage-ment**	**Hydro-electric**	**Unregulated Contracted Generation Portfolio**	**Unregulated Services, Trading, and Other Non-Generation**	**Elimination**	**Total**
Revenue	**3,481**	**138**	**1,527**	**573**	**68**	**(134)**	**5,653**
Fuel expense	**315**	**-**	**353**	**58**	**1**	**-**	**727**
Gross margin	**3,166**	**138**	**1,174**	**515**	**67**	**(134)**	**4,926**
Operations, maintenance and administration	**2,210**	**146**	**325**	**178**	**22**	**(134)**	**2,747**
Depreciation and amortization	**925**	**-**	**225**	**75**	**32**	**-**	**1,257**
Accretion on fixed asset removal and nuclear waste management liabilities	**-**	**912**	**-**	**9**	**8**	**-**	**929**
Earnings on nuclear fixed asset removal and nuclear waste management funds	**-**	**(746)**	**-**	**-**	**-**	**-**	**(746)**
Income from investments subject to significant influence	**-**	**-**	**-**	**(37)**	**-**	**-**	**(37)**
Property taxes	**26**	**-**	**1**	**7**	**12**	**-**	**46**
Restructuring	**-**	**-**	**-**	**-**	**6**	**-**	**6**
Other losses (gains)	**1**	**-**	**(19)**	**1**	**-**	**-**	**(17)**
Income (loss) before interest and income taxes	**4**	**(174)**	**642**	**282**	**(13)**	**-**	**741**

Segment Income (Loss) for the Year Ended December 31, 2015 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	3,245	122	1,619	535	73	(118)	5,476
Fuel expense	301	-	345	39	2	-	687
Gross margin	2,944	122	1,274	496	71	(118)	4,789
Operations, maintenance and administration	2,196	132	340	185	48	(118)	2,783
Depreciation and amortization	717	-	282	72	29	-	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	-	880	-	8	7	-	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(704)	-	-	-	-	(704)
Income from investments subject to significant influence	-	-	-	(39)	-	-	(39)
Property taxes	26	-	1	7	11	-	45
Restructuring	-	-	-	-	6	-	6
Other losses	3	-	3	1	7	-	14
Income (loss) before interest and income taxes	2	(186)	648	262	(37)	-	689

Selected Consolidated Balance Sheet Information as at December 31, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Total
Segment property, plant and equipment in-service, net	**5,653**	**-**	**7,355**	**3,282**	**229**	**16,519**
Segment construction in progress	**2,988**	**-**	**166**	**301**	**28**	**3,483**
Segment property, plant and equipment, net	**8,641**	**-**	**7,521**	**3,583**	**257**	**20,002**
Segment intangible assets in-service, net	**7**	**-**	**2**	**4**	**66**	**79**
Segment development in progress	**3**	**-**	**-**	**1**	**16**	**20**
Segment intangible assets, net	**10**	**-**	**2**	**5**	**82**	**99**
Segment fuel inventory	**276**	**-**	**-**	**34**	**-**	**310**
Segment materials and supplies inventory, net:						
Current	**99**	**-**	**-**	**1**	**-**	**100**
Long-term	**340**	**-**	**1**	**4**	**-**	**345**
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	**-**	**15,984**	**-**	**-**	**-**	**15,984**
Fixed asset removal and nuclear waste management liabilities	**-**	**(19,103)**	**-**	**(160)**	**(221)**	**(19,484)**

Selected Consolidated Balance Sheet Information as at December 31, 2015		Regulated		Unregulated		
(millions of dollars)	Nuclear Generation	Nuclear Waste Manage-ment	Hydro-electric	Contracted Generation Portfolio	Services, Trading, and Other Non-Generation	Total
Segment property, plant and equipment in-service, net	6,972	-	7,413	3,319	324	18,028
Segment construction in progress	2,289	-	99	141	38	2,567
Segment property, plant and equipment, net	9,261	-	7,512	3,460	362	20,595
Segment intangible assets in-service, net	8	-	1	3	58	70
Segment development in progress	-	-	4	-	24	28
Segment intangible assets, net	8	-	5	3	82	98
Segment fuel inventory	304	-	-	40	-	344
Segment materials and supplies inventory, net:						
Current	95	-	-	1	-	96
Long-term	333	-	1	3	-	337
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	15,136	-	-	-	15,136
Fixed asset removal and nuclear waste management liabilities	-	(19,792)	-	(163)	(214)	(20,169)

Selected Consolidated Cash Flow Information		Regulated		Unregulated		
(millions of dollars)	Nuclear Generation	Nuclear Waste Management	Hydro-electric	Contracted Generation Portfolio	Services, Trading, and Other Non-Generation	Total
Year ended December 31, 2016						
Investment in property, plant and equipment, and intangible assets	**1,338**	**-**	**135**	**198**	**33**	**1,704**
Year ended December 31, 2015						
Investment in property, plant and equipment, and intangible assets	1,023	-	89	222	42	1,376

17. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	2016	2015
Receivables from related parties	**116**	(63)
Prepaid expenses	**(108)**	(35)
Other current assets [1]	**(32)**	(12)
Fuel inventory	**34**	(10)
Materials and supplies	**(4)**	(2)
Income taxes payable	**57**	42
Accounts payable and accrued charges	**5**	(20)
	68	(100)

[1] Includes other accounts receivable.

18. RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		2015	
(millions of dollars)	Revenue	Expense	Revenue	Expense
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**15**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,070**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Hydro One Limited Shares

During 2015, OPG entered into renewed three-year collective bargaining agreements with the PWU and The Society. Changes to the respective collective agreements included increases to employee pension plan contributions and provisions for qualifying existing employees represented by the PWU and The Society to annually receive common shares of Hydro One for up to 15 years starting in the third year of the respective agreements. In April 2016, OPG acquired nine million common shares of Hydro One at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements. The shares acquired in this transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

OPG classified the Hydro One shares as AFS securities.

For the year ended December 31, 2016, unrealized losses recognized in accumulated AOCL related to the changes in the fair value of the Hydro One shares were $1 million, net of income taxes. The fair value of the shares was $212 million as at December 31, 2016. Refer to Notes 10 and 13 for the required disclosures related to the AFS securities.

19. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of PEC and Brighton Beach, which are accounted for using the equity method as described in Note 3. The details of the balance included in the consolidated balance sheets as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
PEC		
Current assets	**18**	14
Long-term assets	**256**	270
Current liabilities	**(8)**	(4)
Long-term liabilities	**(5)**	(5)
Brighton Beach		
Current assets	**5**	9
Long-term assets	**168**	177
Current liabilities	**(16)**	(15)
Long-term liabilities	**(7)**	(6)
Long-term debt	**(90)**	(104)
Investments subject to significant influence	**321**	336

20. RESEARCH AND DEVELOPMENT

For the year ended December 31, 2016, research and development expenses of $58 million (2015 – $91 million) were charged to operations.

21. NON-CONTROLLING INTEREST

Lower Mattagami Limited Partnership (LMLP) is an Ontario limited partnership between OPG and Amisk-oo-Skow Finance Corporation (AFC), a corporation wholly owned by the Moose Cree First Nation. The principal business of LMLP is the development, construction, ownership, operation and maintenance of hydroelectric generating facilities located on the Lower Mattagami River.

During 2014, all six new units constructed as part of the Lower Mattagami River project were declared in-service. Subsequent to the units' in-service dates, the AFC made contributions of $141 million to acquire their equity interest in LMLP, through the settlement of existing liabilities, including long-term debt. As of December 31, 2016, the AFC had a 25 percent interest in LMLP. OPG consolidates the results of LMLP in its consolidated financial statements and the non-controlling interest represents the AFC's equity interest in LMLP.

From: Ronald Kwan
To: Francisco Chinchon; Darren Scanlan
Cc: Gavin He; John Kim
Subject: Fw: OPG Q4 2016 submission to Province
Date: Thursday, February 16, 2017 2:05:09 PM
Attachments: OPG News Release YE 2016_DRAFT_PROVINCE MAILING.docx
Q4 2016 MDA_DRAFT_PROVINCE MAILING.docx
Q4 2016 FS DRAFT_PROVINCE MAILING.docx.docx
2016 AIF DRAFT_PROVINCE MAILING.docx

Hi,

Note the disclosure on the head office building sale on p. 14 of the MD&A and similarly in the F/S. And note the planned filing date of March 10.

Please review that and the ONFA and Hydro one shares related materials.

Thanks,
Ron

From: DYKXHOORN Sandra -CORPRELCOMM <sandra.dykxhoorn@opg.com>
Sent: February 15, 2017 9:14 AM
To: John Kim; Ronald Kwan; 'Talwar, Shruti (ENERGY)'; Sunita Chander (ENERGY)
Cc: CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
Subject: OPG Q4 2016 submission to Province

Good morning,

Please find attached OPG's draft Q4 2016 News Release, Management's Discussion and Analysis (MD&A), Annual Information Form (AIF) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Monday, February 27th**.

These documents will be filed with the Ontario Securities Commission on **Friday, March 10th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Sandra Dykxhoorn (copy to Alec Cheng – alec.cheng@opg.com and Philip Ho – philip.ho@opg.com).

To assist the review process, the following are the key items in the Q4 2016 MD&A:

Highlights Recent Developments	MD&A p.11-16
Darlington Refurbishment	MD&A p.11-12; 24-25
Peter Sutherland Sr. GS project	MD&A p.25
Outlook – OEB application on OPG's results, impact of ONFA update on Nuclear Segregated Funds earnings, and the expected income and cash flow trends for 2017	MD&A p.30-31

Sandra Dykxhoorn | Acting Director, Provincial Relations | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | p: (416) 592-2887 | c: (416) 571-4366 | sandra.dykxhoorn@opg.com

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ONTARIO POWER GENERATION

News
from Ontario Power Generation

700 University Avenue Toronto, ON M5G 1X6 **Tel: 416-592-4008 or 1-800-592-4008** Fax: 416-592-2178
www.opg.com

[DRAFT]

Mar. 10, 2017

OPG REPORTS 2016 FINANCIAL RESULTS

Solid operating and financial results position the Company for success with major generation projects

[Toronto]: – Ontario Power Generation Inc. (OPG or Company) today reported net income attributable to the Shareholder of $436 million for 2016, compared to $402 million in 2015. The increase was primarily the result of higher generation from the nuclear fleet and higher earnings from the Contracted Generation Portfolio segment. The higher nuclear production reflected more days when the Darlington nuclear units were producing electricity in 2016, compared to 2015.

"I'm pleased with OPG's 2016 financial results," said OPG President and CEO Jeff Lyash. "The continued strong financial performance of OPG benefits the Province. It is essential that we manage our operations effectively for the benefit of Ontarians."

"Both the Darlington and Pickering generating stations produce clean, reliable baseload power with virtually no smog or greenhouse gas emissions. The refurbishment of the Darlington station will provide another 30 years of operations at one of Ontario's most important public assets." said Lyash. "The $12.8 billion that we are investing in the refurbishment will provide important economic stimulus in Ontario, creating jobs and providing opportunities for more than 60 companies from over 25 communities across the province."

Higher electricity demand for stations in the Contracted Generation Portfolio segment in 2016, namely the Lennox Generating Station (GS) and the Atikokan GS, also contributed to the increase in earnings.

"We have achieved significant progress in a number of projects during the year, including the refurbishment work at the Sir Adam Beck Pump Hydroelectric Generating Station's 300-hectare reservoir, and the construction of the Peter Sutherland Sr. Hydroelectric Generating Station in northeastern Ontario. The construction of the Peter Sutherland Sr. station is our third partnership with an Indigenous community." said Lyash. "We're pleased that construction is progressing ahead of schedule and within budget. The 28 megawatt generating station is currently being commissioned and is expected to be in service this spring. This project is another example of OPG's strong partnerships with Ontario's Indigenous communities, yielding renewable power and lasting economic benefits."

Generating and Operating Performance

Electricity generated increased in 2016 to 78.2 terawatt hours (TWh) from 78.0 TWh in 2015. Higher nuclear generation of 1.1 TWh was primarily due to a lower number of planned outage days during 2016.

Higher volume of water spilled at OPG's hydroelectric stations in 2016 as a result of more prevalent surplus baseload generation (SBG) conditions partially offset the increase in nuclear generation. OPG's generation for 2016 was also affected by the Unit 2 refurbishment outage at the Darlington GS, which commenced in October 2016.

The unit capability factor at the Darlington GS increased to 89.5 percent for 2016, compared to 76.9 percent for 2015 primarily due to fewer planned and unplanned outage days at the station during 2016, compared to 2015. The unit capability factor excludes Unit 2 while it is undergoing refurbishment.

At the Pickering GS, the unit capability factor decreased to 75.2 per cent for 2016, compared to 79.4 per cent for 2015, primarily due to a higher number of additional outage days at the station in 2016 as a result of emergent discovery work during planned outages.

The availability of OPG's regulated hydroelectric generating stations decreased to 89.0 per cent for 2016, from 91.2 per cent for 2015. The decrease was primarily due to the scheduled reservoir refurbishment project at the Sir Adam Beck Pump hydroelectric GS, discussed below.

For the contracted hydroelectric stations, the availability decreased to 75.2 per cent for 2016, from 79.4 per cent for 2015. The decrease reflected an increase in planned outage days.

The Enterprise Total Generating Cost per megawatt hour (MWh) was $48.10 for the year ended December 31, 2016, compared to $50.46 for the same period in 2015. The year-over-year improvement was primarily a result of lower operations, maintenance and administration expenses, excluding the impact of regulatory variance and deferral accounts, and higher electricity generation adjusted for foregone hydroelectric generation due to SBG conditions during 2016.

Generation Development

OPG is undertaking a number of generation development and life extension projects in support of Ontario's electricity planning initiatives. Significant developments during 2016 were as follows:

Darlington Refurbishment

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit was removed from service, was safely completed in January 2017, ahead of schedule, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to

support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. The Darlington Refurbishment project is expected to extend the operating life of the station by approximately 30 years. Life-to-date capital expenditures were $3,185 million as at December 31, 2016.

Peter Sutherland Sr. GS

Construction of the new 28 MW hydroelectric generating station continued during 2016. Commissioning of the generating station began in February 2017 and the station is expected to be in-service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. **[MONITOR]** The project is tracking within the approved budget of $300 million.

Sir Adam Beck Pump GS

The Sir Adam Beck Pump GS reservoir refurbishment project began in April 2016. The 300-hectare reservoir was returned to service in February 2017 upon completion of the refurbishment, which included installation of a partial new liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The project is expected to add approximately 50 more years to the reservoir's life. The Sir Adam Beck Pump GS facility is integral to OPG’s hydroelectric fleet as it allows water to be diverted from the Sir Adam Beck complex during periods of low electricity demand and stored in the reservoir, to be used to generate up to 600 MW of electricity during subsequent periods of high demand. The project was completed ahead of the originally planned in-service date and below the approved budget of $58 million.

FINANCIAL AND OPERATIONAL HIGHLIGHTS

(millions of dollars – except where noted)	**2016**	**2015**
Revenue	**5,653**	5,476
Fuel expense	**727**	687
Gross margin	**4,926**	4,789
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	**929**	895
Earnings on Nuclear Segregated Funds - (a reduction to expenses)	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Other net expenses	**35**	65
Income before interest and income taxes	**741**	689
Net interest expense	**120**	180
Income tax expense	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest [1]	**17**	15
Income (loss) before interest and income taxes		
Electricity generation business segments	**928**	912
Regulated – Nuclear Waste Management	**(174)**	(186)
Services, Trading, and Other Non-Generation	**(13)**	(37)
Total income before interest and income taxes	**741**	689
Cash flow		
Cash flow provided by operating activities	**1,705**	1,465
Electricity generation (TWh)		
Regulated – Nuclear Generation	**45.6**	44.5
Regulated – Hydroelectric	**29.5**	30.4
Contracted Generation Portfolio [2]	**3.1**	3.1
Total electricity generation	**78.2**	78.0
Nuclear unit capability factor (per cent) [3]		
Darlington Nuclear GS	**89.5**	76.9
Pickering Nuclear GS	**75.2**	79.4
Availability (per cent)		
Regulated – Hydroelectric	**89.0**	91.2
Contracted Generation Portfolio – hydroelectric stations	**77.3**	88.6
Equivalent forced outage rate		
Contracted Generation Portfolio – thermal stations	**1.6**	11.2
Enterprise Total Generating Cost (TGC) per MWh for the twelve months ended December 31, 2016 and 2015 ($/MWh) [4]	**48.10**	50.46
Return on Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI) for the twelve months ended December 31, 2016 and 2015 (%) [4]	**4.2**	4.0
Funds from Operations (FFO) Adjusted Interest Coverage for the twelve months ended December 31, 2016 and 2015 (times) [4]	**5.1**	5.0

[1] Relates to the 25 per cent interest of a corporation wholly owned by the Moose Cree First Nation in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 per cent ownership interests in the Portlands Energy Centre and Brighton Beach GS.

[3] Nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

[4] Enterprise TGC, ROE Excluding AOCI, and FFO Adjusted Interest Coverage are non-GAAP financial measures and do not have any standardized meaning prescribed by US GAAP. Additional information about the non-GAAP measures is provided in OPG's Management's Discussion and Analysis for the year ended December 31, 2016, under the sections *Highlights – Enterprise TGC, Highlights – FFO Adjusted Interest Coverage,* and *Highlights – ROE Excluding AOCI, as well as supplementary Non-GAAP Financial Measures.*

Ontario Power Generation Inc. is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. Our mission is on providing low cost power in a safe, clean, reliable and sustainable manner for the benefit of our customers and shareholder.

Ontario Power Generation Inc.'s audited consolidated financial statements and Management's Discussion and Analysis as at and for the year ended December 31, 2016 can be accessed on OPG's web site (www.opg.com), the Canadian Securities Administrators' web site (www.sedar.com), or can be requested from the Company.

For further information, please contact: Investor Relations 416-592-6700
1-866-592-6700
investor.relations@opg.com

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1-877-592-4008

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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

DECEMBER 31, 2016

[DRAFT]

2016 YEAR-END REPORT

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ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the audited consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the year ended December 31, 2016. OPG's consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. The Ontario Securities Commission (OSC) approved an exemption that allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the heading, *Exemptive Relief for Reporting under US GAAP,* in the section *Critical Accounting Policies and Estimates.* This MD&A is dated March 10, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act (Ontario)* (OBCA) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at December 31, 2016, OPG's electricity generation portfolio had an in-service capacity of 16,177 megawatts (MW). OPG operates two nuclear generating stations, 65 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report.

All of OPG's owned and co-owned generating facilities are located in Ontario.

OPG's Reporting Structure

The composition of OPG's reportable business segments is as follows:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

OPG receives regulated prices for electricity generated from most of its hydroelectric facilities and all of the nuclear facilities that it operates (collectively, prescribed facilities or regulated facilities). This includes the following facilities:

- the six hydroelectric generating stations prescribed for rate regulation prior to 2014, as follows:
    - Sir Adam Beck 1, 2 and Pump hydroelectric generating stations
    - DeCew Falls 1 and 2 hydroelectric generating stations
    - R.H. Saunders hydroelectric GS
- the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014
- Pickering Nuclear GS (Pickering GS)
- Darlington Nuclear GS (Darlington GS).

The operating results related to these regulated facilities are described under the Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, and Regulated – Hydroelectric segments. For the remainder of OPG's operating generating facilities, the operating results are described under the Contracted Generation Portfolio segment. A description of all OPG's segments is provided under the section, *Business Segments*.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of December 31 was as follows:

(MW)	**2016**	**2015**
Regulated – Nuclear Generation [1]	**5,728**	6,606
Regulated – Hydroelectric	**6,421**	6,428
Contracted Generation Portfolio [2]	**4,028**	4,021
Total	**16,177**	17,055

[1] The in-service generating capacity as of December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

The total in-service capacity as at December 31, 2016 decreased by 878 MW compared to 2015. The decrease was primarily due to the commencement of the refurbishment of the first Darlington GS unit, Unit 2, which was taken offline in mid-October 2016. In addition, during 2016, the capacity of the regulated hydroelectric units at the Abitibi Canyon GS and the Sir Adam Beck 1 GS was reduced to reflect unit limit capability. This decrease in in-service capacity was partially offset by an increase in capacity of the Contracted Generation Portfolio segment, reflecting the completion of an upgrade and rehabilitation of Unit 2 of the Harmon hydroelectric GS during 2016.

REVENUE MECHANISMS FOR REGULATED AND NON-REGULATED GENERATION

Regulated Generation

The OEB sets the prices for electricity generated from OPG's regulated nuclear and regulated hydroelectric facilities. The following are the OEB-authorized regulated prices for electricity generated from these facilities:

	2016	**2015**	
($/MWh)		**January 1 to June 30**	**July 1 to December 31**
Regulated – Nuclear Generation			
Base regulated price	**59.29**	59.29	59.29
Rate riders	**10.84** [1]	1.33	12.17 [1]
	70.13	60.62	71.46
Regulated – Hydroelectric			
Hydroelectric generating stations prescribed for rate regulation prior to 2014			
Base regulated price	**40.20**	40.20	40.20
Rate riders	**3.19** [1]	6.04	9.23 [1]
	43.39	46.24	49.43
Hydroelectric generating stations prescribed for rate regulation effective in 2014			
Base regulated price	**41.93**	41.93	41.93
Rate rider	**3.19** [1]	-	3.19 [1]
	45.12	41.93	45.12

[1] The increase in the 2015 rate riders effective July 1, 2015 was implemented by the OEB effective October 1, 2015. As such, the OEB authorized interim period rate riders for the period from October 1, 2015 to December 31, 2016 to allow for the recovery of the increase in the riders for the period from July 1, 2015 to September 30, 2015. The revenue from the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The nuclear interim period rate rider was $2.17 per megawatt hour (MWh) and the regulated hydroelectric interim period rate rider was $0.64/MWh. These interim period rate riders have not been included in the above table. All rate riders in effect during 2016 expired on December 31, 2016.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements for the 2014 to 2015 period, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base for OPG represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital.

In accordance with *Ontario Regulation 53/05* under the *Ontario Energy Board Act, 1998*, OPG's nuclear regulated prices are reduced by the amount of OPG's revenues, net of costs, from leasing the Bruce nuclear generating stations to Bruce Power. As directed by the OEB, OPG's revenues and costs related to the Bruce nuclear generating stations are determined in accordance with US GAAP for the purposes of establishing OPG's nuclear regulated prices and are subject to the Bruce Lease Net Revenues Variance Account in accordance with *Ontario Regulation 53/05*. This includes OPG's costs related to its obligations for nuclear waste management and nuclear facilities decommissioning associated with the Bruce nuclear generating stations and the corresponding portion of earnings on the nuclear fixed asset removal and nuclear waste management segregated funds (Nuclear Segregated Funds) established pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province.

Rate riders for OPG are established to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts. Variance and deferral accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The rate riders in effect during 2015 included those established by the OEB's December 2014 order for the period from January 1, 2015 to December 31, 2015, as well as those authorized by the OEB's October 2015 order on OPG's 2014 application to recover the December 31, 2014 variance and deferral account balances, for the period from July 1, 2015 December 31, 2016. The rate riders in effect during 2016 were those authorized by the October 2015 order.

Non-Regulated Generation

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements (ESAs) with the Independent Electricity System Operator (IESO). Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO was substituted as the counterparty of ESAs and other agreements that were previously executed with the OPA.

During 2016, ESAs were in effect for the following thermal generating facilities:

- Lennox GS: Capacity provided by, and production from, the station are subject to an ESA for the period from January 1, 2013 to September 30, 2022
- Atikokan GS: Capacity provided by, and production from, the station are subject to a 10-year ESA expiring in July 2024
- Thunder Bay GS: Capacity provided by, and production from, the station are subject to a 5-year ESA expiring in January 2020.

In addition, long-term hydroelectric ESAs are in place for the following facilities, with expiry dates for currently operating stations ranging from 2059 to 2064:

- Lac Seul and Ear Falls generating stations
- Healey Falls GS
- Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations
- Little Long, Harmon, Smoky Falls, and Kipling generating stations (collectively the Lower Mattagami River generating stations)

- Peter Sutherland Sr. GS which is being commissioned. **[MONITOR]** Payments under this ESA will commence when the station achieves commercial operation. Further details on the Peter Sutherland Sr. GS project are found under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's operating results for 2016 and 2015.

(millions of dollars – except where noted)	**2016**	**2015**
Revenue	**5,653**	5,476
Fuel expense	**727**	687
Gross margin	**4,926**	4,789
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (income) loss, interest, and income taxes	**724**	703
Other (income) loss	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense	**120**	180
Income before income taxes	**621**	509
Income tax expense	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest [1]	**17**	15
Electricity production (TWh) [2]	**78.2**	78.0
Cash flow		
Cash flow provided by operating activities	**1,705**	1,465

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $436 million for 2016, an increase of $34 million compared to 2015. Income before interest and income taxes was $741 million for 2016, an increase of $52 million compared to 2015.

The following summarizes the significant factors which contributed to the variance:

Significant factors that increased income before interest and income taxes:

- Higher generation of 1.1 terawatt hours (TWh) from the Regulated – Nuclear generation segment, resulting in an increase in revenue of $65 million from the nuclear base regulated price. The year-over-year increase

in revenue from the higher nuclear rate riders in effect during the first half of 2016, compared to the same period in 2015, was primarily offset by an increase in the amortization expense related to regulatory balances.

- Higher earnings on the Nuclear Segregated Funds of $42 million, primarily due to a higher rate of return on the portion of the Used Fuel Segregated Fund that is subject to a consumer price index (CPI) adjusted rate of return guarantee by the Province pursuant to the ONFA. This increase in Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the updated ONFA reference plan, approved by the Province in December 2016
- Increase in earnings from the Services, Trading, and Other Non-Generation segment of $24 million, primarily due to lower operations, maintenance and administration (OM&A) expenses
- A gain of $22 million recorded during the first quarter of 2016, reflecting the OEB's January 2016 decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices
- Increase in earnings of $20 million from the Contracted Generation Portfolio segment, mainly as a result of an increase in the gross margin due to higher revenues from the Lower Mattagami River generating stations, the Lennox GS and the Atikokan GS.

Significant factors that reduced income before interest and income taxes:

- Higher financing expense of $32 million, which represents an increase in the present value of the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities). The financing expense, known as accretion expense, is added to the Nuclear Liabilities balance over time
- A decrease in nuclear non-electricity revenue of $21 million, primarily due to a decrease in nuclear detritiation services revenue and lower isotope sales
- Higher OM&A expenses, fuel expense and depreciation expense for the Regulated – Nuclear Generation segment. The increase in OM&A expenses of $14 million reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium costs and higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million, primarily due to new assets in service in 2016. The increase in amortization expense related to regulatory balances was largely offset by the increase in nuclear revenue related to rate riders
- Lower earnings before other gains from the Regulated – Hydroelectric segment of $28 million, primarily due to lower hydroelectric incentive mechanism revenue and the income impact of OEB-approved variance accounts.

Net interest expense decreased by $60 million in 2016, compared to 2015, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project and a higher amount of interest costs deferred in regulatory variance and deferral accounts.

Income tax expense increased by $76 million in 2016, compared to 2015, primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. Significant factors which contributed to the higher income during 2016, compared to 2015, are discussed above. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	**2016**	**2015**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**4**	2
Regulated – Hydroelectric	**642**	648
Contracted Generation Portfolio	**282**	262
Total electricity generation business segments	**928**	912
Regulated – Nuclear Waste Management	**(174)**	(186)
Services, Trading, and Other Non-Generation	**(13)**	(37)
	741	689

Electricity Generation

Electricity generation for 2016 and 2015 was as follows:

(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**45.6**	44.5
Regulated – Hydroelectric	**29.5**	30.4
Contracted Generation Portfolio [1]	**3.1**	3.1
Total OPG electricity generation	**78.2**	78.0
Total electricity generation by other generators in Ontario [2]	**72.7**	76.1

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The higher electricity generation from the Regulated – Nuclear Generation segment in 2016 was primarily a result of a lower number of non-refurbishment outage days at the Darlington GS due to the planned Vacuum Building Outage (VBO) in 2015 and a decrease in unplanned outages at the station in 2016. The VBO is a unique outage to inspect and maintain specific safety and other systems common to all four units of the station. The 2015 VBO required the shutdown of the four units for 47 days. Vacuum building outages are currently required every 12 years at the Darlington GS. The year-over-year increase in electricity generation was partially offset by a decrease in generation from the Pickering GS, primarily due to an increase in the number of unplanned outage days, and the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment beginning on October 15, 2016.

Lower electricity generation from the Regulated – Hydroelectric generating segment was primarily due to a higher volume of water spilled as a result of higher SBG conditions during 2016.

Electricity generation from the Contracted Generation Portfolio segment was 3.1 TWh for each of 2016 and 2015. Electricity generation in 2016 reflected higher production from the Lennox and Atikokan generating stations, primarily due to increased market demand. The increase was offset by a higher volume of water spilled at the contracted hydroelectric stations as a result of higher SBG conditions during 2016, and transmission system constraints in northeastern Ontario in 2016. **[CONFIRM]**

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Ontario's electricity demand as reported by the IESO was 137.0 TWh in each of 2016 and 2015, which excludes electricity exports out of the province.

Baseload generation supply surplus in Ontario was more prevalent in 2016 than in 2015, mainly due to higher water flows in the province during 2016 and limitations on the export of surplus power out of the province, primarily due to transmission constraints in the state of New York. Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric and nuclear stations and other grid-connected renewable resources. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. During 2016 and 2015, OPG lost 4.7 TWh and 3.2 TWh of hydroelectric generation due to SBG conditions, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions in 2016 and 2015 was offset by a regulatory variance account authorized by the OEB. OPG did not forego any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The regulated prices authorized by the OEB for electricity generated from OPG's nuclear and regulated hydroelectric generating stations are discussed in the section *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment during 2016 was 6.9 cents per kilowatt hour (¢/kWh), compared to 6.5 ¢/kWh during 2015. The average sales price in 2016 reflected the higher OEB-authorized nuclear rate rider of $10.84/MWh for recovery of variance and deferral account balances in effect during the year. The average sales price for the Regulated – Hydroelectric segment was 4.4 ¢/kWh, compared to 4.7 ¢/kWh during 2015. The decrease was primarily due to a lower rate rider in effect during 2016 related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years.

As such, the year-over-year changes in revenue from rate riders were largely offset by changes in amortization expense related to regulatory balances.

Cash Flow from Operations

Cash flow provided by operating activities for 2016 was $1,705 million, compared to $1,465 million for 2015. The increase in cash flow provided by operating activities for 2016, compared to 2015, was primarily due to higher generation revenue receipts reflecting higher nuclear rate riders and higher nuclear generation in 2016. The increase in cash flow was also due to lower pension plan contributions in 2016 reflecting an updated actuarial valuation of the OPG registered pension plan. The increase in cash flow was partially offset by higher OM&A expenditures during 2016, compared to 2015, and the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to the period from January 1, 2015 to December 4, 2015. The rebate was made pursuant to a provision under the lease agreement for the Bruce nuclear generating stations. This provision was eliminated effective December 4, 2015 as part of the 2015 amendments to the lease agreement.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. The FFO Adjusted Interest Coverage was 5.1 times for 2016, compared to 5.0 times for 2015. The modest increase in the FFO Adjusted Interest Coverage in 2016 reflected an increase in FFO before interest for 2016, compared to 2015, as a result of the year-over-year increase in cash flow provided by operating activities.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for 2016 was 4.2 percent, compared to 4.0 percent for 2015. ROE Excluding AOCI increased for 2016, compared to 2015, primarily due to higher net income attributable to the Shareholder. OPG's ROE Excluding AOCI reflects regulated prices established by the OEB in 2014. These prices were lower than requested by OPG based on submitted forecast cost and production levels, which has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

ROE Excluding AOCI also reflects the relatively higher equity component in the Company's capital structure, compared to the deemed capital structure used by the OEB in determining OPG's regulated prices. The OEB establishes the allowed return on OPG's investment in regulated assets, which represent the majority of the Company's operations, using the OEB's generic prescribed rate of return and an OPG-specific deemed capital structure. In setting the regulated prices in 2014, the OEB applied a deemed capital structure of 45 percent equity and 55 percent debt. OPG's actual capital structure (excluding AOCI) contains approximately 65 percent equity. The higher equity component in OPG's actual capital structure, compared to the deemed capital structure applied by the OEB, results in a reduced actual ROE Excluding AOCI. In its application for new regulated prices filed with the OEB in May 2016, OPG is seeking an increase in the deemed capital structure to 49 percent equity and 51 percent debt. For further discussion on OPG's application, refer to the heading *Recent Developments* in the section *Highlights*.

Enterprise Total Generating Cost per MWh

The Enterprise Total Generating Cost (TGC) per MWh was $48.10 for the year ended December 31, 2016, compared to $50.46 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses, excluding the impact of regulatory variance and deferral accounts, and higher electricity generation as adjusted for foregone generation due to SBG conditions during 2016.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $62.30 for the year ended December 31, 2016, compared to $66.20 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses excluding the impact of regulatory variance and deferral accounts, and higher electricity generation during 2016.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $25.57 for the year ended December 31, 2016, which was comparable to $25.26 for the same period in 2015.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow from operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in

January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The unit is scheduled to be returned to service in the first quarter of 2020. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

In April 2016, the Federal Court of Appeal unanimously dismissed the request by certain intervenors for a judicial review of the 2013 Environmental Assessment (EA) decision for the Darlington Refurbishment project by the Canadian Nuclear Safety Commission (CNSC) and Fisheries and Oceans Canada. The EA decision had confirmed that, taking into account identified mitigation measures, the project was not likely to cause significant adverse environmental effects. In dismissing the appeal, the Federal Court of Appeal determined that there were no gaps in the EA, that there was nothing unreasonable about the discretionary determinations made by the responsible authorities, and that the intervenors' arguments were not borne out by the evidence. OPG was also awarded its costs of the appeal, as the successful party.

The Darlington Refurbishment project is discussed further under the heading, *Project Excellence* in the *Core Business, Strategy and Outlook* section.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. For the first time since OPG's prescribed assets became subject to rate regulation, the new prices are expected to be determined on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. Rate-setting under incentive regulation is typically more formulaic and involves greater de-coupling of a regulated entity's allowed revenues or prices from its costs than under a cost-of-service rate-setting methodology.

For the hydroelectric facilities, OPG's May 2016 application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021 based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production.

The proposed nuclear revenue requirements reflect OPG's plans to pursue Pickering extended operations until 2024, as well as the projected impact of the scheduled return to service of the first refurbished Darlington unit in the first quarter of 2020. OPG is also seeking an increase in the deemed capital structure applied to its total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt applied by the OEB in setting the existing regulated prices.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG's application incorporates a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved nuclear revenue requirements in a deferral account for future collection, with a view of making more stable year-over-year changes in OPG's nuclear regulated prices for the period from January 1, 2017 to the end of the Darlington Refurbishment project. The regulation stipulates that the deferral account will record interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually, and that the OEB shall authorize recovery of the balance in the account on a straight line basis over a period not to exceed 10 years following the end of the Darlington Refurbishment project. OPG expects to recognize the deferred amounts as income in the period to which the approved revenue requirements relate.

OPG's application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the

Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment in 2016 through rate riders in effect to December 31, 2016. The application also requests the continuation of all applicable existing variance and deferral accounts. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed in the section *Critical Accounting Policies and Estimates,* under the heading, *Rate Regulated Accounting.*

In December 2016, the OEB issued an order granting OPG's request to declare the existing base regulated prices interim, effective January 1, 2017. This preserves the OEB's ability to make new regulated prices effective as early as January 1, 2017, which would allow OPG to recover the difference between the approved new regulated prices and the existing prices for the period between the effective date of the new regulated prices and their implementation date based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017, following a public proceeding. The public proceeding is in progress, with the oral hearing portion having commenced in February 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

In February 2017, the OEB approved a settlement agreement reached by OPG and intervenors on certain limited elements of OPG's application (Settlement Agreement). Among other elements, the Settlement Agreement accepts a number of year-end 2015 variance and deferral account balances totaling $419 million, allows for continuation of all applicable existing variance and deferral accounts, and confirms methodologies for calculating amounts to be recorded in most of the continuing accounts once new regulated prices take effect, as proposed by OPG. The balances of, and methodologies for recording future amounts in the Nuclear Liability Deferral Account, the Bruce Lease Net Revenues Variance Account and the Capacity Refurbishment Variance Account are excluded from the Settlement Agreement. The agreement also results in approval of OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017-2021 period. The Settlement Agreement does not impact OPG's 2016 financial results. **[MONITOR]**

OEB's Decision on OPG's December 2014 Motion

In January 2016, the OEB issued its decision on OPG's December 2014 motion asking the OEB to review and vary the parts of its November 2014 decision related to the disallowance of the Niagara Tunnel project expenditures, and the application of the 2013 regulatory tax loss to reduce the 2014/2015 revenue requirement. In its decision, the OEB reversed a portion of the original disallowance of the Niagara Tunnel project expenditures, and upheld the original tax loss decision. In the first quarter of 2016, OPG recorded a gain of $22 million to recognize the expected future recovery from customers of the portion of the disallowance reversed by the OEB's motion decision.

The original disallowance of the Niagara Tunnel project expenditures resulted in a write-off of $77 million that was charged to operations in 2014. The original tax loss decision resulted in a reduction of the 2014/2015 revenue requirement by approximately $70 million. As OPG's financial results have previously reflected the effect of the OEB's original tax loss decision, the motion decision on the tax loss did not impact OPG's 2016 financial results.

Ontario Nuclear Funds Agreement Reference Plan Update

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for nuclear waste management and nuclear facilities decommissioning as at December 31, 2016 was finalized as part of the required process to update the reference plan under the ONFA. As at December 31, 2016, the update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities with a corresponding decrease to the asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear facilities decommissioning at least once every five years, in line with the required ONFA reference plan update process.

The updated estimate of the obligations was reflected in a new ONFA reference plan, for years 2017 to 2021, which was approved by the Province in December 2016, effective January 1, 2017 (the 2017 ONFA Reference Plan). Based on the lower life cycle liability estimates per the 2017 ONFA Reference Plan, starting in 2017, OPG is not currently required to make overall contributions to the Used Fuel Segregated Fund or the Decommissioning Segregated Fund established under the ONFA. Prior to 2017, OPG made contributions to the Used Fuel Segregated Fund every year, including a one-time special payment in earlier years, as required by the ONFA. These contributions reflected ONFA requirements to fund the majority of the underlying used fuel liability by the end of the estimated useful lives of the nuclear stations in effect at OPG's inception in 1999, resulting in significantly higher contributions to the Used Fuel Segregated Fund in the earlier years of OPG's existence. OPG has not been required to make contributions to the Decommissioning Segregated Fund, which was fully funded at its inception and at the time of every subsequent approved ONFA reference plan. Contributions to either or both funds may be required in the future should the funds be in an underfunded position when a new reference plan is prepared. Such may be the case as a result of variability in asset performance due to volatility inherent in financial markets and Ontario CPI changes. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the underlying obligations in subsequent ONFA reference plans.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of the new regulated prices. In accordance with *Ontario Regulation 53/05*, the OEB is required to ensure that OPG recovers the revenue requirement impact of its nuclear waste management and nuclear decommissioning liabilities arising from the current approved ONFA reference plan. For further discussion on the accounting for Nuclear Liabilities, refer to the section, *Critical Accounting Policies* under the heading, *Asset Retirement Obligation*.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the amount due to the Province. This accounting adjustment represented the overfunded position of Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 relative to the value of the corresponding present value life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province as OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and as any excess funding in the Nuclear Segregated Funds upon termination of the ONFA accrues to the Province. Of the $88 million reduction in Nuclear Segregated Funds earnings, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

For further discussion of the accounting for the Nuclear Segregated Funds, refer to the section, *Critical Accounting Policies* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*. For further discussion of OPG's risks with respect to nuclear waste management and nuclear decommissioning obligations and Nuclear Segregated Funds, refer to the section, *Risk Management* under the headings, *Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds* and *Financial Markets*.

Shareholder Declaration and Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that required the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. The assets are reported under the Services, Trading and Other Non-Generation segment. An active program to locate a buyer for these real estate assets was initiated in October 2016, and a purchase and sale agreement was executed in December 2016. The sale is expected to be completed during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be

recognized upon completion of the transaction. Pursuant to the December 2015 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer a portion of the proceeds from this disposition into the Province's Consolidated Revenue Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario, an asset reported under the Services, Trading and Other Non-Generation segment. OPG is currently in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer a portion of the proceeds from this disposition into the Province's Consolidated Revenue Fund.

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business.

Contract Award for Nanticoke Solar Facility

In March 2016, Nanticoke Solar LP, then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation, was selected through the first phase of the IESO's Large Renewable Procurement (LRP) program to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands in Haldimand County, Ontario. The LRP program was a competitive bidding process for procuring large renewable energy projects in Ontario. In March 2016, Nanticoke Solar LP and the IESO executed a 20-year LRP contract, which formalized the terms and conditions for the development and operation of the new solar facility. In the first quarter of 2017 **[MONITOR]**, OPG purchased SECCLP's interests in Nanticoke Solar LP and is working to obtain approvals and permits required to enable the commencement of construction planned for the first half of 2018.

The 20-year term of the LRP contract takes effect once the station achieves commercial operation, which is expected in the first quarter of 2019. For further discussion, refer to the section, *Core Business, Strategy and Outlook* under the heading, *Project Excellence*.

Decommissioning of the Lambton GS

In November 2016, the Company announced the decommissioning of the Lambton GS, which ceased coal-fired generation in 2013, as it was determined that continuing to preserve the station beyond 2016 for future conversion was no longer economically feasible. OPG is currently developing a decommissioning plan for the Lambton GS, which will ensure that the station is closed safely, securely, and in an environmentally responsible manner.

Canadian Nuclear Safety Commission Safety Rating for the Pickering GS and the Darlington GS

The CNSC publishes an annual report on the safety performance of Canada's nuclear power plants. The report assesses how well plant operators are meeting regulatory requirements and program expectations in the areas of operational performance, safety analysis, radiation protection, waste management and conventional health and safety. In its 2015 annual report, the CNSC gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". The Pickering GS received this rating for the first time, while the Darlington GS achieved the rating for the seventh year in a row.

Acquisition of Hydro One Limited Shares

In April 2016, OPG acquired nine million common shares of Hydro One Limited (Hydro One) at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. OPG paid the same price as other investors in the offering. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union (PWU) and The Society of Energy Professional (The Society) renewed in 2015. Changes to these agreements included increases to employee pension plan contributions and provisions for existing employees represented by the PWU and The Society with eligibility to annually receive common shares of Hydro One for up to 15 years starting in

the third year of the respective agreements, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service. The shares acquired in the April 2016 transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

CORE BUSINESS, STRATEGY AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

OPG's four key strategic imperatives are as follows:

- Operational Excellence
- Project Excellence
- Financial Strength
- Social Licence.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Workplace Safety and Public Safety

Workplace safety and public safety are fundamental core values at OPG. OPG is committed to operating all of its facilities in a safe, secure, and reliable manner that minimizes risks to a reasonably achievable level. Safety is an overriding priority in all activities performed at OPG's generating and other facilities, and all employees and contractors are expected to conduct themselves in manner that ensures workplace safety and public safety in line with the Company's safety culture.

In the area of workplace safety, OPG is committed to achieving excellent safety performance through continuous improvement and a strong safety culture, with the ultimate goal of zero injuries. OPG utilizes an integrated health and safety management system and set of operational risk control procedures to ensure continued monitoring of health and safety performance and to support continuous learning and improvement in this area. Overall, OPG's workplace safety performance has been one of the best amongst its comparator Canadian electrical utilities. In 2016, OPG received the Canadian Electricity Association (CEA) President's Gold Award recognizing three consecutive years, 2013 to 2015, of sustained top quartile safety performance within the comparator group.

Workplace safety performance is measured using two primary indicators at OPG, All Injury Rate (AIR) and Accident Severity Rate (ASR). OPG's AIR and ASR results for employee workplace safety were as follows for the year ended December 31:

	2016	2015
AIR *(injuries per 200,000 hours worked)*	**0.56**	0.39
ASR *(days lost per 200,000 hours)*	**2.59**	0.50

In 2016, OPG's AIR and ASR safety performance was worse than in 2015. OPG's analysis of the underlying events indicated that major contributors to the injuries and near misses included inadequate situational awareness and attention to detail, and suboptimal risk-based decisions, rather than missing or inadequate standards or programs.

OPG is implementing a number of initiatives to target the injury trends based on the analysis of the safety events, with a focus on the use of human performance tools including increased field supervisory oversight, situational awareness, communication, and procedural use and adherence.

In 2016, OPG launched an organization-wide “iCare Enough to Act” initiative aimed at renewing employees’ commitment to their own and each other’s safety and well-being. Plans to further strengthen safety as a foundational element of the Company’s values-based culture are being developed through leadership forums and other engagement activities.

Contractors are required to conduct work safely at OPG sites. In support of this requirement, OPG utilizes an independent contractor pre-qualification process, provides on-site safety support for many of OPG’s major projects, and works with contract partners to improve their health and safety programs to meet OPG’s requirements. To further strengthen contractors’ safety performance, in 2016, OPG updated its contractor’s safety requirements and related governance, and implemented additional oversight and field monitoring to ensure ongoing compliance. In the past eight years, OPG has consistently shown a better than average Construction Contractor AIR as compared to the Health and Safety Association Contractor AIR, a metric of construction contractor safety performance across Ontario.

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG’s nuclear generating stations is estimated on an annual basis for those individuals who live or work near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (µSv), which is an international unit of radiation dose measurement. For 2015, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.5 µSv and 1.2 µSv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000 µSv. While the public doses from OPG’s nuclear operations for the 2016 operating year will not be finalized until the second quarter of 2017, they are not expected to differ significantly from the 2015 levels.

In June 2016 and August 2016, the CNSC released sampling results from its independent environmental monitoring program, which confirmed that the public and the environment around OPG’s nuclear generating stations continued to be safe. Also in 2016, the CNSC published its 2015 annual report on the safety performance of Canada's nuclear power plants, which gave both the Pickering GS and the Darlington GS the highest possible safety rating of “Fully Satisfactory”. For further details, refer to the CNSC safety rating discussion under the heading, *Recent Developments* in the *Highlights* section.

OPG remains committed to high standards of public safety on waterways around hydroelectric dams and generating stations. A Dam Safety Review Panel comprised of internationally recognized experts has previously concluded that OPG’s dam and public safety program is comparable with international best practices in a number of areas related to maintaining safe dam operations. OPG continues to develop a new risk-informed approach on behalf of the Ontario Ministry of Natural Resources and Forestry (MNRF) to prioritize and manage risks identified through dam safety assessments. In 2016, OPG continued its water safety campaign with a series of public service announcements illustrating the danger of water near hydroelectric dams and hydroelectric generating stations.

Electricity Generation Production and Reliability

Key strategic initiatives in support of operational excellence, specific to each of OPG’s core generating operations, are discussed below. Generation and reliability performance for 2016 is discussed by operating segment in the section, *Discussion of Operating Results by Business Segment*.

Nuclear Operations

OPG is pursuing a number of strategic initiatives aimed at the continued safe and reliable operation of the Pickering GS and targeting top performance at the Darlington GS.

OPG's nuclear operations are regularly benchmarked against top performing nuclear facilities around the world. This allows OPG to identify, develop and implement initiatives to further improve performance. During 2016, OPG participated in two World Association of Nuclear Operators (WANO) peer evaluations to compare its stations against standards of excellence through an in-depth, objective review by an international panel of industry experts. In May 2016, OPG hosted a WANO peer evaluation for the Darlington GS. The review maintained Darlington's excellent standing as one of the top performing nuclear plants in the world. In September 2016, OPG hosted a team of experts from the International Atomic Energy Agency at the Pickering GS to conduct a standard Operational Safety Review Team mission. The team conducted an in-depth review of performance and adherence to international safety standards. A report on the mission is expected to be released in the second quarter of 2017.

In January 2016, OPG announced its plan to pursue continued safe and reliable operation of the Pickering GS beyond 2020. OPG's objective is to maximize the operating life of the Pickering units. Under OPG's current plan, all six operating units at the station would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The Province announced its approval of OPG's plan to pursue continued operation of the Pickering GS beyond 2020 up to 2024 in January 2016. Extending operations at the Pickering GS will provide continued employment to approximately 3,000 regular employees at OPG, and will help reduce approximately 17 million tonnes of carbon dioxide emissions, which is the equivalent to removing 3.4 million cars from Ontario's roads.

As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will achieve the additional life necessary to operate to 2024. OPG is also conducting component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently established as the end of 2020, are expected to be reassessed when OPG's further technical work confirms the longer fuel channel life and the units' fitness to operate beyond 2020, taking into account the requirement for the CNSC's approval, discussed below.

OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. OPG has started work on the Pickering licence renewal application, which is expected to be filed in mid-2017 for the CNSC's approval in 2018. The requested licence renewal spans the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. A Periodic Safety Review and an Integrated Implementation Plan (IIP) for the station will be submitted to the CNSC as part of the application.

OPG strives to operate and maintain its nuclear facilities to optimize equipment, performance, availability and electricity generation, while improving the reliability and predictability of the fleet. Improved equipment reliability generally results in fewer generation interruptions. OPG continues to make investments in the performance of the Pickering GS, with a focus on improving plant reliability and maximizing the value of the asset through implementing equipment modifications and fuel handling reliability improvements, reducing equipment maintenance backlogs, and completing critical and high priority work.

Nuclear inspection and testing programs are largely driven by maintenance and regulatory requirements, and are designed to ensure that equipment is performing safely and reliably. Execution of this and other outage work continues to be a high priority. As part of its commitment to operational excellence, OPG continues to focus on improving the planning, execution, monitoring, and reporting of outage work.

Work continues to ensure the integration of life cycle management and refurbishment programs at the Darlington GS. This includes developing staffing strategies to support both ongoing station operations and the refurbishment project, planning and incorporating pre-requisite work for the refurbishment into the station's work schedule, and identifying life cycle and aging management work to sustain safe and reliable station operations for the next three decades.

OPG's longer-term efforts are aimed at positioning the Darlington GS for industry leading operating and cost performance.

Delivering solutions that provide the best combination of safety, cost and effectiveness, as well as establishing challenging financial targets based on comprehensive benchmarking continues to be a vital part of OPG's strategy to improve performance of the nuclear business unit. Financial and staffing targets continue to be reviewed and adjusted where necessary to reduce operating costs, while ensuring safety is not compromised.

In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications will be presented to the CNSC at a public hearing in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018.

Hydroelectric Operations

The objectives of OPG's hydroelectric operations include operating and maintaining the generating facilities in an efficient and cost-effective manner, while enhancing their reliability and availability. OPG continues to evaluate and implement plans to increase capacity, maintain and improve performance, and extend the operating life of its hydroelectric generating assets.

OPG's plans for its existing hydroelectric generating stations are accomplished through multi-year capital investment and other programs, including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers, and controls. The aim of OPG's runner replacement and upgrade program is to increase hydroelectric station capacity by leveraging efficiency enhancements in runner design. Where economical and practical, OPG pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations. Over the next three years, OPG plans to increase the total capacity of its hydroelectric generating fleet by approximately 135 MW, which, in addition to the runner replacement and upgrade program, includes the Peter Sutherland Sr. GS project and the Ranney Falls GS projects. Both of these projects are discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Project Excellence*. OPG is also planning to repair, rehabilitate, or replace a number of aging civil hydroelectric structures.

As part of its commitment to operational excellence, OPG continues to make investments in its existing hydroelectric generating fleet. During 2016, OPG continued to execute a number of projects, including:

- Completion of major equipment overhauls and rehabilitation work on Unit 5 of the Sir Adam Beck Pump GS, and Unit 2 of the Whitedog Falls GS
- Completion of a runner upgrade, headgate replacement and rehabilitation of Unit 2 of the Harmon GS
- Completion of headgate replacement at Units 1 and 2 of the Kipling GS
- Completion of concrete rehabilitation of the main dam at Chats Falls GS
- Continued work on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 5 of the DeCew Falls 1 GS, Unit 1 of the Harmon GS, and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.

OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS. **[MONITOR]**

Thermal Operations

OPG's thermal operations consist of biomass-fuelled generating units at each of Atikokan GS and Thunder Bay GS, and the oil/gas dual-fuelled Lennox GS.

These stations, which operate as peaking facilities, provide Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements and enable the system to accommodate the expansion of Ontario's renewable generation portfolio. The continued operation of these stations during the initial years of the refurbishment of the Darlington GS and Bruce nuclear facilities is expected to provide Ontario with over 2,000 MW of peaking generation.

During the third quarter of 2016, the Atikokan and Thunder Bay generating stations provided renewable generation when called upon to meet system requirements while utility maintenance was being conducted on a local transformer station. As a result of utility maintenance, the Atikokan GS operated continuously from late July 2016 to early September 2016, while the Thunder Bay GS operated as needed. To meet the increased demand for biomass fuels at Atikokan GS, OPG coordinated the acceleration of biomass fuel deliveries with suppliers while continuing to operate the plant safely.

As part of OPG's ongoing strategy to reduce costs and increase efficiency, the operations of the Company's hydroelectric and thermal assets have been combined into one organization. OPG continues to evaluate opportunities to consolidate departments within the stations and across regions.

Thermal stations that are no longer available to generate electricity are included in the Services, Trading and Other Non-Generation segment once they are removed from service. This includes the Lambton GS and Nanticoke GS sites, which ceased coal-fired generation in 2013. In 2015, OPG announced the decommissioning of the Nanticoke GS, as it could not commercially support continued preservation costs.

In November 2016, OPG announced the decommissioning of the Lambton GS, as further discussed in the section, *Highlights* under the heading, *Recent Developments*. OPG is currently developing decommissioning plans for the Lambton and Nanticoke generating stations, which will ensure that they are closed safely, securely and in an environmentally responsible manner. The decommissioning plan for the Nanticoke GS will accommodate the construction and operation of the Nanticoke solar facility. The costs of decommissioning the stations will be charged to a previously established decommissioning provision. OPG expects to review the decommissioning provision estimates for these sites in 2017.

Environmental Performance

OPG's Environmental Policy states that "OPG shall meet all legal requirements and any environmental commitments that it makes, with the objective of exceeding these legal requirements where it makes business sense". This policy commits OPG to:

- establish and maintain an environmental management system (EMS)
- work to prevent or mitigate adverse effects on the environment with a long-term objective of continual improvement
- manage sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern.

In 2016, OPG maintained the ISO 14001 registration of its company-wide EMS. Within the EMS, OPG has planning, operational control, and monitoring programs to manage the Company's positive and negative impacts on the environment. Significant environmental aspects of OPG's operations include: spills, chemical and thermal emissions to water, water flow and level changes, radioactive emissions, low and intermediate level radioactive waste (L&ILW), wildlife habitat, displacement of fossil fuels, and fish impingement and entrainment. Further details regarding OPG's environmental risks can be found in the section, *Risk Management* under the heading, *Environmental Risk*.

Environmental performance targets are set as part of the annual business planning process. OPG met or outperformed its 2016 targets for spills, environmental infractions, and carbon-14 emissions to air. An increase in the volume of waste generated from work activities at the Darlington GS and preparation for the Darlington Refurbishment project led to a higher than expected volume of L&ILW produced in 2016. Performance for tritium

emissions to air and water during 2016 remained less than one percent of the regulatory limit. There were no significant environmental events during 2016.

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. The program requirements are expected to result in increased fuel costs for some OPG-owned and co-owned generating facilities. Fuel costs for these stations are generally recovered from the electricity market. With OPG's low GHG emitting fleet, the program is not expected to have a material adverse financial impact on the Company. OPG has established the necessary processes to comply with the cap and trade program requirements.

OPG is monitoring actions being taken by the Government of Ontario and the Government of Canada to reduce GHG emission levels and transition to a low-carbon economy. In support of efforts to mitigate climate change, the Company continues to evaluate and implement plans to increase the generation capacity of its hydroelectric generating fleet, where economic, and invest in other low-carbon technologies.

OPG communicates its environmental performance internally to employees and to external stakeholders, including the Ontario Ministry of the Environment and Climate Change, Environment and Climate Change Canada, the CNSC, and local communities. Details of OPG's environmental performance and initiatives to fulfill the Company's Environmental Policy can be found in OPG's 2015 Sustainability Report, available on the Company's website at www.opg.com.

Improving Efficiency and Reducing Costs

As part of its commitment to operational excellence, OPG remains focused on reducing costs by pursuing efficiency and productivity improvements across operating business units and support functions, while ensuring that there is no adverse impact on the safety, reliability and environmental sustainability of the Company's operations. This includes streamlining of processes, simplifying governance, upgrading information technology, optimizing service delivery models, and, where appropriate, leveraging attrition to achieve human resource targets aligned with business requirements. Initiatives to improve cost performance and organizational capability are being implemented at the enterprise and business unit level.

To drive efficiency and performance improvement, the Company continues to leverage a more scalable, centre-led organizational model. In 2016, the reduction in OPG's regular headcount from ongoing operations, since the beginning of 2011, reached over 2,800. Improving organizational performance and building on these efficiency gains remains a key priority for the Company. OPG continues to review its cost structure, identify cost improvement strategies and embed an outcomes-driven culture that reinforces low cost, efficiency, and organizational agility as part of business decision-making. In order to enhance the overall focus on productivity, in 2016 OPG adopted Enterprise TGC per MWh as a measure of OPG's overall organizational cost performance and Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets, in addition to the existing Nuclear TGC per MWh measure. Further details regarding these measures are included in the sections, *Highlights, Key Operating and Financial Performance Indicators* and *Supplemental Non-GAAP Measures*.

People and Culture

A well trained and engaged workforce is fundamental to the achievement of OPG's strategic imperatives. To succeed in a demanding business environment, OPG is focused on building a diverse, healthy, engaged workforce and fostering a culture of collaboration, accountability and innovation. OPG also continues to communicate and

implement the values and behaviours expected from its employees in order to maintain a strong focus on safety, performance excellence, continuous improvement, and corporate citizenship.

The Company continues to focus on improving the capability of its workforce through leadership development, knowledge management, diversity and inclusion programs, and hiring in key areas. Ability to secure the right talent mix in order to effectively meet the Company's immediate and longer term business needs on a timely basis is supported through workforce planning, resourcing and on-boarding strategies, both to acquire external talent into the organization and to develop existing employees. The goal of workforce planning and resourcing strategies is to ensure that the Company's workforce is diverse and has the right skill set and capability for the safe and effective operation of the generating facilities and successful delivery of major projects, including the refurbishment of the Darlington GS. These strategies are being designed to take into account anticipated staffing requirements to the end of planned commercial operations of the Pickering GS, through to the end of the planned period to de-fuel, de-water and place the station in a safe state condition.

As part of the strategy to develop and engage employees and to build leadership talent, the Company has an active succession planning program with a focus on accelerating development. OPG also has a talent management monitoring process to proactively assess staffing risks, challenges and opportunities. Since 2015, OPG offers a company-wide high-potential leadership development program to qualified internal candidates. This 18-month cross-functional, competitive-entry program is designed to identify and develop candidates for future leadership positions while they are still relatively early in their career.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification. In addition to maintaining its internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners and educational institutions to meet the required level of qualification. Training delivery models are evaluated for effectiveness and efficiency.

Effective January 1, 2017, OPG implemented a new Executive Compensation Program that is compliant with *Ontario Regulation 304/16: Executive Compensation Framework*, introduced in September 2016. The regulation sets out how all employers designated under the *Broader Public Sector Executive Compensation Act, 2014*, including OPG, must establish and post compensation programs for executives. The program must include the compensation philosophy, salary and performance-related pay caps, comparative analysis details, and a description of other elements of compensation. OPG's new Executive Compensation Program, which applies to employees at the Vice President level and higher, is designed to provide compensation that is at the 50th percentile of the market and focused on at-risk, performance based pay. The program will better enable OPG to attract, align and retain the executive talent critical to delivering Shareholder and customer value, while ensuring continued safe and reliable operations.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. OPG also continues to plan and execute maintenance and capital improvement projects related to its existing assets. OPG strives for excellence in the planning and delivery of all projects across the Company.

OPG's vision for project excellence is to be an industry leader in project management capability and performance. As part of its commitment to project excellence, OPG continues to enhance and streamline its approach to project planning and execution, with the goal of delivering all projects safely, on time, on budget, and with high quality. Achieving project excellence at OPG involves, among other things, putting in place a common, scalable project delivery model across all business units, establishing qualified project management teams, optimizing contracting strategies, engaging qualified and experienced vendors, and effectively monitoring and controlling performance. The status updates for OPG's major projects as of December 31, 2016 are outlined below.

Project	Capital	Approved	Expected	Current status

(millions of dollars)	expenditures Year-to-date	Life-to-date	budget	in-service date	
Darlington Refurbishment	1,019	3,185	12,800 [1]	First unit - 2020 Last unit - 2026	The refurbishment of Unit 2 commenced in October 2016, as planned. De-fueling of Unit 2, the first critical path activity, was completed in January 2017, ahead of schedule. The project is tracking on budget. See update below.
Peter Sutherland Sr. Hydroelectric GS	141	236	300	2017	Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, ahead of the originally planned schedule. **[MONITOR]** See update below.
Sir Adam Beck Pump GS Reservoir Refurbishment	39	46	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget. See update below.
Ranney Falls Hydroelectric GS	2	3	77 **[MONITOR]**	2019	Project design work was completed in 2016 and construction is expected to commence in 2017. See update below. **[MONITOR]**
Nanticoke Solar Facility	1	1			Project definition work is in progress and construction is planned to commence in the first half of 2018. See update below.
Deep Geologic Repository for L&ILW	9 [2]	195 [2]			OPG has completed the additional studies required by the Canadian Environmental Assessment Agency (CEAA) and the federal Minister of Environment and Climate Change and submitted this information in December 2016. See update below.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the Darlington GS by approximately 30 years. The Darlington Refurbishment project is a multi-phase program comprising the following five major sub-projects:

- **Retube and Feeder Replacement (RFR)**, which includes the removal and replacement of fuel channel assemblies and feeder tubes in each reactor

- **Turbines and Generators**, which consists of inspections and repairs of turbine generator sets and the replacement of analog control systems with digital control systems
- **De-fuelling and Fuel Handling**, which involves the de-fuelling of the reactors and the refurbishment of the fuel handling equipment
- **Steam Generators**, which includes mechanical cleaning, water lancing, and inspection and maintenance work on the generators
- **Balance of Plant**, which consists of work on smaller projects to replace or repair certain other station components.

In January 2016, the Government of Ontario's support for the Darlington Refurbishment project was affirmed through the Ontario Minister of Energy's announcement endorsing OPG's plan to refurbish the four Darlington units at a total project budget of $12.8 billion, including capitalized interest and escalation. The Province's announcement followed the approval of the project budget and schedule by OPG's Board of Directors in November 2015. The refurbishment of the last unit is scheduled to be completed by 2026. OPG's current operating licence for the Darlington GS spans most of the planned duration of the Darlington Refurbishment project, expiring in November 2025.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. *Ontario Regulation 53/05* requires the OEB to accept the need for the Darlington Refurbishment project in light of Ontario's 2013 Long-Term Energy Plan (LTEP) and the related policy of the Province endorsing the need for nuclear refurbishment. It also requires the OEB to ensure that OPG recovers capital and non-capital costs and firm financial commitments in respect of the Darlington Refurbishment project, if the OEB is satisfied that the costs were prudently incurred and that the firm financial commitments were prudently made.

A number of pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, in support of the execution phase of the project have been completed, with the remaining projects continuing to track for completion in line with the refurbishment execution schedule.

All major contracts for the Darlington Refurbishment project that OPG expected to award were in place prior to proceeding with the Unit 2 refurbishment. This included the RFR execution phase contract awarded in January 2016 and valued at approximately $2.75 billion for work to be executed on all four units. All of the major contracts contain suspension and termination provisions.

Other key activities related to the project in 2016 included the following:

- Fabrication of the major reactor components including fuel channels and feeder tubes is in progress, with the first set of feeder tubes delivered in the fourth quarter of 2016. The remaining components have planned deliveries tracking in line with the project schedule.
- The specialized tooling for removal and replacement of feeder tubes and fuel channel assemblies in each reactor was delivered to OPG's reactor training and mock-up facility in the second quarter of 2016, as planned, and testing of the tooling has been completed.

- All 28 storage tanks have been installed in the Heavy Water Storage and Drum Handling Facility, which will provide storage and processing capability for the removal of heavy water from the units during refurbishment, as well as for continued station operations.
- The RFR Island Support Annex was completed in February 2016. The facility houses RFR field preparatory, contractor management, and project oversight activities.

In addition to the de-fuelling of the Unit 2 reactor completed in January 2017, milestones for the Darlington Refurbishment project in 2017 include:

- Completion of reactor vault preparation activities to support RFR work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Third Emergency Power Generator and Containment Filtered Venting System safety enhancement projects, which were originally scheduled to be placed in-service in 2016. Remediation measures are in progress and OPG expects both projects to be placed in-service during the first quarter of 2017. These delays will not impact the overall Darlington Refurbishment project schedule, as neither of the two projects is on the critical path.
- Completion of the Re-tube Waste Processing Building and the Heavy Water Storage and Drum Handling Facility.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of the second unit, Unit 3, at the Darlington GS and is entering into associated commitments to procure major components that require long-lead times. As of December 31, 2016, $31 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Peter Sutherland Sr. Hydroelectric GS

The project to construct the 28 MW Peter Sutherland Sr. hydroelectric GS is in the process of testing and commissioning the turbine and generator units, as well as operator training and document turnover. Work also continues on demobilization efforts, as well as site reclamation. Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. **[MONITOR]** The project is tracking within the approved budget of $300 million.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The construction work on the project included installation of a partial new liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

During 2016, OPG completed project design work for the construction of an additional 10 MW single-unit powerhouse on the existing Ranney Falls GS site. The new unit will replace an existing unit that reached its end of life in 2014. Capital expenditures for project definition work completed as of December 31, 2016 were $3 million. OPG plans to commence construction work in 2017, with an expected in-service date in the fourth quarter of 2019 and a budget of $77 million. **[MONITOR]**

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS and adjacent lands is planned to commence in the first half of 2018. It is expected to be completed in early 2019. Capital expenditures for project definition work completed as of December 31, 2016 were $1 million.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In August 2015, OPG responded to the CEAA's list of potential environmental conditions relating to the JRP report. In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and the impact on environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization (NWMO) were located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following a review by the CEAA and a period of public comment, an EA Decision Statement by the Minister is expected by the third quarter of 2017. Based on the information submitted to the Minister, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

In 2013, OPG suspended design activities on the project pending receipt of a site preparation and construction licence. If the decision on the EA is positive, the licensing process will resume. Upon receipt of the site preparation and construction licence, OPG will complete detailed design and development of a project schedule and a budget. In parallel, OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The approval of OPG's Board of Directors must also be obtained in order to proceed with construction. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

New Nuclear Units

The 2013 LTEP also indicated that the Ontario Ministry of Energy would work with OPG to maintain the site preparation licence granted by the CNSC in relation to the potential construction of these reactors. As such, OPG has been undertaking activities required to support the CNSC Power Reactor Site Preparation Licence and the

Darlington New Nuclear Project EA. The JRP Report on the EA had concluded that the project was not likely to cause significant adverse environmental effects, given mitigation. In April 2016, the Supreme Court of Canada dismissed the application for leave to appeal filed by the parties that had challenged the Darlington New Nuclear Project EA through a judicial review, concluding the litigation on the matter. The CNSC site preparation licence expires in 2022.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth. Inherent in this priority are three objectives:

- Increase revenue, reduce costs and achieve appropriate return
- Ensure availability of cost effective funding for operational needs, generation development projects and long-term obligations
- Pursue opportunities to expand the existing core business and capitalize on new growth paths.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In line with its commercial mandate, OPG is focused on increasing revenue and achieving an appropriate rate of return on the Shareholder's investment, while taking into account the impact on Ontario electricity customers.

In order to achieve the above objectives with respect to the regulated operations, OPG is focused on clearly demonstrating in its rate applications to the OEB that the costs required to operate and invest in the assets are reasonable and being prudently incurred, and should be fully recovered, and that the Shareholder's investment in these assets should earn an appropriate rate of return. OPG's existing base regulated prices, which came into effect in November 2014, were lower than requested by OPG based on its forecast costs. This has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

To improve the financial strength of the regulated operations going forward, OPG has been focused on providing appropriate, transparent evidence in support of its OEB rate requests, aligning organizational resources to support an effective rate application process, and continuing to identify opportunities for further efficiencies in the Company's cost structure. To date, OPG's focus on cost reduction and efficiency improvement initiatives has resulted in significant changes across the Company. This includes over $1 billion in cumulative savings realized across the Company since the beginning of 2011 from reductions in ongoing operations regular headcount through Business Transformation and other initiatives. OPG's cost and productivity improvement efforts are discussed further under the heading, *Operational Excellence*.

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. The OEB's decision on the application, including the effective date of the approved new regulated prices, is expected in the second half of 2017. Consistent with *Ontario Regulation 53/05*, OPG incorporated a nuclear rate smoothing proposal into its application, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impact on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the deemed capital structure applied to the regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent

debt. If approved, this would improve OPG's return on Shareholder's investment. Further details on OPG's rate application can be found under the heading, *Recent Developments* in the *Highlights* section.

For generation development projects that do not form a part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements prior to proceeding with the project. In line with this strategy, most of OPG's non-regulated operating facilities and assets under construction are subject to ESAs with the IESO. Based on these agreements, OPG expects its non-regulated generation operations, reported under the Contracted Generation Portfolio segment, to continue to provide a generally stable level of earnings and cash flow going forward.

OPG's capital structure currently reflects lower levels of debt than the deemed capital structure reflected in the Company's existing or proposed regulated prices. OPG is evaluating strategies to enhance Shareholder returns by optimizing the Company's capital structure through better alignment with the deemed capital structure, taking into account the overall financial strength of the Company and the potential impact on the Company's investment grade credit rating.

Ensure Availability of Cost Effective Funding

OPG actively monitors its funding requirements and forecasts availability of funds to ensure that it can meet the Company's operational needs, project commitments and long-term obligations. OPG utilizes multiple sources of funds, including funds from operations, commercial paper, securitization of assets, letters of credit, credit facilities, long-term corporate debt, and private placement project financing. The Company's financing strategy leverages the strength of its balance sheet to obtain cost effective long-term corporate debt. OPG also accesses the capital markets for private placement project financing, secured by the assets of the project, where the characteristics of the project support such financing. Maintaining an investment grade credit rating is critical to OPG's ability to access cost effective financing.

In April 2016, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2016, S&P Global Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

OPG intends to continue to access the capital markets, where appropriate, to obtain cost effective financing for future generation development projects. The Company also continues to evaluate arrangements that would appropriately support its financing needs and capital expenditure programs. OPG's liquidity and capital resources are discussed under the section, *Liquidity and Capital Resources.*

Pursue Business Growth Opportunities

OPG pursues commercially-based business growth opportunities through investments in its core generation portfolio, as well as emerging renewable energy project opportunities. OPG's growth strategy considers the Company's financial position and anticipated future changes in the generating fleet, including the eventual end of Pickering commercial operations. The growth strategy is also informed by industry, technological, environmental, social, and economic external factors. Growth opportunities are evaluated using financial and risk-based analyses as well as strategic considerations.

OPG's core business growth strategy focuses on the renewal and expansion of the Company's generation portfolio of nuclear, hydroelectric and thermal generating assets in Ontario, including the redevelopment and expansion of existing sites and potential new developments. The strategy leverages OPG's operating and project development expertise as well as the Company's existing diverse physical asset base. OPG considers acquisition opportunities as they arise, taking into account operating synergies, strategic benefits, financial returns and risk profile. OPG's current major generation development projects and asset life extension initiatives are discussed under the headings, *Operational Excellence* and *Project Excellence* in the *Core Business and Strategy* section.

OPG seeks to continue to expand beyond its core generation business through investments in innovation and emergent low-carbon technologies, including selective solar generation, energy storage, micro-grid, electric vehicle infrastructure and other development. OPG is also considering longer-term growth paths that include broader electricity sector opportunities, within and outside Ontario. Growth opportunities may be pursued in partnership with other commercial entities where appropriate synergies exist and are aligned with OPG's business objectives.

In March 2016, Nanticoke Solar LP was selected, through the first phase of the IESO's LRP program, to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. The partnership and the IESO executed a 20-year LRP contract in March 2016, which formalized the terms and conditions for the development and operation of the new solar facility. In September 2016, the Government of Ontario suspended the second phase of the LRP program, which does not impact the project.

From October 2016 to December 2016, the Government of Ontario conducted a consultation process to update its LTEP. OPG made a formal submission as part of the consultation as it relates to OPG's core generation business and growth opportunities. The Ontario Ministry of Energy has indicated that the development of the updated LTEP, scheduled to be published in 2017, will balance the principles of affordability, reliability, clean energy, community and Indigenous engagement, as well as conservation and demand management. OPG's business growth opportunities may be affected by the results of the 2017 LTEP.

Social Licence

As the largest, publicly-owned electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations. OPG's commitment to safety is discussed under the heading, *Workplace and Public Safety* in the *Core Business and Strategy* section.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish relationships with Indigenous communities based on a foundation of respect for their languages, customs, and political, social and cultural organizations. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, and other joint projects. Recent examples of partnerships include the Peter Sutherland Sr. GS in partnership with the Taykwa Tagamou Nation, the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River, and two recently completed shoreline remediation projects. The Whitesand First Nation, working closely with OPG, completed a project to remediate nearly two kilometers of shoreline in 2016, while the Long Lake #58 First Nation undertook the management of a five-year shoreline remediation project. OPG also has been engaging proactively with Indigenous communities regarding the Company's nuclear operations, including both regularly scheduled meetings and an outreach effort in connection with OPG's proposed L&ILW DGR and the re-licensing of the PWMF and the WWMF. In November 2016, OPG was recognized for its ongoing commitment to engaging local Indigenous communities with the CEA's 2016 Sustainable Electricity award for Leadership in External Collaboration and Partnerships.

OPG is committed to being an open, transparent, and accountable company. With operations across Ontario, OPG works to maintain public trust with stakeholders by engaging site communities, sharing information, and being transparent about performance. In addition, OPG's operations are subject to extensive regulatory oversight, with public participation, by the CNSC, the OEB, and other bodies.

As part of its commitment to environmental sustainability, OPG works with community partners to support regional ecosystems and biodiversity. In 2016, OPG continued efforts to protect and restore habitat, promote biodiversity education and awareness, and help the recovery of species at risk. In addition, OPG helps contributes to the well-being of its host communities through the Company's Corporate Citizenship Program (CCP), which supports

charitable and non-profit grassroots initiatives in the areas of environment, education, and community, which includes support for including Indigenous initiatives. In 2016, OPG's CCP provided support to over 850 initiatives, of which 87 were Indigenous.

Further details regarding OPG's commitment to sustainable development, including information regarding the Company's environmental, social and economic performance and initiatives, are provided in OPG's 2015 Sustainability Report available on the Company's website at www.opg.com.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of revenue requirement and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's application for new base regulated prices submitted to the OEB in May 2016 is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its May 2016 application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

Until the OEB's decision on OPG's application is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In large part, this is due to the expected year-over-year reduction in nuclear electricity generation resulting from the full year effect of the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined based on a production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision's issuance could have a significant impact on OPG's financial results during 2017. The application for new regulated prices is further discussed in the *Highlights* section under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. Combined with the expiry of rate riders in effect during 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment, as expected, OPG anticipates this to result in lower cash flow from operations and lower Adjusted FFO Interest Coverage ratio in 2017, compared to 2016. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements. In addition, the expected reduction in nuclear generation as a result of the planned outages at Darlington GS is expected to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Other factors that may impact the Enterprise TGC include potential hydroelectric generation losses due to surplus baseload generation conditions and planned capital expenditures.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, variance accounts include those related to the revenue impact of variability in water flows and SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Pursuant to the Settlement Agreement, these and all other applicable existing variance and deferral accounts have been approved to continue once new regulated prices take effect. Considering the impacts of these accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. **[MONITOR]**

OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to ESAs with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major development projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI, which, in the short term, can be volatile and cause fluctuations in the Company's income. This volatility has been partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account. OPG is exposed to rate of return risk for the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodologies for the Nuclear Liabilities.

As OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle liabilities per the most recently approved ONFA reference plan, the volatility of earnings on the Nuclear Segregated Funds reflected in net income is reduced when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at December 31, 2016, the Decommissioning Segregated Fund was overfunded by 21 percent, and the Used Fuel Segregated Fund was marginally overfunded by less than one percent, relative to the liabilities per the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future, which would increase earnings volatility. The 2017 ONFA Reference Plan is discussed in the *Highlights* section, under the heading *Recent Developments.* The accounting for the Nuclear Segregated Funds is discussed in the section *Critical Accounting Policies*, under the heading *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

KEY OPERATING AND FINANCIAL PERFORMANCE INDICATORS

OPG evaluates the performance of its generating stations using a number of key indicators. Key operating performance indicators aligned with corporate strategic imperatives are measures of production reliability, cost effectiveness, environmental performance, and safety performance. Certain of the measures used vary depending on the generating technology. The key financial performance indicators evaluate the Company's financial performance at the enterprise level.

In 2016, OPG adopted Enterprise TGC per MWh as an enterprise-wide measure of operational cost effectiveness. Concurrently, OPG adopted Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets and no longer reports Hydroelectric OM&A expense per MWh. The new performance measures, together with Nuclear TGC per MWh, provide the Company with a single, consistent method of evaluating cost effectiveness across the organization.

Enterprise TGC, Nuclear TGC, Hydroelectric TGC, ROE Excluding AOCI, and the FFO Adjusted Interest Coverage ratio discussed below are not measurements in accordance with US GAAP. They should not be considered as alternative measures to net income or any other measure of performance under US GAAP. However, OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the

Company's strategic imperatives and related objectives. The definition and calculation of Enterprise TGC per MWh, Nuclear TGC per MWh, Hydroelectric TGC per MWh, ROE Excluding AOCI and FFO Adjusted Interest Coverage are found in the section, *Supplementary Non-GAAP Financial Measures*.

Enterprise Total Generating Cost per MWh

Enterprise TGC per MWh is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Nuclear Total Generating Cost per MWh

Nuclear TGC per MWh is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts and expenses ancillary to OPG's nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Hydroelectric Total Generating Cost per MWh

Hydroelectric TGC per MWh is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Nuclear Unit Capability Factor

OPG's nuclear stations are baseload facilities and are not designed for fluctuating production levels to meet peaking demand. The nuclear Unit Capability Factor is a key measure of nuclear station performance. It measures the amount of energy that the unit(s) generated over a period of time, adjusted for externally imposed constraints such as transmission or demand limitations, as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. Capability factors are primarily affected by planned and unplanned outages. By industry definition, capability factors exclude production losses beyond plant management's control, such as grid-related unavailability. The nuclear Unit Capability Factor also excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS is excluded from the measure effective October 15, 2016, when the unit was taken offline as part of the Darlington Refurbishment project.

Hydroelectric Availability

OPG's hydroelectric stations operate as baseload, intermediate, or peaking stations. Hydroelectric Availability is a measure of the reliability of a hydroelectric generating unit. It represents the percentage of time the generating unit is capable of providing service, whether or not it is actually generating electricity, compared to the total time for the respective period.

Thermal Equivalent Forced Outage Rate

Equivalent Forced Outage Rate (EFOR) is an index of the reliability of a generating unit at OPG's thermal stations. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its objective to deliver value to the Shareholder. ROE Excluding AOCI is defined as net income attributable to the Shareholder for the period divided by average equity attributable to the Shareholder excluding AOCI for that period, and is measured over a period of 12 months.

Funds from Operations Adjusted Interest Coverage

The FFO Adjusted Interest Coverage ratio is an indicator of OPG's ability to meet interest obligations from operating cash flow and is consistent with the Company's objective of ensuring availability of cost effective funding. The FFO Adjusted Interest Coverage ratio is defined as FFO before interest divided by adjusted interest expense, and is measured over a period of 12 months.

Other Key Indicators

In addition to production reliability, cost effectiveness, and financial performance indicators, OPG has identified certain environmental and safety performance measures. These measures are discussed under the section, *Core Business, Strategy and Outlook*.

BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary

services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power and other facilities, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to the passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel L&ILW, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Power lease arrangement and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because OPG's costs associated with the Nuclear Liabilities have been included by the OEB in the determination of regulated prices for production from the Pickering and Darlington nuclear generating stations, in accordance with the methodologies applied since the OEB's 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. Brighton Beach operates under an energy conversion agreement between Brighton Beach and Shell Energy North America (Canada) Inc, and the PEC station is operated under the terms of an Accelerated Clean Energy Supply contract with the IESO. OPG's share of the in-service

generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of trading activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the United States (US) market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets, with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and Nanticoke generating stations' sites.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**3,481**	3,245
Fuel expense	**315**	301
Gross margin	**3,166**	2,944
Operations, maintenance and administration	**2,210**	2,196
Depreciation and amortization	**925**	717
Property taxes	**26**	26
Income before other loss, interest, and income taxes	**5**	5
Other loss	**1**	3
Income before interest and income taxes	**4**	2

Income before interest and income taxes from the segment increased to $4 million in 2016, compared to $2 million in 2015. The improvement in earnings of $2 million was primarily due to higher electricity generation in 2016, compared to 2015, which increased revenue from the nuclear base regulated price. The increase in revenue was largely offset by higher OM&A expenses, higher fuel expense, and higher depreciation and amortization expense, excluding amortization expense related to regulatory balances, in 2016, compared to 2015.

Higher nuclear production of 1.1 TWh in 2016, compared to 2015, was primarily due to the planned four-unit VBO in 2015 and a decrease in the number of unplanned outages at the Darlington GS in 2016. This was partially offset by the impact of the increased number of unplanned outage days at the Pickering GS in 2016, and the removal from service of Unit 2 of the Darlington GS in October 2016 as part of the Darlington Refurbishment project.

The increase in OM&A expenses of $14 million in 2016 reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium prices and

higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million primarily due to new assets in service in 2016.

A decrease in non-electricity generation revenue in 2016, compared to 2015, also partially offset the increase in segment earnings. The lower non-electricity generation revenue was mainly attributable to lower detritiation services revenue and lower isotope sales in 2016 and an insurance recovery recognized in 2015.

A higher OEB-authorized rate rider of $10.84/MWh effective from July 1, 2015 to the end of 2016 contributed to the increase in segment revenue in 2016, compared to 2015. In the first half of 2015, OPG received a rate rider of $1.33/MWh. As the rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this increase in revenue was largely offset by an increase in amortization expense related to the regulatory balances.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2016 and 2015 were as follows:

	2016	2015
Unit Capability Factor *(%)* [1]		
Darlington GS	**89.5**	76.9
Pickering GS	**75.2**	79.4

[1] The nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS increased in 2016, compared to 2015, primarily due to the four-unit VBO completed during 2015. In addition, a lower number of unplanned outage days at the Darlington GS during 2016, compared to 2015, also contributed to the improvement in the Unit Capability Factor.

The decrease in the Unit Capability Factor at the Pickering GS in 2016, compared to 2015, was primarily due to a higher number of unplanned outage days at the station in 2016, as a result of emergent discovery work during planned outages.

The definition of the nuclear Unit Capability Factor is found under the heading, *Key Operating and Financial Performance Indicators.*

Regulated – Nuclear Waste Management Segment

	2016	2015
Revenue	**138**	122
Operations, maintenance and administration	**146**	132
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**912**	880
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Loss before interest and income taxes	**(174)**	(186)

Earnings from the segment improved by $12 million in 2016 compared to 2015. The improvement was primarily due to higher earnings from the Nuclear Segregated Funds, partially offset by an increase in accretion expense on the Nuclear Liabilities.

The improvement in Nuclear Segregated Funds earnings was primarily due to an increase in the Used Fuel Segregated Fund earnings due to higher CPI-adjusted rate of return guaranteed by the Province for funding related to the initial 2.23 million used fuel bundles. Pursuant to the ONFA, the guaranteed annual rate of return for that portion of the Used Fuel Segregated Fund is set at 3.25 percent plus the change in the Ontario CPI. This increase in

Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the 2017 ONFA Reference Plan. The 2017 ONFA Reference Plan was approved by the Province in December 2016, and is discussed in the section, *Highlights* under the heading, *Recent Developments*. The accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section. The Nuclear Segregated Funds earnings are reported net of the impact of the Bruce Lease Net Revenue Variance Account.

The higher accretion expense on the Nuclear Liabilities during 2016, compared to 2015, reflected an upward adjustment in the liabilities recognized in December 2015 related to the revised accounting assumptions for the estimated useful lives of OPG's nuclear generating stations. The increased accretion expense was partially offset by the impact of the Bruce Lease Net Revenues Variance Account. The changes in the assumed estimated useful lives of the nuclear stations and the related adjustment to Nuclear Liabilities are discussed further in the section, *Balance Sheet Highlights* under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account*.

Regulated – Hydroelectric Segment

(millions of dollars)	**2016**	**2015**
Revenue [1]	**1,527**	1,619
Fuel expense	**353**	345
Gross margin	**1,174**	1,274
Operations, maintenance and administration	**325**	340
Depreciation and amortization	**225**	282
Property tax	**1**	1
Income before other (income) loss, interest and income taxes	**623**	651
Other (income) loss	**(19)**	3
Income before interest and income taxes	**642**	648

[1] During 2016 and 2015, the Regulated – Hydroelectric segment revenue included incentive payments of $14 million and $26 million, respectively, related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $6 million in 2016, compared to 2015, was primarily due to lower hydroelectric incentive mechanism payments and the income impact of OEB-approved variance accounts. The lower payments under the hydroelectric incentive mechanism were primarily due to the reservoir refurbishment outage at the Sir Adam Beck Pump GS during 2016. The decrease in segment income was partially offset by a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to OPG's December 2014 motion. The decrease in segment income also was partially offset by a year-over-year decrease in OM&A expenses, primarily due to higher costs incurred in 2015 for shoreline remediation work.

The decrease in segment revenues due to the lower OEB-authorized rate rider in 2016, compared to 2015, was largely offset by a corresponding decrease in amortization expense related to the regulatory balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	2016	**2015**
Hydroelectric Availability *(%)*	**89.0**	91.2

The Hydroelectric Availability decreased during 2016, compared to 2015, primarily due to the planned reservoir refurbishment project at the Sir Adam Beck Pump GS. The project was completed in February 2017.

The definition of Hydroelectric Availability is found under the heading, *Key Operating and Financial Performance Indicators*.

Contracted Generation Portfolio Segment

(millions of dollars)	2016	2015
Revenue	**573**	535
Fuel expense	**58**	39
Gross margin	**515**	496
Operations, maintenance and administration	**178**	185
Depreciation and amortization	**75**	72
Accretion on fixed asset removal liabilities	**9**	8
Property taxes	**7**	7
Income from investments subject to significant influence	**(37)**	(39)
Income before other loss, interest, and income taxes	**283**	263
Other loss	**1**	1
Income before interest and income taxes	**282**	262

Income before interest and income taxes increased by $20 million during 2016, compared to 2015. The increase primarily resulted from the higher gross margin, due to increased revenues from the Lower Mattagami River generating stations, the Lennox GS, and the Atikokan GS. Higher revenue from the Lennox GS was primarily due to increased market demand. The increase in revenue from the Atikokan GS reflected the support provided to the electricity system in northwestern Ontario as a result of an outage at a local transformer station from late July 2016 to early September 2016. The year-over-year increase in segment revenue was also due to a provision made in 2015 related to an IESO audit.

The Hydroelectric Availability and the Thermal EFOR for the Contracted Generation Portfolio segment were as follows:

	2016	2015
Hydroelectric Availability *(%)*	**77.3**	88.6
Thermal EFOR *(%)*	**1.6**	11.2

Lower Hydroelectric Availability during 2016, compared to 2015, was primarily due to a higher number of planned outage days at the Kipling and Harmon generating stations on the Lower Mattagami River. During 2016, headgate replacements were made at certain units of the Kipling GS and Harmon GS. In addition, a runner upgrade and rehabilitation work was completed at Unit 2 of the Harmon GS. The lower thermal EFOR in 2016, compared to 2015, was primarily due to an outage in 2015 to perform repair work at the Lennox GS.

The definitions of Hydroelectric Availability and Thermal EFOR are found under the heading, *Key Operating and Financial Performance Indicators*.

Services, Trading, and Other Non-Generation Segment

(millions of dollars)	2016	2015
Revenue	**68**	73
Fuel expense	**1**	2
Gross margin	**67**	71
Operations, maintenance and administration	**22**	48
Depreciation and amortization	**32**	29
Accretion on fixed asset removal liabilities	**8**	7
Property taxes	**12**	11
Restructuring	**6**	6
Loss before other loss, interest, and income taxes	**(13)**	(30)
Other loss	**-**	7
Loss before interest and income taxes	**(13)**	(37)

Segment earnings improved by $24 million in 2016 compared to 2015. The losses incurred by the segment in 2015 and 2016 largely reflect the costs associated with the Nanticoke and Lambton generating stations prior to OPG's decisions, in 2015 and November 2016, respectively, to proceed with the stations' decommissioning. These losses are partially offset by OPG's trading activities.

The improvement in earnings in 2016 primarily reflected higher OM&A expenses in 2015, including those incurred related to the Nanticoke GS prior to OPG's decision to proceed with the station's decommissioning, and a provision made in 2015 related to an IESO audit. The year-over-year decrease in OM&A expenses also reflected reduced work programs at the Lambton GS during 2016 due to lower staffing levels used to preserve the station. The preservation activities were discontinued after the announcement to decommission the station. Expenditures incurred in connection with decommissioning activities for the Nanticoke and Lambton generating stations are charged against a previously established decommissioning provision.

During each of 2016 and 2015, OPG recorded a charge against earnings to adjust the scrap value estimates for the Lambton GS. In 2016, this adjustment was offset by dividend income earned from OPG's investment in Hydro One shares, which contributed to the year-over-year improvement in earnings.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies; to undertake major projects; to fund long-term obligations such as contributions to the pension fund; to make payments under the OPEB plans; to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds; and to service and repay long-term debt.

Changes in cash and cash equivalents for 2016 and 2015 are as follows:

(millions of dollars)	**2016**	**2015**
Cash and cash equivalents, beginning of period	**464**	610
Cash flow provided by operating activities	**1,705**	1,465
Cash flow used in investing activities	**(1,807)**	(1,553)
Cash flow used in financing activities	**(176)**	(58)
Net decrease	**(278)**	(146)
Cash and cash equivalents, end of period	**186**	464

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details under the heading, *Overview of Results* in the section, *Highlights*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities in 2016 was $1,807 million, compared to $1,553 million in 2015. The increase was primarily due to higher expenditures on the Darlington Refurbishment project as it transitioned to execution phase, and the acquisition of nine million common shares of Hydro One in April 2016. The increase in cash flow used in investing activities in 2016, compared to 2015, was partially offset by the investment of proceeds from a long-term debt issuance in support of the Peter Sutherland Sr. GS project into a structured deposit note in 2015, and the subsequent receipt of proceeds from this investment on staggered maturity dates throughout 2016. The final maturity date of the deposit note is in April 2017. The acquisition of the Hydro One shares is discussed under the heading *Recent Developments* in the *Highlights* section, as well as in Note 3 of the Company's 2016 audited consolidated financial statements.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, sustaining capital investments across the generating fleet, and hydroelectric development projects including the expansion of the Ranney Falls GS and the completion of Peter Sutherland Sr. GS.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended the expiry date of both tranches from May 2020 to May 2021. As at December 31, 2016, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this

agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plan.

As at December 31, 2016, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As of December 31, 2016, there were outstanding borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

As at December 31, 2016, OPG's long-term debt outstanding was $5,534 million, including $1,103 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes is x.xx percent and x.xx percent, respectively. **[MONITOR]**

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, were as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Other Commitments

Collective Agreements

As of December 31, 2016, OPG had approximately 9,270 regular employees. Most of OPG's regular employees are represented by two unions:

- **The PWU** – This union represents approximately 5,070 OPG employees or approximately 55 percent of OPG's regular workforce as at December 31, 2016. Union membership includes operators, technicians, skilled trades, clerical, and security personnel. The current collective agreement between OPG and the PWU has a three-year term, expiring on March 31, 2018.
- **The Society** – This union represents approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce as at December 31, 2016. Union membership includes supervisors, professional engineers, scientists, and other professionals. The current collective agreement between OPG and The Society has a three-year term, expiring on December 31, 2018.

In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights at OPG facilities. These bargaining rights are established either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. All of these collective agreements currently have multi-year terms, expiring on April 30, 2020.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's audited consolidated financial position using selected balance sheet data as at December 31:

(millions of dollars)	**2016**	**2015**
Property, plant and equipment – net	**20,002**	20,595
The decrease was primarily due to a reduction in asset retirement costs of approximately $1,570 million in 2016 as a result of a reduction in the estimates for the Nuclear Liabilities to reflect the 2017 ONFA Reference Plan cost estimates. The decrease was partially offset by capital expenditures on the Darlington Refurbishment and other projects, net of depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**15,984**	15,136
The increase was primarily due to earnings on the Nuclear Segregated Funds and contributions to the Used Fuel Segregated Fund, partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded to the lower underlying obligations reflected in the updated ONFA reference plan and reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Available-for-sale securities	**212**	-
The balance as at December 31, 2016 represents the fair value of the nine million Hydro One shares acquired in April 2016, as discussed under the heading *Recent Developments* in the *Highlights* Section.		
Regulatory assets and liabilities – net *(current and non-current portions)*	**5,545**	5,808
The decrease was primarily due to the amortization of regulatory balances recovered through rate riders in effect during 2016 and an increase in regulatory liabilities resulting from a change in the estimated useful lives of OPG's nuclear stations at the end of 2015, as discussed under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account* below. This was partially offset by amounts deferred in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and other variance and deferral accounts during the year.		
Short-term debt	**2**	225
The decrease was due to the maturity of external commercial paper outstanding under LME's commercial paper program.		
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169
The decrease was primarily due to a reduction of approximately $1,570 million in the estimates for the Nuclear Liabilities at the end of 2016 to reflect the 2017 ONFA Reference Plan cost estimates, partially offset by accretion expense during the year.		
Pension liabilities	**3,012**	2,597
The increase was primarily due to the re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as discussed in the section, *Changes In Accounting Policies* under the heading, *Pension and Other Post-Employment Benefits.*		

Impact of Changes in Station End-of-Life Dates Deferral Account

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense arising from the changes in the estimated useful lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG has recognized a regulatory liability of $71 million related to the balance in the deferral account. Together with the Bruce Lease Net Revenues Variance Account discussed below, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account offset the decrease in depreciation expense in 2016, compared to 2015, as a result of the changes in estimated useful lives of OPG's nuclear stations effective December 31, 2015.

The changes to the estimated useful lives of OPG's nuclear generating station effective December 31, 2015, for accounting purposes, were as follows:

- the average service lives of the Bruce A GS and Bruce B GS were extended from 2048 to 2052 and from 2019 to 2061, respectively, to reflect the estimated end-of-life dates reflected in the updated refurbishment agreement between the IESO and Bruce Power, which was announced in December 2015
- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015
- the average service life of the Pickering GS was extended by less than one year.

To reflect the above changes, OPG recognized a total increase of $2,330 million in the Nuclear Liabilities and a corresponding increase in the related asset retirement costs, effective December 31, 2015. These increases were primarily due to the changes in the estimated useful life of the Bruce B GS. The nuclear asset retirement obligations (ARO) associated with the Pickering GS and Darlington GS was impacted by the changes to the Bruce nuclear generating stations' useful lives because the costs of the fleet-wide waste management programs are shared by all of OPG's nuclear stations based on used nuclear fuel and waste volumes. Consistent with the changes in the end-of-life dates for the Bruce nuclear generating stations and the December 2015 amendments to the Bruce Lease in connection with the Province's endorsement of Bruce Power's refurbishment plans, the term of the Bruce Lease for accounting purposes also was extended, in line with the refurbishment plans for these stations.

The impact of the above changes on OPG's revenues and costs related to the Bruce nuclear generating stations effective January 1, 2016 is recorded in the Bruce Lease Net Revenues Variance Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's consolidated financial statements or are recorded in the Company's consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

Guarantees

As part of normal business, OPG and certain of its subsidiaries and joint ventures enter into various agreements to provide financial or performance assurance to third parties. Such agreements include guarantees, standby Letters of Credit and surety bonds. For more details on OPG's guarantees, refer to Note 15 of OPG's audited consolidated financial statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies, including the impact of major recent accounting pronouncements, are outlined in Note 3 of the audited consolidated financial statements. Certain of these policies are recognized as critical accounting policies by virtue of the subjective and complex judgments and estimates required around matters that are inherently uncertain and could result in materially different amounts being reported under different conditions or assumptions. The critical accounting policies and estimates that affect OPG's US GAAP consolidated financial statements are highlighted below.

Exemptive Relief for Reporting under US GAAP

As required by *Ontario Regulation 395/11,* as amended, under the FAA, OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG has also received exemptive relief from the OSC from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board (IASB) for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

As a result of OPG's 2011 decision to adopt US GAAP, as required by the FAA regulation, OPG's earlier plan to convert to IFRS, effective January 1, 2012, was discontinued. OPG had substantively completed its IFRS conversion project, which included separate diagnostic, development, and implementation phases, when it suspended the project. If a future transition to IFRS for the purposes of OPG's consolidated financial statements is required, conversion work can be effectively restarted with sufficient lead time to evaluate and conclude on changes that occurred subsequent to the decision to suspend the project. OPG continues to monitor the IASB's current standard-setting project related to entities with rate-regulated activities and is evaluating alternatives with respect to the Company's future financial reporting.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the OEB.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998*, the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the

future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05.* The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures for its pension and OPEB plans. It is the Company's position that this decision by the OEB did not constitute a change in the basis of OPG's rate recovery of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices, or in an OEB-authorized deferral or variance account for future recovery, as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account to record the difference between OPG's actual pension and OPEB costs for the regulated business determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million, which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the above noted consultation process.

See Notes 3, 5, 8, 9, and 11 of OPG's 2016 audited consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or payable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its rate regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and in respect of investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

The Company has recognized net deferred income tax liabilities of $829 million as at December 31, 2016 (2015 – $880 million).

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset, based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

The accounting estimates related to end-of-life assumptions for PP&E and intangible assets require significant management judgment, including consideration of various operating, technological, and other factors. OPG reviews the estimated useful lives for its PP&E and intangible assets on a regular basis.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

Various assumptions and accounting estimates are required to determine whether an impairment loss should be recognized and, if so, the value of such loss. This includes factors such as short-term and long-term forecasts of prices for electricity generation under applicable revenue mechanisms, the demand for and supply of electricity, inflation, fuel prices, capital and operating expenditures, and estimated useful service lives of the assets.

The carrying value of investments accounted for under the equity method are reviewed for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Segregated Funds based on approved ONFA reference plans. Costs for L&ILW management and used fuel storage incurred during station operation are not funded by the Nuclear Segregated Funds. They are funded through the Company's operating cash flow or other sources of liquidity.

Decommissioning Segregated Fund

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the earnings it recognizes in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded.

The amount due to the Province in respect of the Decommissioning Segregated Fund could be reduced in subsequent periods in the event that the fund earns less than is target rate of return, a new ONFA reference plan is approved with a higher underlying liability, or the amount of the underfunding in the Used Fuel Segregated Fund increases.

When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets.

Used Fuel Segregated Fund

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined in the ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return on the Used Fuel Segregated Fund and the actual market return determined based on the fair value of the fund's assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount OPG would pay to, or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions attributed to the used fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province has the right at any time to access the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. Accordingly, when the Used Fuel Segregated Fund is overfunded, OPG limits the earnings it recognizes int he consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the underlying liability based on the most recently approved ONFA reference plan. In accordance with the ONFA, OPG does not have a right to direct any amounts from the Used Fuel Segregated Fund to the Decommissioning Segregated Fund.

Provincial Guarantee

In accordance with the *Nuclear Safety and Control Act* (Canada), the CNSC requires OPG to have sufficient funds available to discharge the current nuclear waste management and nuclear decommissioning liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the CNSC, on behalf of OPG, for any shortfall between the CNSC financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee equal to 0.5 percent of the amount of the Provincial Guarantee. The

current value of the Provincial Guarantee of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016. The CNSC process requires the CNSC financial guarantee requirement to be updated once every five years. OPG is currently updating the CNSC financial quarantee requirement for the 2018-2022 period and expects to file it with the CNSC in the first half of 2017. **[MONITOR]**

Pension and Other Post-Employment Benefits

The determination of OPG's pension and OPEB costs and obligations is based on accounting policies and assumptions, as discussed below.

Accounting Policy

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor) for each plan is amortized over the expected average remaining service life of the employees covered by the plan, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on its consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation, on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net

of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as amortization components of pension and OPRB costs as described above.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Accounting Assumptions

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost, and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses.

The discount rates, which are representative of the AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. In 2016 and prior years, benefit costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. A lower discount rate increases the benefit obligations and increases benefit costs. The weighted-average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

Starting in 2017, OPG expects to change the method used to estimate the current service and interest cost components of pension and OPEB costs. OPG expects to adopt a full yield curve approach in the estimation of these components of pension and OPEB cost by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Making this change will improve the correlation between projected benefit cash flows and the corresponding yield curve spot rates, and provide a more precise measurement of service and interest costs. This change does not affect the measurement of the total benefit obligations, as the change in the current service and interest components of the costs from the previous method will be offset by a corresponding change in the actuarial (gain) loss recorded in AOCI. OPG will account for this change as a change in estimate, prospectively starting in 2017. With an upward sloping yield curve and the pattern of OPG's estimated future benefit cash flows, the adoption of the full yield curve approach is expected to materially lower OPG's current service and interest cost components, reducing the overall pension and OPEB costs in the initial years following adoption.

The expected rate of return on plan assets is determined based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined under the heading, *Contractual and Commercial Commitments,* in the section *Liquidity and Capital Resources*. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation and assumptions as at December 31, 2016. As part of the valuation, the plans' demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The deficit for the registered pension plan, for accounting purposes, increased from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

Asset Retirement Obligation

OPG recognized ARO for fixed asset removal and nuclear waste management liabilities, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The ARO is comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating plant facilities and other facilities. Costs are expected to be incurred for activities such as preparation for safe storage and safe storage of nuclear stations, dismantlement, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel bundles and L&ILW material. The liabilities associated with the decommissioning of the nuclear generating stations and the long-term management of used nuclear fuel comprise the most significant amounts of the total obligation.

The nuclear decommissioning liability includes the estimated costs of closing the nuclear stations after the end of their service lives, which includes preparation and placement of the stations into a safe state condition followed by an assumed 30-year safe store period prior to station dismantlement and site restoration. Activities associated with the placement of stations into a safe state condition include de-fueling and de-watering of the nuclear reactors. Under the terms of the lease agreement with Bruce Power and as required by the CNSC, OPG is responsible for the nuclear waste management and nuclear decommissioning obligations associated with the Bruce nuclear generating stations. Pursuant to the lease agreement, Bruce Power must return the two Bruce stations to OPG together, in a de-fueled and de-watered state. These de-watering and de-fueling costs are not part of OPG's ARO.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the obligation for these costs include an L&ILW DGR facility to be constructed and operated by OPG, as discussed under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section. To estimate the liability for nuclear used fuel management, OPG has adopted an approach consistent with the Adaptive Phased Management concept approved by the Government of

Canada, which assumes a deep geologic repository or the long-term management of Canada's nuclear used fuel waste. The NWMO is responsible for the design and implementation of Canada's plan for the long-term management of used nuclear fuel.

The following costs are recognized as a liability on OPG's consolidated balance sheets:

- the present value of the costs of decommissioning the nuclear and thermal production facilities and other facilities after the end of their useful lives
- the present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed lives of the stations
- the present value of the variable cost portion of nuclear waste management programs taking into account waste volumes generated to date.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs including construction of assumed waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, decommissioning strategy, and the technology employed may result in significant changes to the value of the accrued liabilities. With programs of such long-term duration and the evolving technology to handle nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the costs for these programs. These costs may increase or decrease over time.

The estimates for the Nuclear Liabilities are reviewed on an ongoing basis as part of the overall nuclear waste management program. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically, at least once every five years, in line with the required ONFA reference plan update process. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of a net increase in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of a net decrease in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets.

The most recent comprehensive update of the baseline cost estimates for the Nuclear Liabilities is contained in the approved 2017 ONFA Reference Plan, and was completed in the fourth quarter of 2016. The update resulted in a decrease of approximately $1,570 million in the Nuclear Liabilities as at December 31, 2016, which was determined using a discount rate of 4.95 percent. The overall reduction in OPG's nuclear waste management and nuclear decommissioning obligations was due mainly to a decrease in cost estimates to reflect a proposed new, more cost effective container design and engineered barrier concept to house used nuclear fuel for disposal, updated cost escalation rates for all programs, and a later expected in-service date for the NWMO's planned deep geologic repository for the long-term permanent disposal of Canada's used nuclear fuel. These decreases were partly offset by higher cost estimates related to decommissioning activities, primarily due to an improved definition of work required during the preparation for safe storage after station shutdown and a higher volume of waste expected to be generated during decommissioning. Cost escalation rates used to estimate future undiscounted cash flows reflected in the December 31, 2016 adjustment to the Nuclear Liabilities ranged from 2.0 percent to 3.4 percent.

The December 31, 2016 adjustment to the Nuclear Liabilities and associated asset retirement costs did not impact OPG's income for 2016. The estimated impact of this adjustment on 2017 expenses, before the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account, includes a decrease to depreciation expense of approximately $8 million, a decrease to accretion expense of approximately $78 million, and a combined decrease in used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as they are expected to be largely offset by

the OEB approved variance and deferral accounts, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to Ontario Regulation 53/05. It records the revenue requirement impact associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years.

The liability for nuclear fixed asset removal and nuclear waste management on a present value basis as at December 31, 2016 was $19,103 million (2015 – $19,792 million). As at December 31, 2016, the undiscounted cash flows of expenditures for OPG's Nuclear Liabilities in 2016 dollars are as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Expenditures for nuclear fixed asset removal and nuclear waste management [1]	354	360	386	429	465	39,296	41,290

[1] The majority of the expenditures are expected to be reimbursed by the Nuclear Segregated Funds established by the ONFA. Any contributions required under the ONFA are not included in these undiscounted cash flows. Accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The liability for non-nuclear fixed asset removal was $381 million as at December 31, 2016 (2015 – $377 million). This liability primarily represents the present value of estimated costs of decommissioning OPG's thermal generating stations at the end of their service lives. The liability reflects third party cost estimates based on an in-depth review of plant sites and an assessment of required clean-up and restoration activities. For the purpose of measuring the liability, asset removal activities are assumed to take place approximately over the next one to 15 years. The amount of undiscounted estimated future cash flows associated with the thermal liabilities is approximately $500 million. With the decisions taken in 2015 and 2016 to decommission the Nanticoke and Lambton generating stations, respectively, OPG expects to review the decommissioning liability estimates for these sites. Any adjustments as a result of a change in the liability estimates for these stations will be recorded in net income in the period of change.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model.

The fair value of financial assets and liabilities for which quoted prices in an active market are available, including exchange traded derivatives and other financial instruments, are determined directly from those quoted market prices.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the

use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that may affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If the valuation technique or model is not based on observable market data, specific valuation techniques are used, primarily based on recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

OPG's use of financial instruments exposes the Company to certain risks, including credit risk, foreign currency risk and interest rate risk. A discussion of how OPG manages these and other risks is found under the section, *Risk Management*.

Variable Interest Entities

OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated. As at December 31, 2016, PSS Generating Station Limited Partnership was classified as a variable interest entity because it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership. Refer to Note 3 of OPG's 2016 audited consolidated financial statements for further details.

Recent Accounting Pronouncements

The recent US GAAP accounting pronouncements related to revenue recognition, leases, and financial instruments are described below. Other recent accounting pronouncements applicable to OPG are outlined in Note 3 of the audited consolidated financial statements.

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact that the new standard will have on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

RISK MANAGEMENT

Overview

OPG faces various risks that could significantly impact the achievement of its strategic imperatives. The objective of risk management is to identify and mitigate these risks, and to preserve and increase the value of the Shareholder's investment in the Company.

Risk Governance Structure

The Audit and Risk Committee of OPG's Board of Directors assists the Board of Directors in fulfilling its oversight responsibilities for matters relating to the identification and management of the Company's key business risks. An Executive Risk Committee (ERC), which is comprised of business unit leaders and the Chief Risk & Audit Executive (CRAE), assists the Audit and Risk Committee in fulfilling its governance and oversight responsibilities related to OPG's risk management activities.

Risk Management Activities

OPG faces a wide array of risks as a result of its business operations. OPG's Enterprise Risk Management (ERM) framework is designed to identify and evaluate risks on the basis of their potential impact on the Company's capacity to achieve specific strategic imperatives and business plan objectives.

A centralized ERM group led by the CRAE coordinates the quarterly risk management reporting activities. The activities begin with business units identifying, reviewing, and assessing risks that could prevent achievement of their objectives. The ERM group reviews, validates, and consolidates this information and prioritizes risks based on their potential to impact OPG's overall strategic imperatives. The ERM group also assesses external developments that may have implications on the corporate risk profile and facilitates the identification and assessment of emerging risks. The ERC then reviews and validates significant changes in the top risks that may impact OPG's ability to achieve its strategic imperatives, as well as any emerging risks that have been identified. The results of the ERC review and significant changes in the enterprise risk profile are reviewed by the Audit and Risk Committee.

In order to maintain an appropriate balance between risk and return, senior management sets limits for the market risk, credit risk and energy trading activities of the Company. Senior management also establishes risk management policies and processes to ensure compliance with such limits.

The key risks to OPG's strategic imperatives are briefly described below.

Risks to Achieving Operational Excellence

OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance.

Operational risks are the risks inherent in the operation of electricity generating facilities. These risks can lead to interruptions in the operations of generating stations affecting future production. The operational risks of a station are generally a function of its age, human performance, and the technology used.

Nuclear Generating Stations

Operating an aging nuclear fleet exposes OPG to unique risks such as unplanned outages, an increase in operating costs, and risks associated with nuclear waste management operations.

Operating nuclear stations exposes OPG to unique risks, such as greater-than-anticipated deterioration of station components and systems, risks associated with the nuclear industry, supply chain and vendor quality, risks related to the handling, storage and disposal of nuclear waste, and the risk of a nuclear accident. The primary implications of these risks include additional safety requirements, potentially lower than expected generation and revenues, and potentially higher operating costs.

The uncertainty associated with production by OPG's Canadian Deuterium Uranium nuclear generating units is primarily driven by the condition of station components and systems, which are all subject to the effects of aging. Fuel channels are expected to be the most life-limiting component affecting station end-of-life. Another significant factor identified to date includes degradation of primary heat transport pump motors at the Darlington GS. Additionally, there are fuel handling performance challenges at both the Darlington GS and Pickering GS. To respond to these risks, OPG continues to monitor performance, implement extensive inspection and maintenance programs, identify corrective actions and undertake projects required to operate reliably and within design parameters.

Deterioration of station components may progress in an unexpected manner, resulting in the need to increase monitoring, conduct extensive repairs, or undertake additional remedial measures. To maintain a safe operating margin, a nuclear unit could be derated resulting in reduced generation. When an unexpected condition first appears, a specific monitoring program is established. The primary impact of these conditions on OPG is an increase in the long-term cost of operations. The associated mitigation may create additional outage work, increasing the number of outages or extending planned outages.

Pickering Extended Operations to 2024

In January 2016, the Province of Ontario announced its approval of OPG's plan to pursue the continued safe and reliable operation of the Pickering GS to 2024. Under OPG's plan, all six operating units at the Pickering GS would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The current operating licence for the Pickering GS, which expires in August 2018, was issued in 2013 assuming that the station would shut down in 2020.

Inability to achieve Pickering extended operations as planned would result in a reduction of OPG's future generation revenue and cash flows and lead to the advancement of shutdown and station decommissioning expenditures.

Risk factors for continued operation of the Pickering units include the discovery of unexpected conditions, equipment failures, the state of critical plant components that are reaching end-of-life, and a requirement for significant plant modifications. To mitigate these risks, OPG continues to undertake a number of activities, including the following:

- work to confirm achievability of fuel channel life necessary to enable extended operations
- component condition assessments to identify the work required to support the extended operation of the station
- modification of the operating and maintenance strategy to support continued operation of the station.

Over the remaining lifespan of the station, risks such as performance of the fuel handling system, challenges with parts procurement, and a shortage of qualified human resources may challenge operational excellence at the Pickering GS. OPG is addressing these risks by taking appropriate actions, including undertaking fuel handling reliability improvements, equipment modifications and targeted investments in plant systems and components, supply chain initiatives, and developing workforce planning and resourcing strategies.

Nuclear Waste Management

The process of generating electricity by nuclear generating stations produces nuclear waste. As required by the CNSC, OPG is accountable for the management of used fuel and L&ILW, and decommissioning of its nuclear stations and waste management facilities, including the stations on lease to Bruce Power. Currently, there are no licenced facilities in Canada for the permanent disposal of nuclear used fuel or L&ILW. The risks to OPG's proposed L&ILW DGR for the safe long-term management of L&ILW are discussed below, under the heading, *Deep Geologic Repository for Low and Intermediate Level Waste* in the section *Risks to Achieving Project Excellence*.

The NWMO has developed a process for moving forward with Adaptive Phased Management as the long-term solution for Canada's nuclear fuel waste. The Adaptive Phased Management plan contemplates the eventual long-term permanent disposal of radioactive nuclear fuel waste in a deep geologic repository. The NWMO is in the process of undertaking a multi-year site selection process for the used fuel deep geologic repository.

In the interim, OPG is storing and managing L&ILW at the WWMF site and used fuel at its nuclear generating station sites.

Nuclear Regulatory Requirements

The uncertainty associated with nuclear regulatory requirements is primarily driven by plant aging, changes to technical codes, and challenges raised by the public at regulatory hearings, particularly in the areas of safety, environment and emergency preparedness. Addressing these requirements could add to the cost of operations, and in some instances, may result in a reduction or elimination of the productive capacity of a station, earlier than planned replacement of a station component or additional requirements for waste management. Additionally, the operations of nuclear stations are often directly impacted by circumstances or events that occur at other nuclear stations globally. These circumstances or events may lead to CNSC regulatory changes with a significant impact on the cost and future operation of OPG's nuclear fleet.

In December 2015, the CNSC granted the station a 10-year operating licence, valid until November 30, 2025. The new licence spans most of the planned duration of the Darlington Refurbishment project, which provides greater regulatory stability and reduces regulatory risk. As discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Nuclear Operations*, the plan to extend Pickering operations to 2024 is subject to the CNSC's approval of the Pickering licence renewal application and other regulatory requirements as set out by the CNSC.

In January 2014, the federal government introduced Bill C-22 which contains a new *Nuclear Liability and Compensation Act* (NLCA). This bill received Royal Assent in February 2015, and the NLCA came into effect on January 1, 2017. The NLCA requires all operators of nuclear generating stations in Canada to maintain specified amounts of nuclear liability insurance purchased from a federal government approved insurer or other equivalent forms of financial security approved by the federal government. The NLCA increases OPG's nuclear liability limit from $75 million to an initial $650 million, with successive annual increases to $750 million, $850 million, and $1 billion. OPG has met this requirement for the $650 million liability limit required by the NLCA for 2017 and is assessing the availability and premium cost of coverage for the $750 million liability limit required for 2018.

Hydroelectric Generating Stations

OPG's hydroelectric generation is exposed to risks associated with water flows, the age of plant and equipment,surplus baseload generation conditions, and dam safety requirements.

The extent to which OPG can operate its hydroelectric generation facilities depends upon the availability of water. Significant variability in weather, including impacts of climate change, could affect water flows. For OPG's regulated hydroelectric generation, the financial impact of variability in electricity production due to differences between the forecast water conditions underpinning the hydroelectric regulated prices and the actual water conditions are captured in an OEB-approved regulatory variance account.

OPG's hydroelectric generating stations have an average age of approximately 80 years, with the majority of the hydroelectric generating equipment being over 50 years old. The condition of the equipment and civil components resulting from the age of these components requires OPG to plan potentially significant work to mitigate risks to the reliability of some hydroelectric generating stations. OPG manages these risks by performing inspection and maintenance of critical components and by reviewing mitigating actions. In addition, OPG conducts detailed engineering reviews and station condition assessments on an ongoing basis. These reviews and assessments help to identify future work required to sustain and, as appropriate, upgrade a station.

SBG has, and will continue to be, an issue in Ontario when electricity supply exceeds demand. To manage SBG conditions, the IESO may require OPG to reduce hydroelectric generation and spill water. A regulatory variance account authorized by the OEB helps to mitigate the financial impact of spill due to SBG conditions for OPG's regulated hydroelectric generating stations. The Company anticipates a declining trend in SBG for its hydroelectric assets due to reduced nuclear availability resulting from the refurbishment of the Darlington GS, future refurbishment of the Bruce generating stations, and the eventual shutdown of the Pickering GS.

The hydroelectric business operates 238 dams across Ontario. Dam safety legislation does not currently exist in the province. Technical guidelines which were published by the MNRF represent the government standards for dam safety. In general, OPG's practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the MNRF technical guidelines. OPG continues to develop a new risk-informed approach in cooperation with the MNRF to prioritize the outcomes of dam safety assessments. OPG could eventually incur additional costs for certain dams that it operates in order to comply with any new requirements.

People and Culture

OPG's operations could be affected if skilled human resources are not available or aligned with its talent requirements.

The development of new leaders and retention of staff in critical roles across OPG is a key factor to OPG's success. Another success factor is related to the effective transfer of knowledge from those in critical positions throughout the organization to future leaders. The risk associated with the alignment and/or availability of skilled and experienced resources continues to exist for OPG in specific areas, including leadership and project management positions. To mitigate this risk, OPG continues to focus on succession planning, leadership development and knowledge management programs to improve the capability of its workforce. There is also a continued risk of a mismatch between attrition levels and the resource requirements to meet OPG's future business needs.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification, which requires a long-term outlook to workforce planning.

To mitigate the above risks, OPG is developing an organization-wide workforce planning and resourcing strategies and has established ongoing monitoring processes to reassess risks, challenges and opportunities related to staffing on a regular basis. OPG expects to meet the human resource needs of the business by developing existing employees and hiring in specific areas, while continuing to leverage attrition through realignment of work and streamlining of processes, where appropriate.

As of December 31, 2016, approximately 90 percent of OPG's regular labour force was represented by a union. OPG's current collective agreements with the PWU and The Society expire on March 31, 2018 and December 31, 2018, respectively, while all 19 collective agreements with craft unions expire on April 30, 2020. As a result of these agreements, OPG considers the likelihood of a labour disruption in the near future to be significantly reduced.

Health and Safety

OPG's operations involve inherent occupational safety risks and hazards.

OPG's operations involve inherent occupational safety risks and hazards that could impact the achievement of the Company's health and safety goals. OPG is committed to continuous improvement and achievement of its ultimate goal of zero injuries through a formal enterprise-wide safety management system, integrated at the operating site level, and by continuing to foster a strong health and safety culture among its employees and contractors. The safety management system serves to focus the Company on proactively managing safety risks and hazard exposures to employees and contractors. In 2016, OPG launched the organization-wide "iCare Enough to Act" initiative aimed at renewing employees' and contractors' commitments to their own and each other's safety and well-being.

Cyber Security

OPG's ability to operate effectively is, in part, dependent on the efficient operation and management of the Company's complex information technology and industrial control systems in a secure, vigilant, and resilient manner that minimizes cyber risks. Cyber security incidents may have an adverse impact on OPG's reputation, energy production, and public and employee safety.

Cyber security incidents have been on the rise for the past few years and this trend is only expected to intensify as organizations' reliance on technology increases. OPG has strategies in place to prepare for, respond to, and recover from cyber security incidents. OPG continuously monitors, assesses, and improves the effectiveness of its strategies and program considering leading industry practices and remains proactive in information and intelligence sharing to learn and adapt to the changing cyber environment.

As a registered Ontario market participant, OPG is accountable to comply with all applicable reliability obligations. Within the context of the Ontario regulatory framework, OPG is a registered generator, and is responsible for complying with the associated reliability standards. These standards apply to the relevant Bulk Electric System (BES) elements specified under North American Electric Reliability Corporation (NERC) and the relevant Bulk Power System (BPS) facilities as determined by the Northeast Power Coordinating Council. In addition, OPG's nuclear cyber assets are subject to CNSC licensing conditions and regulatory requirements. For other cyber assets not subject to applicable regulatory requirements, OPG has adopted a risk-based approach based on the National Institute of Standards and Technology Cybersecurity Framework to manage its cyber security.

To mitigate cyber risks, OPG's cyber security program focuses on educating employees, contractors, and vendors, improving processes, and upgrading technology infrastructure. In particular, OPG's program focuses on the following:

1. Complying with regulatory requirements and applicable laws
2. Improving its cyber security protection and detection capabilities to reduce known or potential exposures by engaging the services of external experts to evaluate the security of its information technology infrastructure and controls
3. Adopting industry leading practices to reduce third party cyber security risks through enhanced vendor risk assessments, introducing cyber security requirements into commercial agreements, and enhanced governance
4. Improving and exercising its incident response, recovery capability, and business continuity plans to minimize the business impact of an incident
5. Increasing the cyber security awareness and training level of its workforce through mandatory annual cyber security awareness training, specialized training for cyber specialists, social engineering tests, and periodic company-wide communications on relevant cyber security topics.

The oversight responsibility of the Audit and Risk Committee of OPG's Board of Directors over the Company's risk management activities includes the review of a semi-annual update from management on the Company's cyber security position and programs.

Suppliers

Non-performance by strategic suppliers or an inability to diversify the supplier base could adversely impact operating and project performance, financial results and reputation of OPG.

OPG's ability to operate effectively is in part dependent upon timely access to equipment, materials, and service suppliers. Loss of key equipment, materials, and service suppliers, particularly for the nuclear business, could affect OPG's ability to operate effectively and/or to execute major development projects or other capital investment programs. OPG mitigates this risk, to the extent possible, through contract negotiations, contract terms, vendor monitoring, diversification of supplier base, and business continuity plans.

Business Continuity and Emergency Management

Natural, technological or human-caused hazards may impact OPG's business continuity.

OPG is exposed to potential or actual incidents or developments resulting from extreme temperatures, precipitation, wind conditions or other natural disasters, and technological or human-caused hazards; to significant events against which it is not fully insured or indemnified; or to parties that fail to meet their indemnification obligations. These incidents have the potential to disrupt operations resulting in decreased generation revenue or additional costs to repair damages and restore operations.

OPG's business continuity program provides a framework to build resilience into critical business processes by facilitating development of risk response plans and business continuity exercises. OPG's emergency management

program is designed to ensure that the Company can manage an emergency in a timely and effective manner. OPG's plans and implementation procedures identify immediate response actions to be taken to protect the health and safety of employees and the public, and to limit the impact of the crisis on site security, production capability, and the environment. The program elements are designed to meet legal and regulatory requirements.

Risks to Achieving Project Excellence

The risks associated with the cost, schedule, technical and contractor performance aspects of the major projects could adversely impact OPG's financial performance and its corporate reputation.

OPG is undertaking several capital intensive projects with significant investments. There may be an adverse effect on the Company if it is unable to: obtain necessary approvals; raise the necessary funds; effectively manage the projects on time and on budget; or fully recover capital costs and earn an appropriate return on investment in a timely manner. These projects may also have a significant impact on OPG's borrowing capacity and credit rating. Some projects may be ultimately reassessed as being uneconomic. The risks associated with OPG's current major projects are described below.

Darlington Refurbishment

OPG is responsible for the management of the Darlington Refurbishment project, including the project's budget and schedule, and continues to systematically manage all of the risks associated with the project through robust risk management practices. There are financial and reputational risk exposures for OPG if actual costs exceed the budget or if OPG does not meet the project schedule. In addition, failure to achieve the objectives of the refurbishment project may result in future forced outages and more complex planned outages, potentially impacting the post-refurbishment performance or useful life of the station. Failure to carry out the refurbishment of the first unit as planned may result in not proceeding with the refurbishment of the remaining units, which, together with the end of commercial operations at the Pickering GS, could result in most of OPG's nuclear units shutting down by the early to mid 2020s.

There are a number of specific risks that OPG is managing and mitigating in relation to the Darlington Refurbishment project, which include OPG and vendor performance risks, delay or productivity risks, financial risks related to escalation of costs, technical risks such as equipment conditions resulting in additional scope, and execution risks such as failure to manage foreign material exclusion from the heat transport system that could lead to post refurbishment operational risks.

To mitigate the above risks and to build on major lessons learned from other nuclear refurbishments and large scale, complex projects, OPG engaged in an extensive five-year project planning phase in order to determine the project scope, rigorously estimate costs in keeping with best practices, and incorporate lessons learned from other nuclear refurbishments. In order to fully define the scope and material requirements for the project, the planning phase included the completion of detailed designs before proceeding with the execution of the unit refurbishments. Further risk mitigation has been implemented through the construction of a full scale model training reactor, which allows for simulations and training for unit refurbishment execution tasks.

A large portion of the costs for the Darlington Refurbishment project is being paid to contractors and suppliers, including vendors that will engineer, procure, and construct components of the project. There is a risk that, as the volume of work increases significantly, vendor capability, capacity, and performance shortfalls may impact project objectives and deliverables. OPG's risk management strategy aims to ensure that contractors are held accountable and appropriate off-ramps are in place. In mitigating its overall financial risk, OPG utilizes a contracting strategy that aims to share the risk with key vendors in a cost effective manner, where appropriate. There is also an increased risk of contractor initiated safety events, which may impact OPG's reputation. Mitigating actions include collaborative execution phase planning, an enhanced human performance program, active risk management, increased field presence by supervisory staff, and assisting vendors in removing barriers to work. OPG also is managing other

ongoing risks that could potentially impact the project, including those related to continuity of skilled leaders within OPG and its vendor partners, as well as the availability of technical resources to support the project through execution.

Independent, third-party oversight has been established for the execution phase of the project, for both the project executive team and OPG's Board of Directors. The Ontario Ministry of Energy has also retained an external advisor to provide oversight of the project, reporting to the Minister of Energy.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG, with the support of Bruce County municipalities, is proposing to construct and operate a deep geologic repository as the preferred solution for the safe long-term management of L&ILW. While broad local community support for the proposed L&ILW DGR is stable, there are pockets of opposition. OPG is currently awaiting a decision on the EA for the project by the federal Minister of Environment and Climate Change, before the issuance of the site preparation and construction licence may proceed. There is a risk of delay to the EA approval and/or the issuance of the site preparation and construction licence from potential political or legal challenges. OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR.

Other Development Projects

Projects that are in the initial development stages are subject to schedule delays or possible cancellation due to unforeseen delays in receiving permits or approvals, or establishing sufficient certainty regarding project cost recovery through revenue mechanisms, which may involve various external stakeholders. OPG attempts to mitigate these risks through early involvement and regular communication with applicable government agencies, close consultation with external stakeholders and ongoing monitoring of contractor compliance relative to permits. Projects in the execution phase are subject to inherent risks related to performance against approved budgets and schedules. Mitigating activities for the risks include performing detailed engineering designs before proceeding with execution, engaging qualified and experienced vendors, and effectively monitoring and controlling performance.

Development projects also could be faced with increasing costs for equipment and construction that could impact their economic viability. OPG continuously monitors such trends in costs in order to identify emerging issues and seeks to manage and limit cost increases through contracting strategies, where possible.

Risks to Maintaining Financial Strength

Risks related to rate regulation, financial markets, and long-term obligations could significantly impact OPG's financial performance. The Company is also exposed to risks such as weak electricity demand, displacement of generation by competitors and financial risk associated with energy trading.

There is a risk that future regulated prices will not allow OPG to consistently achieve financial performance that is commensurate with that of a commercial enterprise. OPG is exposed to a number of other significant financial risks, many of which arise due to decreasing demand for electricity, competing energy sources, OPG's exposure to volatility in commodity and equity markets and interest rate fluctuations. This includes the Company's pension and OPEB obligations and costs that are impacted by market and interest rate fluctuations. OPG manages this complex array of risks with a view to reduce the uncertainty and/or mitigate the potential unfavourable impact on the Company's financial results.

Rate Regulation

Significant uncertainties remain regarding the outcome of rate and generic proceedings impacting OPG's rate regulated operations.

There is an inherent risk that regulated prices established by the OEB may not provide for the recovery of all actual costs that will be incurred by OPG's regulated operations or allow the regulated operations to earn an appropriate

rate of return. This could occur if, in setting regulated prices, the OEB makes adjustments to forecasts submitted by OPG, if actual production and costs significantly differ from the forecasts approved by the OEB, or if OPG is unable to achieve additional efficiencies to meet the OEB-approved stretch factors included in regulated prices under incentive ratemaking. Differences between OPG's actual and forecast production and costs could be due to factors such as outages or project execution risks. In providing evidence in support of its applications for regulated prices, OPG aims to clearly demonstrate to the OEB that the costs for the regulated operations are reasonable, being prudently incurred and should be fully recovered.

Certain differences between elements of OEB-approved revenue requirements and OPG's actual results are recorded in OEB-approved variance and deferral accounts for future review by the OEB, including a number of the variance and deferral accounts that are subject to an OEB prudence review. There is inherent uncertainty associated with the outcomes of future proceedings for the clearance of these balances.

Proposed Incentive Regulation Ratemaking Methodologies

In May 2016, OPG submitted a 5-year application to the OEB for new regulated prices effective January 1, 2017, on the basis of an incentive regulation rate making methodology for the hydroelectric operations and a custom incentive regulation ratemaking framework for the nuclear operations. If accepted by the OEB, both approaches would result in greater decoupling of OPG's revenues for the regulated operations from their costs. The OEB's decision on OPG's application is expected in the second half of 2017.

Effective Date of New Regulated Prices

There are inherent uncertainties regarding the effective date that the OEB will establish for the new regulated prices. OPG has requested January 1, 2017 as the effective date. The OEB's decision on the effective date and the timing of the decision issuance could have a significant impact on OPG's 2017 results. Until the OEB's decision is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017.

Nuclear Rate Smoothing Proposal

Consistent with *Ontario Regulation 53/05*, OPG's May 2016 application includes a nuclear rate smoothing proposal, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. There is an inherent risk that the magnitude of the deferral ordered by the OEB will result in regulated prices that do not provide sufficient cash flow to the Company for meeting its financial objectives in an optimal manner, including ensuring sufficient liquidity, cost effectively funding the Darlington Refurbishment project and other expenditures, and maintaining the Company's investment grade credit rating. Maintaining adequate levels of credit metrics will support OPG's investment grade credit rating. As such, OPG has advanced credit metrics as a key criterion for the OEB to apply in determining the smoothed nuclear base rates.

Recovery of Pension and OPEB Costs

The OEB is currently conducting a consultation in the gas and electricity sectors to develop standard principles to guide the OEB's review of pension and OPEB costs for rate-regulated utilities, including establishing appropriate regulatory mechanisms for cost recovery. The OEB's November 2014 decision establishing OPG's existing regulated prices indicated that a change in the recovery methodology for OPG's pension and OPEB costs from the accrual basis, if required, would be addressed in OPG's next rate proceeding, having been informed by the outcome of the OEB's generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The decision also stated that the future recovery, if any, of amounts recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account authorized by that decision also would be subject to the outcome of the generic proceeding. As such, the outcome of the current consultation could have a material impact on OPG's ability to recover the balance in

the Pension & OPEB Cash Versus Accrual Differential Deferral Account and full pension and OPEB costs in the future. This would have significant adverse implications on OPG's future financial results. OPG is participating in the OEB consultation and has advanced its position in support of the appropriateness of using the accrual basis for cost recovery purposes.

Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds

Changes in cost estimates or strategies for nuclear waste management and nuclear facilities decommissioning obligations could impact OPG's future contributions to the Nuclear Segregated Funds to cover these obligations.

As required by the CNSC, OPG is responsible for the management of used nuclear fuel and L&ILW and the decommissioning of its nuclear stations and waste management facilities. The cost estimates for OPG's nuclear waste management and decommissioning obligations are based on multiple underlying assumptions and estimates that are inherently uncertain and may evolve over time. The assumptions include station end-of-life dates, waste volumes, waste disposal methods, the timing of construction of assumed waste disposal facilities, waste packaging systems, decommissioning strategy, and financial indicators. To address the inherent uncertainty, OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates at least once every five years, in line with the required ONFA Reference Plan update process.

The most recent comprehensive update of the nuclear waste management and decommissioning obligations was performed as part the 2017 ONFA Reference Plan approved by the Province in December 2016. An approved ONFA Reference Plan determines OPG's contributions to the Nuclear Segregated Funds. The changes in contribution levels are impacted by changes in the values of the Nuclear Segregated Funds as well as changes in the associated nuclear waste management and nuclear facilities decommissioning obligations. Based on the 2017 ONFA Reference Plan, no contributions are currently required to the Nuclear Segregated Funds. Contributions may be required in the future should the Nuclear Segregated Funds be in an underfunded position relative to the funding requirement of a new approved reference plan.

Financial Markets

The market value of investments held by OPG's Nuclear Segregated Funds and registered pension plan could be significantly affected by changes in various market factors such as equity prices, interest rates, inflation, and commodity prices.

Nuclear Segregated Funds Market Risk

Investments in the Nuclear Segregated Funds are allocated to certain asset classes including fixed income securities, domestic and international equity securities, pooled funds, infrastructure, agriculture and real estate. These funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, in order to fund the expenditures associated with the long-term management of used fuel and L&ILW after station shutdown, and the decommissioning of OPG's nuclear stations and waste management facilities. The rates of return earned on these segregated funds are subject to various factors including the current and future financial market conditions, which are inherently uncertain. The asset mix of the funds is determined jointly by OPG and the Province in accordance with the ONFA.

For the Used Fuel Segregated Fund, the Province guarantees the annual rate of return at 3.25 percent plus the change in the Ontario CPI, as defined by the ONFA, for the portion of the fund attributed to the first 2.23 million nuclear fuel bundles. As such, a change in the portion of the fund's value attributed to the first 2.23 million bundles impacts OPG's earnings to the extent of changes in the Ontario CPI. OPG is subject to the market risk for the investment of funds set aside in the Used Fuel Segregated Fund for incremental bundles in excess of 2.23 million.

In accordance with the cost recovery methodology established by the OEB, the performance of the portion of the Nuclear Segregated Funds attributed to the nuclear generating stations leased to Bruce Power has been subject to the Bruce Lease Net Revenues Variance Account. The variance account partially mitigates rate of return risk related to the Nuclear Segregated Funds, as it captures the differences between actual and forecast earnings from the Nuclear Segregated Funds related to these stations. Forecast earnings are those approved by the OEB in setting nuclear regulated prices. OPG is exposed to rate of return risk related to the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodology. The income statement impact of rate of return risk is reduced when the Nuclear Segregated Funds are in a fully funded position.

Post-Employment Benefit Obligations Risk

OPG's post-employment benefit obligations include pension, group life insurance, health care benefits, and LTD benefits. OPG's post-employment benefit obligations and costs, and pension plan contributions could be materially affected in the future by numerous factors, including: changes in discount rates, inflation rates, and other actuarial assumptions; future investment returns; experience gains and losses; the funded status of the pension plans; changes in benefits; changes in the regulatory environment including potential changes to the *Pension Benefits Act* (Ontario); changes in OPG's operations; and the measurement uncertainty incorporated into the actuarial valuation process.

The OPG registered pension plan, which covers most of OPG's employees and retirees, is a contributory defined benefit plan that is indexed to inflation. Contributions to the OPG registered pension plan are determined by actuarial valuations, which are filed with the appropriate regulatory authorities at least every three years. The most recent actuarial valuation of the OPG registered pension plan, covering the three-year period to the end of 2018, was completed as of January 1, 2016. There is an inherent risk that future actuarial valuations could increase OPG's funding requirements due to market and economic-related conditions. A significant decline in the financial markets could trigger an immediate requirement to update the actuarial valuation based on declines in the funded status. OPG continues to assess the requirements for contributions to the registered pension plan, including the timing of future actuarial valuations. The next actuarial valuation of the OPG registered plan must have an effective date no later than January 1, 2019. OPG's OPEB obligations are not funded and the associated employee benefits are paid from cash flow provided by operating activities or other sources of liquidity.

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017	2018	2019
Estimated fuel requirements hedged[1]	75%	76%	65%

[1] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars (USD). To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at December 31, 2016, OPG had total foreign exchange contracts outstanding with a notional value of USD $9 million.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. During 2016, the VaR utilization ranged between nil and $1.5 million, compared to between nil and $1.5 million in 2015.

Credit

Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

The Company's credit risk exposure is a function of its electricity sales, trading and hedging activities, treasury activities including investing, and commercial transactions with various suppliers of goods and services. OPG's credit risk exposure relating to electricity sales is considered low as the majority of sales are through the IESO-administered spot market. The IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market.

Other major components of OPG's credit risk exposure include those associated with vendors that are contracted to provide services or products. OPG manages its exposure to various suppliers or counterparties by evaluating their financial condition and ensuring that the Company holds appropriate collateral or other forms of security.

The following table summarizes OPG's credit exposure to all counterparties from electricity transactions and trading as at December 31, 2016:

Credit Rating [1]	Number of Counterparties [2]	Potential Exposure [3] *(million of dollars)*	Potential Exposure for Largest Counterparties: Number of Counterparties	Potential Exposure for Largest Counterparties: Counterparty Exposure *(millions of*
Investment grade	11	11	5	9
IESO[4]	1	421	1	422
Total	12	432	6	431

[1] Credit ratings are based on OPG's own analysis, taking into consideration external rating agency analysis where available, as well as recognizing explicit credit support provided through parental guarantees, Letters of Credit or other forms of security.

[2] OPG's counterparties are defined on the basis of individual master agreements.

[3] Potential exposure is OPG's statistical assessment of maximum exposure over the life of each transaction at a 95 percent confidence interval.

[4] Credit exposure is an estimate of the receivable amount arising from OPG's electricity sales into the IESO market. The credit exposure and associated receivable vary each month based on electricity sales. The monthly receivable from the IESO is typically paid to OPG in the subsequent month as per the IESO payment schedule.

Liquidity

Rising liquidity requirements can impact OPG's capital investment projects and ability to meet financial obligations.

OPG operates in a capital intensive business. Significant financial resources are required to fund major development and other capital improvement projects, including the Darlington Refurbishment project. In addition, the Company has other significant disbursement requirements including pension contributions, payments towards OPEB and other benefit plans, expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, debt maturities with the OEFC, and investments in new generating capacity and other business growth opportunities. OPG must ensure that it has the financial capacity and sufficient access to cost effective financing sources to fund its capital requirements and other disbursements. In support of this objective, OPG utilizes multiple sources and forecasts availability of funds, actively monitors funding requirements, and is focused on maintaining its investment grade credit rating. A discussion of corporate liquidity is included under the section, *Liquidity and Capital Resources*.

Contracted Generation

OPG may incur costs if its contracted generating assets do not meet performance targets as specified in the ESAs with the IESO or other long-term contracts. There is also a risk that, upon expiry, subsequent ESAs may not be available.

The Company's generating stations operating under ESAs with the IESO or other long-term contracts are subject to availability and production targets specified in their respective contracts. OPG could incur charges and other costs if these facilities fail to operate at required capacity or production levels, as required. This risk is mitigated through the implementation of maintenance, capital investment and other programs, as appropriate.

OPG's owned and co-owned thermal generating stations operate under ESAs with the IESO or other long-term agreements. In December 2016, the Ontario and Quebec governments signed an electricity trade agreement that will allow Ontario to import up to 2 TWh of hydroelectric power from Quebec annually from 2017 to 2023. This is expected to replace some gas-fired generation in Ontario. While OPG expects that its thermal generating stations will continue to provide capacity to the market over the term of the respective agreements, there is a risk that, upon expiry of the current agreements, subsequent contracts for these stations may not be available or may not be available on financially viable terms.

Ontario Electricity Market

Ontario electricity market conditions could impact OPG's revenue and operations.

OPG's revenue can be impacted by external factors related to the electricity market including: the entrance of new participants into the Ontario market; the competitive actions of market participants; Ontario electricity demand; changes in the regulatory environment; and wholesale electricity prices in the interconnected markets.

The structure of the Ontario electricity market is subject to regulation and market rules, changes to which may affect OPG's revenue. The Province, the IESO, the OEB, or another entity or regulatory body may change or institute regulations or rules that can impact OPG's capability to generate revenue or ability to recover appropriate costs and earn a return on the assets.

Ownership by the Province

OPG's commitment to maximize the return on the Shareholder's investment in the Company may compete with the obligation of the Shareholder to respond to a broad range of matters in its role as the Government of Ontario.

The Province owns all of OPG's issued and outstanding common shares. Accordingly, the Province, as represented by the Ontario Ministry of Energy, has the authority to make appointments to OPG's Board of Directors. OPG could be subject to Shareholder direction, under Section 108 of the OBCA, that can directly influence major decisions including those related to project development, timing and strategy of applications for regulated prices, asset divestitures, financing and capital structure, that could require OPG to undertake activities that result in increased expenditures, or that reduce revenues or cash flows relative to the business activities or strategies that would have otherwise been undertaken. In addition, the obligation of OPG's Shareholder to respond to a broad range of matters in its role as the Government of Ontario may compete with OPG's commitment to maximize the return on the Shareholder's investment in the Company. This includes, but is not limited to, the Province's response to mitigate the impact of rising electricity prices on consumers.

Government Legislation and Regulation Change

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on the Company's operations and financial position.

OPG's core business and strategy may be impacted by changes in federal and provincial legislation and regulations. Matters that are subject to regulation include, among others, rate regulation, electricity generating operations, nuclear waste management and nuclear decommissioning, and taxation. Regulatory bodies may change or enact regulations or rules, such as new nuclear fitness for duty requirements, that could increase OPG's costs, decrease OPG's revenue, or limit the Company's ability to recover appropriate costs or earn a return on the assets.

Since legal requirements are subject to change and to interpretation, OPG is unable to predict the impact of such changes on the Company and its operations. To mitigate legislative risks, OPG continues to monitor and actively engage with the federal and provincial governments in order to determine if future legislation will impact the Company.

Risks to Maintaining Social Licence

OPG is exposed to risks associated with its social licence and public profile due to changes in the opinions of various stakeholders, including local communities, Ontario customers, government agencies, and Indigenous Communities. Additionally, inability to achieve operational excellence and project excellence safely and reliably and to maintain financial strength could impact OPG's social licence.

Maintaining public trust and meeting stakeholders and Indigenous communities' expectations are critical to OPG's success. OPG focuses on building and maintaining its social licence and corporate reputation through safe, reliable,

environmentally-responsible operations as well as corporate citizenship initiatives across the province. The inability to maintain safe, reliable operations could negatively impact OPG's reputation and result in a loss of public support.

OPG has transparent governance practices and works continuously towards effective communication and consultation with Indigenous communities and stakeholders. Efforts to reinforce OPG's social licence include various media campaigns that highlight the Company's contribution as a clean power generator with a commitment to safety, environment and community partnerships. OPG undertakes various assurance and risk management activities to effectively manage the risks to its social licence and corporate reputation. Issue management and response plans are developed to address specific concerns as they arise.

Indigenous Communities

The quality of OPG's relationships and the outcome of negotiations with Indigenous communities may impact OPG's project and financial performance, as well as its social licence to operate.

OPG may be subject to claims by Indigenous communities. These claims stem from projects and generation development related to the operations of OPG and historic operations of OPG's predecessor company, Ontario Hydro, which may have impacted the Aboriginal and/or Treaty rights of Indigenous communities.

OPG has an Indigenous Relations Policy, which sets out the Company's commitment to proactively build and maintain positive relationships with Indigenous communities. OPG has been successful in resolving a number of past grievances by Indigenous communities. However, the outcome of the ongoing and any future negotiations depends on a number of factors, including legislation and regulations and precedents created by court rulings, which are subject to change over time. OPG pursues generation-related developments in partnerships with Indigenous communities on the basis of long-term mutually beneficial commercial arrangements.

Environmental Risks

OPG may be subject to orders or charges if it is not in compliance with applicable environmental laws. Changes in environmental regulatory requirements can result in existing operations being in a state of non-compliance, a potential inability to comply, and potential costs and liabilities for OPG.

Changes to environmental laws could create compliance risks and result in potential liabilities that may be addressed by the installation of control technologies, development of new processes, allowances or offsets, or constraints on electricity production. A failure to comply with applicable environmental laws may result in enforcement actions, including the potential for orders or charges. In addition, some of OPG's activities have the potential to impair natural habitat, damage aquatic or terrestrial plant and wildlife, or cause contamination to land or water that may require remediation. There is also a risk that OPG may incur additional costs to meet heritage conservation program requirements under the *Ontario Heritage Act*.

Potential environmental regulatory changes being managed as risks by the Company include electricity production constraints and water flow management requirements to protect fish and fish habitat, expanded fish passage requirements, and lower drinking and ground water tritium concentration standards. These changes could impact plant operations and increase costs. OPG continues to monitor and address risks associated with changes to environmental laws and regulatory requirements. There were no significant changes to environmental legislation applicable to OPG during 2016.

OPG recognizes that efforts are required to plan for the effects of climate change and has identified climate change adaptation as a strategic issue for the company. OPG monitors developments in climate science, adaptation activities, and potential changes to policy and regulatory requirements. OPG continues to work with stakeholders to better define adaptation requirements through analysis and understanding of climate change impacts on watersheds and electricity supply and demand. Once adaptation requirements are better known, a risk-based analysis will help OPG determine the extent of efforts it will undertake to reduce the impact of climate change on its operations.

A carbon cap and trade program became effective in Ontario in January 2017. The program is not expected to have a material adverse economic impact on OPG due to the Company's low GHG emitting generating fleet. Further details can be found under the heading, *Environmental Performance*, in the section, *Core Business, Strategy and Outlook*.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		**2015**	
(millions of dollars)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**15**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,070**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

Management, including the President and Chief Executive Officer (President and CEO) and the Chief Financial Officer (CFO), are responsible for maintaining Disclosure Controls and Procedures (DC&P) and Internal Controls over Financial Reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements in accordance with US GAAP.

There were no other changes in OPG's ICOFR during the year ended December 31, 2016 that have materially affected or are reasonably likely to materially affect OPG's ICOFR.

Management, including the President and CEO and the CFO, concluded that, as of December 31, 2016, OPG's DC&P and ICOFR (as defined in National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings*) were effective.

FOURTH QUARTER

Discussion of Results

(millions of dollars) (unaudited)	Three Months Ended December 31 2016	2015
Revenue	**1,388**	1,312
Fuel expense	**186**	175
Gross margin	**1,202**	1,137
Operations, maintenance and administration	**686**	788
Depreciation and amortization	**316**	354
Accretion on fixed asset removal and nuclear waste management liabilities	**233**	223
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(126)**	(169)
Income from investments subject to significant influence	**(9)**	(9)
Property taxes	**11**	11
Restructuring	**6**	5
Income (loss) before other loss, interest, and income taxes	**85**	(66)
Other loss	**6**	12
Income (loss) before interest and income taxes	**79**	(78)
Net interest expense	**28**	44
Income (loss) before income taxes	**51**	(122)
Income tax expense (recovery)	**59**	(22)
Net loss	**(8)**	(100)
Net loss attributable to the Shareholder	**(13)**	(101)
Net income attributable to non-controlling interest	**5**	1

Net loss attributable to the Shareholder for the fourth quarter was $13 million, compared to a net loss of $101 million for the same quarter in 2015.

Income before interest and income taxes was $79 million during the fourth quarter of 2016, an increase of $157 million compared to loss before interest and income taxes of $78 million during the same period in 2015. The following summarizes the significant factors which caused the variance:

Significant factors that increased income before other loss, interest and income taxes:

- Lower number of outage days increased nuclear generation by 2.2 TWh during the fourth quarter in 2016, compared to the same period in 2015, primarily due to the four-unit Darlington VBO that was completed on October 30, 2015 and a lower number of unplanned outage days at the Darlington GS. The increase in nuclear generation resulted in an increase in revenue from the nuclear base regulated price of approximately $130 million.
- Lower OM&A expenses of $77 million in the Regulated – Nuclear Generation segment primarily due to increased outage activities in 2015, including the Darlington VBO.

Significant factors that decreased income before other loss, interest and income taxes:

- Decrease in earnings from the Nuclear Segregated Funds of $43 million during the fourth quarter of 2016, compared to the same quarter in 2015, mainly due to an accounting adjustment recorded during the fourth quarter of 2016 to limit the funds asset values recognized on OPG's consolidated balance sheet to the lower underlying obligations as reflected in the 2017 ONFA Reference Plan.
- Higher accretion expense of $10 million, reflecting the increase in the Nuclear Liabilities recognized in December 2015 in connection with the changes in the estimated useful life assumptions for OPG's nuclear stations, net of the impact of the Bruce Lease Net Revenues Variance Account.

The increase in income tax expense during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets in 2016.

Average Sales Prices

The average sales price for the Regulated – Nuclear Generation segment during the fourth quarter of 2016 was 6.9 ¢/kWh, compared to 7.0 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of an OEB-authorized nuclear rate rider of $1.33/MWh related to the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment during the fourth quarter of 2016 was 4.5 ¢/kWh, compared to 4.8 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of a rate rider of $6.04 per MWh related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014.

The income impact of changes in revenue from rate riders was largely offset by changes in amortization expense related to regulatory balances.

Electricity Generation

OPG's electricity generation for the three months ended December 31, 2016 and 2015 was as follows:

	Three Months Ended December 31	
(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**11.0**	8.8
Regulated – Hydroelectric	**6.7**	7.3
Contracted Generation Portfolio [1]	**0.6**	0.7
Total OPG electricity generation	**18.3**	16.8
Total electricity generation by all other generators in Ontario [2]	**18.9**	19.6

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The increase in OPG's electricity generation of 1.5 TWh during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher electricity generation of 2.2 TWh from the Regulated – Nuclear Generation segment as a result of fewer outage days at the Darlington GS during the fourth quarter of 2016, which was primarily due to the Darlington VBO that occurred during the fourth quarter of 2015. The increase in generation was partially offset by reduced generation from the Regulated – Hydroelectric Segment of 0.6 TWh, primarily due to lower water flows in eastern Ontario during the fourth quarter of 2016.

Ontario's electricity demand as reported by the IESO was 33.2 TWh during the fourth quarter of 2016, compared to 32.7 TWh during the fourth quarter of 2015.

Liquidity and Capital Resources

Cash flow provided by operating activities during the three months ended December 31, 2016 was $437 million, compared to $111 million for the same period in 2015. The increase in cash flow was primarily due to higher generation revenue receipts, lower pension plan contributions and lower OM&A expenditures during the fourth quarter of 2016. Higher generation revenue receipts reflected higher nuclear generation in the fourth quarter of 2016, compared to the same period in 2015.

Cash flow used in investing activities during the three months ended December 31, 2016 was $497 million, compared to $571 million during the same period in 2015. The decrease was primarily due to partial maturity, in the fourth quarter of 2016, of a structured deposit note invested in the fourth quarter of 2015, partially offset by higher expenditures for the Darlington Refurbishment project. The deposit note invested proceeds from the long-term debt issued in support of the Peter Sutherland Sr. GS project in October 2015.

Cash flow used by financing activities during the three months ended December 31, 2016 was $180 million, compared to cash flow provided in financing activities of $356 million for the same period in 2015. The decrease in cash flow provided by financing activities was due to the net repayment of short-term notes and lower net issuance of long-term debt in the fourth quarter of 2016.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected annual financial information for the last three years and financial information for each of the eight most recently completed quarters. This information is derived from OPG's unaudited interim consolidated financial statements and the audited consolidated financial statements, and has been prepared in accordance with US GAAP.

Annual Financial Information

(millions of dollars – except where noted)	**2016**	**2015**	**2014**
Revenue	**5,653**	5,476	4,963
Income before extraordinary item attributable to the Shareholder	**436**	402	561
Net income attributable to the Shareholder	**436**	402	804
Net income per common share before extraordinary item *(dollars)*	**$1.70**	$1.57	$2.19
Net income per common share *(dollars)*	**$1.70**	$1.57	$3.14
Total assets	**44,372**	44,250	41,645
Total long-term liabilities	**31,460**	32,404	30,483
Common shares outstanding *(millions)*	**256.3**	256.3	256.3

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**2016 Quarters Ended**				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	**1,388**	**1,400**	**1,387**	**1,478**	**5,653**
Net (loss) income	**(8)**	**198**	**135**	**128**	**453**
Less: Net income attributable to non-controlling interest	**5**	**4**	**3**	**5**	**17**
Net (loss) income attributable to the Shareholder	**(13)**	**194**	**132**	**123**	**436**
Per common share, attributable to the Shareholder *(dollars)*	**($0.05)**	**$0.76**	**$0.51**	**$0.48**	**$1.70**

Quarterly Financial Information

(millions of dollars – except where noted) (unaudited)	2015 Quarters Ended				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	1,312	1,426	1,383	1,355	5,476
Net (loss) income	(100)	85	193	239	417
Less: Net income attributable to non-controlling interest	1	5	4	5	15
Net (loss) income attributable to the Shareholder	(101)	80	189	234	402
Per common share, attributable to the Shareholder *(dollars)*	($0.39)	$0.31	$0.74	$0.91	$1.57

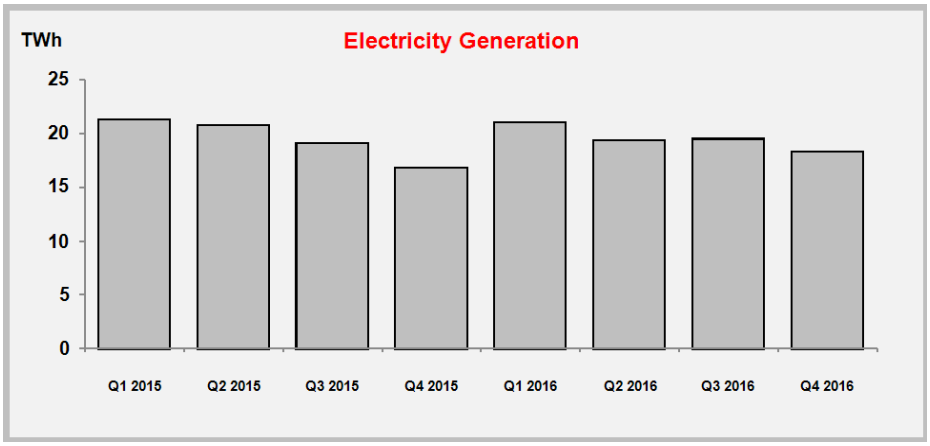
Trends

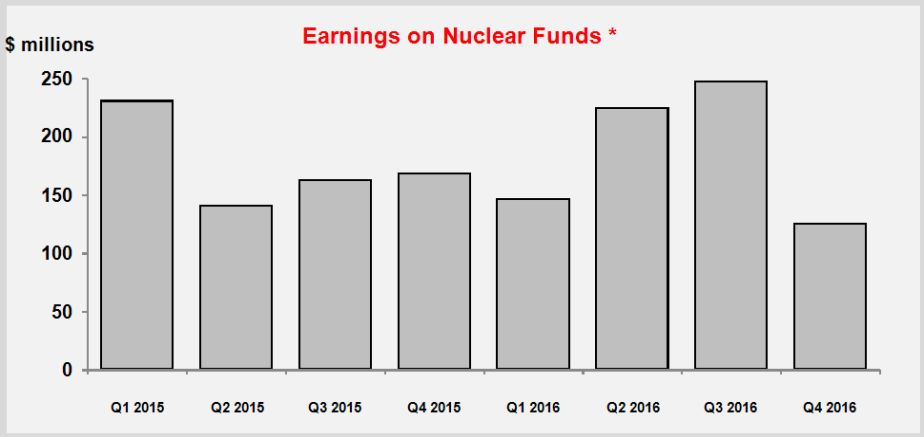
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues are higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of foregone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington VBO, which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items which affected net income (loss) in certain quarters above are described below:

- A gain of $22 million recorded during the first quarter of 2016 reflecting the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to Niagara Tunnel project expenditures.
- Lower earnings of $16 million during the first quarter of 2015, compared to the same quarter in 2016, in the Contracted Generation Portfolio segment, primarily as a result of a provision made in that quarter related to an IESO audit.
- Higher OM&A expenses of $105 million for the Regulated – Nuclear Generation segment during the first half of 2016, compared to the same period in 2015, primarily resulting from an increase in planned outage activities and the timing of planned outage activities during the year.
- Lower OM&A expenses of $91 million for the Regulated – Nuclear Generation segment during the last half of 2016, compared to the same period in 2015, primarily as a result of the VBO at the Darlington GS in the third and fourth quarters of 2015.

Additional information about OPG, including its audited consolidated financial statements and notes thereto, can be found on SEDAR at www.sedar.com.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow from operations, or any other measure in accordance with US GAAP, but as an indicator of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period.

ROE Excluding AOCI is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**436**	402
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,442**	10,023
ROE Excluding AOCI *(percent)*	**4.2**	4.0

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
FFO before interest		
Cash flow provided by operating activities	**1,705**	1,465
Add: Interest paid	**269**	269
Less: Interest capitalized to fixed and intangible assets	**(141)**	(102)
Add: Changes to non-cash working capital balances	**(68)**	100
FFO before interest	**1,765**	1,732
Adjusted interest expense		
Net interest expense	**120**	180
Add: Interest income	**7**	9
Add: Interest capitalized to fixed and intangible assets	**141**	102
Add: Interest related to regulatory assets and liabilities	**30**	2
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**45**	53
Adjusted interest expense	**343**	346
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.0

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Enterprise TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Enterprise TGC		
Total OM&A expenses	**2,747**	2,783
Total fuel expense	**727**	687
Total capital expenditures	**1,704**	1,376
Less: Darlington Refurbishment capital and non-capital costs	**(1,022)**	(707)
Less: Other generation development project capital and OM&A costs	**(162)**	(197)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**62**	250
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(55)
Add: Hydroelectric gross revenue charge due to electricity foregone due to SBG conditions	**49**	34
Less: OM&A expenses ancillary to electricity generation business	**(24)**	(27)
Other adjustments	**(25)**	(46)
	3,989	4,098
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**78.2**	78.0
Add: Electricity generation foregone due to SBG conditions	**4.7**	3.2
	82.9	81.2
Enterprise TGC per MWh *($/MWh)* [1]	**48.10**	**50.46**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Nuclear TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**2,210**	2,196
Regulated – Nuclear Generation fuel expense	**315**	301
Regulated – Nuclear Generation capital expenditures	**1,338**	1,023
Less: Darlington Refurbishment capital and OM&A costs	**(1,022)**	(708)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**81**	230
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(62)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(6)**	(6)
Other adjustments	**(8)**	(28)
	2,841	2,946
Nuclear electricity generation *(TWh)*	**45.6**	44.5
Nuclear TGC per MWh *($/MWh)* [1]	**62.30**	66.20

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Hydroelectric TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**325**	340
Regulated – Hydroelectric Generation fuel expense	**353**	345
Contracted Generation Portfolio OM&A expenses	**178**	185
Contracted Generation Portfolio fuel expense	**58**	39
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**333**	311
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(158)**	(197)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(177)**	(163)
(Less) Add: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(24)**	18
Add: Hydroelectric gross revenue charge and water rental payments due to electricity generation foregone due to SBG conditions	**49**	34
Other adjustments	**(1)**	-
	936	912
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**29.5**	30.4
Contracted Generation Portfolio electricity generation	**3.1**	3.1
Add: Hydroelectric electricity generation foregone due to SBG conditions	**4.7**	3.2
Less: Non-hydroelectric electricity generation of the Contracted Generation Portfolio	**(0.7)**	(0.6)
	36.6	36.1
Hydroelectric TGC per MWh *($/MWh)*[1]	**25.57**	25.26

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

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ONTARIO POWER GENERATION INC.

CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2016

[DRAFT]

STATEMENT OF MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL INFORMATION

Ontario Power Generation Inc.'s (OPG) management is responsible for the presentation and preparation of the annual consolidated financial statements and Management's Discussion and Analysis (MD&A).

The consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States Securities and Exchange Commission for annual financial statements. The MD&A has been prepared in accordance with the requirements of securities regulators, including National Instrument 51-102 of the Canadian Securities Administrators and its related published requirements.

The consolidated financial statements and information in the MD&A necessarily include amounts based on informed judgments and estimates of the expected effects of current events and transactions with appropriate consideration to materiality. Something is considered material if it is reasonably expected to have a significant impact on the Company's earnings, cash flow, value of an asset or liability, or reputation. In addition, in preparing the financial information, we must interpret the requirements described above, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect the reported information. The MD&A also includes information regarding the impact of current transactions and events, sources of liquidity and capital resources, operating trends, and risks and uncertainties. Actual results in the future may differ materially from our present assessment of this information because future events and circumstances may not occur as expected.

In meeting our responsibility for the reliability of the financial information, we maintain and rely on a comprehensive system of internal controls and internal audits, including organizational and procedural controls and internal controls over financial reporting. Our system of internal controls includes: written communication of our policies and procedures governing corporate conduct and risk management; comprehensive business planning; effective segregation of duties; delegation of authority and personal accountability; careful selection and training of personnel; and accounting policies, which we regularly update. This structure ensures appropriate internal controls over transactions, assets and records. We also regularly test internal controls. These controls and testing are designed to provide us with reasonable assurance that the financial records are reliable for preparing financial statements and other financial information, assets are safeguarded against unauthorized use or disposition, liabilities are recognized, and we are in compliance with all regulatory requirements.

Management, including the President and Chief Executive Officer (CEO) and the Chief Financial Officer (CFO), is responsible for maintaining disclosure controls and procedures (DC&P) and internal controls over financial reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements in accordance with US GAAP.

An evaluation of the effectiveness of the design and operation of OPG's DC&P and ICOFR was conducted as of December 31, 2016. Accordingly, we, as OPG's President and CEO and CFO, will certify OPG's annual disclosure documents filed with the Ontario Securities Commission, which includes attesting to the design and effectiveness of OPG's DC&P and ICOFR.

The Board of Directors, based on recommendations from its Audit and Risk Committee, reviews and approves the consolidated financial statements and the MD&A, and oversees management's responsibilities for the presentation and preparation of financial information, maintenance of appropriate internal controls, management and control of major areas of financial risk, and assessment of significant and related party transactions.

The consolidated financial statements have been audited by Ernst & Young LLP, independent external auditors appointed by the Board of Directors. The Independent Auditors' Report outlines the auditors' responsibilities and the scope of their examination and their opinion on OPG's consolidated financial statements. The independent external auditors, as confirmed by the Audit and Risk Committee, had direct and full access to the Audit and Risk Committee, with and without the presence of management, to discuss their audit and their findings therefrom, as to the integrity of OPG's financial reporting and the effectiveness of the system of internal controls.

Jeff Lyash
President and Chief Executive Officer

Ken Hartwick
Senior Vice President, Finance, Strategy, Risk and Chief Financial Officer

March 10, 2017

INDEPENDENT
AUDITORS' REPORT

To the Shareholder of Ontario Power Generation Inc.

We have audited the accompanying consolidated financial statements of Ontario Power Generation Inc., which comprise the consolidated balance sheets as at December 31, 2016 and 2015, and the consolidated statements of income, comprehensive income, cash flows, and changes in shareholder's equity for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with United States generally accepted accounting principles, and for such internal controls as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Ontario Power Generation Inc. as at December 31, 2016 and 2015 and the results of its operations and its cash flows for the years then ended in accordance with United States generally accepted accounting principles.

Toronto, Canada

March 10, 2017

Ernst & Young LLP

Chartered Professional Accountants,
Licensed Public Accountants

CONSOLIDATED STATEMENTS OF INCOME

Years Ended December 31 *(millions of dollars except where noted)*	**2016**	**2015**
Revenue *(Note 16)*	**5,653**	5,476
Fuel expense *(Note 16)*	**727**	687
Gross margin *(Note 16)*	**4,926**	4,789
Expenses *(Note 16)*		
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization *(Note 4)*	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities *(Note 8)*	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (gains) losses, interest and income taxes	**724**	703
Other (gains) losses *(Note 16)*	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense *(Note 7)*	**120**	180
Income before income taxes	**621**	509
Income tax expense *(Note 9)*	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest	**17**	15
Basic and diluted net income per common share *(dollars)*	**1.70**	1.57
Common shares outstanding *(millions)*	**256.3**	256.3

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Years Ended December 31 *(millions of dollars)*	2016	2015
Net income	**453**	417
Other comprehensive income, net of income taxes *(Note 10)*		
Actuarial (loss) gain and past service costs on re-measurement of liabilities for pension and other post-employment benefits [1]	**(6)**	148
Reclassification to income of amounts related to pension and other post-employment benefits [2]	**12**	18
Net loss on derivatives designated as cash flow hedges [3]	**-**	(5)
Reclassification to income of losses on derivatives designated as cash flow hedges [4]	**19**	16
Unrealized loss on available-for-sale securities [5]	**(1)**	-
Other comprehensive income	**24**	177
Comprehensive income	**477**	594
Comprehensive income attributable to the Shareholder	**460**	579
Comprehensive income attributable to non-controlling interest	**17**	15

[1] Net of income tax recoveries of $2 million and income tax expenses of $49 million for 2016 and 2015, respectively.

[2] Net of income tax expenses of $4 million and $7 million for 2016 and 2015, respectively.

[3] Net of income tax recoveries of nil and $2 million for 2016 and 2015, respectively.

[4] Net of income tax expenses of $2 million for each of 2016 and 2015.

[5] Net of income tax expenses of nil for each of 2016 and 2015.

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years Ended December 31 *(millions of dollars)*	2016	2015
Operating activities		
Net income	**453**	417
Adjust for non-cash items:		
Depreciation and amortization *(Note 4)*	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities *(Note 8)*	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(746)**	(704)
Pension and other post-employment benefit costs *(Note 11)*	**464**	483
Deferred income taxes and other accrued charges	**(36)**	23
Mark-to-market on derivative instruments	**3**	(218)
Provision for used nuclear fuel and low and intermediate level waste	**118**	117
Regulatory assets and liabilities	**(170)**	141
Provision for materials and supplies	**42**	28
Other (gains) losses	**(17)**	14
Other	**(8)**	5
	2,289	2,301
Contributions to nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(150)**	(143)
Expenditures on fixed asset removal and nuclear waste management *(Note 8)*	**(275)**	(218)
Reimbursement of expenditures on nuclear fixed asset removal and nuclear waste management *(Note 8)*	**70**	76
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans *(Note 11)*	**(363)**	(480)
Expenditures on restructuring	**(6)**	(16)
Distributions received from investments subject to significant influence	**52**	51
Net changes to other long-term assets and liabilities	**20**	(6)
Net changes to non-cash working capital balances *(Note 17)*	**68**	(100)
Cash flow provided by operating activities	**1,705**	1,465
Investing activities		
Purchase of available-for-sale securities	**(213)**	-
Investment in deposit note *(Note 6)*	**-**	(180)
Proceeds from deposit note *(Note 6)*	**110**	-
Net proceeds from sale of property, plant and equipment	**-**	3
Investment in property, plant and equipment and intangible assets *(Note 16)*	**(1,704)**	(1,376)
Cash flow used in investing activities	**(1,807)**	(1,553)
Financing activities		
Issuance of long-term debt *(Note 6)*	**334**	245
Repayment of long-term debt *(Note 6)*	**(273)**	(503)
Settlement of cash flow hedges	**-**	(9)
Distribution to non-controlling interest	**(14)**	(16)
Issuance of short-term notes *(Note 7)*	**3,108**	2,628
Repayment of short-term notes *(Note 7)*	**(3,331)**	(2,403)
Cash flow used in financing activities	**(176)**	(58)
Net decrease in cash and cash equivalents	**(278)**	(146)
Cash and cash equivalents, beginning of year	**464**	610
Cash and cash equivalents, end of year	**186**	464

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 *(millions of dollars)*	2016	2015
Assets		
Current assets		
Cash and cash equivalents	**186**	464
Available-for-sale securities *(Note 18)*	**212**	-
Receivables from related parties *(Note 18)*	**429**	545
Nuclear fixed asset removal and nuclear waste management funds *(Notes 8 and 16)*	**24**	15
Fuel inventory *(Note 16)*	**310**	344
Materials and supplies *(Note 16)*	**100**	96
Regulatory assets *(Note 5)*	**-**	628
Prepaid expenses	**200**	92
Other current assets *(Notes 4 and 6)*	**282**	206
	1,743	2,390
Property, plant and equipment *(Notes 4, 15, and 16)*	**29,319**	29,469
Less: accumulated depreciation	**9,317**	8,874
	20,002	20,595
Intangible assets *(Notes 4 and 16)*	**503**	476
Less: accumulated amortization	**404**	378
	99	98
Other assets		
Nuclear fixed asset removal and nuclear waste management funds *(Notes 8 and 16)*	**15,960**	15,121
Long-term materials and supplies *(Note 16)*	**345**	337
Regulatory assets *(Note 5)*	**5,855**	5,240
Investments subject to significant influence *(Note 19)*	**321**	336
Other long-term assets *(Note 6)*	**47**	133
	22,528	21,167
	44,372	44,250

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 *(millions of dollars)*	2016	2015
Liabilities		
Current liabilities		
Accounts payable and accrued charges *(Note 18)*	**1,164**	1,199
Short-term debt *(Note 7)*	**2**	225
Deferred revenue due within one year	**12**	12
Long-term debt due within one year *(Note 6)*	**1,103**	273
Income taxes payable	**123**	66
Regulatory liabilities *(Note 5)*	**-**	26
	2,404	1,801
Long-term debt *(Note 6 and 18)*	**4,417**	5,186
Other liabilities		
Fixed asset removal and nuclear waste management liabilities *(Notes 8 and 16)*	**19,484**	20,169
Pension liabilities *(Note 11)*	**3,012**	2,597
Other post-employment benefit liabilities *(Note 11)*	**2,897**	3,085
Long-term accounts payable and accrued charges	**213**	207
Deferred revenue	**298**	246
Deferred income taxes *(Note 9)*	**829**	880
Regulatory liabilities *(Note 5)*	**310**	34
	27,043	27,218
Equity		
Common shares *(Note 14)* [1]	**5,126**	5,126
Retained earnings	**5,534**	5,098
Accumulated other comprehensive loss *(Note 10)*	**(295)**	(319)
Equity attributable to the Shareholder	**10,365**	9,905
Equity attributable to non-controlling interest *(Note 21)*	**143**	140
Total equity	**10,508**	10,045
	44,372	44,250

[1] 256,300,010 common shares outstanding at a stated value of $5,126 million as at December 31, 2016 and 2015.

Commitments and Contingencies *(Notes 6, 9, 11, and 15)*

See accompanying notes to the consolidated financial statements

On behalf of the Board of Directors:

Bernard Lord
Board Chair

M. George Lewis
Director

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Common shares *(Note 14)*	**5,126**	5,126
Retained earnings		
Balance at beginning of year	**5,098**	4,696
Net income attributable to the Shareholder	**436**	402
Balance, end of year	**5,534**	5,098
Accumulated other comprehensive loss, net of income taxes *(Note 10)*		
Balance at beginning of year	**(319)**	(496)
Other comprehensive income	**24**	177
Balance, end of year	**(295)**	(319)
Equity attributable to the Shareholder	**10,365**	9,905
Equity attributable to non-controlling interest *(Note 21)*		
Balance at beginning of year	**140**	141
Distribution to non-controlling interest	**(14)**	(16)
Net income attributable to non-controlling interest	**17**	15
Balance, end of year	**143**	140
Total equity	**10,508**	10,045

See accompanying notes to the consolidated financial statements

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2016 and 2015

1. DESCRIPTION OF BUSINESS

Ontario Power Generation Inc. (OPG or the Company) was incorporated on December 1, 1998 pursuant to the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (the Province or the Shareholder). OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario.

2. BASIS OF PRESENTATION

These consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States (US) Securities and Exchange Commission for annual financial statements.

As required by *Ontario Regulation 395/11,* as amended, under the Financial Administration Act (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG has also received exemptive relief from the Ontario Securities Commission (OSC) from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant, or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

All dollar amounts are presented in Canadian dollars, except in tabular format where noted. Certain of the 2015 comparative amounts have been reclassified from financial statements previously presented to conform to the 2016 consolidated financial statement presentation.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Consolidation

The consolidated financial statements of the Company include the accounts of OPG and its majority-owned subsidiaries, and a variable interest entity (VIE) where OPG is the primary beneficiary. All significant intercompany balances and intercompany transactions have been eliminated on consolidation.

Where OPG does not control an investment, but has significant influence over operating and financing policies of the investee, the investment is accounted for under the equity method. OPG co-owns the Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS) with TransCanada Energy Ltd. and co-owns the Brighton Beach gas-fired combined cycle generating station (Brighton Beach) with ATCO Power Canada Ltd. OPG accounts for its 50 percent ownership interest in each of these jointly controlled entities using the equity method.

Variable Interest Entities

OPG performs ongoing analysis to assess whether it holds any VIEs. VIEs of which OPG is deemed to be the primary beneficiary are consolidated. The primary beneficiary of a VIE has both the power to direct the activities of the entity that most significantly impact its economic performance and the obligation to absorb losses of the entity that could potentially be significant to the Company. In circumstances where OPG is not deemed to be the primary beneficiary, the VIE is not recorded in OPG's consolidated financial statements.

In 2002, OPG and other Canadian nuclear waste producers established the Nuclear Waste Management Organization (NWMO) in accordance with the *Nuclear Fuel Waste Act* (NFWA). The primary long-term mandate of the NWMO is to implement an approach to address the long-term management of used nuclear fuel. In addition to the above mandate, the NWMO provides project management services for OPG's proposed Deep Geologic Repository (DGR) for the long-term management of low and intermediate level waste (L&ILW) and other nuclear lifecycle liability management services. OPG has the majority of voting rights at the NWMO Board of Directors' and members' level. The NFWA requires the nuclear fuel waste owners to establish and make payments into trust funds for the purpose of funding the implementation of the long-term nuclear used fuel management plan. OPG provides over 90 percent of NWMO's funding, primarily towards the design and implementation of Canada's Adaptive Phased Management plan for the long-term management of nuclear used fuel. As a result, OPG is expected to absorb a majority of the NWMO's expected losses through future funding in the event of any shortfall. Therefore, OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated.

As at December 31, 2016, PSS Generating Station Limited Partnership (PSS or the Partnership) was classified as a VIE because it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership.

Use of Management Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefit (OPEB) balances, asset retirement obligations (AROs), income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments and investments in segregated funds, depreciation and amortization expenses, valuation of the nuclear fixed assets and nuclear waste management funds, and inventories. Actual results may differ significantly from these estimates.

Cash and Cash Equivalents and Short-Term Investments

Cash and cash equivalents include cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments and classified as current assets. These securities are valued at the lower of cost and market.

Inventories

Inventories, consisting of fuel and materials and supplies, are measured at the lower of cost and net realizable value. Cost is determined as weighted average cost for fuel inventory and average cost for materials and supplies.

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to operations, maintenance and administration (OM&A) expenses when incurred. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis, except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis. As at December 31, 2016, the amortization periods of PP&E and intangible assets are as follows:

Nuclear generating stations and major components	15 to 74 years [1]
Thermal generating stations and major components	5 to 50 years
Hydroelectric generating stations and major components	10 to 100 years
Administration and service facilities	10 to 50 years
Computers, and transport and work equipment assets – declining balance	12% to 40% per year
Major application software	5 years
Service equipment	5 to 10 years

[1] As at December 31, 2016, the end of station life for depreciation purposes for the Darlington, Pickering, and Bruce A and B nuclear generating stations ranged between 2020 and 2061. Major components are depreciated over the lesser of the station life and the life of the components.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

The carrying value of investments accounted for under the equity method are reviewed annually for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the Ontario Energy Board (OEB).

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998,* the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB are classified as current if they are expected to be recovered from, or refunded to, customers within 12 months of the end of the reporting period, based on recovery or repayment periods authorized by the OEB. All other regulatory asset and liability balances are classified as non-current on the consolidated balance sheets.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in accumulated other comprehensive income (AOCI) in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans. The regulatory asset is reversed as underlying unamortized balances are amortized as components of the benefit cost.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures on its pension and OPEB plans. It is the Company's position that this decision by the OEB does not constitute a change in the basis of rate recovery for OPG's of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices or in an OEB-authorized deferral or variance account for future recovery as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account to record the difference between OPG's actual pension and OPEB costs for the regulated business

determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the above noted consultation process.

See Notes 5, 8, 9, and 11 to these consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Revenue Recognition

All of OPG's electricity generation is offered into the real-time energy spot market administered by the Independent Electricity System Operator (IESO). Revenue is recognized as electricity is generated and metered to the IESO.

Revenue Recognition – Regulated Generation

Energy revenue generated from OPG's regulated facilities is based on regulated prices determined by the OEB that currently include a base regulated price and rate riders for the recovery or repayment of approved variance and deferral account balances.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base is a regulatory construct that, for OPG, represents the average net level of investment in regulated fixed and intangible assets in-service and an allowance for working capital. The revenues from the regulated hydroelectric facilities are also subject to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The rate riders in effect during 2016 were established by the OEB in its October 2015 order based on OPG's application to recover balances in most of the authorized variance and deferral accounts as at December 31, 2014. The rate riders in effect during 2015 included those established by the OEB in 2014 in conjunction with the base regulated prices in effect since November 1, 2014 and those authorized by the OEB in October 2015 based on OPG's application to recover the December 31, 2014 balances. The OEB-authorized variance and deferral accounts are discussed in Note 5 to these consolidated financial statements.

Revenue Recognition – Non-regulated Generation and Other Revenue

The electricity generation from OPG's non-regulated assets receives the Ontario electricity spot market price, except where an energy supply agreement (ESA) with the IESO or another contractual agreement is in place. As at December 31, 2016, most of OPG's operating non-regulated assets are subject to an ESA. Revenue from the generating stations subject to an ESA is recognized in accordance with the terms of the agreement. Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO is substituted as the counterparty of the ESAs or other agreements that were previously executed with the OPA.

OPG also sells into, and purchases from, interconnected markets of other provinces and the northeast and midwest regions of the US. All contracts that are not designated as hedges are recorded in the consolidated balance sheets at market value, with gains or losses recorded in the consolidated statements of income. Gains and losses on energy trading contracts (including those to be physically settled) are recorded on a net basis in the consolidated statements of income. Accordingly, power purchases of $19 million were netted against revenue in 2016 (2015 – $75 million).

OPG derives non-energy revenue under the terms of a lease arrangement and associated agreements with Bruce Power L.P. (Bruce Power) related to the Bruce nuclear generating stations. This includes lease revenue and revenue from heavy water sales, detritiation services and waste management services. OPG's net revenues from the lease of the Bruce stations and related agreements, including a portion of heavy water sales, are credited to customers and have therefore reduced regulated prices for the generation from the nuclear facilities owned and operated by OPG. The minimum lease payments are recognized in revenue on a straight-line basis over the term of the lease.

In addition, non-energy revenue includes isotope sales, real estate rentals and other service revenues. Revenues from these activities are recognized as services are provided, or as products are delivered.

Fixed Asset Removal and Nuclear Waste Management Liabilities

OPG recognizes AROs for fixed asset removal and nuclear waste management, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The liabilities are initially recorded at their estimated fair value, which is based on a discounted value of the expected costs to be paid.

On an ongoing basis, the liabilities for nuclear fixed asset removal and nuclear waste management (Nuclear Liabilities) are increased by the present value of the incremental (variable) cost portion for the nuclear waste generated each year, with the corresponding amounts charged to operating expenses. Variable expenses relating to low and intermediate level nuclear waste are charged to OM&A expenses. Variable expenses relating to the management and storage of nuclear used fuel are charged to fuel expense. The liabilities may also be adjusted due to any changes in the estimated amount or timing of the underlying future cash flows, with any resulting changes in the related asset retirement costs capitalized as part of the carrying amount of the related fixed assets. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the originally estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of increases in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of decreases in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets. Upon settlement of the liabilities, a gain or loss would be recorded.

Accretion arises because the fixed asset removal and nuclear waste management liabilities are reported on a net present value basis. Accretion expense is the increase in the carrying amount of the liabilities due to the passage of time.

The asset retirement cost is capitalized by increasing the carrying value of the related fixed assets. The capitalized cost is depreciated over the remaining service life of the related fixed assets and is included in depreciation and amortization expenses.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG established a Used Fuel Segregated Fund and a Decommissioning Segregated Fund (together the Nuclear Segregated Funds). The Used Fuel Segregated Fund is intended to fund expenditures associated with the long-term management of radioactive used nuclear fuel bundles, while the Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the nuclear stations are shut down. OPG maintains the Nuclear Segregated Funds in third-party custodial and trust accounts that are segregated from the rest of OPG's assets.

OPG's investments in the Nuclear Segregated Funds and the corresponding amounts payable to/receivable from the Province are classified as held-for-trading. The Nuclear Segregated Funds are measured at fair value based on the bid prices of the underlying equity and fixed income securities, and, in the case of the alternative investment portfolio, using appropriate valuation techniques as outlined in Note 13 to these consolidated financial statements, with realized and unrealized gains and losses recognized in OPG's consolidated statements of income.

Derivatives

All derivatives, including embedded derivatives that must be separately accounted for, generally are classified as held-for-trading and recorded at fair value in the consolidated balance sheets. Transaction costs are expensed as incurred for financial instruments classified or designated as held-for-trading.

Derivatives qualify for hedge accounting if they meet stringent documentation requirements, and if the derivative instrument that is designated as a hedge is expected to effectively hedge the identified risk throughout the life of the hedged item. At the inception of a hedging relationship, OPG documents the relationship between the hedging instrument and the hedged item, its risk management objective, and its strategy for undertaking the hedge. A documented assessment is made, both at the inception of a hedge and on an ongoing basis, of whether or not the derivatives that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

All derivative contracts not designated as hedges are recorded on the consolidated balance sheets as derivative assets or liabilities at fair value with changes in the fair value recorded in the revenue of the Services, Trading, and Other Non-Generation segment. Refer to Note 12 for a discussion of OPG's risk exposures and the derivative instruments used to manage these risks.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model. OPG uses a fair value hierarchy, grouping assets and liabilities into three levels based on the relative objectivity of the inputs used to measure fair value, with Level 1 representing the most objective. Refer to Note 13 for a discussion of fair value measurements and the fair value hierarchy.

Investments in Equity Securities

Available-for-sale (AFS) securities are measured at fair value with unrealized gains and losses due to changes in fair value recognized in other comprehensive income (OCI). Realized gains and losses are included in net income when the shares are sold or awarded. Related transaction costs are expensed as incurred, and dividend income is included in net income in the period dividends are declared. Equity securities are initially measured at the transaction price.

Research and Development

Research and development costs are expensed as incurred. Research and development costs incurred to discharge long-term obligations, such as the Nuclear Liabilities, for which specific provisions have already been made, are charged to the related liability.

Leases

Leases are evaluated and classified as either operating or capital leases for financial reporting purposes. Capital leases, which transfer substantially all of the risks and benefits incidental to ownership of the leased item, are capitalized at the inception of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Capital leases are depreciated over the shorter of the estimated useful life of the asset and the lease term.

Leases where the lessor retains substantially all the risks and benefits incidental to ownership of the asset are classified as operating leases. Operating lease payments, other than contingent rentals, are recognized as an expense in the consolidated statements of income on a straight-line basis over the lease term. Where the amount of rent expense recognized is different from the actual operating lease payment, other than contingent rentals, the difference is deferred and included as assets or liabilities on the consolidated balance sheets.

Pension and Other Post-Employment Benefits

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post-retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective

benefit obligations is accumulated and amortized over future periods; for LTD benefits, the impact of these updates and differences is immediately recognized as OPEB costs in the period incurred.

The discount rates, which are representative of AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure, and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments, and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor), is amortized over the expected average remaining service life of the employees, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on the consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in OCI, net of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as components of pension and OPRB costs as described above.

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the amounts reclassified from AOCI into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the Ontario Electricity Financial Corporation (OEFC). These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or payable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized income tax benefits as income tax expense.

Changes in Accounting Policies and Estimates

Change in Nuclear Liabilities Estimate

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for Nuclear Liabilities as at December 31, 2016 was finalized as part of the required process to update the Reference Plan under the ONFA between OPG and the Province. The update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities, with a corresponding decrease to the asset retirement costs capitalized as part of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear decommissioning at least once every five years, in line with the required ONFA Reference Plan update process.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. These changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account established by the OEB pursuant to *Ontario Regulation 53/05*, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices. The estimated impact on 2017 expenses, before regulatory deferrals, includes a decrease to depreciation expense of approximately $8 million**,** a decrease to accretion expense of approximately $78 million in 2017, and a combined decrease in used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million**.** Under the current OEB-approved cost recovery methodologies, these changes are not expected to materially affect OPG's income in 2017, as they are expected to be largely offset by the OEB-approved variance and deferral accounts, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to *Ontario Regulation 53/05*. It records the revenue requirement impact

associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the amount due to the Province. This accounting adjustment represented the overfunded position of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 relative to the value of the corresponding life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province, because OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and because any excess funding in the Nuclear Segregated Funds upon termination of the ONFA accrues to the Province. Of the $88 million reduction in the Nuclear Segregated Funds assets, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

Pension and Other Post-Employment Benefits

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined under the heading, *Contractual and Commercial Commitments,* in Note 15 Commitments and Contingencies. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation, and assumptions as at December 31, 2016. As part of the valuation, the plan's demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The weighted average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

The deficit for the registered pension plan increased, for accounting purposes, from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million).

Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

OEB's Decision on OPG's December 2014 Motion

In January 2016, OEB issued its decision on OPG's December 2014 motion that requested the OEB to review and vary parts of its November 2014 decision, including the disallowed Niagara Tunnel project capital costs. In its January 2016 decision, the OEB reversed a portion of the November 2014 Niagara Tunnel capital cost disallowance and established a new variance account to record the revenue requirement impact of the reversed disallowance effective November 1, 2014. The November 2014 disallowance resulted in a write off of capital costs in the fourth quarter of 2014. To recognize the expected future recovery of the reversed portion of the disallowance and related revenue requirement impact to March 31, 2016, during the first quarter of 2016, OPG recorded an increase to property, plant and equipment and a corresponding gain of $22 million, and a regulatory asset of $3 million related to the balance in the variance account, in accordance with Accounting Standards Codification (ASC) Topic 980, *Regulated Operations*.

Recent Accounting Pronouncements

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact that the new standard will have on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the AFS classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of other comprehensive income. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One Limited (Hydro One) share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

Intra-Entity Transfers of Assets Other than Inventory

In October 2016, the FASB issued ASU No. 2016-16, *Income* Taxes, where entities will be required to recognize the income tax effects of certain intercompany transfers of assets as an income tax expense or benefit in the period the transaction occurs. This is different from current standards where entities are required to defer the income tax effects until that asset has been sold to a third party or otherwise recognized. OPG is required to adopt this ASU on January 1, 2018. The amendments in this ASU should be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. OPG expects to record a cumulative-effect adjustment to the 2018 opening retained earnings of a debit of $7 million.

Significant Accounting Standard Update Adopted

Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share

In May 2015, the FASB issued ASU No. 2015-07, *Fair Value Measurement (Topic 820) – Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent)*. Under the new guidance, investments measured at net asset value (NAV), which have been elected under the guidance as a practical expedient for fair value, are excluded from the fair value hierarchy. Removing investments measured using the practical expedient from the fair value hierarchy is intended to eliminate the diversity in practice that currently exists with respect to the categorization of these investments. The only criterion for categorizing investments in the fair value hierarchy is the observability of the inputs. OPG has adopted the updates to ASC Topic 820, *Fair Value Measurement* in 2016. The changes in disclosures required under this update are reflected in Notes 11 and 13.

4. PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND DEPRECIATION AND AMORTIZATION

Depreciation and amortization expenses, including amounts recognized in regulatory variance and deferral accounts authorized by the OEB, for the years ended December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Depreciation	**602**	617
Amortization of intangible assets	**27**	20
Amounts recognized in regulatory variance and deferral accounts	**26**	(1)
Amortization of regulatory assets and liabilities *(Note 5)*	**602**	464
	1,257	1,100

Property, plant and equipment as at December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Nuclear generating stations	**11,057**	11,999
Regulated hydroelectric generating stations	**9,430**	9,351
Contracted generation portfolio generating stations	**3,751**	3,713
Other property, plant and equipment	**1,598**	1,839
Construction in progress	**3,483**	2,567
	29,319	29,469
Less: accumulated depreciation		
Generating stations	**7,948**	7,359
Other property, plant and equipment	**1,369**	1,515
	9,317	8,874
	20,002	20,595

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. An active program to locate a buyer was initiated in October 2016. As such, in the fourth quarter of 2016, OPG reclassified the assets' net book value of approximately $93 million (December 31, 2015 – $96 million) out of property, plant and equipment and into Other current assets in the Services, Trading, and Other Non-Generation segment. Depreciation on the assets ceased in the fourth quarter of 2016. In December 2016, a purchase and sale agreement was executed and the disposition is expected to close during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be recognized in the second quarter of 2017 when the transaction is expected to be completed. Pursuant to the December 2015 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act 2014*, OPG is required to transfer a portion of the proceeds of disposition into the Province's Consolidated Revenue Fund.

Construction in progress as at December 31 consists of the following:

(millions of dollars)	**2016**	**2015**
Darlington Refurbishment	**2,563**	1,868
Peter Sutherland Sr. GS	**236**	95
Other	**684**	604
	3,483	2,567

Interest capitalized to construction and development in progress at an average rate of five percent during 2016 (2015 – five percent) was $141 million (2015 – $102 million).

Intangible assets as at December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Nuclear generating stations	**122**	118
Regulated hydroelectric generating stations	**7**	4
Contracted generation portfolio generating stations	**4**	5
Computer software and other intangible assets	**350**	321
Development in progress	**20**	28
	503	476
Less: accumulated amortization		
Generating stations	**120**	115
Computer software and other intangible assets	**284**	263
	404	378
	99	98

The estimated aggregate amortization expense for each of the five succeeding years for intangible assets in service as at December 31, 2016 is as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**
Amortization expense	24	21	20	8	2

5. REGULATORY ASSETS AND LIABILITIES

In December 2014, OPG filed an application with the OEB to recover approximately $1.8 billion in December 31, 2014 balances in most of its authorized regulatory variance and deferral accounts. The recovery of the amount sought was approved by the OEB in 2015.

In October 2015, the OEB issued an order implementing its 2015 decisions on OPG's application. The order authorized OPG to recover $933 million over the period from October 1, 2015 to December 31, 2016 through new rate riders for generation from all of OPG's regulated nuclear and regulated hydroelectric facilities during this period, as shown below. The remaining approved balances will be subject to recovery after 2016.

($/Megawatt hour)	**Nuclear**	**Hydroelectric**
2015/2016 rate riders	10.84	3.19
2015/2016 interim period rate riders [1]	2.17	0.64
Rate riders for the period from October 1, 2015 to December 31, 2016	13.01	3.83

[1] The new riders were made effective July 1, 2015 and implemented effective October 1, 2015 by the OEB. The interim period rate riders were authorized by the OEB to allow for the recovery of the new riders for the period from July 1, 2015 to September 30, 2015. The revenue for the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The income impact of the revenue accrual was largely offset by a corresponding increase in amortization expense related to regulatory assets and liabilities for deferral and variance accounts.

In 2016, OPG recorded amortization of the regulatory assets and liabilities for the deferral and variance account balances approved for disposition on a straight-line basis, based on recovery or repayment periods authorized by the OEB's October 2015 order. In 2015, OPG recorded such amortization on a straight-line basis based on balances and recovery or repayment periods authorized by the OEB's December 2014 and October 2015 orders.

Any shortfall or over-recovery of the approved balances due to differences between actual and forecast production are recorded in the authorized Nuclear Deferral and Variance Over/Under Recovery Variance Account and the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account to be collected from, or refunded to, customers in the future.

The OEB's October 2015 order also approved the continuation of previously authorized variance and deferral accounts, including those authorized pursuant to *Ontario Regulation 53/05*.

Where authorized by the OEB, OPG recorded interest on the unamortized balances in the applicable variance and deferral accounts at the OEB-prescribed rates of 1.10 percent per annum for the period from April 1, 2015 to December 31, 2016 and 1.47 percent per annum for the period from January 1, 2015 to March 31, 2015.

The regulatory assets and liabilities recorded as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Regulatory assets		
Variance and deferral accounts authorized by the OEB		
Pension and OPEB Cost Variance Account	**716**	865
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 11)*	**497**	315
Hydroelectric Surplus Baseload Generation Variance Account	**210**	114
Bruce Lease Net Revenues Variance Account	**95**	95
Nuclear Deferral and Variance Over/Under Recovery Variance Account	**74**	82
Other variance and deferral accounts	**33**	243
	1,625	1,714
Pension and OPEB regulatory asset *(Note 11)*	**3,392**	3,362
Deferred Income Taxes *(Note 9)*	**838**	792
Total regulatory assets	**5,855**	5,868
Less: current portion	**-**	628
Non-current regulatory assets	**5,855**	5,240
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Capacity Refurbishment Variance Account	**102**	-
Other variance and deferral accounts	**208**	60
Total regulatory liabilities	**310**	60
Less: current portion	**-**	26
Non-current regulatory liabilities	**310**	34

The changes in the regulatory assets and liabilities during 2016 and 2015 are as follows:

(millions of dollars)	**Pension and OPEB Cost Variance**	**Pension & OPEB Cash vs Accrual Differential Deferral**	**Hydro-electric Surplus Baseload Generation Variance**	**Bruce Lease Net Revenues Variance**	**Nuclear Deferral and Variance Over/Under Recovery Variance**	**Capacity Refurb-ishment Variance**	**Other Variance and Deferral (net)**	**Pension and OPEB Regula-tory Asset**	**Deferred Income Taxes**
Net regulatory assets January 1, 2015	939	36	67	315	56	190	320	4,363	861
Increase (decrease)	-	279	82	(149)	44	(68)	3	(1,001)	(69)
Interest	-	-	-	-	1	2	1	-	-
Amortization	(74)	-	(35)	(71)	(19)	(124)	(141)	-	-
Net regulatory assets December 31, 2015	865	315	114	95	82	-	183	3,362	792
Increase (decrease)	**-**	**182**	**126**	**143**	**29**	**(36)**	**(184)**	**30**	**46**
Interest	**-**	**-**	**2**	**-**	**1**	**-**	**-**	**-**	**-**
Amortization	**(149)**	**-**	**(32)**	**(143)**	**(38)**	**(66)**	**(174)**	**-**	**-**
Net regulatory assets December 31, 2016	**716**	**497**	**210**	**95**	**74**	**(102)**	**(175)**	**3,392**	**838**

Pension and OPEB Cost Variance Account

As authorized by the OEB, for the period from March 1, 2011 to October 30, 2014, the Pension and OPEB Cost Variance Account recorded the differences between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and related tax impacts, and corresponding forecast amounts reflected in the regulated prices then in effect. In its November 2014 decision, the OEB determined that the pension and OPEB amounts reflected in OPG's new regulated prices effective November 1, 2014 would be limited to the Company's estimated minimum contributions to its registered pension plan and a forecast of OPG's expenditures on the OPEB and supplementary pension plans. As such, the OEB ordered the Pension and OPEB Cost Variance Account to record only amortization beginning on November 1, 2014.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of 10/12 of the account balance as at December 31, 2012 over a 144-month period to December 31, 2024. Amounts recorded in the account in 2013 and 2014 were approved for recovery over a 72-month period to June 30, 2021 by the OEB's October 2015 order.

Pension & OPEB Cash Versus Accrual Differential Deferral Account

In its November 2014 decision and December 2014 order, the OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Effective November 1, 2014, this deferral account records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis under US GAAP and OPG's corresponding actual cash expenditures for these plans. The balance in the account as at December 31, 2016 represents the excess of costs calculated using the accrual basis over the cash basis for the period from November 1, 2014 to December 31, 2016. The Company has recognized the amount set aside in the deferral account as a regulatory asset.

The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of the generic OEB proceeding on the regulatory treatment and recovery of pension and OPEB costs. The OEB's consultation process to develop standard principles to guide its review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery, began in May 2015. OPG is participating in the consultation. In July 2016, the OEB held a public stakeholder forum as part of the consultation. In September 2016, OPG made a written submission of its position on the matter with the OEB. OEB's consultation process remains ongoing.

Hydroelectric Surplus Baseload Generation Variance Account

The Hydroelectric Surplus Baseload Generation Variance Account records the impact of foregone production at OPG's regulated hydroelectric facilities due to surplus baseload generation conditions. The variance account was authorized by the OEB effective March 1, 2011 for the regulated hydroelectric facilities prescribed for rate regulation prior to 2014, and effective November 1, 2014 for the applicable regulated hydroelectric facilities prescribed for rate regulation effective in 2014.

In its November 2014 decision and December 2014 order, the OEB approved the recovery of the account balance as at December 31, 2013 over a 12-month period beginning on January 1, 2015. The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 over an 18-month period from July 1, 2015 to December 31, 2016. OPG's May 2016 application to the OEB included a request to recover the balance in this account as at December 31, 2015 less amounts approved in the OEB's October 2015 order.

Bruce Lease Net Revenues Variance Account

In accordance with *Ontario Regulation 53/05*, the OEB is required to include the difference between OPG's revenues and costs associated with its ownership of the two nuclear stations on lease to Bruce Power in the determination of the regulated prices for production from OPG's regulated nuclear facilities. The OEB established a variance account

that captures differences between OPG's revenues and costs related to the Bruce nuclear generating stations and the corresponding forecasts included in approved nuclear regulated prices.

In 2013, the OEB ordered the portion of the balance in the Bruce Lease Net Revenues Variance Account related to the impact of the derivative liability embedded in the terms of the Bruce Lease in effect prior to December 2015 to be recovered on the basis of OPG's expected rent rebate payments to Bruce Power and associated income tax impacts. The OEB's October 2015 order reaffirmed this approach. In December 2015, as a result of amendments to the Bruce Lease, OPG reversed the derivative liability, with a corresponding reduction to the regulatory asset for this account. Amounts collected from customers for the derivative liability for periods after its reversal are subject to refund in the future and recognized as a regulatory liability as part of the variance account balance.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of the non-derivative portion of the account balance as at December 31, 2012 over a 48-month period ending December 31, 2016. The non-derivative portion of amounts recorded in the account in 2013 and 2014 was approved for recovery over an 18-month period from July 1, 2015 to December 31, 2016 by the OEB's October 2015 order. The balance in this account as at December 31, 2016 therefore reflects the cumulative variances in net revenues related to the non-derivative portion of the account between January 1, 2015 and December 2016, partially offset by the refund to ratepayers for the derivative cancellation in 2015.

Nuclear Deferral and Variance Over/Under Recovery Variance Account

The Nuclear Deferral and Variance Over/Under Recovery Variance Account records any shortfall or over-recovery of the approved variance and deferral account balances due to differences between actual and forecast nuclear production. The account also captures transfer of balances remaining in other variance and deferral accounts as they expire. The balance in the account will be collected from, or refunded to, customers following OPG's next application to the OEB.

The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 over an 18-month period from July 1, 2015 to December 31, 2016. OPG's May 2016 application to the OEB included a request to recover the balance in this account as at December 31, 2015 less amounts approved in the OEB's October 2015 order.

Capacity Refurbishment Variance Account

Pursuant to *Ontario Regulation 53/05*, the OEB has authorized the Capacity Refurbishment Variance Account (CRVA). The account captures variances from the forecasts reflected in the regulated prices for capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to one or more of the regulated facilities. The balance in the account as at December 31, 2016 includes variances related to the refurbishment of the Darlington nuclear generating station, life extension initiatives at the Pickering nuclear generation station, and other projects.

OPG determines amounts to be recovered from, or refunded to, customers with respect to variances in capital costs as the difference from forecast depreciation expense and cost of capital associated with the in-service capital reflected in the regulated prices and associated income tax effects. The cost of capital amount in the account is calculated using the weighted average cost of capital, including a return on equity, as approved by the OEB in determining the regulated prices. In accordance with US GAAP, in recognizing a regulatory asset for the CRVA, OPG limits the portion of cost of capital additions recognized as a regulatory asset to the amount calculated using the average rate of capitalized interest applied to construction and development in progress.

The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 less amounts approved in the OEB's December 2014 order over an 18-month period from July 1, 2015 to December 31, 2016. In setting new regulated prices effective November 1, 2014, the OEB approved the recovery of the December 31, 2013 nuclear capital and hydroelectric portions of the account balance, totaling $119 million, over a 12-month period beginning on January 1, 2015.

Other Variance Accounts

Regulatory assets

As at December 31, 2016 and 2015, regulatory assets for other variance and deferral accounts included amounts for Nuclear Liability Deferral Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Development Variance Account, and the Pickering Life Extension Depreciation Variance Account.

The Nuclear Liability Deferral Account is authorized in connection with changes to OPG's liabilities for nuclear used fuel management and nuclear decommissioning and L&ILW management associated with the nuclear facilities owned and operated by OPG, which are comprised of the Pickering and Darlington nuclear generating stations. The deferral account records the revenue requirement impact associated with the changes in these liabilities arising from an approved reference plan, in accordance with the terms of the ONFA.

The Hydroelectric Deferral and Variance Over/Under Recovery Variance Account records any shortfall or over-recovery of the approved variance and deferral account balances due to differences between actual and forecast hydroelectric production. The account also captures transfer of balances remaining in other variance and deferral accounts as they expire. The balance in the account will be collected from, or refunded to, customers following OPG's next application to the OEB.

The Nuclear Development Variance Account records variances between the actual non-capital costs incurred and firm financial commitments made in the course of planning and preparation for the development of proposed new nuclear generation facilities and the corresponding forecasts reflected in the regulated prices approved by the OEB.

The Pickering Life Extension Depreciation Variance Account balance was recorded wholly during the period from November 1, 2014 to December 31, 2014. This balance represents an offset to the customer credit for the reduction in depreciation expense for the Pickering nuclear generating station that was reflected both as a reduction to the base regulated prices effective November 1, 2014 and the nuclear rate rider in effect during 2014. The regulatory asset for this balance was fully amortized during the year ended December 31, 2016 based on the recovery periods authorized by the OEB.

As at December 31, 2016, regulatory assets for other variance and deferral accounts also included the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account. This account was established in the OEB's January 2016 decision in which it reversed a portion of the November 2014 Niagara Tunnel Capital cost disallowance. This account records the revenue requirement impact of the reversed disallowance effective November 1, 2014. To recognize the expected future recovery of the reversed portion of the disallowance, OPG recorded an increase to property, plant and equipment and a corresponding gain of $22 million during 2016 in accordance with ASC Topic 980, *Regulated Operations*. As at December 31, 2016, OPG also recorded a regulatory asset of $3 million related to the balance in the variance account.

As at December 31, 2015, regulatory assets for other variance and deferral accounts also included the Pension & OPEB Cash Payment Variance Account.

Regulatory liabilities

As at December 31, 2016 and 2015, regulatory liabilities for other variance and deferral accounts included amounts for the Hydroelectric Water Conditions Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account.

The Hydroelectric Water Conditions Variance Account captures the impact of differences in regulated hydroelectric electricity production due to differences between forecast water conditions underlying the production forecast approved by the OEB in setting regulated hydroelectric prices, and the actual water conditions.

The Ancillary Services Net Revenue Variance Account was authorized by the OEB to capture differences between actual nuclear and regulated hydroelectric ancillary services net revenue and the forecast amounts of such revenue approved by the OEB in setting regulated prices.

The Income and Other Taxes Variance Account includes deviations in income taxes for the regulated business, from those approved by the OEB in setting regulated prices, caused by changes in tax rates and rules, as well as reassessments.

The Hydroelectric Incentive Mechanism Variance Account records a credit to customers equal to 50 percent of OPG's hydroelectric incentive mechanism revenues above a specified threshold for the regulated hydroelectric facilities.

In its November 2014 decision and December 2014 order, the OEB approved the recovery or repayment of certain of the account balances of the other variance accounts as at December 31, 2013 over a 12-month period beginning on January 1, 2015. In its October 2015 order, the OEB approved the recovery or repayment of the majority of the account balances of the other variance and deferral accounts as at December 31, 2014, less amounts approved in the December 2014 order, over an 18-month period from July 1, 2015 to December 31, 2016.

As at December 31, 2016, regulatory liabilities for other variance and deferral accounts also included the Impact Resulting from Changes in Station-End-of-Life Deferral Account. In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of the changes to the nuclear fixed asset removal and nuclear waste management liabilities and depreciation expense arising from the changes in the estimated useful lives of the Company's nuclear stations, for accounting purposes, implemented effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station-End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG recognized a regulatory liability of $71 million related to the balance in the deferral account.

In addition, as at December 31, 2016, the regulatory liabilities also included the Pension & OPEB Cash Payment Variance Account. This account records, effective November 1, 2014, the difference between OPG's actual contributions to its registered pension plan and expenditures on its OPEB and supplementary pension plans for the regulated business, and the corresponding amounts reflected in the regulated prices.

Pension and OPEB Regulatory Asset

The Pension and OPEB Regulatory Asset represents unamortized amounts in respect of OPG's pension and OPEB plans that have been recognized in OCI and not yet reclassified into the amortization component of the benefit costs in respect of these plans. These amounts are expected to be recovered from customers through future regulated prices. The regulatory asset is reversed as underlying unamortized balances are amortized as components of benefit costs. Refer to Note 3 for a detailed discussion of the rate recovery methodology for pension and OPEB costs under the heading, *Rate Regulated Accounting*. The AOCI amounts related to pension and OPEB plans are presented in Note 11.

Deferred Income Taxes

OPG is required to record a regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities. In addition, OPG is required to recognize a deferred income tax liability or asset for the regulatory asset or liability for the amount of deferred income taxes expected to be included in future regulated prices and paid to or recovered from customers. Income taxes are discussed in Note 9.

6. LONG-TERM DEBT

Long-term debt consists of the following as at December 31: [1]

(millions of dollars)	**2016**	**2015**
Notes payable to the OEFC		
Senior Notes [2]		
4.91% due 2016	**-**	270
5.35% due 2017	**900**	900
5.27% due 2018	**395**	395
5.44% due 2019	**365**	365
4.56% due 2020	**660**	660
4.28% due 2021	**185**	185
3.30% due 2022	**150**	150
3.12% due 2023	**40**	40
3.04% due 2026	**50**	-
5.07% due 2041	**300**	300
4.36% due 2042	**200**	200
4.03% due 2046	**50**	-
UMH Energy Partnership [3]		
Senior Notes		
7.86% due to 2041	**184**	187
PSS Generating Station Limited Partnership [4]		
Senior Notes		
4.90% due to 2067	**245**	245
Lower Mattagami Energy Limited Partnership [5]		
Senior Notes		
2.35% due 2017	**200**	200
4.46% due 2021	**225**	225
3.53% due 2024	**200**	200
2.40% due 2026	**220**	-
5.26% due 2041	**250**	250
5.05% due 2043	**200**	200
4.26% due 2046	**275**	275
4.26% due 2052	**225**	225
Other	**15**	-
	5,534	5,472
Less: bond issuance fees	**(14)**	(13)
Less: due within one year	**(1,103)**	(273)
Long-term debt	**4,417**	5,186

[1] The interest rates disclosed reflect the effective interest rate of the debt.

[2] OEFC senior debt is entitled to receive, in full, amounts owing in respect of the senior debt and is pari passu to the Lower Mattagami Energy Limited Partnership senior notes.

[3] These notes are secured by the assets of the Upper Mattagami and Hound Chute project. Principal repayments of $3 million per year are made on a semi-annual basis until maturity in 2041, at which time the remaining principal balance of $116 million becomes due.

[4] These notes are secured by the assets of the Peter Sutherland Sr. GS project. The notes have an interest-only feature until 2025 and will be amortized with blended semi-annual principal and interest payments thereafter until maturity in 2067, at which time the remaining principal balance of $49 million becomes due.

[5] These notes are secured by the assets of the Lower Mattagami River project, including existing and new operating facilities, and are recourse to OPG until the recourse release date. These notes rank pari passu to the OEFC senior notes.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As at December 31, 2016, there were outstanding borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016,

OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

Interest paid in 2016 was $269 million (2015 – $269 million), of which $261 million (2015 – $261 million) relates to interest paid on long-term debt.

In the fourth quarter of 2015, PSS, a subsidiary of OPG, issued long-term debt totalling $245 million in support of the Peter Sutherland Sr. GS project. The majority of the debt proceeds, totalling $180 million, were invested in a structured deposit note with staggered maturity dates ranging from January 2016 to April 2017. As at December 31, 2016, $70 million was reported as Other current assets on the consolidated balance sheets, based on the terms of the deposit note. As at December 31, 2015, $110 million was reported as Other current assets and $70 million as Other long-term assets.

In October 2016, Lower Mattagami Energy Limited Partnership (LME) issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes is x.xx percent and x.xx percent, respectively. **[MONITOR]**

A summary of the contractual maturities of all long-term borrowings outstanding as at December 31, 2016, by year, is as follows:

(millions of dollars)	
2017	**1,103**
2018	**398**
2019	**368**
2020	**663**
2021	**413**
Thereafter	**2,589**
	5,534

The book value of the pledged assets as at December 31, 2016 was $3,510 million (2015 – $3,520 million).

7. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended both tranches to May 2021. As at December 31, 2016 and 2015, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, the LME maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for the LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program (2015 – $225 million). There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016 and 2015.

As at December 31, 2016, OPG maintained $25 million of short-term, uncommitted overdraft facilities and $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included

$349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016 and 2015, there were Letters of Credit outstanding under this agreement of $150 million which were issued in support of OPG's supplementary pension plan.

In October 2014, UMH Energy Partnership entered into an $8 million short-term, uncommitted overdraft facility and $16 million of irrevocable, standby Letters of Credit facilities in support of its operations. As at December 31, 2016, total Letters of Credit of $14 million had been issued under these facilities.

The following table summarizes the net interest expense for the years ended December 31:

(millions of dollars)	**2016**	**2015**
Interest on long-term debt	**290**	285
Interest on short-term debt	**8**	8
Interest income	**(7)**	(9)
Interest capitalized to property, plant and equipment and intangible assets	**(141)**	(102)
Interest related to regulatory assets and liabilities [1]	**(30)**	(2)
Net interest expense	**120**	180

[1] Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Bruce Lease Net Revenues Variance Account, the Capacity Refurbishment Variance Account, and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

8. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES AND FUNDS

The liabilities for fixed asset removal and nuclear waste management on a present value basis consist of the following as at December 31:

(millions of dollars)	**2016**	**2015**
Liability for nuclear used fuel management	**11,292**	12,793
Liability for nuclear decommissioning and L&ILW waste management	**7,811**	6,999
Liability for non-nuclear fixed asset removal	**381**	377
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169

The changes in the fixed asset removal and nuclear waste management liabilities for the years ended December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Liabilities, beginning of year	**20,169**	17,028
Increase in liabilities due to accretion [1]	**1,024**	906
(Decrease) increase in liabilities reflecting changes to the estimated useful lives of nuclear generating stations *(Note 3)*	**(1,567)**	2,330
Increase in liabilities due to nuclear used fuel and nuclear waste management expenses and other expenses [1]	**133**	123
Liabilities settled by expenditures on fixed asset removal and nuclear waste management	**(275)**	(218)
Liabilities, end of year	**19,484**	20,169

[1] Amounts shown exclude the impact of regulatory variance and deferral accounts.

OPG's fixed asset removal and nuclear waste management liabilities are comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating facilities, and other facilities. Costs will be incurred for activities such as preparation for safe storage, dismantling, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel and L&ILW material.

The determination of the accrual for fixed asset removal and nuclear waste management costs requires significant assumptions since these programs are long-term in nature. The most recent comprehensive update of the cost estimates for the nuclear decommissioning and nuclear waste management liabilities is contained in the approved 2017 ONFA Reference Plan, which covers the 2017-2021 period.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years. The estimates for the Nuclear Liabilities include cash flow estimates for decommissioning the nuclear stations for approximately 40 years after stations are shut down and to 2088 for placement of used fuel into the long-term disposal repository, followed by extended monitoring.

The significant assumptions underlying operational, technical, and economic factors used in the calculation of the accrued Nuclear Liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the nuclear waste programs including construction of waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, or the technology employed may result in significant changes to the value of the accrued liabilities. With programs of this duration and the evolving technology to handle the nuclear waste, there is a significant degree of uncertainty surrounding the measurement of the costs for these long-term programs. These costs may increase or decrease over time.

Liability for Nuclear Used Fuel Management Costs

The liability for nuclear used fuel management represents the cost of managing the highly radioactive used nuclear fuel bundles. The federal NFWA, proclaimed into force in 2002, required that Canada's nuclear fuel waste owners form a nuclear waste management organization, and that each waste owner establish a trust fund for used fuel management costs. This organization, the NWMO, is responsible for the design and implementation of Canada's plan for the long-term management of nuclear used fuel waste. To estimate its liability for nuclear used fuel management costs, OPG has adopted a conservative approach consistent with the Adaptive Phased Management concept approved by the Government of Canada, which assumes a deep geologic repository as part of the long-term management of nuclear used fuel, with an in-service date of 2043 at the earliest.

Liability for Nuclear Decommissioning and L&ILW Management Costs

The liability for nuclear decommissioning and L&ILW management represents the estimated costs of decommissioning the nuclear generating stations after the end of their service lives, as well as the cost of managing L&ILW generated by the stations. The significant assumptions used in estimating future nuclear fixed asset removal costs include a deferred dismantlement basis for decommissioning of the stations, whereby the reactors will remain in a safe state condition for a 30-year period prior to an approximate 10-year dismantlement period.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the accrued costs for the management of L&ILW include an L&ILW DGR. Agreement was previously reached with local municipalities for OPG to develop a deep geologic repository for the long-term management of L&ILW adjacent to OPG's Western Waste Management Facility. OPG has suspended design activities for the L&ILW DGR pending receipt of the site preparation and construction licence.

Liability for Non-Nuclear Fixed Asset Removal Costs

The liability for non-nuclear fixed asset removal primarily represents the estimated costs of decommissioning OPG's thermal generating stations at the end of their services lives. The liability is based on third-party cost estimates after an in-depth review of plant sites and an assessment of required clean-up and restoration activities, completed in 2011 for most of the thermal generating stations. For the purpose of measuring the liability, asset removal activities are estimated to take place over the next one to 15 years. As at December 31, 2016, the liability for non-nuclear fixed asset removal was $381 million (2015 – $377 million).

Ontario Nuclear Funds Agreement

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Segregated Funds based on the approved ONFA Reference Plan in effect.

OPG makes quarterly payments to the Used Fuel Segregated Fund over the life of its nuclear generating stations, as specified in the ONFA, including contributions to the NFWA Trust (the Trust). The Trust forms part of the Used Fuel Segregated Fund, and contributions to the Trust, as required by the NFWA, may be applied towards OPG's ONFA payment obligations. Required funding for 2016 under the ONFA was $150 million (2015 – $143 million). In 2016, OPG completed a comprehensive update of the estimate for its obligations for nuclear waste management and nuclear decommissioning, in line with the required reference plan update process under the ONFA. The results of the update were reflected in a new ONFA reference plan, for years 2017 to 2021, as well as an adjustment reducing the asset retirement obligation carried on OPG's consolidated balance sheet as at December 31, 2016. The 2017-2021 ONFA reference plan was approved by the Province in December 2016, with an effective date of January 1, 2017 (the 2017 ONFA Reference Plan). Based on the funded status of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund reflecting the revised, overall lower life cycle liability estimates per the 2017 ONFA Reference Plan, no contributions to the Nuclear Segregated Funds are required starting in 2017. Contributions may be required in the future should either or both of the funds be in an underfunded position when a new reference plan is prepared.

The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge the current nuclear decommissioning and waste management liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the Canadian Nuclear Safety Commission (CNSC) since 2003, on behalf of OPG. The Provincial Guarantee provides for any shortfall between the CNSC consolidated financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount of the Provincial Guarantee. The current value of the Provincial Guarantee amount of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016.

The investments in the Nuclear Segregated Funds include a diversified portfolio of equities and fixed income securities that are invested across geographic markets, as well as investments in infrastructure, real estate, and agriculture. The Nuclear Segregated Funds are invested to fund long-term liability requirements and, as such, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While short-term fluctuations in market value will occur, managing the long-term return of the Nuclear Segregated Funds remains the primary goal. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Decommissioning Segregated Fund

OPG bears the risk and liability for cost estimate changes and fund earnings in the Decommissioning Segregated Fund. As at December 31, 2016 and December 31, 2015, the Decommissioning Segregated Fund was in an overfunded position.

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund, which is the excess of the fair market value of the Decommissioning Segregated Fund assets over the estimated completion costs, as per the most recently approved ONFA Reference Plan. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the earnings recognized in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus, that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded. Based on the 2017 ONFA Reference Plan, the Used Fuel Segregated Fund was in an overfunded position as at December 31, 2016. As a result, the Decommissioning Segregated Fund balance was reduced by amounts due to the Province. When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets. The payable to the Province may be reduced in subsequent periods in the event that the Decommissioning Segregated Fund earns less than its target rate of return or in the event that a new ONFA Reference Plan is approved with a higher estimated decommissioning liability.

The Province's right to any excess funding in the Decommissioning Segregated Fund upon termination of the ONFA results in OPG capping its annual earnings generally at 3.25 percent plus the long-term Ontario Consumer Price Index (CPI) specified in the most recently approved ONFA Reference Plan, which is the rate of growth in the liability for the estimated completion cost, as long as the Decommissioning Segregated Fund is in an overfunded status of less than 120 percent.

Used Fuel Segregated Fund

OPG is responsible for the risk and liability of cost increases for used fuel waste management under the ONFA, subject to specified graduated liability thresholds, which limit OPG's total financial exposure for the first 2.23 million nuclear used fuel bundles at approximately $15 billion in present value dollars as at December 31, 2016. The graduated liability thresholds do not apply to incremental used fuel bundles beyond 2.23 million.

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined by ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return and the actual market return determined based on the fair value of the fund assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount OPG would pay to or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions for fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province, has the right at any time to access

the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. As at December 31, 2016, the Used Fuel Segregated Fund was overfunded in accordance with the 2017 ONFA Reference Plan. As such, the fund balances are reduced by amounts due to the Province.

Nuclear Segregated Funds

The nuclear fixed asset removal and nuclear waste management funds as at December 31 consist of the following:

	Fair Value	
(millions of dollars)	**2016**	**2015**
Decommissioning Segregated Fund	**8,317**	7,834
Due to Province – Decommissioning Segregated Fund	**(1,477)**	(1,285)
	6,840	6,549
Used Fuel Segregated Fund [1]	**11,082**	10,290
Due to Province – Used Fuel Segregated Fund	**(1,938)**	(1,703)
	9,144	8,587
Total Nuclear Segregated Funds	**15,984**	15,136
Less: current portion	**24**	15
Non-current Nuclear Segregated Funds	**15,960**	15,121

[1] The Ontario NFWA Trust represented $3,688 million as at December 31, 2016 (2015 – $3,409 million) of the Used Fuel Segregated Fund on a fair value basis.

The fair value of the securities invested in the Nuclear Segregated Funds as at December 31 is as follows:

	Fair Value	
(millions of dollars)	**2016**	**2015**
Cash and cash equivalents and short-term investments	**354**	343
Alternative investments	**1,989**	1,620
Pooled funds	**1,330**	1,311
Marketable equity securities	**9,503**	8,621
Fixed income securities	**6,181**	6,219
Net receivables/payables	**42**	10
	19,399	18,124
Due to Province	**(3,415)**	(2,988)
	15,984	15,136

The historical cost, gross unrealized aggregate appreciation and depreciation of investment, gross unrealized foreign exchange gains, and fair value of the Nuclear Segregated Funds as at December 31, 2016 and 2015 are summarized as follows:

(millions of dollars)	**Decommissioning Segregated Fund**	**2016 Used Fuel Segregated Fund**	**Total**
Historical cost	**6,896**	**9,385**	**16,281**
Gross unrealized gains (losses)			
Aggregate appreciation	**1,326**	**1,564**	**2,890**
Aggregate depreciation	**(165)**	**(222)**	**(387)**
Foreign exchange	**260**	**355**	**615**
	8,317	**11,082**	**19,399**
Due to Province	**(1,477)**	**(1,938)**	**(3,415)**
Total fair value	**6,840**	**9,144**	**15,984**
Less: current portion	**16**	**8**	**24**
Non-current fair value	**6,824**	**9,136**	**15,960**

(millions of dollars)	**Decommissioning Segregated Fund**	**2015 Used Fuel Segregated Fund**	**Total**
Historical cost	6,608	8,819	15,427
Gross unrealized gains (losses)			
Aggregate appreciation	1,098	1,283	2,381
Aggregate depreciation	(297)	(383)	(680)
Foreign exchange	425	571	996
	7,834	10,290	18,124
Due to Province	(1,285)	(1,703)	(2,988)
Fair value	6,549	8,587	15,136
Less: current portion	5	10	15
Non-current fair value	6,544	8,577	15,121

Net realized and unrealized gains or losses from investments for the years ended December 31, 2016 and 2015 are summarized as follows:

(millions of dollars)	2016 Decommissioning Segregated Fund	2016 Used Fuel Segregated Fund	2016 Total
Net realized gains			
Realized gains excluding foreign exchange	**84**	**180**	**264**
Realized foreign exchange gains	**30**	**41**	**71**
Net realized gains	**114**	**221**	**335**
Net unrealized gains			
Unrealized gains excluding foreign exchange	**360**	**442**	**802**
Unrealized foreign exchange losses	**(165)**	**(216)**	**(381)**
Net unrealized gains	**195**	**226**	**421**

(millions of dollars)	2015 Decommissioning Segregated Fund	2015 Used Fuel Segregated Fund	2015 Total
Net realized gains			
Realized gains	159	221	380
Realized foreign exchange gains	56	71	127
Net realized gains	215	292	507
Net unrealized gains			
Unrealized losses	(267)	(367)	(634)
Unrealized foreign exchange gains	335	439	774
Net unrealized gains	68	72	140

The change in the Nuclear Segregated Funds for the years ended December 31 is as follows:

(millions of dollars)	Fair Value 2016	2015
Decommissioning Segregated Fund, beginning of year	**6,549**	6,246
Increase in fund due to return on investments	**505**	507
Decrease in fund due to reimbursement of eligible expenditures	**(22)**	(19)
Increase in due to Province	**(192)**	(185)
Decommissioning Segregated Fund, end of year	**6,840**	6,549
Used Fuel Segregated Fund, beginning of year	**8,587**	8,133
Increase in fund due to contributions made	**150**	143
Increase in fund due to return on investments	**690**	642
Decrease in fund due to reimbursement of eligible expenditures	**(48)**	(57)
Increase in due to Province	**(235)**	(274)
Used Fuel Segregated Fund, end of year	**9,144**	8,587

The earnings from the Nuclear Segregated Funds during 2016 and 2015 were impacted by the Bruce Lease Net Revenues Variance Account authorized by the OEB. The earnings on the Nuclear Segregated Funds for the years ended December 31 are as follows:

(millions of dollars)	2016	2015
Decommissioning Segregated Fund	**313**	322
Used Fuel Segregated Fund	**455**	368
Bruce Lease Net Revenues Variance Account	**(22)**	14
Total earnings	**746**	704

9. INCOME TAXES

OPG follows the liability method of accounting for income taxes. The Company records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities.

A reconciliation between the statutory and the effective rate of income taxes is as follows:

(millions of dollars)	**2016**	**2015**
Income before income taxes	**621**	509
Combined Canadian federal and provincial statutory enacted income tax rates	**26.5%**	26.5%
Statutory income tax rates applied to accounting income	**165**	135
Increase (decrease) in income taxes resulting from:		
Impact of rate regulated accounting	**65**	29
Scientific Research and Experimental Development investment tax credits	**(42)**	(55)
Manufacturing and processing credit	**(9)**	(8)
Other	**(11)**	(9)
	3	(43)
Income tax expense	**168**	92
Effective rate of income taxes	**27.0%**	18.1%

Significant components of the income tax expense are presented in the table below:

(millions of dollars)	**2016**	**2015**
Current income tax expense:	**204**	59
Deferred income tax (recovery) expense:	**(36)**	33
Income tax expense	**168**	92

The income tax effects of temporary differences that give rise to deferred income tax assets and liabilities as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Deferred income tax assets:		
Fixed asset removal and nuclear waste management liabilities	**4,861**	5,032
Other liabilities and assets	**1,813**	1,699
	6,674	6,731
Deferred income tax liabilities:		
Property, plant and equipment and intangible assets	**(1,807)**	(2,119)
Nuclear fixed asset removal and nuclear waste management funds	**(3,996)**	(3,784)
Other assets and liabilities	**(1,700)**	(1,708)
	(7,503)	(7,611)
Net deferred income tax liabilities	**(829)**	(880)

During 2016, OPG recorded an increase in the deferred income tax liability for the income taxes that are expected to be recovered or refunded through regulated prices charged to customers of $46 million (2015 – a decrease of $69 million). Since these deferred income taxes are expected to be refunded through future regulated prices, OPG recorded a corresponding increase to the regulatory asset for deferred income taxes. As a result, the deferred income tax expense for 2016 and 2015 was not impacted.

The following table summarizes the deferred income tax liabilities recorded for the rate regulated operations that are expected to be recovered through future regulated prices:

(millions of dollars)	**2016**	**2015**
January 1:		
Deferred income tax liabilities on temporary differences related to regulated operations	**592**	644
Deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liability	**200**	217
	792	861
Changes during the year:		
Increase (decrease) in deferred income tax liabilities on temporary differences related to regulated operations	**35**	(52)
Increase (decrease) in deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liability	**11**	(17)
Balance as at December 31	**838**	792

The tax benefit associated with an income tax position is recognized only when it is more likely than not that such a position will be sustained upon examination by the taxing authorities based on the technical merits of the position. The current and deferred income tax benefit is equal to the largest amount, considering possible settlement outcomes, that is greater than 50 percent likely of being realized upon settlement with the taxing authorities.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(millions of dollars)	**2016**	**2015**
Unrecognized tax benefits, beginning of year	**72**	79
Additions based on tax positions related to the current year	**19**	16
Additions for tax positions of prior years	**2**	7
Reductions for tax positions of prior years	**(16)**	(14)
Other	**-**	(16)
Unrecognized tax benefits, end of year	**77**	72

As at December 31, 2016, OPG's unrecognized tax benefits were $77 million (2015 – $72 million), excluding interest and penalties, all of which, if recognized, would affect OPG's effective tax rate. Changes in unrecognized tax benefits over the next 12 months cannot be predicted with certainty.

OPG recognizes interest and penalties related to unrecognized tax benefits as income tax expense. As at December 31, 2016, OPG had recorded interest on unrecognized tax benefits of $8 million (2015 – $7 million). OPG considers its significant tax jurisdiction to be Canada. OPG remains subject to income tax examination for years after 2012.

OPG paid $98 million in income taxes (net of tax refunds) during 2016 (2015 – $47 million).

10. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of Accumulated Other Comprehensive Loss (AOCL), net of income taxes, during the years December 31, 2016 and 2015 are as follows:

	2016			
(millions of dollars)	**Unrealized Gains and Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities[1]**	**Total [1]**
AOCL, beginning of year	**(106)**	**(213)**	**-**	**(319)**
Actuarial loss on re-measurement of liabilities for pension and OPEB	**-**	**(6)**	**-**	**(6)**
Unrealized loss on available-for-sale securities	**-**	**-**	**(1)**	**(1)**
Amounts reclassified from AOCL	**19**	**12**	**-**	**31**
OCI for the year	**19**	**6**	**(1)**	**24**
AOCL, end of year	**(87)**	**(207)**	**(1)**	**(295)**

[1] All amounts are net of income taxes.

	2015		
(millions of dollars)	**Unrealized Gains and Losses on Cash Flow Hedges [1]**	**Pension and OPEB[1]**	**Total [1]**
AOCL, beginning of year	(117)	(379)	(496)
Net loss on cash flow hedges	(5)	-	(5)
Actuarial gain on re-measurement of liabilities for pension and OPEB	-	148	148
Amounts reclassified from AOCL	16	18	34
OCI for the year	11	166	177
AOCL, end of year	(106)	(213)	(319)

[1] All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the years ended December 31, 2016 and 2015 are as follows:

	Amount Reclassified from AOCL		
(millions of dollars)	**2016**	**2015**	**Statement of Income Line Item**
Amortization of losses from cash flow hedges			
Losses	**21**	18	Net interest expense and fuel expense
Income tax recovery	**(2)**	(2)	Income tax expense
	19	16	
Amortization of amounts related to pension and OPEB			
Actuarial losses and past service costs	**16**	25	See (1) below
Income tax recovery	**(4)**	(7)	Income tax expense
	12	18	
Total reclassifications for the year	**31**	34	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 11 for additional details).

11. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

Fund Assets

The OPG registered pension fund investment guidelines are stated in an approved Statement of Investment Policies and Procedures (SIPP). The SIPP is reviewed and approved by the Audit and Risk Committee of OPG's Board of Directors at least annually and includes a discussion of investment objectives and expectations, asset mix and rebalancing, and the basis for measuring the performance of the pension fund assets.

In accordance with the SIPP, investment allocation decisions are made with a view to achieve OPG's objective of meeting obligations of the plan as they come due. The pension fund assets are invested in four categories of asset classes. The first category is liability hedging assets which are intended to hedge the inflation and interest rate sensitivity of the plan liabilities. The second category is return enhancing assets which are intended to obtain higher investment returns compared to the returns expected for liability hedging assets. The third category is real assets which offer exposure to the combined characteristics of liability hedging and return enhancing assets. The fourth category is return diversifying strategies, which are intended to improve the overall return of the pension fund while mitigating the downside market risk.

To achieve the above objective, OPG has adopted the following target strategic asset allocation:

	Target
Asset Class	
Liability Hedging Assets	34%
Return Enhancing Assets	31%
Real Assets	20%
Return on Diversifying Assets	15%

The plan may enter into derivative securities, such as interest rate swaps and forward foreign exchange contracts, for risk management purposes, where such activity is consistent with the plan's investment objectives.

Significant Concentrations of Risk in Fund Assets

The assets of the pension fund are diversified to limit the impact of any individual investment. The pension fund is diversified across multiple asset classes. Fixed income securities are diversified among Canadian government bonds, government agency bonds, real return bonds, corporate bonds, and an interest rate overlay hedging program, which is disclosed under pooled funds. Equity securities are diversified across Canadian, US, and non-North American stocks. There are also real estate, infrastructure, and agriculture portfolios that represent approximately 12 percent of the total pension fund assets as at December 31, 2016. Investments in the above asset classes are further diversified across funds, investment managers, strategies, vintages, sectors and geographies, depending on the specific characteristics of each asset class.

Credit risk with respect to the pension fund's fixed income securities is managed by risk tolerance guidelines, which requires that fixed income securities comply with various investment constraints that ensure prudent diversification and prescribed minimum required credit rating quality. Credit risk, as it relates to the pension fund's derivatives, is managed through the use of International Swap and Derivatives Association documentation and counterparty management performed by the fund's investment managers.

Risk Management

Risk management oversight with respect to the pension fund includes, but is not limited to, the following activities:

- Periodic asset/liability management and strategic asset allocation studies
- Monitoring of funding levels and funding ratios
- Monitoring compliance with asset allocation guidelines and investment management agreements
- Monitoring asset class performance against asset class benchmarks
- Monitoring investment manager performance against benchmarks

- Monitoring of risk tolerance guidelines

Expected Rate of Return on Plan Assets

The expected rate of return on plan assets is based on the fund's asset allocation, as well as the return expectations considering long-term historical risks and returns associated with each asset class within the plan portfolio. The asset management decisions consider the economic liabilities of the plan.

Fair Value Measurements

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities. Refer to Note 13 for a detailed discussion of fair value measurements and the fair value hierarchy.

The following tables present pension plan assets measured at fair value in accordance with the fair value hierarchy:

	December 31, 2016			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	**690**	**-**	**-**	**690**
Fixed income				
Corporate debt securities	**-**	**407**	**-**	**407**
Government bonds	**-**	**3,483**	**-**	**3,483**
Equities				
Canadian	**1,451**	**291**	**-**	**1,742**
US	**1,495**	**-**	**-**	**1,495**
Non-North American	**1,643**	**-**	**-**	**1,643**
Pooled funds	**118**	**413**	**-**	**531**
Other	**(2)**	**-**	**-**	**(2)**
	5,395	**4,594**	**-**	**9,989**
Investments measured at NAV [1]				**3,865**
				13,854 [2]

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

[2] The table above excludes pension fund receivables and payables.

	December 31, 2015			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	374	-	-	374
Short-term investments	-	1	-	1
Fixed income				
Corporate debt securities	-	392	-	392
Government bonds	-	3,794	-	3,794
Equities				
Canadian	1,547	-	-	1,547
US	1,786	-	-	1,786
Non-North American	1,992	-	-	1,992
Pooled funds	37	147	-	184
Other	1	-	-	1
	5,737	4,334	-	10,071
Investments measured at NAV [1]				3,079
				13,150 [2]

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

[2] The table above excludes pension fund receivables and payables.

During the years ended December 31, 2016 and 2015, there were no transfers between Level 1 and Level 2.

Plan Costs and Liabilities

Details of OPG's pension and OPEB obligations, pension fund assets and costs are presented in the following tables:

	Registered and Supplementary Pension Plans		Other Post-Employment Benefits	
	2016	**2015**	**2016**	**2015**
Weighted Average Assumptions – Benefit Obligations at Year-End				
Rate used to discount future benefits	**3.90%**	4.10%	**3.94%**	4.13%
Salary schedule escalation rate - initial rate [1]	**1.80%**	1.60%	**1.80%**	1.60%
- thereafter	**2.50%**	2.50%	**2.50%**	2.50%
Rate of cost of living increase to pensions	**2.00%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**5.90%**	6.00%
Ultimate health care trend rate	**n/a**	n/a	**4.32%**	4.33%
Year ultimate health care trend rate reached	**n/a**	n/a	**2030**	2030
Rate of increase in disability benefits	**n/a**	n/a	**2.00%**	2.00%

[1] Per year to December 31, 2021.

	Registered and Supplementary Pension Plans		Other Post-Employment Benefits	
	2016	**2015**	**2016**	**2015**
Weighted Average Assumptions – Costs for the Year				
Expected return on plan assets, net of expenses	**6.00%**	6.25%	**n/a**	n/a
Rate used to discount future benefits	**4.10%**	4.00%	**4.13%**	4.03%
Salary schedule escalation rate - initial rate [1]	**1.60%**	2.00%	**1.60%**	2.00%
- thereafter	**2.50%**	2.50%	**2.50%**	2.50%
Rate of cost of living increase to pensions	**2.00%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**6.00%**	6.09%
Ultimate health care trend rate	**n/a**	n/a	**4.33%**	4.33%
Year ultimate health care trend rate reached	**n/a**	n/a	**2030**	2030
Rate of increase in disability benefits	**n/a**	n/a	**2.00%**	2.00%
Expected average remaining service life for employees (years)	**12**	12	**13**	13

[1] 1.60% per year to December 31, 2021; 2.00% per year to December 31, 2020.

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Components of Cost Recognized						
Current service costs	**277**	320	**7**	7	**67**	71
Interest on projected benefit obligation	**634**	630	**12**	13	**133**	127
Expected return on plan assets, net of expenses	**(734)**	(717)	**-**	-	**-**	-
Amortization of past service costs [1]	**-**	-	**-**	-	**1**	-
Amortization of net actuarial loss [1]	**192**	292	**4**	6	**19**	27
Recognition of LTD net actuarial (gain) loss	**-**	-	**-**	-	**(52)**	7
Costs recognized [2]	**369**	525	**23**	26	**168**	232

[1] The amortization of past service costs and net actuarial loss was recognized as an increase to OCI. This increase was partially offset by the impact of the Pension and OPEB Regulatory Asset discussed in Note 5.

[2] Excludes the impact of regulatory variance and deferral accounts discussed in Note 5.

Total benefit costs, including the impact of the Pension & OPEB Cash Payment Variance Account and the Pension & OPEB Cash Versus Accrual Differential Deferral Account, for the years ended December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Registered pension plans	**369**	525
Supplementary pension plans	**23**	26
Other post-employment benefits	**168**	232
Pension & OPEB Cash Payment Variance Account *(Note 5)*	**86**	(21)
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 5)*	**(182)**	(279)
Pension and other post-employment benefit costs	**464**	483

The pension and OPEB obligations and the pension fund assets measured as at December 31 are as follows:

	Registered Pension Plans		**Supplementary Pension Plans**		**Other Post-Employment Benefits**	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Change in Plan Assets						
Fair value of plan assets at beginning of year	**13,160**	12,407	**-**	-	**-**	-
Contributions by employer	**255**	362	**15**	24	**93**	94
Contributions by employees	**85**	72	**-**	-	**-**	-
Actual return on plan assets, net of expenses	**714**	1,151	**-**	-	**-**	-
Benefit payments	**(708)**	(832)	**(15)**	(24)	**(93)**	(94)
Fair value of plan assets at end of year	**13,506**	13,160	**-**	-	**-**	-
Change in Projected Benefit Obligations						
Projected benefit obligations at beginning of year	**15,475**	15,669	**299**	317	**3,188**	3,143
Employer current service costs	**277**	320	**7**	7	**67**	71
Contributions by employees	**85**	72	**-**	-	**-**	-
Interest on projected benefit obligation	**634**	630	**12**	13	**133**	127
Benefit payments	**(708)**	(832)	**(15)**	(24)	**(93)**	(94)
Past service costs	**-**	-	**-**	-	**-**	5
Net actuarial loss (gain)	**436**	(384)	**33**	(14)	**(303)**	(64)
Projected benefit obligations at end of year	**16,199**	15,475	**336**	299	**2,992**	3,188
Funded status – deficit at end of year	**(2,693)**	(2,315)	**(336)**	(299)	**(2,992)**	(3,188)

The following table provides the pension and OPEB liabilities and their classification on the consolidated balance sheets as at December 31:

	Registered Pension Plans		**Supplementary Pension Plans**		**Other Post-Employment Benefits**	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Current liabilities	**-**	-	**(17)**	(17)	**(95)**	(103)
Non-current liabilities	**(2,693)**	(2,315)	**(319)**	(282)	**(2,897)**	(3,085)
Total liabilities	**(2,693)**	(2,315)	**(336)**	(299)	**(2,992)**	(3,188)

The accumulated benefit obligations for the registered pension plans and supplementary pension plans as at December 31, 2016 are $14,909 million and $293 million, respectively (2015 – $14,327 million and $267 million, respectively). The accumulated benefit obligation differs from the projected benefit obligation in that the accumulated benefit obligation includes no assumption about future compensation levels.

The following table provides the components of OPG's OCI related to pension and OPEB plans and the offsetting Pension and OPEB Regulatory Asset as discussed in Note 5 for the years ended December 31, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Changes in plan assets and benefit obligations recognized in OCI						
Current year net actuarial loss (gain)	**456**	(818)	**33**	(14)	**(251)**	(71)
Current year past service costs	**-**	-	**-**	-	**-**	5
Amortization of net actuarial loss	**(192)**	(292)	**(4)**	(6)	**(19)**	(27)
Amortization of past service costs	**-**	-	**-**	-	**(1)**	-
Total decrease (increase) in OCI	**264**	(1,110)	**29**	(20)	**(271)**	(93)
Less: Increase (decrease) in Pension and OPEB Regulatory Asset*(Note 5)*	**253**	(916)	**27**	(15)	**(250)**	(70)
Net decrease (increase) in OCI (pre-tax)	**11**	(194)	**2**	(5)	**(21)**	(23)

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset that have not yet been recognized as components of benefit costs as at December 31, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Unamortized amounts recognized in AOCL						
Past service costs	**-**	-	**-**	-	**5**	6
Net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Total recognized in AOCL	**3,287**	3,023	**106**	77	**275**	546
Less: Pension and OPEB Regulatory Asset *(Note 5)*	**3,039**	2,786	**100**	73	**253**	503
Net recognized in AOCL (pre-tax)	**248**	237	**6**	4	**22**	43

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset as at December 31 (included in the table above) that are expected to be amortized as components of benefit costs and recognized as increases to OCI and reductions in the Pension and OPEB Regulatory Asset, in 2017, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post-Employment Benefits
Past service costs	**-**	**-**	**1**
Net actuarial loss	**183**	**6**	**-**
Total increase in AOCL	**183**	**6**	**1**
Less: Estimated decrease in Pension and OPEB Regulatory Asset	**170**	**6**	**1**
Net increase in AOCL (pre-tax)	**13**	**-**	**-**

Based on the most recently filed actuarial valuation, for funding purposes, of the OPG registered pension plan, as at January 1, 2016, there was an unfunded liability on a going-concern basis of $485 million and a deficiency on a hypothetical wind-up basis of $7,347 million. The funded status to be determined in the next filed funding valuation, which must have an effective date no later than January 1, 2019, could be significantly different. For 2017, OPG's required contribution to its registered pension plan is expected to be $248 million. The amount of OPG's additional,

voluntary contribution, if any, is revisited from time to time. OPG will continue to assess the requirements for contributions to the pension plan.

The supplementary pension plans are not funded, but are secured by Letters of Credit totalling $349 million as at December 31, 2016 (2015 – $345 million).

Estimated future benefit payments to participants in the pension and OPEB plans based on the assumptions used to measure the benefit obligations as at December 31, 2016 are as follows:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post-Employment Benefits
2017	687	18	95
2018	759	18	98
2019	750	18	101
2020	767	19	105
2021	795	19	108
2022 through 2026	4,218	102	613

A one percent increase or decrease in the health care trend rate would result in an increase in the current service and interest components of the 2016 OPEB costs of $45 million (2015 – $45 million) or a decrease in the service and interest components of the 2016 OPEB costs of $33 million (2015 – $33 million). A one percent increase or decrease in the health care trend rate would result in an increase in the projected OPEB obligation as at December 31, 2016 of $560 million (2015 – $584 million) or a decrease in the projected OPEB obligation as at December 31, 2016 of $426 million (2015 – $446 million).

12. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect the Company's assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the IESO-administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at December 31, 2016 was less than $1 million. OPG's fair value derivatives totalled a net liability of $24 million as at December 31, 2016 (2015 – $2 million).

The following table shows the amount related to derivatives recorded in AOCL and income for the years ended December 31:

(millions of dollars)	**2016**	**2015**
Cash flow hedges (recorded in AOCL)		
Losses in OCI	**-**	(7)
Reclassification of losses to net interest expense	**21**	20
Reclassification of gains to fuel expense	**-**	(2)
Commodity derivatives (recorded in income)		
Realized losses in revenue	**(12)**	(16)
Unrealized losses in revenue	**(3)**	(7)
Embedded derivative (recorded in income)		
Unrealized gains in revenue [1]	**-**	225

[1] Excludes the impact of the Bruce Lease Net Revenues Variance Account.

Existing net losses of $20 million deferred in AOCL as at December 31, 2016 are expected to be reclassified to net income within the next 12 months.

13. FAIR VALUE MEASUREMENTS

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial assets and liabilities into three levels, based on the inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The fair value of financial instruments traded in active markets is based on quoted market prices at the consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The Company is required to determine the fair value of all its financial instruments. The following is a summary of OPG's financial instruments as at December 31:

	Fair Value		Carrying Value [1]		
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**Balance Sheet Line Item**
Nuclear Segregated Funds (includes current portion)	**15,984**	15,136	**15,984**	15,136	Nuclear fixed asset removal and nuclear waste management funds
Investment in Hydro One shares	**212**	-	**212**	-	Available-for-sale securities
Payable related to cash flow hedges	**(48)**	(56)	**(48)**	(56)	Long-term accounts payable and accrued charges
Long-term debt (includes current portion)	**(6,033)**	(5,978)	**(5,520)**	(5,459)	Long-term debt
Other financial instruments	**(18)**	6	**(18)**	6	Various

[1] The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other current assets, short-term debt, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs.

The following tables present financial assets and financial liabilities measured at fair value in accordance with the fair value hierarchy as at December 31, 2016 and 2015:

	December 31, 2016			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**5,602**	**4,394**	**-**	**9,996**
Investments measured at NAV [1]				**1,086**
				11,082
Due to Province				**(1,938)**
Used Fuel Segregated Fund, net				**9,144**
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**4,171**	**3,243**	**-**	**7,414**
Investments measured at NAV [1]				**903**
				8,317
Due to Province				**(1,477)**
Decommissioning Segregated Fund, net				**6,840**
Investment in available-for-sale securities	**212**	**-**	**-**	**212**
Other financial assets	**6**	**2**	**9**	**17**
Liabilities				
Other financial liabilities	**(29)**	**(6)**	**-**	**(35)**

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

(millions of dollars)	December 31, 2015 Level 1	Level 2	Level 3	Total
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	5,114	4,293	-	9,407
Investments measured at NAV [1]				883
				10,290
Due to Province				(1,703)
Used Fuel Segregated Fund, net				8,587
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	3,870	3,227	-	7,097
Investments measured at NAV [1]				737
				7,834
Due to Province				(1,285)
Decommissioning Segregated Fund, net				6,549
Other financial assets	14	4	16	34
Liabilities				
Other financial liabilities	(18)	(8)	(2)	(28)

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

During the year ended December 31, 2016, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3:

(millions of dollars)	Other financial instruments
Opening balance, January 1, 2016	**14**
Unrealized losses included in revenue	**1**
Realized losses included in revenue	**(12)**
Purchases	**6**
Closing balance, December 31, 2016	**9**

Nuclear Segregated Funds

The fair value of the investments within the Nuclear Segregated Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Segregated Funds that are reported on the basis of NAV as at December 31, 2016:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Infrastructure	**1,205**	**648**	**n/a**	**n/a**
Real Estate	**713**	**406**	**n/a**	**n/a**
Agriculture	**71**	**128**	**n/a**	**n/a**
Pooled Funds				
Short-term Investments	**34**	**n/a**	**Daily**	**1 - 5 Days**
Fixed Income	**553**	**n/a**	**Daily**	**1 - 5 Days**
Equity	**743**	**n/a**	**Daily**	**1 - 5 Days**
Total	**3,319**	**1,182**		

The fair value of the pooled funds is classified as Level 2. Infrastructure, real estate and agriculture investments are measured using NAV as a practical expedient for determining their fair value.

Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

Real Estate

This class includes investments in institutional-grade real estate property. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests to another party, as stipulated in the partnership agreement. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements.

Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations, and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally

managed portfolios. The fair value of the investments in this class has been estimated using the NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

14. COMMON SHARES

As at December 31, 2016 and 2015, OPG had 256,300,010 common shares issued and outstanding at a stated value of $5,126 million. OPG is authorized to issue an unlimited number of common shares without nominal or par value. Any issue of new shares is subject to the consent of OPG's shareholder.

15. COMMITMENTS AND CONTINGENCIES

Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered by June 30, 2017, as required by the timetable.

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at December 31, 2016, the total amount of guarantees OPG provided to these entities was $83 million (2015 – $81 million). OPG may terminate some of these guarantees within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at December 31, 2016, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, were as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

Lease Commitments

The Company leases the Bruce A and Bruce B nuclear generating stations to Bruce Power. Under the lease, as amended in December 2015, Bruce Power has options to renew the lease up to the end of 2064. As per *Ontario Regulation 53/05* pursuant to the *Ontario Energy Board Act, 1998*, the difference between OPG's revenues, including lease revenues, and costs, including depreciation expense, associated with its ownership of the Bruce A and B nuclear generating stations is included in the determination of OPG's nuclear regulated prices established by the OEB. These revenues and costs are determined on the basis of the manner in which they are recognized in OPG's consolidated financial statements. As the assets on lease to Bruce Power are not prescribed facilities under *Ontario Regulation 53/05*, the net book value of the assets is not included in the regulated rate base. The net book value of property, plant and equipment on lease to Bruce Power as at December 31, 2016 was $2,986 million (2015 – $4,400 million).

Collective Bargaining Agreements

As at December 31, 2016, the Power Workers' Union (PWU) represented approximately 5,070 OPG regular employees or approximately 55 percent of OPG's regular workforce. The previous collective agreement between OPG and the PWU expired on March 31, 2015. In May 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on March 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each year of the agreement.

As at December 31, 2016, The Society of Energy Professionals (The Society) represented approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce. The governing collective agreement between OPG and The Society expired on December 31, 2015. In November 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on December 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each of the first two years of the agreement.

The changes to both collective agreements will provide existing employees with lump-sum payments for each of the first two years of the contract and eligibility to annually receive shares in Hydro One for up to 15 years starting in year three of the contract, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service.

16. BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel and low and intermediate level wastes, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Lease and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because the costs associated with the Nuclear Liabilities are included by the OEB in the determination of regulated prices for production from OPG's Pickering and Darlington nuclear generating stations, in accordance with the methodologies applied since the OEB's 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. OPG's share of the in-service generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of these activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the US market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and the Nanticoke generating stations' sites.

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The service fee included in OM&A expenses by segment in 2016 and 2015 was as follows:

(millions of dollars)	2016	2015
Regulated – Nuclear Generation	**34**	33
Regulated – Hydroelectric	**7**	6
Contracted Generation Portfolio	**4**	4
Reduction to Services, Trading, and Other Non-Generation	**45**	43

Segment Income (Loss) for the Year Ended December 31, 2016 *(millions of dollars)*	**Nuclear Generation**	**Regulated Nuclear Waste Manage-ment**	**Hydro-electric**	**Unregulated Contracted Generation Portfolio**	**Unregulated Services, Trading, and Other Non-Generation**	**Elimination**	**Total**
Revenue	**3,481**	**138**	**1,527**	**573**	**68**	**(134)**	**5,653**
Fuel expense	**315**	**-**	**353**	**58**	**1**	**-**	**727**
Gross margin	**3,166**	**138**	**1,174**	**515**	**67**	**(134)**	**4,926**
Operations, maintenance and administration	**2,210**	**146**	**325**	**178**	**22**	**(134)**	**2,747**
Depreciation and amortization	**925**	**-**	**225**	**75**	**32**	**-**	**1,257**
Accretion on fixed asset removal and nuclear waste management liabilities	**-**	**912**	**-**	**9**	**8**	**-**	**929**
Earnings on nuclear fixed asset removal and nuclear waste management funds	**-**	**(746)**	**-**	**-**	**-**	**-**	**(746)**
Income from investments subject to significant influence	**-**	**-**	**-**	**(37)**	**-**	**-**	**(37)**
Property taxes	**26**	**-**	**1**	**7**	**12**	**-**	**46**
Restructuring	**-**	**-**	**-**	**-**	**6**	**-**	**6**
Other losses (gains)	**1**	**-**	**(19)**	**1**	**-**	**-**	**(17)**
Income (loss) before interest and income taxes	**4**	**(174)**	**642**	**282**	**(13)**	**-**	**741**

Segment Income (Loss) for the Year Ended December 31, 2015 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydroelectric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	3,245	122	1,619	535	73	(118)	5,476
Fuel expense	301	-	345	39	2	-	687
Gross margin	2,944	122	1,274	496	71	(118)	4,789
Operations, maintenance and administration	2,196	132	340	185	48	(118)	2,783
Depreciation and amortization	717	-	282	72	29	-	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	-	880	-	8	7	-	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(704)	-	-	-	-	(704)
Income from investments subject to significant influence	-	-	-	(39)	-	-	(39)
Property taxes	26	-	1	7	11	-	45
Restructuring	-	-	-	-	6	-	6
Other losses	3	-	3	1	7	-	14
Income (loss) before interest and income taxes	2	(186)	648	262	(37)	-	689

Selected Consolidated Balance Sheet Information as at December 31, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydro-electric	Unregulated		Total
				Contracted Generation Portfolio	Services, Trading, and Other Non-Generation	
Segment property, plant and equipment in-service, net	**5,653**	**-**	**7,355**	**3,282**	**229**	**16,519**
Segment construction in progress	**2,988**	**-**	**166**	**301**	**28**	**3,483**
Segment property, plant and equipment, net	**8,641**	**-**	**7,521**	**3,583**	**257**	**20,002**
Segment intangible assets in-service, net	**7**	**-**	**2**	**4**	**66**	**79**
Segment development in progress	**3**	**-**	**-**	**1**	**16**	**20**
Segment intangible assets, net	**10**	**-**	**2**	**5**	**82**	**99**
Segment fuel inventory	**276**	**-**	**-**	**34**	**-**	**310**
Segment materials and supplies inventory, net:						
Current	**99**	**-**	**-**	**1**	**-**	**100**
Long-term	**340**	**-**	**1**	**4**	**-**	**345**
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	**-**	**15,984**	**-**	**-**	**-**	**15,984**
Fixed asset removal and nuclear waste management liabilities	**-**	**(19,103)**	**-**	**(160)**	**(221)**	**(19,484)**

Selected Consolidated Balance Sheet Information as at December 31, 2015 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Total
Segment property, plant and equipment in-service, net	6,972	-	7,413	3,319	324	18,028
Segment construction in progress	2,289	-	99	141	38	2,567
Segment property, plant and equipment, net	9,261	-	7,512	3,460	362	20,595
Segment intangible assets in-service, net	8	-	1	3	58	70
Segment development in progress	-	-	4	-	24	28
Segment intangible assets, net	8	-	5	3	82	98
Segment fuel inventory	304	-	-	40	-	344
Segment materials and supplies inventory, net:						
Current	95	-	-	1	-	96
Long-term	333	-	1	3	-	337
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	15,136	-	-	-	15,136
Fixed asset removal and nuclear waste management liabilities	-	(19,792)	-	(163)	(214)	(20,169)

Selected Consolidated Cash Flow Information *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Total
Year ended December 31, 2016						
Investment in property, plant and equipment, and intangible assets	**1,338**	**-**	**135**	**198**	**33**	**1,704**
Year ended December 31, 2015						
Investment in property, plant and equipment, and intangible assets	1,023	-	89	222	42	1,376

17. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	2016	2015
Receivables from related parties	**116**	(63)
Prepaid expenses	**(108)**	(35)
Other current assets [1]	**(32)**	(12)
Fuel inventory	**34**	(10)
Materials and supplies	**(4)**	(2)
Income taxes payable	**57**	42
Accounts payable and accrued charges	**5**	(20)
	68	(100)

[1] Includes other accounts receivable.

18. RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		2015	
(millions of dollars)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**15**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,070**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Hydro One Limited Shares

During 2015, OPG entered into renewed three-year collective bargaining agreements with the PWU and The Society. Changes to the respective collective agreements included increases to employee pension plan contributions and provisions for qualifying existing employees represented by the PWU and The Society to annually receive common shares of Hydro One for up to 15 years starting in the third year of the respective agreements. In April 2016, OPG acquired nine million common shares of Hydro One at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements. The shares acquired in this transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

OPG classified the Hydro One shares as AFS securities.

For the year ended December 31, 2016, unrealized losses recognized in accumulated AOCL related to the changes in the fair value of the Hydro One shares were $1 million, net of income taxes. The fair value of the shares was $212 million as at December 31, 2016. Refer to Notes 10 and 13 for the required disclosures related to the AFS securities.

19. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of PEC and Brighton Beach, which are accounted for using the equity method as described in Note 3. The details of the balance included in the consolidated balance sheets as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
PEC		
Current assets	**18**	14
Long-term assets	**256**	270
Current liabilities	**(8)**	(4)
Long-term liabilities	**(5)**	(5)
Brighton Beach		
Current assets	**5**	9
Long-term assets	**168**	177
Current liabilities	**(16)**	(15)
Long-term liabilities	**(7)**	(6)
Long-term debt	**(90)**	(104)
Investments subject to significant influence	**321**	336

20. RESEARCH AND DEVELOPMENT

For the year ended December 31, 2016, research and development expenses of $58 million (2015 – $91 million) were charged to operations.

21. NON-CONTROLLING INTEREST

Lower Mattagami Limited Partnership (LMLP) is an Ontario limited partnership between OPG and Amisk-oo-Skow Finance Corporation (AFC), a corporation wholly owned by the Moose Cree First Nation. The principal business of LMLP is the development, construction, ownership, operation and maintenance of hydroelectric generating facilities located on the Lower Mattagami River.

During 2014, all six new units constructed as part of the Lower Mattagami River project were declared in-service. Subsequent to the units' in-service dates, the AFC made contributions of $141 million to acquire their equity interest in LMLP, through the settlement of existing liabilities, including long-term debt. As of December 31, 2016, the AFC had a 25 percent interest in LMLP. OPG consolidates the results of LMLP in its consolidated financial statements and the non-controlling interest represents the AFC's equity interest in LMLP.

ONTARIO POWER GENERATION INC.

ANNUAL INFORMATION FORM

FOR THE YEAR ENDED DECEMBER 31, 2016

[DRAFT]

March 10, 2017

ANNUAL INFORMATION FORM
FOR THE YEAR ENDED DECEMBER 31, 2016

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PRESENTATION OF INFORMATION

References in this Annual Information Form (AIF) to the "Company", the "Corporation" or "OPG" are made to Ontario Power Generation Inc. Unless otherwise noted, the information contained in this AIF is at or for the year ended December 31, 2016. Amounts are expressed in Canadian dollars unless otherwise indicated. Financial information is presented in accordance with United States generally accepted accounting principles (US GAAP). This AIF is dated March 10, 2017.

ADDITIONAL INFORMATION

Additional information relating to the Company may be found on SEDAR at www.sedar.com. Additional financial information relating to the Company is provided in the Company's annual Management's Discussion and Analysis (MD&A) and audited consolidated financial statements as at and for the year ended December 31, 2016, which is available on SEDAR at www.sedar.com or on the Company's website at www.opg.com. ***The above information is made available in accordance with legal requirements of an AIF and is not, unless otherwise specifically stated, incorporated by reference into this AIF.***

Details regarding compensation paid to directors and executive officers of the Company during the financial year ended December 31, 2016 is included in OPG's Statement of Executive Compensation (Form 51-102F6), which is available on SEDAR at www.sedar.com and is incorporated by reference herein.

FORWARD-LOOKING INFORMATION

This AIF contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties. All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, OM&A expenditures, retention of critical talent, supplier and third party performance, and project expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this AIF are made only as of the date of this AIF. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

OPG faces various risks that could have a material adverse effect on its business, strategy, generating stations, reputation, financial condition, operating results, and generation development and other projects, as the context requires. There may be further risks and uncertainties that are not presently known, or that are not currently believed to be material, that may in the future adversely affect the Company's performance or financial condition. OPG may be exposed to a significant event that it is not fully insured or indemnified against or to a party that fails to meet its indemnification obligations. For further details on risks faced by OPG, see *Risk Factors*.

CORPORATE STRUCTURE

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was formed in April 1999 through the restructuring of Ontario Hydro's integrated electricity business. OPG was established under the *Business Corporations Act* (Ontario) (OBCA) and is wholly owned by the Province of Ontario (Province or Shareholder). OPG and the Province are parties to a Memorandum of Agreement (MOA) that sets out OPG's role and responsibilities. The current MOA was executed in July 2015, and reaffirmed for continuance by both the Ontario Minster of Energy and the OPG Board of Directors' Chair in the fourth quarter of 2016, as required by the MOA following a change in the Minister of Energy. For further details on the MOA, see *Interest of Management and Others in Material Transactions – Relationship with the Province and the OEFC*.

OPG's registered head office is located at 700 University Avenue, Toronto, Ontario, M5G 1X6, Canada.

OVERVIEW OF OPG

OPG is Ontario's largest clean energy generator. As at December 31, 2016, OPG operated two nuclear generating stations, three thermal generating stations, 65 hydroelectric generating stations, and one wind power turbine. The majority of OPG's generation is from its rate-regulated nuclear and rate-regulated hydroelectric stations. In addition, OPG and TransCanada Energy Ltd. co-own the 550 megawatt (MW) Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). Including its share of the co-owned facilities, OPG's total in-service generating capacity was 16,177 MW as at December 31, 2016, which represented approximately 45 percent of installed generation capacity in Ontario's electricity grid as reported by the Independent Electricity System Operator (IESO). OPG's in-service generating capacity as of December 31, 2016 excludes Unit 2 of the Darlington Nuclear GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment. OPG operates under an electricity generation licence issued by the OEB, which is valid until October 30, 2023. OPG expects the licence to be renewed in the future.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power L.P. (Bruce Power) and are not included in the generation and other operating statistics set out in this AIF.

All of OPG's owned and co-owned generating facilities are located in Ontario.

OPG's business operations are divided into the following business segments:

- ***Regulated – Nuclear Generation*** comprises the Pickering Nuclear GS and the Darlington Nuclear GS, which are subject to rate regulation, as well as the lease arrangement related to the Bruce nuclear generating stations;
- ***Regulated – Nuclear Waste Management*** reports the results of the Company's operations associated with the management of nuclear waste and the decommissioning of nuclear facilities;
- ***Regulated – Hydroelectric*** comprises the 54 OPG hydroelectric facilities subject to rate regulation;
- ***Contracted Generation Portfolio*** comprises the Company's generating operations that are under energy supply contracts; and
- ***Services, Trading and Other Non-Generation*** is a non-generation segment, which is not subject to rate regulation.

Pursuant to the *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05,* OPG receives OEB-authorized regulated prices for electricity generated from the Pickering and Darlington nuclear generating stations and the 54 hydroelectric facilities prescribed for rate regulation (collectively, prescribed facilities or regulated facilities). The OEB is an independent, quasi-judicial tribunal that regulates market participants in Ontario's natural gas and electricity industries, and reports to the Legislature of the

Province through the Ontario Ministry of Energy. OPG is Ontario's only electricity generator subject to rate regulation by the OEB.

Of OPG's 54 regulated hydroelectric facilities, 48 facilities were prescribed for rate regulation effective July 1, 2014 pursuant to a November 2013 amendment to *Ontario Regulation 53/05*. The remaining six regulated hydroelectric facilities and the Pickering and Darlington nuclear generating stations have been subject to rate regulation by the OEB since 2008.

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements (ESAs) with the IESO. The IESO is a non-profit corporate entity governed by an independent Board of Directors appointed by the Province and is responsible for operating the electricity market and directing the operation of the bulk electrical system in Ontario. Effective January 1, 2015, the Ontario Power Authority (OPA), an organization previously established by the Province with a mandate to contribute to the development of a reliable and sustainable electricity system in Ontario, merged with the IESO. The new entity continued under the name IESO. The IESO is the counterparty of ESAs and other agreements that were previously executed with the OPA.

ESAs are in effect for the capacity and production from OPG's three operating thermal generating stations – the oil/gas dual-fueled Lennox GS, the biomass powered Atikokan GS and the advanced biomass fueled unit at the Thunder Bay GS. The results of these stations are reported under the Contracted Generation Portfolio segment. The expiry dates of these ESAs range from January 2020 to July 2024. In addition, 50-year ESAs are in place for the hydroelectric facilities reported under the Contracted Generation Portfolio segment. The hydroelectric ESAs for the operating stations have expiry dates ranging from February 2059 to January 2064. The ESAs for the contracted generating stations result in a relatively stable stream of revenues from the Contracted Generation Segment.

OPG's revenue and electricity generation by business segment for the years ended December 31, 2016, 2015 and 2014 and OPG's in-service generating capacity as at December 31, 2016, 2015 and 2014 are summarized in the table below.

		Regulated – Nuclear Generation	Regulated – Nuclear Waste Management	Regulated – Hydroelectric	Contracted Generation Portfolio [1]	Services, Trading, and Other Non-Generation
2016	Revenue *(millions of dollars)* [2]	**3,481**	**138**	**1,527**	**573**	**68**
	Electricity Generation *(terawatt hours)*	**45.6**	**N/A**	**29.5**	**3.1**	**N/A**
	In-service Generating Capacity *(MW)* [3]	**5,728**	**N/A**	**6,421**	**4,028**	**N/A**
2015	Revenue *(millions of dollars)* [2]	3,245	122	1,619	535	73
	Electricity Generation *(terawatt hours)*	44.5	N/A	30.4	3.1	N/A
	In-service Generating Capacity *(MW)*	6,606	N/A	6,428	4,021	N/A
2014	Revenue *(millions of dollars)* [2]	3,015	121	1,417	329	197
	Electricity Generation *(terawatt hours)*	48.1	N/A	31.3	2.8	N/A
	In-service Generating Capacity *(MW)*	6,606	N/A	6,426	4,027	N/A

[1] The in-service generating capacity includes OPG's share of 275 MW for PEC and 280 MW for Brighton Beach, and the electricity generation includes OPG's share of its 50 percent ownership in these stations.
[2] Revenue for each segment is shown before inter-segment elimination.
[3] Regulated – Nuclear Generation segment excludes the generating capacity of 878 MW from Unit 2 of the Darlington GS, which has been undergoing refurbishment since mid-October 2016.

For the year ended December 31, 2016, OPG's electricity generation accounted for over 50 percent of the total energy generated on Ontario's electricity grid, as reported by the IESO.

OPG is subject to a number of provincial and federal legislation and regulations, including the decisions of administrative tribunals or other regulatory bodies, and to Canada's international obligations under certain international treaties. Collectively, these sources dictate many of the constraints within which OPG is permitted to operate its facilities and manage its business.

Strategic Imperatives

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder. The four strategic imperatives of OPG are described below.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce. Workplace safety and public safety are overriding priorities in all activities performed at OPG.

Project Excellence

OPG is pursuing a number of generation development and other projects in support of Ontario's electricity planning initiatives. OPG's major generation projects include the refurbishment of the Darlington GS, the construction of the Peter Sutherland Sr. hydroelectric GS, the refurbishment of the Sir Adam Beck Pump hydroelectric GS reservoir, the expansion of the Ranney Falls hydroelectric GS, and the construction of a solar facility at the Nanticoke GS site. OPG aims to be an industry leader in project management capability and performance.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth. Inherent in this priority are the following objectives:

- Increase revenue, reduce costs and achieve appropriate return;
- Ensure availability of cost effective funding for operational needs, generation development projects and long-term obligations; and
- Pursue opportunities to expand the existing core business and capitalize on new growth paths including emerging renewable energy opportunities.

Social Licence

As the largest, publicly-owned electricity generator in Ontario with geographically diverse operations, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations.

OPG has in place a Code of Business Conduct that establishes the standards, expectations, and accountabilities for ethical behaviour. All employees and all parties with whom the Company does business are expected to abide by OPG's Code of Business Conduct. A copy of the Code of Business Conduct can be found on SEDAR at www.sedar.com and is also available on the Company's website at www.opg.com.

Further details on OPG's strategic imperatives can be found in the corresponding sections of the Company's 2016 annual MD&A in the section, *Core Business, Strategy and Outlook.*

GENERAL DEVELOPMENT OF THE BUSINESS

The following is a summary of key developments in OPG's business since January 2014.

General Development

OPG's Regulated Prices and Other OEB-Related Developments

Energy revenue generated from the Company's regulated nuclear and regulated hydroelectric facilities is based on regulated prices determined by the OEB through public proceedings. To date, the regulated prices have included a volumetric base regulated price, and volumetric rate riders for the recovery or repayment of approved variance and deferral account balances. As the regulated operations account for the majority of the Company's electricity generation, the outcomes of OPG's applications to the OEB for regulated prices determine a large portion of the Company's revenues and can have a significant impact on the Company's financial performance.

The following are the OEB-authorized regulated prices for electricity generated from the Company's regulated facilities in effect during the years ended December 31:

	2016	2015		2014	
($/megawatt hour)		January 1 to June 30	July 1 to December 31	January 1 to October 31	November 1 to December 31
Regulated – Nuclear Generation					
Base regulated price	**59.29**	59.29	59.29	51.52	59.29
Rate riders	**10.84** [1]	1.33	12.17 [1]	4.18	4.18
	70.13	60.62	71.46	55.70	63.47
Regulated – Hydroelectric					
Hydroelectric generating stations prescribed for rate regulation prior to 2014					
Base regulated price	**40.20**	40.20	40.20	35.78	40.20
Rate riders	**3.19** [1]	6.04	9.23 [1]	2.02	2.02
	43.39	46.24	49.43	37.80	42.22
Hydroelectric generating stations prescribed for rate regulation effective in 2014					
Base regulated price	**41.93**	41.93	41.93	N/A	41.93
Rate rider	**3.19** [1]	-	3.19 [1]	N/A	-
	45.12	41.93	45.12	N/A	41.93

[1] The increase in the 2015 rate riders effective July 1, 2015 was implemented by the OEB on October 1, 2015. As such, the OEB authorized interim period rate riders for the period from October 1, 2015 to December 31, 2016 to allow for the recovery of the increase in the riders for the period from July 1, 2015 to September 30, 2015. The revenue from the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The nuclear interim period rate rider was $2.17 per megawatt hour (MWh) and the regulated hydroelectric interim period rate rider was $0.64/MWh. These interim period rate riders have not been included in the above table. All rate riders in effect during 2016 expired on December 31, 2016.

Base Regulated Prices

Base regulated prices in effect in 2014 through 2016 were established using a forecast cost-of-service methodology based on OEB-approved revenue requirements, taking into account OEB-approved forecasts of production and operating costs for the regulated facilities, and a return on rate base determined using OEB's prescribed rate of return and an OEB-approved deemed capital structure. Rate base for OPG represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital. In accordance with *Ontario Regulation 53/05*, OPG's nuclear regulated prices are reduced by the amount of OPG's revenues, net of costs, from leasing the Bruce nuclear generating stations to Bruce Power. As directed by the OEB, OPG's revenues and costs related to the Bruce nuclear generating stations are determined in accordance with US GAAP for the purposes of establishing OPG's nuclear regulated prices in accordance with *Ontario Regulation 53/05*. This includes OPG's costs related to its obligations for nuclear waste management and nuclear facilities decommissioning associated with the Bruce nuclear generating stations.

The base regulated prices effective November 1, 2014 were established by the OEB's November 2014 decision and December 2014 order on OPG's September 2013 rate application. This included regulated prices effective November 1, 2014 for the 48 hydroelectric facilities that were prescribed for rate regulation effective July 1, 2014. Prior to November 1, 2014, the generation revenue for these hydroelectric facilities was based on the Ontario electricity spot market price, including for the period from July 1, 2014 to November 1, 2014 as determined by the OEB. The base regulated prices effective November 1, 2014 are expected to remain in effect until superseded by a subsequent order of the OEB.

The regulated prices effective November 1, 2014 for the nuclear facilities and the hydroelectric facilities prescribed for rate regulation prior to 2014 were determined by the OEB based on approved 24-month revenue requirements for the 2014 to 2015 period totaling approximately $7.3 billion. This reflected a reduction of $833 million from the revenue requirements submitted by OPG. The regulated price for the 48 hydroelectric facilities prescribed for rate regulation beginning in 2014 was established based on an approved 18-month revenue requirement for the period from July 1, 2014 to December 31, 2015 of approximately $750 million, a reduction of $101 million from OPG's submission. The most significant adjustments made by the OEB to OPG's rate request included the following:

- Allowed pension and OPEB costs were limited to the forecast 2014 and 2015 cash expenditures for these plans, which were approximately $600 million lower, including related tax impacts, than the forecast accrual costs submitted by OPG. The difference between accrual costs and cash expenditures is being recorded in a deferral account authorized by the OEB. For further details, see *General Development of the Business – General Development – OPG's Regulated Prices and Other OEB-Related Developments – Pension and OPEB Cost Recovery Methodology.*
- A reduction in overall forecast compensation costs of $100 million in each of 2014 and 2015 across all of OPG's regulated facilities.
- An increase in the forecast nuclear production of 0.5 terawatt hours (TWh) annually used to set the nuclear regulated prices, which had the effect of reducing the approved nuclear regulated price.
- The rate base addition for the Niagara Tunnel project to construct a third tunnel to divert additional water to OPG's generating stations on the Niagara River was limited to $1,365 million, which resulted in a write-off of $77 million being charged to operations in 2014.
- A reduction in the 2014 income tax expense included in the regulated prices by the amount of the regulatory tax loss calculated for 2013, which reduced the 2014/2015 revenue requirement by approximately $70 million.

In December 2014, OPG filed a motion with the OEB asking it to review and vary the parts of its November 2014 decision related to the disallowance of the Niagara Tunnel project expenditures and the application of the 2013 regulatory tax loss against the 2014/2015 revenue requirement. In its January 2016 decision on the motion, the OEB reversed a portion of the Niagara Tunnel project disallowance and upheld the original tax loss decision. In the first quarter of 2016, OPG recorded a gain of $22 million to

recognize the expected future recovery from customers of the reversed portion of the Niagara Tunnel project disallowance.

In its November 2014 decision, the OEB adjusted the deemed capital structure applied to OPG's total regulated rate base to 45 percent equity and 55 percent debt, from 47 percent equity and 53 percent debt used previously. In making this adjustment, the OEB found that there had been an overall improvement in the risk profile of OPG's regulated operations, based on the increased proportionate share of rate base related to hydroelectric facilities. This reduced the 2014/2015 revenue requirements. In general, OPG's actual capital structure contains a significantly higher proportion of equity than has been reflected in the OEB-approved deemed capital structure, which has had the effect of reducing OPG's return on shareholder's equity.

The OEB-authorized effective date of November 1, 2014 for the base regulated prices was substantially later than the January 1, 2014 date requested by OPG. Consistent with the November 1, 2014 effective date, for the period from January 1, 2014 to October 31, 2014, OPG continued to record additions to the existing variance and deferral accounts pursuant to the OEB's previous decisions and orders, with reference to amounts embedded in the base regulated prices in effect prior to November 1, 2014.

The base regulated prices in effect prior to November 1, 2014 were established pursuant to the OEB's decision and order issued in March 2011 and April 2011, respectively. The prices had an effective date of March 1, 2011 and were based on approved 24-month revenue requirements totaling approximately $6.7 billion.

Variance and Deferral Accounts and Rate Riders

Variance and deferral accounts are typically established by the OEB to capture, for subsequent review and approval, differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or to record the impact of items not reflected in the approved regulated prices. Such accounts generally help to mitigate risks and uncertainties both to the regulated entity and its customers.

The OEB has authorized several variance and deferral accounts for OPG, including those required by *Ontario Regulation 53/05*. The authorized accounts include those related to the gross margin impact of variability in regulated hydroelectric electricity production due to differences between the forecast and actual water conditions and due to the effect of SBG conditions, changes in liabilities for nuclear waste management and nuclear decommissioning, changes in revenues and costs related to the lease and related agreements with Bruce Power for the Bruce nuclear generating stations, and variances in the revenue requirement impact of capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to the regulated facilities, including the Darlington Refurbishment project. The Darlington Refurbishment project is discussed under *General Development of the Business – Nuclear Business Development – Darlington Refurbishment*. There is currently no regulatory variance or deferral account related to the impact of generation performance of OPG's nuclear stations on revenue from base regulated prices.

Approved balances in the regulatory variance and deferral accounts authorized by OPG are recovered or refunded through volumetric rate riders. The additional revenue from the riders is largely offset by a corresponding increase in amortization expense related to the regulatory balances, which are typically recognized as assets (amounts recoverable from customers) or liabilities (amounts payable to customers) on the Company's balance sheet. Differences in amounts recovered or repaid through rate riders due to differences between actual and forecast production volumes are recorded in separate variance accounts for future disposition.

The rate riders in effect in 2015 and 2016 included those authorized by the OEB's October 2015 order on OPG's application in 2014 to recover or repay most of the December 31, 2014 variance and deferral account balances, discussed below. The 2015 rate riders also included those established by the OEB's December 2014 order on OPG's September 2013 rate application from January 1, 2015 to December 31,

2015. The December 2014 order allowed for recovery of $189 million recorded in certain variance and deferral accounts as at December 31, 2013, without adjustments.

The total balances approved for recovery by the OEB's October 2015 order were approximately $1.8 billion, of which approximately $1.5 billion was the subject of an OEB-approved partial settlement agreement reached by OPG and intervenors in June 2015. The remaining balances of $263 million were approved by the OEB's September 2015 decision, without adjustments. The rate riders authorized by the October 2015 order were in effect from July 1, 2015 to December 31, 2016 and allowed for recovery of $933 million of the total approved balances. The remaining approved balances will be subject to recovery after 2016, including through OPG's May 2016 application for new regulated prices, which is discussed under *General Development of the Business – General Development – OPG's Regulated Prices and Other OEB-Related Developments – OPG's 2016 Application for New Regulated Prices*.

The rate riders in effect during 2014 reflected the terms of a 2013 OEB-approved settlement agreement between OPG and intervenors, which provided for the recovery or repayment of most OEB-authorized variance and deferral account balances as at December 31, 2012. The settlement agreement provided for recovery of $633 million over the 2013/2014 period.

Amendments to Ontario Regulation 53/05

In November 2015, the Province amended *Ontario Regulation 53/05* to establish a deferral account, effective January 1, 2017, that will record, for future recovery, a portion of the annual OEB-approved revenue requirement for OPG's regulated nuclear facilities, with a view of making more stable year-over-year changes in OPG's nuclear regulated prices during the Darlington Refurbishment period. The amended regulation requires the OEB to determine the revenue requirements for OPG's nuclear facilities on a five-year basis for the 10-year period beginning on January 1, 2017. The portion of the approved revenue requirement deferred in the new account each year will also be determined by the OEB on a five-year basis during this 10-year period. The regulation stipulates that the deferral account will record interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually, and that the OEB shall authorize recovery of the balance in the account on a straight line basis over a period not to exceed 10 years following the end of the Darlington Refurbishment project. OPG expects to recognize the deferred amounts as income in the period to which the approved revenue requirements relate.

The regulation was also amended in November 2015 to require the OEB to accept the need for the Darlington Refurbishment project in light of Ontario's 2013 Long-Term Energy Plan (LTEP) and the related policy of the Province endorsing the need for nuclear refurbishment. The LTEP is discussed under *General Development of the Business – General Development – Ontario's Long-Term Energy Plan and New Nuclear Units*.

Pension and OPEB Cost Recovery Methodology

Using the methodology previously applied by the OEB in setting OPG's regulated prices, the revenue requirements submitted by OPG in its September 2013 rate application included a forecast of 2014 and 2015 pension and OPEB costs determined on an accrual basis in accordance with US GAAP. In its November 2014 decision and December 2014 order on the application, the OEB approved revenue requirements based on OPG's estimated minimum required contributions to its registered pension plan, and a forecast of OPG's expenditures on the OPEB and supplementary pension plans. In directing this reduction in the revenue requirement, the OEB agreed with OPG and certain other parties that a generic proceeding on the regulatory treatment and recovery of pension and OPEB costs would be beneficial. The OEB also indicated that a change in the recovery methodology for OPG's pension and OPEB amounts from the accrual basis, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of the generic proceeding.

Pending the generic proceeding, the OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Effective November 1, 2014, this deferral account records the difference

between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and the corresponding actual cash expenditures for these plans. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of a future generic OEB proceeding on the regulatory treatment and recovery of pension and OPEB costs. The balance in the account is recognized as a regulatory asset on OPG's balance sheet.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, the OEB held a public stakeholder forum as part of the consultation. In September 2016, OPG made a written submission of its position on the matter to the OEB. If the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory asset recorded for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. **[MONITOR]**

OPG's 2016 Application for New Regulated Prices

In May 2016, OPG filed a five-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. For the first time since OPG's prescribed assets became subject to rate regulation, the new prices are expected to be determined on an incentive ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. Rate-setting under incentive regulation is typically more formulaic and involves greater de-coupling of a regulated entity's allowed revenues or prices from its costs than under a cost-of-service rate-setting methodology.

For the hydroelectric facilities, OPG's May 2016 application proposes to escalate the existing base regulated prices, with some adjustments, for each of years 2017 to 2021, based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production.

The proposed nuclear revenue requirements reflect OPG's plans to pursue Pickering extended operations until 2024, discussed in *General Development of the Business – Nuclear Business Development – Pickering Extended Operations to 2024*, as well as the projected impact of the scheduled return to service of the first refurbished Darlington unit in the first quarter of 2020. OPG is also seeking an increase in the deemed capital structure applied to its total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 debt applied by the OEB in setting the existing regulated prices.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG's application incorporates a nuclear rate smoothing proposal. The proposal would result in OPG deferring a portion of the approved nuclear revenue requirements in a deferral account for future collection. In addition, OPG's application requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment in 2016 through rate riders in effect to December 31, 2016. The application also requests the continuation of all applicable existing variance and deferral accounts.

In December 2016, the OEB issued an order granting OPG's request to declare the existing base regulated prices interim, effective January 1, 2017. This preserves the OEB's ability to make new regulated prices effective as early as January 1, 2017, which would allow OPG to recover the difference between the approved new regulated prices and the existing prices for the period between the effective

date of the new regulated prices and their implementation date based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017, following a public proceeding. The public proceeding is in progress, with the oral hearing portion having commenced in February 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

Supreme Court of Canada's Decision on 2011 OEB Ruling

In September 2015, the Supreme Court of Canada (Supreme Court) issued its decision upholding the OEB's disallowance of $145 million of OPG's forecast nuclear compensation costs for the 2011 to 2012 period. The majority of these costs were based on previously negotiated collective bargaining agreements. This disallowance was part of the OEB's March 2011 decision on OPG's application for regulated prices effective March 1, 2011. The Supreme Court decision underscores that OPG must continue to establish the reasonableness of both committed and future costs as part of the rate-setting process.

Renewal of Collective Agreements and Acquisition of Hydro One Limited Shares

Most of OPG's regular employees are represented by one of two unions: the Power Workers' Union (PWU) and The Society of Energy Professionals (The Society). As at December 31, 2016, the PWU represented approximately 55 percent of OPG's regular workforce, while The Society represented approximately 34 percent of the regular workforce.

The previous collective agreement between OPG and the PWU expired on March 31, 2015. In May 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on March 31, 2018. The changes to the collective agreement included increases to employee pension plan contributions in each year of the agreement. The previous collective agreement between OPG and The Society expired on December 31, 2015. In November 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on December 31, 2018. Changes to the collective agreement included increases to employee pension plan contributions in each of the first two years of the agreement. The changes in pension plan contributions apply to current employees and future employees of both unions, and do not have an end date.

The changes to both collective agreements provided existing employees with lump sum payments for each of the first two years of the respective contract and eligibility to annually receive shares in Hydro One Limited (Hydro One) for up to 15 years starting in the third year of the contract, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service. The lump sum payments and future share awards are intended to compensate current eligible employees, over a defined period, for their increased pension plan contributions.

In April 2016, OPG acquired nine million common shares of Hydro One at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements. The shares acquired in this transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights at OPG facilities. These bargaining rights are established either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. All of these collective agreements currently have multi-year terms, expiring on April 30, 2020.

Ontario's Long-Term Energy Plan and New Nuclear Units

From October 2016 to December 2016, the Government of Ontario conducted a consultation process as part of the update to the LTEP, a document periodically published by the Ontario Ministry of Energy to outline the Province's long-term plans for the future development of Ontario's electricity system. OPG made a formal submission as part of the consultation as it relates to OPG's core generation business and growth opportunities. The Ontario Ministry of Energy has indicated that the development of the updated LTEP, scheduled to be published in 2017, will balance the principles of affordability, reliability, clean energy, community and Indigenous engagement, as well as conservation and demand management.

The last LTEP was released by the Government of Ontario in December 2013. Key elements of the 2013 LTEP that impacted OPG included the planned refurbishment of the four-unit Darlington GS, Bruce Power's planned refurbishment of the six un-refurbished units of the Bruce nuclear generating stations, and the Province's encouragement of OPG to explore new business lines and opportunities inside and outside Ontario. The 2013 LTEP indicated that by 2025, 20,000 MW of renewable energy would be online, representing about one half of Ontario's installed capacity, including 10,700 MW of wind, solar, and bioenergy capacity by 2021 and 9,300 MW of hydroelectric capacity by 2025.

The 2013 LTEP stated that while the Province would not proceed, at that time, with the construction of two new nuclear reactors at the Darlington site, the Ontario Ministry of Energy would work with OPG to maintain the site preparation licence granted by the Canadian Nuclear Safety Commission (CNSC) in relation to the potential construction of these reactors. As such, OPG has been undertaking activities required to support the CNSC Power Reactor Site Preparation Licence and the Darlington New Nuclear Project Environmental Assessment (EA). The Joint Review Panel's (JRP) Report on the EA concluded that the project was not likely to cause significant adverse environmental effects, given mitigation. In April 2016, the Supreme Court dismissed the application for leave to appeal filed by the parties that had challenged the Darlington New Nuclear Project EA through a judicial review, concluding the litigation on the matter. The CNSC site preparation licence expires in 2022.

Since the issuance of the 2013 LTEP, the Province has confirmed that it will proceed with OPG's refurbishment of the Darlington GS, approved OPG's plans to pursue the continued safe and reliable operation of two units at the Pickering GS to 2022 with the four remaining units continuing to operate until 2024, and announced an updated agreement between the IESO and Bruce Power that provides for the refurbishment of the six un-refurbished units of the Bruce nuclear generating stations. These developments are discussed further in *General Development of the Business – Nuclear Business Development*.

Shareholder Declarations and Resolutions to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. An active program to locate a buyer for these real estate assets was initiated in October 2016, and a purchase and sale agreement was executed in December 2016. The sale is expected to be completed during the second quarter of 2017.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. OPG is currently in the process of preparing the site for sale.

Pursuant to both Shareholder Declarations and Shareholder Resolutions, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer a portion of the proceeds from disposition of the above assets into the Province's Consolidated Revenue Fund. Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business.

For a complete list of Shareholder directives, see *Interest of Management and Others in Material Transactions – Relationship with the Province and the OEFC – Shareholder Directives*.

Business Transformation

OPG has completed a multi-year initiative with the objective of transforming itself into a more streamlined, agile and efficient organization. The business transformation initiative was intended to drive sustainable change across the Company, while ensuring that there is no adverse impact on the safety, reliability and environmental sustainability of OPG's operations. OPG's cumulative savings from reductions in regular headcount from ongoing operations, through the business transformation and other initiatives since the beginning of 2011, reached $1 billion in 2016.

The business transformation initiative involved aggressively pursuing cost control and efficiency improvements at the enterprise and business unit level, including realignment of work, streamlining of processes and leveraging workforce attrition. As part of the initiative, OPG implemented a centre-led organizational model intended to more efficiently utilize resources. In 2015, OPG successfully completed a large-scale initiative, the Enterprise System Consolidation Project, to streamline the company's software systems and improve business processes by implementing a common enterprise software platform.

Although business transformation has concluded as a discrete initiative, improving organizational performance and building on efficiency gains achieved to date remains a key priority for the Company. OPG continues to review its cost structure, identify cost improvement strategies and embed an outcomes-driven culture that reinforces low cost, efficiency, and organizational agility as part of business decision-making.

Nuclear Business Development

Darlington Refurbishment

Government's Endorsement and Transition to Execution Phase

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years, into the 2050s. In January 2016, the Government of Ontario's support for the Darlington Refurbishment project was affirmed through the Ontario Minister of Energy's announcement endorsing OPG's plan to refurbish the four Darlington units at a total project budget of $12.8 billion, including capitalized interest and escalation. The Province's announcement followed the approval of the project budget and schedule by OPG's Board of Directors in November 2015. The refurbishment of the last unit is scheduled to be completed by 2026. *Ontario Regulation 53/05* requires the OEB to ensure that OPG recovers capital and non-capital costs and firm financial commitments in respect of the Darlington Refurbishment project, if the OEB is satisfied that the costs were prudently incurred and that the firm financial commitments were prudently made.

The refurbishment project is a multi-phase program comprising several sub-projects. The major work streams include: de-fueling of reactors and refurbishment of the fuel handling equipment; removal and replacement of feeder tubes and fuel channel assemblies in each reactor (Retube and Feeder Replacement or RFR); inspections and repairs of turbine generator sets and replacement of associated control systems; mechanical cleaning, water lancing, and inspection and maintenance work on steam generators; and replacement or repairs of certain other station components referred to as balance of plant. The RFR is the largest sub-project and represents a majority of the critical path schedule.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, ahead of schedule, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support

the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project.

Preparation and execution activities on the major sub-projects and the planned deliveries of the major reactor components, including fuel channels and feeder tubes, are tracking in line with the project schedule. Detailed engineering design for the project has been substantially completed.

A number of pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, in support of the execution phase of the project have been completed, with the remaining projects continuing to track for completion in line with the refurbishment execution schedule.

Major pre-requisite and preparatory work completed since the beginning of 2014 includes the following:

- A training and reactor mock-up facility was completed in 2014, allowing for simulation and training for refurbishment execution tasks.
- In November 2015, the Refurbishment Project Office was completed. The facility acts as a secure entry point and provides supporting facilities for refurbishment personnel.
- The RFR Island Support Annex was completed in February 2016. The facility houses RFR field preparatory, contractor management, and project oversight activities.
- The specialized tooling for removal and replacement of feeder tubes and fuel channel assemblies in each reactor was delivered to OPG's reactor training and mock-up facility in the second quarter of 2016, as planned, and testing of the tooling has been completed.
- All 28 storage tanks have been installed in the Heavy Water Storage and Drum Handling Facility, which will provide storage and processing capability for the removal of heavy water from the units during refurbishment, as well as for continued station operations.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of the second unit, Unit 3, at the Darlington GS and is entering into associated commitments to procure major components that require long-lead times. These planning activities are being undertaken in accordance with the refurbishment project schedule.

All major contracts for the Darlington Refurbishment project that OPG expected to award were in place prior to proceeding with the first unit refurbishment. This included the RFR execution phase contract awarded in January 2016 and valued at approximately $2.75 billion for work to be executed on all four units. All of the major contracts contain suspension and termination provisions.

CNSC Regulatory Approvals

In December 2013, OPG submitted an application to the CNSC for the operating licence renewal for the Darlington GS. The CNSC granted the Darlington GS a 10-year operating licence in December 2015, which is the longest licence ever granted by the CNSC to a Canadian nuclear power plant. The new licence, which is effective from January 1, 2016 to November 30, 2025, spans most of the planned duration of the Darlington Refurbishment project.

In line with CNSC's regulatory requirements related to life extensions of nuclear power plants in effect at the time that OPG began to undertake the Darlington Refurbishment project, OPG completed a series of assessments, including an EA, an Integrated Safety Review, and a Global Assessment Report (GAR). The EA decision, issued by the CNSC and Fisheries and Oceans Canada in March 2013 following public hearings, confirmed that, taking into account identified mitigation measures, the project was not likely to cause significant adverse environmental effects. In April 2014, the CNSC accepted the GAR as meeting all regulatory requirements related to life extensions of nuclear power plants. In November 2014 and

April 2016, respectively, certain intervenors' request for a judicial review and subsequent appeal to the Federal Court of Appeal related to the EA decision were dismissed by the courts.

Actions identified as part of the above assessments to meet updated codes, standards and practices, and to ensure that the operation of the station continues to pose minimal risk to health, safety, security and the environment, were integrated into an Integrated Implementation Plan (IIP). As part of the Darlington operating licence renewal in December 2015, the CNSC approved the regulatory scope defined in the IIP. OPG has been undertaking activities in support of the IIP requirements, including the commissioning of two safety enhancements at the station, the Third Emergency Power Generator and the Containment Filtered Venting System, which were originally scheduled to be placed in-service in 2016. Remediation measures are in progress. These delays will not impact the overall Darlington Refurbishment project schedule, as neither of the two projects is on the critical path.

Pickering Extended Operations to 2024

In 2015, OPG completed the necessary work to demonstrate with sufficient confidence that the Pickering fuel channel life, a key life-limiting component of the station, will allow all six operating units of the station to operate to the end of 2020. OPG's early technical work at that time also showed that the Pickering GS can be operated safely beyond 2020. In January 2016, OPG announced its plan to pursue continued safe and reliable operation of the Pickering GS beyond 2020. OPG's objective is to maximize the operating life of the Pickering units. Under OPG's current plan, all six operating units at the station would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The Province announced its approval of OPG's plan to pursue continued operation of the Pickering GS beyond 2020 up to 2024 in January 2016. Extending operations at the Pickering GS will provide continued employment to approximately 3,000 regular employees at OPG and is expected to provide Ontario with a clean, reliable source of baseload electricity during the Darlington GS and initial Bruce nuclear unit refurbishments.

OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. OPG has started work on the Pickering licence renewal application, which is expected to be filed in mid-2017 for the CNSC's approval in 2018. A Periodic Safety Review and an IIP for the station will be submitted to the CNSC as part of the application.

As part of the plan to extend operations, OPG is continuing to undertake further technical work to confirm that the Pickering pressure tubes will achieve the additional life necessary to operate to 2024. OPG also is conducting component condition assessments to identify the work required to support the continued operation of the station.

Bruce Power Refurbishment and Bruce Lease Agreement

OPG leases the four-unit Bruce A (Units 1-4) and the four-unit Bruce B (Units 5-8) nuclear generating stations and associated lands and facilities to Bruce Power on a long-term basis. Bruce Units 1 and 2 were refurbished by Bruce Power under a refurbishment agreement with the IESO and returned to service in 2012. While Bruce Power is responsible for operating all of the leased units, under the terms of the lease agreement between Bruce Power and OPG (Bruce Lease) and as required by the CNSC, OPG is primarily responsible for the management of the nuclear used fuel and other nuclear waste associated with the Bruce nuclear generating facilities, as well as the decommissioning of the facilities at the Bruce site. Under the Bruce Lease and related agreements, OPG receives base rent and supplemental rent payments from Bruce Power, fees for nuclear waste management other than used fuel, and fees for certain other services. The output from the Bruce nuclear generating stations is not subject to rate regulation by the OEB.

In December 2015, the Province announced that the refurbishment agreement between the IESO and Bruce Power had been updated and that Bruce Power will proceed with the refurbishment of the six un-

refurbished units of the Bruce nuclear generating stations. In order to facilitate Bruce Power's refurbishment plans, the Bruce Lease and related agreements were amended in December 2015 to extend Bruce Power's future options to renew the lease up to the end of 2064. To achieve better alignment with OPG's costs, the agreements were also amended to revise, starting in 2016, the approach for calculating supplemental rent payments and fees for nuclear waste management other than used fuel, and to modify the fee structure for OPG's heavy water detritiation services starting in 2017. Beginning in 2016, supplemental rent payments wholly represent fees for nuclear used fuel management. Amendments were also made to enable certain adjustments to future base rent, supplemental rent and other fees for potential future changes in OPG's decommissioning and nuclear waste management cost estimates related to the Bruce facilities, and to remove a conditional supplemental rent rebate provision effective December 4, 2015. Certain of the above amendments were executed by OPG pursuant to a Shareholder Declaration and Shareholder Resolutions issued in November 2015. For a complete list of Shareholder directives, see *Interest of Management and Others in Material Transactions – Relationship with the Province and the OEFC – Shareholder Directives*.

Ontario Nuclear Funds Agreement Reference Plan Update

OPG is responsible for the management of radioactive used nuclear fuel and low and intermediated level radioactive waste (L&ILW) and the decommissioning of its nuclear stations and waste management facilities. Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG is required to set aside monies into two segregated funds, the Used Fuel Segregated Fund and the Decommissioning Segregated Fund (together, the Nuclear Segregated Funds) to fund the future life cycle costs of long-term nuclear used fuel and L&ILW management and nuclear facilities decommissioning. OPG's required contributions to the Nuclear Segregated Funds are determined based on periodically updated reference plans approved by the Province under the ONFA, at least once every five years. As part of the reference plan update process, OPG estimates the total liabilities for future nuclear waste management and nuclear decommissioning based on life cycle cost estimates and a set of assumptions, including remaining useful lives of the nuclear stations, proposed methods and timing of nuclear waste disposal, and economic indicators. In accordance with US GAAP, OPG carries a present value asset retirement obligation on the balance sheet related to its nuclear waste management and nuclear decommissioning obligations. In accordance with *Ontario Regulation 53/05*, the OEB is required to ensure that OPG recovers the revenue requirement impact of its nuclear waste management and nuclear decommissioning liabilities arising from the current approved ONFA reference plan.

In 2016, OPG completed a comprehensive update of the estimate for its obligations for nuclear waste management and nuclear facilities decommissioning, in line with the required ONFA reference plan update process. The results of the update were reflected in a new ONFA reference plan, for years 2017 to 2021, as well as an adjustment reducing the asset retirement obligation on OPG's balance sheet as at December 31, 2016. The 2017-2021 ONFA reference plan was approved by the Province in December 2016, with an effective date of January 1, 2017 (the 2017 ONFA Reference Plan). Based on the funded status of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund based on the revised, lower life cycle liability estimates per the 2017 ONFA Reference Plan, no overall contributions to the Nuclear Segregated Funds are currently required starting in 2017. Contributions may be required in the future should either or both of the funds be in an underfunded position when a new reference plan is prepared. Such may be the case as a result of future variability in asset performance due to volatility inherent in financial markets. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the underlying obligations in subsequent ONFA reference plans.

The overall reduction in OPG's nuclear waste management and nuclear decommissioning liabilities from the comprehensive update was mainly due to a decrease in cost estimates to reflect a proposed new, more cost effective container design and engineered barrier concept to house used nuclear fuel for disposal, as well as a later expected in-service date for Nuclear Waste Management Organization's (NWMO) planned deep geologic repository for the long-term permanent disposal of Canada's used nuclear fuel.

Canada's planned used fuel deep geologic repository. These decreases were partly offset by higher cost estimates related to station decommissioning, primarily due to a better definition of work required during the preparation for safe storage after station shutdown and a higher volume of waste projected to be generated during the decommissioning.

For further details on OPG's nuclear waste management and nuclear decommissioning obligations, the ONFA and proposed methods for long-term used fuel and L&ILW disposal, see Description of the Business – Regulated – Nuclear Waste Management Segment.

Hydroelectric Business Development

Lower Mattagami Generating Stations

The Lower Mattagami River project added one additional generating unit at each of OPG's existing Little Long, Harmon, and Kipling generating stations, and replaced the existing generating station at the Smoky Falls site with a new three-unit station. All six new generating units were placed in-service in 2014, ahead of the target completion date of June 2015. The cost of the project after the completion of closure activities was within the approved budget of $2.6 billion. The project increased the capacity of the four generating stations on the Lower Mattagami River by 438 MW. The stations are operating under a 50-year ESA with the IESO. The last tranche of the project financing was issued in October 2016.

Peter Sutherland Sr. Hydroelectric Generating Station

In March 2015, OPG's Board of Directors approved a project to construct the Peter Sutherland Sr. GS, a new 28 MW hydroelectric station on the New Post Creek near its outlet to the Abitibi River, with a budget of $300 million. The station is being constructed through PSS Generating Station LP, a partnership between OPG and Coral Rapids L.P., a wholly owned subsidiary of the Taykwa Tagamou Nation. Under the partnership agreement, Coral Rapids L.P. may acquire up to a 33 percent interest in the partnership. In May 2015, a 50-year hydroelectric ESA was executed by the IESO and the partnership for the development of the station and the supply of electricity and related products to the Ontario market. The ESA's 50-year term takes effect once the station achieves commercial operation. Construction work on the project commenced in the second quarter of 2015, and project financing was completed in October 2015. Commissioning of the generating station began in February 2017. The station is expected to be in service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. The project is tracking within the approved budget. **[MONITOR]**

Sir Adam Beck Pump Generating Station Reservoir Refurbishment

In August 2015, OPG's Board of Directors approved a project to refurbish the 300-hectare storage reservoir at the Sir Adam Beck Pump GS. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The refurbishment construction began in April 2016 and was completed in February 2017, ahead of the originally planned schedule date of April 2017 and below the approved budget of $58 million. The reservoir refurbishment work included the installation of a partial new reservoir liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life.

Ranney Falls Hydroelectric Generating Station

During 2016, OPG completed project design work for the construction of an additional 10 MW single-unit powerhouse on the existing Ranney Falls GS site. The new unit will replace an existing unit that reached its end of life in 2014. OPG plans to commence construction work in 2017, with an expected in-service date in the fourth quarter of 2019 and a budget of $77 million. **[MONITOR]**

Biomass Conversions at Atikokan and Thunder Bay Generating Stations

In April 2014, OPG ended coal-fired generation at the Thunder Bay GS, which marked the end of coal-fired generation in Ontario.

Following the cessation of coal-fired generation, OPG completed the conversion of the Atikokan GS to biomass in August 2014 and one unit at the Thunder Bay GS to advanced biomass in January 2015. The Atikokan GS is currently the largest generating station in North America fuelled by 100 percent biomass, a sustainable fuel recognized as beneficial to climate change mitigation, with an in-service capacity of 205 MW. The converted Thunder Bay unit has 153 MW of in-service capacity using advanced biomass fuel. Advanced biomass fuel is wood-based fuel that is thermally treated to allow it to be stored outdoors and withstand exposure to the weather, and contains significantly less nitrogen oxide and sulphur dioxide compared to coal emissions. Both conversion projects were completed ahead of schedule and within the approved cost estimates, and are operating under ESAs with the IESO.

Thermal and Solar Business Development

Nanticoke Solar Facility

In March 2016, Nanticoke Solar LP, then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of Six Nations of the Grand River Development Corporation, was selected through the first phase of IESO's Large Renewable Procurement (LRP) program to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands in Haldimand County, Ontario. The LRP program was a competitive bidding process for procuring large renewable energy projects in Ontario. In March 2016, Nanticoke Solar LP and the IESO executed a 20-year LRP contract, which formalized the terms and conditions for the development and operation of the new solar facility. In the first quarter of 2017 **[MONITOR]**, OPG purchased SECCLP's interests in Nanticoke Solar LP and is working to obtain approvals and permits required to enable the commencement of construction planned for the first half of 2018. The 20-year term of the LRP contract takes effect once the station achieves commercial operation, which is expected in the first quarter of 2019.

Decommissioning of Lambton and Nanticoke Coal-Fired Generating Stations

OPG ceased coal-fired generation at the Lambton and Nanticoke generating stations in September 2013 and December 2013, respectively. In November 2016 and July 2015, respectively, OPG announced that it would decommission the Lambton and Nanticoke generating stations as it could not commercially support continued preservation of these sites in light of the outlook for long-term electricity demand in the province that does not support the need for their future conversion. OPG is developing decommissioning plans for these two stations, which will ensure that they are closed safely, securely, and in an environmentally responsible manner.

DESCRIPTION OF THE BUSINESS

The Electricity Industry

The electricity industry is principally comprised of four components: generation, transmission, distribution, and marketing of energy and other services in wholesale and retail markets.

Generation is the production of electricity. Transmission is the transfer of electricity across high-voltage power lines from generating facilities to local areas. Distribution is the delivery of electricity within local areas to homes and businesses using relatively low-voltage power lines. Energy marketing relates to the purchase of large amounts of electricity or equivalent financial products, and the subsequent re-selling in smaller quantities to third parties in either the wholesale or retail markets.

Electricity has traditionally been generated in large, multi-unit, centralized facilities. These facilities are usually classified by: (i) the type of fuel used; (ii) capacity, typically expressed in MW; and (iii) dispatch mode (being whether or not the electricity generated by a particular facility is dispatched to meet peak, intermediate or baseload demand). The energy produced by a facility is generally expressed as its output over the time the facility operates, typically in terms of MWh. Increasingly, new supply from smaller scale, largely intermittent, renewable sources such as wind, solar, and bio-energy is being integrated into the power system, connected either directly to the transmission system or embedded in distribution networks. Distributed generation involves production of electricity closer to end users and away from large scale production facilities that require more transmission. Electricity systems typically require new capital expenditures and processes in order to accommodate intermittent generators.

Electricity is an essential commodity that cannot be stored without converting to other forms, a process that is more difficult in large volumes. Therefore, electricity supply must instantaneously match demand to maintain the stability and reliability of the electrical power system. This is accomplished by coordinating the supply of and demand for electricity, a responsibility typically assigned to regulated regional system operators. Electricity systems have evolved on a regional basis and are connected to neighbouring regional power grids. Such connections enhance system reliability and permit the economic purchase and sale of electricity between electricity markets.

Ontario's Electricity Industry

OPG's predecessor, Ontario Hydro, served as a vertically integrated electric utility in Ontario. Following the adoption of a restructuring plan for Ontario's electricity industry pursuant to the *Energy Competition Act, 1998,* five principal successors to Ontario Hydro's integrated electricity business began operating as separate entities on April 1, 1999:

- OPG, which purchased and assumed the electricity generation, wholesale energy, and ancillary services businesses of Ontario Hydro;
- Hydro One, which purchased and assumed the transmission, distribution, and retail energy services businesses of Ontario Hydro;
- the Independent Electricity Market Operator (later renamed the IESO), which was formed to act as both the independent electricity system operator and the market operator. The IESO is responsible for the dispatch of generation to meet demand, the control of the Ontario transmission grid, and the operation of energy and ancillary markets;
- the Electrical Safety Authority, which was established to carry out electrical equipment and electrical wiring safety and inspection functions; and
- the Ontario Electricity Financial Corporation (OEFC), which is the legal continuation of the former Ontario Hydro and is responsible for managing the debt and certain other obligations not transferred to other successor companies of Ontario Hydro.

OPG purchased and assumed all of the interest of Ontario Hydro in and to all officers, employees, assets, liabilities, rights and obligations of Ontario Hydro directly or indirectly relating in any manner to the applicable activities carried on by Ontario Hydro as of April 1, 1999, pursuant to the transfer orders made by Order-in-Council under the *Electricity Act, 1998*. The transfer orders provide that if they fail for any reason to fully and effectively in law transfer any such asset, right, liability or obligation or that if such transfer would constitute a breach of the terms of the asset, right, liability or obligation or of any applicable law, such assets, rights, liabilities or obligations are not transferred, but are held by the OEFC for the benefit of OPG.

Ontario's competitive electricity market was opened by the IESO in 2002. The market is used to manage the purchase and sale of wholesale electricity in the province.

Since the opening of the competitive market, Ontario's power supply mix has experienced significant change. A significant amount of new capacity has been added, while coal-fired generation, which at its peak accounted for approximately 6,500 MW of capacity, has been eliminated. New natural gas powered capacity of approximately 5,000 MW as of the end of 2016 has largely replaced the peaking capacity previously provided by coal-fired generation, while the return to service of Units 1 and 2 at the Bruce A GS in 2012 added approximately 1,500 MW of baseload nuclear generation. New wind and solar capacity of over 6,700 MW has also been added as of the end of 2016, toward the longer-term targets set out in Ontario's 2013 LTEP. In September 2016, the Government of Ontario suspended the planned second phase of the IESO's LRP procurement process for over 1,000 MW of additional renewable generation capacity that was about to begin. The updated LTEP, scheduled to be released in 2017, is expected to include revised plans and targets for renewable generation in Ontario.

While electricity supply in Ontario has increased, the province's electricity demand as reported by the IESO has fallen by approximately 9 percent over the last decade, largely due to changes in economic conditions and conservation measures, and also in part due to the addition of small scale solar generation embedded in the distribution system. Embedded generation reduces the demand supplied by grid-connected generation. Reducing electricity demand by encouraging conservation and demand management has been a key part of the Government of Ontario's plan to reduce greenhouse gas (GHG) emissions from the province's electricity sector. Shorter-term fluctuations in electricity demand are impacted by variations in seasonal weather conditions. Ontario's electricity demand as reported by the IESO was 137.0 TWh in 2016, which excludes electricity exports out of the province.

For further details on the LTEP, refer to *General Development of the Business – General Development – Ontario's Long-Term Energy Plan and New Nuclear Units.*

Ontario Electricity Market Activities

Real-time energy supply needs are met through the wholesale market administered by the IESO, with the market clearing price, the Hourly Ontario Energy Price, set by offers or bids into the market. OPG offers its generation into this real-time energy market, or spot market, to be dispatched by the IESO. The IESO receives hourly offers from electricity generators and importers to provide energy, along with bids to withdraw energy from a few flexible loads and exporters, and then schedules the lowest-cost offers and bids needed to meet demand every five minutes.

Virtually all generators in Ontario have bilateral contracts with the IESO that provide for payments that are different from the market price of electricity. In addition, the prices for all of OPG's nuclear and most of its hydroelectric stations are set by the OEB. The difference between the market price and the prices paid for regulated and contracted generation, as well the cost of conservation and demand management programs, are charged to Ontario electricity consumers through the Global Adjustment portion of the total price of electricity.

Maintaining power system reliability requires a continuous balance of supply and demand. Some generators are needed to produce a constant supply of energy to meet basic energy needs (baseload generation), while others are needed to adjust energy output to match changes in demand (peaking and intermediate generation). OPG's nuclear generating stations operate as baseload facilities, whereas the hydroelectric stations operate as baseload, intermediate or peaking stations, depending on their physical characteristics and hydrological conditions. OPG's thermal stations operate as peaking facilities.

SBG occurs when electricity production from the baseload facilities is greater than the market demand for electricity. Baseload generation supply surplus in Ontario is managed by the IESO, mainly through generation reductions at hydroelectric and certain nuclear stations and other grid-connected renewable resources. The prevalence of SBG conditions is impacted by weather conditions which affect electricity demand, wind and solar generation quantities, as well as water flows and therefore the availability of hydroelectric power. In 2016, OPG lost 4.7 TWh of hydroelectric generation due to SBG conditions. In each of 2015 and 2014, OPG lost 3.2 TWh of hydroelectric generation due to SBG conditions. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions,

which represents the majority of OPG's hydroelectric production forgone due to SBG conditions to date, has been offset by a regulatory variance account authorized by the OEB. During 2016, 2015 and 2014, generation losses at OPG's regulated hydroelectric stations due to SBG conditions were 4.3 TWh, 2.8 TWh and 1.9 TWh, respectively. OPG has not foregone any electricity production at its nuclear stations due to SBG conditions.

The OEB has authorized an additional pricing mechanism for OPG's regulated hydroelectric generation that provides a financial incentive to OPG to shift hydroelectric generation from lower market price periods to higher market price periods. This is intended to benefit customers through the displacement of generation from the relatively higher cost sources such as natural gas. The time-shifting is made possible by the ability to store water in reservoirs located at a number of OPG's hydroelectric facilities, including the Sir Adam Beck Pump GS.

The IESO also administers the operating reserve market and a market for ancillary services. The objective of the operating reserve market is to ensure that additional supplies of energy are available to maintain power system reliability following an unforeseen event. Ancillary services include regulation service, reactive support, black start capacity, and other services required to maintain the reliability of the Ontario electricity system. OPG participates in these markets. Revenues earned by OPG's regulated facilities from providing services into these markets are applied by the OEB to reduce regulated prices for electricity generated from these facilities.

OPG and other Ontario electricity market participants are required to comply with market rules issued by the IESO. As an owner and operator of generating stations, OPG is also subject to reliability standards as set out by the North American Electric Reliability Corporation (NERC), Northeast Power Coordinating Council (NPCC) and the IESO. NERC, NPCC and IESO are standards authorities with the ability to create or modify reliability standards. Such standards are binding on OPG pursuant to the OEB-issued electricity generating license and the IESO market rules. The IESO monitors compliance with and enforces the market rules and coordinates with system operators and reliability agencies in other jurisdictions to ensure energy adequacy and security across the interconnected bulk electricity market in North America.

Interconnected Markets

The interconnected markets are electricity markets in neighbouring provinces and states whose transmission systems are connected to the Ontario power grid, either directly or through other contiguous interconnected markets. Ontario's market is interconnected with the United States (U.S.) northeast, U.S. midwest, Manitoba, and Québec. Market intermediaries wishing to import or export electricity between Ontario and the interconnected markets are required to schedule these transactions through the Ontario spot market. OPG and its wholly owned subsidiary, OPG Energy Trading (OPGET), participate in the interconnected markets. For further details on OPGET, see *Description of the Business – Services, Trading and Other Non-Generation Segment.*

Interconnection transmission capabilities between Ontario and the interconnected markets are subject to limitations, which can be physical or weather dependent. Planned or forced outages to transmission lines and other equipment reduce transmission capacity. Wind and temperature conditions affect the transfer capability of all transmission lines on the electrical system. For example, higher ambient air temperature lowers capacity and higher wind speeds increase capacity. Overall power system parameters and conditions can also result in limitations on particular interties, being one or more transmission lines that connect Ontario to a neighbouring region. For example, high flow on one intertie may result in a reduction in the limit on another intertie.

Water Rights

OPG's management of available water resources directly affects the generation output, efficiency, and ultimately return on investment for the Company's hydroelectric assets. The watersheds on which OPG's hydroelectric generating facilities are located are shared by many users and are subject to various governance requirements, such as international, federal and provincial agreements, water power leases, and regulations. Accordingly, OPG must balance the economic, environmental, social and legal requirements associated with the watersheds when utilizing water to optimize electricity generation.

International Rivers

The six OPG hydroelectric generating stations subject to OEB rate regulation since 2008 are directly or indirectly supplied by two major international waterways, the Niagara River and the St. Lawrence River, and are subject to treaties with the U.S. relating to water use. These stations represent approximately 45 percent of OPG's total in-service hydroelectric capacity.

Through a series of agreements between the Government of Canada and the Province, and certain federal and provincial laws, OPG has been granted the right to exercise Canada's rights with respect to the construction, maintenance, and operation of generating facilities under the *Boundary Waters Treaty of 1909* and the *Niagara Diversion Treaty of 1950* between Canada and the U.S. Both of these treaties continue in perpetuity but are terminable by either party with 12 months prior written notice. Given the significance of these treaties, OPG does not expect either party to exercise their respective termination rights in the foreseeable future.

The *Boundary Waters Treaty of 1909* established the International Joint Commission with the mandate of regulating shared water uses and preventing and resolving disputes between U.S. and Canada. In December 2016, the International Joint Commission issued an order implementing a new plan to manage water levels and flows in Lake Ontario and the St. Lawrence River, effective January 7, 2017. The new plan, which replaced the existing plan in use since 1963, is intended to allow for more natural water levels, while minimizing impacts to other users, including hydroelectric power production. No significant changes in OPG's operations are expected as a result of the new plan.

The *Niagara Parks Act* (Ontario) gives the Niagara Parks Commission the authority to grant certain rights to use the waters of the Niagara River for purposes of power generation. By agreement with OPG, the Niagara Parks Commission has agreed not to grant any rights to third parties until after 2056.

Under an agreement between OPG and the St. Lawrence Seaway Management Corporation, a federal agency, the DeCew Falls generating stations use water that is transported along the Welland Canal from Lake Erie. The agreement has been renewed through June 30, 2038.

The Province has granted OPG the right to use water from the International Rapids section of the St. Lawrence River for power generation at the R.H. Saunders GS, subject to an agreement between the Government of Canada and the Province. The Government of Canada has the right, upon notice and after unsuccessful arbitration, to take over the operation of and title to the R.H. Saunders GS in the unlikely event of a breach of the agreement by the Province.

Interprovincial Rivers

Four of OPG's hydroelectric stations are located on the Ottawa River, which forms part of the Ontario-Québec border. These stations represent approximately 12 percent of OPG's total in-service hydroelectric capacity. Three of these stations are subject to 999-year leases with each of the Provinces of Ontario and Québec. The fourth station is subject to a water power lease with the Province of Ontario, which is renewable to 2031, subject to certain conditions. OPG's use of water from the Ottawa River basin is subject to guidelines established by the Ottawa River Regulation Planning Board, comprised of government and industry representatives.

Interior Rivers

Fifty-five of OPG's hydroelectric stations, representing approximately 43 percent of OPG's total in-service hydroelectric capacity, are located on 20 other Ontario river systems. OPG holds water power leases, Crown leases and licences with the Province on the river systems that supply 37 of these stations. These leases and licences have expiry dates, including renewal periods, ranging between 2023 and 2075. Certain of these leases provide that the leased property and any fixed improvements, including generating stations and dams, will revert to the Province on the expiry of the lease. OPG intends to work towards new leases and licenses for these stations. OPG's use of Ontario's interior watersheds is constrained by restrictions contained in certain of the water power leases and licences. Eight of the 55 stations are located on the Trent and Rideau Waterways and are operated pursuant to licences from the federal government. These licences expire in February 2020. The process to renew the licences is currently underway with Parks Canada. Ten of the 55 stations are not subject to leases or licences.

The current provincial regulatory framework requires the development of Operational Plans for new storage dams and generating stations in Ontario, except for those on international rivers, interprovincial rivers, or rivers under federal jurisdiction. These plans include any limitations on water flows and elevations, and historically have been a component of formal Water Management Plans (WMPs). WMPs were established under the *Lakes and Rivers Improvement Act* (Ontario) and *Water Management Planning Guidelines for Waterpower (2002)*, on a watershed basis, in consultation with the Ontario Ministry of Natural Resources and Forestry (MNRF), federal fisheries authorities, and stakeholders, such as recreational and commercial users, local communities, environmental groups, and Indigenous groups. In October 2016, the MNRF published a Technical Bulletin, *Maintaining Water Management Plans (2016),* eliminating the need for WMPs where they are not already in place, removing the expiry date from existing WMPs, and outlining the requirements for Operational Plans for new waterpower works going forward. Existing WMPs continue to be in effect. WMPs and Operational Plans may be amended as certain conditions change or new data becomes available. OPG operates in compliance with WMPs and Operational Plans.

The operations of certain OPG stations in northwestern Ontario can impact users in Manitoba and are subject to guidelines and directions provided by the Lake of the Woods Control Board, which is comprised of Ontario, Manitoba and federal government representatives.

Dams and Waterways

In Canada, dams fall under provincial jurisdiction, with the exception of dams situated in interprovincial and international boundary waters and canals, and those owned by the Government of Canada. The majority of OPG's dams fall within the jurisdiction of the Province, with approximately 20 dams falling within the jurisdiction of the Province of Québec and 13 dams associated with the Trent-Severn and Rideau Waterways falling under federal jurisdiction. The International Joint Commission has an oversight role for dams and associated works on international boundary waters, including the St. Lawrence River and the Niagara River.

The Province regulates dams under the *Lakes and Rivers Improvement Act* (Ontario) administered by the MNRF. The legislation requires MNRF approval for activities such as the construction, alteration, improvement, or repair of dams.

In August 2011, the MNRF published a revised set of Technical Guidelines for dams, following a period of public consultation. The Technical Guidelines represent the government standards for dam safety. OPG was an active participant in developing the Technical Guidelines through the MNRF's advisory panel. In general, OPG practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the Technical Guidelines.

Currently, there is no federal or provincial regulation with respect to public safety around dams that addresses dam public safety issues relating to changes in operating water levels, discharges from the hydroelectric or dam facilities, and other waterways-based hazards posed by such facilities. The

Navigation Protection Act (Canada) does, however, require OPG to obtain approvals for the installation of all in-water works, such as safety booms and buoys associated with the OPG Waterways Public Safety Program. For additional details on OPG's Dam Safety and Waterways Public Safety Programs, see *Description of the Business – Workplace Safety and Public Safety – Dam Safety and Waterways Public Safety*.

Generation Operations

Nuclear (Regulated – Nuclear Generation segment)

Overview of Generating Facilities

OPG owns and operates two nuclear generating stations, the results of which are reported in the Regulated – Nuclear Generation business segment. The Pickering GS, comprised of six operating units and two units in a permanent safe shutdown state, is located on the shore of Lake Ontario in Pickering, Ontario. As at December 31, 2016, the station's total in-service capacity was 3,094 MW. Four of the eight Pickering units originally went into service in the 1970s. A decision was made by Ontario Hydro in the late 1990s to place these four units in voluntary lay-up. In 2003 and 2005, respectively, two of the four laid-up units were returned to commercial operation, with the two remaining units placed in a permanent safe shutdown state. The other four operating units have been in service since between 1983 and 1986.

The Darlington GS, comprised of three operating units and one unit, Unit 2, undergoing refurbishment as of mid-October 2016, is located on the shore of Lake Ontario in the Municipality of Clarington, Ontario. As at December 31, 2016, the total in-service capacity of the three operating units was 2,634 MW. Unit 2 has a capacity of 878 MW. All four Darlington units have been in service since the early 1990s. Both the Pickering GS and the Darlington GS have been designed to operate at full power as baseload facilities.

The performance of OPG-operated nuclear generating stations during 2016, 2015 and 2014 was as follows:

Regulated – Nuclear Generation Performance (2014 to 2016)

Station	No. of In-Service Units	Unit Capability Factor [1] (%)		
		2016	2015	2014
Darlington	3[2]	**89.5**	76.9	92.1
Pickering	6	**75.2**	79.4	75.3
Total	9			

1 Unit capability factor is the amount of energy a generating unit is capable of producing as a percentage of its maximum output assuming no external constraints such as transmission limitations. The nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment.

2 Excluding Unit 2, which has been undergoing refurbishment since October 15, 2016.

The lower Unit Capability Factor at the Darlington GS in 2015 was primarily due to the four-unit vacuum building outage in 2015, which required the shutdown of all units. The higher Unit Capability Factor at the Pickering GS in 2015 was primarily due to the improvement in reliability of the station in 2015, associated with improved equipment reliability and human performance. In 2016, the Pickering GS experienced a higher number of unplanned outage days as a result of emergent discovery work during planned outages, which contributed to the lower Unit Capability Factor in 2016.

OPG's Bruce A and Bruce B nuclear generating stations have been leased on a long-term basis to Bruce Power. The stations are located in the Municipality of Kincardine, Ontario on the shore of Lake Huron.

For additional information on OPG's nuclear operations, see *Core Business and Strategy – Operational Excellence – Electricity Generation Production and Reliability – Nuclear Operations* in the Company's 2016 MD&A.

Nuclear Generation Technology

Nuclear generation harnesses the energy released during controlled nuclear fission reactions to produce steam that is used to drive turbines to generate electricity. Nuclear generation has two main advantages. It is a relatively low marginal-cost generation technology, and it produces virtually no GHG, sulphur dioxide, nitrogen oxide, or mercury emissions. The latter advantage has become more significant as governments implement climate change action plans and stricter air emission standards.

However, in contrast to other types of generating facilities, notwithstanding the lower fuel costs, nuclear generating stations incur nuclear waste management and decommissioning costs and greater operating and maintenance expenses. In addition, the construction of nuclear generating stations entails greater initial capital costs than other generation technologies. The higher initial costs reflect the complexity of the technical processes fundamental to nuclear electricity generation, and the additional design and safety precautions taken to protect the public from potential risks associated with nuclear operations.

All of OPG's nuclear generating stations use CANada Deuterium Uranium (CANDU) technology reactors. CANDU is a pressurized-heavy-water, natural-uranium power reactor, originally designed in the 1960s by a consortium of Canadian government agencies and private industry. CANDU reactors are unique in their use of natural-uranium fuel and deuterium oxide, or heavy water, as both a moderator to slow down the fission process and a coolant within the reactor. The refuelling system is also unique in that CANDU reactors can be refuelled at full power. This is due to the subdivision of the reactor core into hundreds of separate fuel channels, each holding a single string of natural uranium fuel bundles, allowing for greater fuel efficiency. In contrast, U.S. reactors, which use enriched uranium fuel, must be shut down during refuelling. All nuclear power reactors in Canada use CANDU technology. CANDU reactors are currently operating in Ontario, New Brunswick, Argentina, Romania, South Korea, India, Pakistan and China.

Nuclear Fuel Procurement

OPG's nuclear fuel supply chain involves the purchase of uranium concentrate, the purchase of services for the conversion of uranium concentrate to uranium dioxide, and the purchase of services for the manufacture of fuel bundles containing the uranium dioxide. OPG currently purchases each of these components separately and maintains ownership of the uranium throughout the supply chain. OPG maintains a portfolio of multi-year supply contracts for uranium concentrate with domestic and foreign suppliers located in uranium-producing regions and occasionally enters into the short-term spot market to acquire a portion of its uranium needs. OPG's nuclear fuel bundles are supplied by Canadian-based manufacturers.

Nuclear Regulation

The *Nuclear Safety and Control Act* (NSCA) establishes the mandate and authority of the CNSC to make regulations governing all aspects of the development and application of nuclear energy in Canada. The NSCA grants to the CNSC the power to act as a court of record, the right to make regulations, the power to require financial guarantees for nuclear waste management and nuclear facilities decommissioning as a condition of granting a licence, order-making powers, and the power to impose monetary penalties for licence infractions. The NSCA also grants the CNSC the power to require periodic re-certification of nuclear operators and to set requirements for various nuclear facility security measures. It also provides for regulatory authority over environmental matters, including a requirement that licence applicants make adequate provision for the protection of the environment. The NSCA grants the CNSC licensing authority for all nuclear activities in Canada, including the issuance of new licences to operators, the renewal of existing licences, and amendments to existing licences.

A fundamental principle in nuclear regulation is that the licensee bears the responsibility for safe operation, with the CNSC setting safety objectives in areas such as radiation protection and physical security for nuclear generating stations and the transport of radioactive materials. The CNSC verifies compliance with the licence and performs audits and inspections of the licensee's performance against the objectives. The CNSC also has issued guidance documents to assist licensees in complying with regulatory requirements. Requirements specified in these guidance documents have been incorporated into the design and operating documents for OPG's nuclear generating stations.

Since the operation and regulation of nuclear energy has transboundary impacts, Canada has become a signatory to various international conventions relating to nuclear energy and emergency responses and is bound by conventions that it has ratified. In addition, the CNSC has a bilateral information exchange and co-operation agreement with the U.S. Nuclear Regulatory Commission, which provides among other things, for the prompt, reciprocal notification of reactor safety problems that could affect both U.S. and Canadian nuclear generation facilities.

The CNSC publishes an annual report on the safety performance of Canada's nuclear power plants. The report assesses how well plant operators are meeting regulatory requirements and program expectations in the areas of operational performance, safety analysis, radiation protection, waste management and conventional health and safety. In its 2015 annual report, the CNSC gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". The Pickering GS received this rating for the first time, while the Darlington GS achieved the rating for the seventh year in a row.

All of OPG's nuclear power reactor operating licences and waste facility licences are current and up to date. In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF) located at the Bruce generating stations' site to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications will be presented to the CNSC at a public hearing in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018. The current licence for the Darlington Waste Management Facility expires on April 30, 2023. Further details on the operating licences for the Darlington GS are found under *General Development of the Business – Nuclear Business Development – Darlington Refurbishment* and for the Pickering GS under *General Development of the Business – Nuclear Business Development – Pickering Extended Operations to 2024.*

For details on Canada's nuclear liability regime and related insurance coverage, see *Description of the Business – Insurance*.

Fukushima Daiichi Response

In response to the 2011 Fukushima Daiichi incident in Japan, OPG has confirmed that its stations are safe and that systems and procedures are in place to withstand significant emergencies. In 2013, a systematic review and verification of defences against external hazards was completed at OPG-operated stations. The review showed that:

- the nuclear safety systems and multiple back-up power systems in place at the stations are effective; and
- the current design of the stations is strong and the stations are able to withstand extreme external events.

The review also provided recommendations for further opportunities to enhance the safety margin and to develop preparedness for unexpected events that go beyond the extreme events already considered in the design of the stations.

OPG's action plan in response to the Fukushima Daiichi event is well aligned with the CNSC's Fukushima Action Plan, issued in mid-2012. In 2013, OPG submitted its plans for the majority of the CNSC's Fukushima Action Plan items applicable to OPG-operated stations to the CNSC. In January 2015, the

CNSC recognized OPG's efforts in this area and confirmed that all of the Fukushima action items were closed. OPG's Fukushima Implementation Plan included a number of key safety enhancements for providing additional back-up capability to increase OPG's flexibility to respond to unexpected and highly unlikely external events that can impact either a single unit or multiple units at the same time. CNSC staff concluded that OPG had strengthened reactor defence and enhanced its emergency response at both the Darlington GS and the Pickering GS in response to the lessons learned from the Fukushima Daiichi incident.

Nuclear Generating Station Life

Service life predictions for OPG's nuclear stations are developed by assessing the impacts of a number of operating, technical, and regulatory considerations on both unit and station economics. A decision by OPG to remove a unit from service would be primarily an economic decision that becomes more likely as the number of components requiring replacement and the frequency and duration of inspections required to ensure a unit's fitness for service increases. The key life-limiting components at OPG's nuclear stations include fuel channels, feeder tubes, steam generators, and other reactor components. End-of-service life predictions are reviewed as new information on possible degradation mechanisms becomes available and as future generation expectations are revised.

In December 2015, OPG revised the accounting assumptions for the estimated useful lives of the nuclear generating stations it operates. Effective December 31, 2015:

- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015; and
- the average service life of the Pickering GS was extended by less than one year to reflect the technical confidence that all six operating units of the station will operate to the end of 2020.

The accounting end of life assumptions for the Pickering GS are expected to be reassessed when OPG's further technical work confirms that the longer fuel channel life necessary to extend Pickering operations will be achieved and that the units would be fit to operate beyond 2020, taking into account the requirement for the CNSC's approval. Further information can be found in the section, *Nuclear Business Development*, under the heading, *Pickering Extended Operations to 2024*.

Nuclear Facility Planning

OPG uses a structured approach to identify and prioritize projects to optimize returns from nuclear station reinvestment within the constraints imposed by technical and financial requirements, while ensuring that safety, environmental, and other regulatory programs are of the highest priority. Input from predictive maintenance programs, life cycle management plans, and system health monitoring is used to determine the activities necessary to sustain and improve nuclear unit performance.

A structured framework modeled on the best practices identified by the Electric Power Research Institute, the Institute for Nuclear Power Operations and the World Association of Nuclear Operators (WANO) is used to optimize the maintenance of the nuclear generating stations and assess the health of the facilities. The structured framework includes predictive maintenance programs, which combine technologies and human expertise to analyze equipment performance, maintenance and design data in order to make timely decisions about the scope and timing of inspections and maintenance for major or critical equipment. The predictive maintenance program for each station is prioritized on the basis of the importance of the equipment for reactor safety. Life cycle management plans are maintained for critical station components and are updated annually to incorporate operating experience and new information. The life cycle plans define the inspection and maintenance programs required to ensure that these components perform in accordance with their design basis. In addition, system engineers conduct performance monitoring of station systems according to system performance monitoring plans that are based on a comparison of performance indicators against established targets to improve system performance. System performance is assessed by collecting, trending and analyzing station data. This information is reported in system health reports which are updated, at a minimum, annually.

OPG's practices impacting the performance of the nuclear stations are audited regularly by WANO, with identified areas for improvement acted upon with priority. During 2016, OPG participated in two WANO peer evaluations to compare against standards of excellence through an in-depth, objective review by an international panel of industry experts. In May 2016, OPG hosted a WANO peer evaluation for the Darlington GS. The review maintained Darlington's excellent standing as one of the top performing nuclear plants in the world.

In September 2016, OPG hosted a team of experts from the International Atomic Energy Agency at the Pickering GS to conduct a standard Operational Safety Review Team mission. The team conducted an in-depth review of performance and adherence to international safety standards. A report on the mission is expected to be released in the second quarter of 2017.

Nuclear planned outages are necessary to execute inspection and maintenance work related to asset management and regulatory requirements for systems and equipment where access is not possible under normal operating conditions. Planned outages also give OPG an opportunity to perform system and equipment upgrades, project work, configuration changes, and other improvements and modifications. The nuclear generation plan, by reference to the station's life cycle management plans, establishes the number, frequency and duration of the outages for each year required to ensure the continued safe and reliable long-term operation of the plant and its compliance with CNSC regulatory requirements.

The outage cycle determines the number of planned outages at each station in a particular year. The Darlington GS is on a 36-month outage cycle, where each of the four units undergoes an outage every three years, resulting in one or two outages per year for the station. The Pickering GS is on a 24-month outage cycle, resulting in each of the six units having an outage every two years, and three outages per year for the station. In addition, on a periodic basis all units at each station are required to be shut down to allow for inspection and maintenance on the station vacuum building, containment systems and other safety systems. The CNSC currently requires these outages every 12 years at the Darlington GS and every 10 years at the Pickering GS. The most recent vacuum building outage took place at the Darlington GS in 2015 and at the Pickering GS in 2010.

Nuclear Ancillary Operations

OPG's nuclear generating units contain approximately 7,500 tonnes of deuterium oxide, or heavy water, not including heavy water contained at the leased Bruce stations. The heavy water is required to operate CANDU reactors. Ontario Hydro ceased the operation of its heavy water plants in 1997 and the plants were subsequently decommissioned. There are currently no heavy water plants in Canada. OPG believes that its existing inventory of heavy water will be sufficient to replenish supplies as a result of normal operating losses at its nuclear stations, including the refurbishment of the Darlington GS. OPG believes sufficient quantities of heavy water are also available for possible changes in operating conditions or for new nuclear generating facilities. OPG seeks opportunities to sell available surplus quantities of heavy water from its inventory.

Tritium is a radioactive substance produced as a by-product of operating CANDU reactors, through the use of heavy water in the reactor moderator and heat transport systems. OPG operates a specialized facility at its Darlington site, the Darlington Tritium Removal Facility (TRF), which removes tritium from the tritiated heavy water (detritiation) used at the nuclear generating stations, in order to control the occupational dose exposure to employees and limit the amount of tritium released to the environment. The extracted tritium is chemically immobilized, placed in special containers, and safely stored in a vault. The Darlington TRF is also expected to be used to detritiate heavy water during the eventual decommissioning of OPG's nuclear generating stations. Some tritium is sold to government-approved organizations for authorized commercial and health industry uses. OPG also provides detritiation services to Bruce Power. Opportunities for providing detritiation services to other third parties are limited because of storage and capacity restrictions at the Darlington TRF.

Cobalt-60 produced and sold by OPG is used mainly in the health industry to sterilize surgical and medical supplies. Cobalt-60 is produced in Units 6, 7, and 8 at the Pickering GS. Cobalt-60 can be produced in reactors which, like the CANDU reactors, use adjuster rods to regulate power. The production process involves replacing the stainless steel rod by a rod containing Cobalt-59, which is isotopically converted into Cobalt-60 after lengthy exposure to the atomic reaction in the reactor core. After two years, the rods are removed, cut, and packaged for sale as Cobalt-60, and new rods are inserted in the reactor to continue the production cycle.

OPG's revenues from the sale of the above isotopes and detritiation services, as well as a portion of the revenues from the sale of surplus heavy water are applied by the OEB to reduce regulated prices for electricity produced from OPG's nuclear facilities.

Hydroelectric (Regulated – Hydroelectric and Contracted Generation Portfolio Segments)

Overview of Generating Facilities

Hydroelectric generating stations use the energy of falling water to drive hydraulic turbines that generate electricity. OPG's hydroelectric stations provide one of the Company's competitive advantages – a reliable, relatively low-cost source of renewable energy free of air emissions. Electricity generation from OPG's hydroelectric facilities depends primarily upon the availability of water, which is affected largely by natural factors such as precipitation and evaporation. It is also impacted by the prevalence of SBG conditions.

OPG currently owns and operates 65 hydroelectric generating stations and 238 associated dams located on 24 rivers systems across Ontario. Effective January 1, 2014, the results of 54 of these stations that are rate regulated by the OEB are reported in the Regulated – Hydroelectric segment. The results of the remaining 11 stations are subject to long-term ESAs with the IESO and are included in the Contracted Generation Portfolio segment. The 54 regulated hydroelectric stations include the 48 stations prescribed for rate regulation beginning in 2014 and the six stations that have been rate regulated by the OEB since 2008.

As at December 31, 2016, OPG's regulated hydroelectric facilities had a total in-service capacity of 6,421 MW and the non-regulated hydroelectric facilities had a total in-service capacity of 1,014 MW. OPG's hydroelectric generating stations range in age from two to over 118 years and include the oldest assets in OPG's generation portfolio.

Hydroelectric ESAs with 50-year terms are in place for the following hydroelectric facilities:

- Lac Seul and Ear Falls generating stations, with an expiry date of February 2059;
- Healey Falls GS, with an expiry date of April 2060;
- Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations, with an expiry date of December 2060;
- Little Long, Harmon, Smoky Falls, and Kipling generating stations, with an expiry date of January 2064; and
- Peter Sutherland Sr. GS, which is being commissioned **[MONITOR]** and will be subject to a 50-year ESA upon achieving commercial operation.

OPG's hydroelectric facilities are operated and maintained by the following five regional operations groups:

- Niagara Operations – includes the three Sir Adam Beck stations located on the Niagara River and the two DeCew Falls facilities located on the Welland River. These facilities have been rate regulated by the OEB since 2008.
- Eastern Operations – includes the following ten regulated hydroelectric generating stations: the R.H. Saunders GS on the St. Lawrence River; the Otto Holden, Des Joachims, Chenaux, and Chats Falls generating stations on the Ottawa River; and the Mountain Chute, Barrett Chute,

Calabogie, Stewartville, and Arnprior generating stations on the Madawaska River. The R.H. Saunders GS has been regulated by the OEB since 2008.

- Central Operations – includes 25 regulated and one non-regulated hydroelectric generating station on the following ten river systems in central Ontario: Beaver River, Mississippi River, Muskoka River, Otonabee River, Rideau River, Severn River, South River, Sturgeon River, Trent River, and Wanapitei River.
- Northeast Operations – includes five regulated and eight non-regulated hydroelectric stations in northeastern Ontario. The regulated stations are the Chute and Lower Notch generating stations on the Montreal River; the Abitibi Canyon and Otter Rapids generating stations on the Abitibi River; and the Matabitchuan GS on the Matabitchuan River. The non-regulated stations are the Little Long, Harmon, Smoky Falls, and Kipling generating stations on the Lower Mattagami River; the Wawaitin, Sandy Falls, and Lower Sturgeon generating stations on the Upper Mattagami River; and the Hound Chute GS on the Montreal River.
- Northwest Operations – includes nine regulated and two non-regulated generating stations in northwestern Ontario. The regulated stations are the Pine Portage, Cameron Falls, and Alexander generating stations on the Nipigon River; the Silver Falls and Kakabeka Falls generating stations on the Kamanistikwia River; the Manitou Falls and Caribou Falls generating stations on the English River; the Aguasabon GS on the Aguasabon River; and the Whitedog Falls GS on the Winnipeg River. The non-regulated stations are the Lac Seul and Ear Falls generating stations on the English River.

These operations groups are also responsible for the operation and maintenance of OPG's thermal facilities discussed under the heading, *Description of the Business – Generation Operations – Thermal (Contracted Generation Portfolio Segment)*.

The performance of OPG's hydroelectric generating stations during 2016, 2015 and 2014 was as follows:

Hydroelectric Generation Performance (2014 to 2016)

	Regulated – Hydroelectric			**Contracted Generation Portfolio – Hydroelectric**			**Total Hydroelectric**		
	2016	**2015**	**2014**	**2016**	**2015**	**2014**	**2016**	**2015**	**2014**
Availability *(%)* [1]	**89.0**	91.2	91.4	**77.3**	88.6	90.2	**87.5**	90.9	91.7

[1] Availability refers to the measure of the reliability of a hydroelectric generating unit. It is represented by the percentage of time the generating unit is capable of providing service, whether or not it is actually generating electricity, compared to the total time for the respective period.

Lower availability of the Regulated – Hydroelectric facilities during 2016 was primarily due to the planned reservoir refurbishment project at the Sir Adam Beck Pump GS. Lower availability of the Contracted Generation Portfolio hydroelectric facilities in 2016 was primarily due to a higher number of planned outage days at the Kipling and Harmon generating stations on the Lower Mattagami River.

OPG's objectives for the hydroelectric operations include operating and maintaining the generating facilities in an efficient and cost-effective manner, while enhancing their reliability and availability. The Company continues to evaluate and implement plans to increase capacity, maintain and improve performance, and extend the operating life of its hydroelectric generating assets. These plans are accomplished through multi-year capital investment and other programs, including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers, and controls. Over the next three years, OPG plans to increase the total capacity of its hydroelectric generating fleet by approximately 135 MW, which includes the Peter Sutherland Sr. GS and the Ranney Falls GS projects. OPG is also planning to repair, rehabilitate, or replace a number of aging civil

structures. Where economic and practical, OPG pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations.

Hydroelectric Facility Planning

Major components of hydroelectric facilities typically include: generating equipment such as turbines, generators and transformers; civil works such as powerhouses, dams, headworks, spillways and water conveyance canals and tunnels; and facilities required to operate and maintain the stations such as control rooms and work centres. Although there is a link between the age of a facility and the capital investment required to maintain that facility, age does not establish an upper limit on the expected useful life of hydroelectric facilities and dams. Regular maintenance and the replacement of specific components typically allow stations to operate for very long periods, especially for facilities built after 1925.

OPG operates seven staffed control rooms across Ontario that provide remote control and monitoring for all of OPG's hydroelectric generating facilities. These control rooms are designed to minimize the number of staffed control rooms, reduce control system failures, and increase the amount of information available for production planning.

OPG uses a structured portfolio approach to identify and prioritize projects for its hydroelectric asset investment program. Engineering reviews and station condition assessments are performed to determine short-term and long-term expenditure requirements to sustain or improve the performance of each facility. These may be followed by the preparation of a facility life cycle plan, which is performed on an as-needed basis for marginal assets or assets potentially requiring significant expenditures relative to the value of the facility. This approach is designed to identify necessary capital, operating and maintenance expenditures for each facility and to direct resources towards those facilities that can best maintain or enhance their value.

OPG utilizes a preventive maintenance program that provides a consistent method of identifying, scheduling, and executing maintenance activities at the hydroelectric facilities. The maintenance program is based on the concept of streamlined reliability-centred maintenance, whereby the type and frequency of preventive maintenance applied to an individual component is determined based on the nature and consequences of failure, balancing cost and risk.

The cornerstone of OPG's project prioritization and preventive maintenance approaches for the hydroelectric assets is that safety, environmental, and other regulatory programs are of the highest priority.

Water Management

OPG's water management strategy for its hydroelectric facilities is to safely utilize available water for generation of electricity in conformance with legal, environmental, operational, and WMP and Operational Plan requirements. OPG uses hydrological and meteorological data to manage water levels, water flows and water storage, and strives to schedule water use for optimum utilization and to minimize controllable water spills due to SBG conditions.

Gross Revenue Charge and Water Rental Payments

Hydroelectric generating stations in Ontario are subject to taxes and charges as prescribed by *Ontario Regulation 124/02* under the *Electricity Act, 1998*. These taxes and charges, referred to as Gross Revenue Charge (GRC), are based on station gross revenue, which is determined as the product of annual station energy generation and the prescribed revenue rate of $40/MWh (Gross Revenue). All OPG hydroelectric generating stations are subject to GRC Property Tax, which is determined by applying graduated tax rates, ranging from 2.5 percent to 26.5 percent through four tiers of production, to a station's annual Gross Revenue. GRC Property Tax payments are made to the OEFC. Hydroelectric generating stations that are subject to water power lease agreements with the MNRF are also subject to

GRC Water Rental charges in addition to GRC Property Tax payments. The GRC Water Rental charge is determined as 9.5 percent of a station's annual Gross Revenue. GRC Water Rental payments are made to the Ontario Ministry of Finance.

Annual land rental fees are paid to the MNRF as prescribed by Crown leases and licences of occupation which authorize OPG's tenure (including flooding rights), typically at storage dam sites.

The eight OPG hydroelectric generating stations located on the Trent River and Rideau Canal are subject to rental charges prescribed by licences with Parks Canada. These licences authorize OPG to occupy the lands, maintain and operate the powerhouses and dams, and utilize water that is surplus to navigation needs for the generation of electricity.

Water conveyance charges are paid to the St. Lawrence Seaway Management Corporation as prescribed by a lease agreement providing for the withdrawal of water surplus to navigation needs from the Welland Canal for utilization at the DeCew Falls generating stations. The water conveyance charges apply to the transport of water from Lake Erie through the Welland Canal to OPG's intakes at Allanburg.

Water rental payments are made to the Government of Québec, as prescribed by an agreement dated January 2, 1943 and a rate amending agreement effective January 2, 1993. These agreements pertain to the sharing of the water powers of the Ottawa River and were ratified by the Governments of Ontario and Québec. Water rental charges payable to the Province of Québec are based on one-half of the energy produced at the three regulated OPG hydroelectric generating stations located on the Ottawa River. The GRC payments made to the Province of Ontario with respect to these three sites are also based on one-half of the energy produced at the stations.

Under the aforementioned 1943 agreement, OPG also provides compensation to Hydro Québec for the generating value at OPG's stations on the Ottawa River attributed to the water diverted into the Ottawa River through the Dozois Reservoir in Québec. OPG shares in operation and maintenance costs pertaining to the dam enabling the Dozois diversion.

The GRC and water rental payments for the regulated hydroelectric stations are recovered by OPG through OEB-approved regulated prices applicable to these stations.

For further details on water rights, see *Description of the Business – Water Rights*.

Thermal (Contracted Generation Portfolio Segment)

Overview of Generating Facilities

Thermal generating stations use heat energy to drive steam turbines that generate electricity. OPG's wholly-owned operating thermal facilities are comprised of biomass-fuelled generating units at each of Atikokan GS and Thunder Bay GS, and the dual-fuelled generating Lennox GS, which is capable of burning either oil or natural gas. Effective January 1, 2014, the results of these facilities are reported in the Contracted – Generation Portfolio business segment.

The combined in-service capacity of the three operating thermal facilities was 2,458 MW as at December 31, 2016. The Lennox GS is located in Greater Napanee, Ontario and accounts for approximately 2,100 MW of the in-service capacity. The Atikokan GS is located in Atikokan, Ontario and has a total in-service capacity of 205 MW. The Thunder Bay GS is located in Thunder Bay, Ontario and its advanced biomass fueled unit has an in-service capacity of 153 MW.

Capacity and production from the Lennox GS are subject to an ESA with the IESO for the period from January 2013 to September 2022. The capacity and production from the Atikokan GS are subject to a ten-year ESA expiring in July 2024. For the Thunder Bay GS advanced biomass fueled unit, capacity and production are subject to a five-year ESA expiring in January 2020.

OPG's three thermal generating stations operate as peaking facilities, depending on electricity demand. This provides Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements and has enabled the system to accommodate the expansion of Ontario's renewable generation portfolio. The continued operation of these stations is expected to provide Ontario with capacity and peaking generation during the initial years of the refurbishment of the Darlington and Bruce nuclear facilities.

The three thermal generating stations are operated and maintained as part of regional operations groups used to operate and maintain the Company's hydroelectric facilities. The Lennox GS is operated under Eastern Operations, and the Atikokan and Thunder Bay generating stations are part of Northwest Operations.

Thermal stations that are no longer available to generate electricity are included in the Services, Trading and Other Non-Generation business segment once they are removed from service. This includes the Lambton GS and Nanticoke GS sites, which ceased coal-fired generation in 2013.

Contracted Generation Portfolio – Thermal Performance (2014 to 2016)

	2016	2015	2014
Equivalent Forced Outage Rate (%) [1]	**1.6**	11.2	8.9

[1] Equivalent Forced Outage Rate is an index of the reliability of a generating unit at OPG's thermal stations. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

The change in thermal EFOR in the three-year period was primarily due to an outage in 2015 to perform repair work at the Lennox GS.

Thermal Fuel Procurement

Due to the relatively low capacity factor of the Lennox GS, natural gas is purchased on the spot market, other than a small volume of fixed term natural gas required for non-generation operational services. Oil for the Lennox GS is contracted for and purchased on an as needed basis. Fuel switching at the station is based on market and fuel economics. Annual procurement of biomass fuel quantities for Atikokan GS and Thunder Bay GS is pre-determined by the corresponding ESAs. Agreements are in place with suppliers for the purchase of all biomass fuel pellets needed to provide fuel for the Atikokan GS for the duration of its ESA, and for most of the advanced biomass fuel pellets needed to provide fuel for the duration of the ESA for the Thunder Bay GS.

Thermal Facility Planning

OPG's facility planning approach is designed to identify necessary capital and operating and maintenance expenditures for each thermal facility. This planning approach aims to sustain facility availability for the remaining service life through station reinvestment within constraints imposed by technical, financial, safety, and system requirements, as well as regulatory and contractual limits. Periodic engineering reviews of major systems are conducted to identify performance issues, provide reinvestment recommendations where appropriate, and ensure that regulatory, safety and operating standards continue to meet expectations. OPG undertakes projects at thermal stations that are expected to achieve an appropriate return within the service life of the stations.

Thermal Station Decommissioning

OPG has recognized, and carries on its balance sheet, a liability to cover future expenditures to decommission and dismantle each of its thermal stations at the end of their service lives. This provision is not funded and is estimated on the basis of station closure. Costs previously incurred by OPG to

preserve Lambton and Nanticoke generating stations for potential conversion to natural gas in the future were not charged to the provision.

Portlands Energy Centre Partnership

OPG has a 49.95 percent partnership interest in Portlands Energy Centre L.P., a limited partnership formed with TransCanada Energy Ltd. (49.95 percent) and the general partner of the partnership, Portlands Energy Centre Inc. (0.1 percent). The shareholders of Portlands Energy Centre Inc. are OPG (50 percent) and TransCanada Energy Ltd. (50 percent). PEC is a 550 MW combined cycle generation natural gas turbine electricity generating facility located on the former R. L. Hearn GS site in the port area of downtown Toronto, Ontario. The station was declared in-service in a combined cycle mode in April 2009. PEC operates under an Accelerated Clean Energy Supply contract with the IESO and trades electricity in the Ontario electricity market.

The Contracted Generation Portfolio segment includes OPG's share of equity income from its 50 percent ownership interest in the station. OPG's share of the in-service generating capacity and generation volume from its interest in the station are included in the operating statistics for the segment.

Brighton Beach Power Partnership

OPG has a 49.95 percent partnership interest in Brighton Beach Power L.P., a limited partnership formed with ATCO Power Canada Ltd. (49.95 percent) and the general partner of the partnership, Brighton Beach Power Ltd. (0.1 percent). The shareholders of Brighton Beach Power Ltd. are OPG (50 percent) and ATCO Power Canada Ltd. (50 percent). Brighton Beach is a 580 MW combined cycle gas turbine electricity generating facility located on the former J.C. Keith GS site in Windsor, Ontario. The station began commercial operation in July 2004. Brighton Beach operates under a tolling arrangement with Shell Energy North America (Canada) Inc. (Shell Energy), pursuant to which Shell Energy owns and trades the electricity produced by the facility in return for the supply of gas and the fees payable under the tolling agreement. Shell Energy's financial obligations are guaranteed by Shell Energy North America (US) L.P. (Shell L.P.), and Shell L.P.'s obligations are in turn guaranteed by Shell Oil Company.

The Contracted Generation Portfolio segment includes OPG's share of equity income from its 50 percent ownership interest in the station. OPG's share of the in-service generating capacity and generation volume from its interest in the station are included in the operating statistics for the segment.

Regulated – Nuclear Waste Management Segment

Overview

OPG is responsible for the ongoing management of radioactive wastes generated by its nuclear operations. In addition, OPG has the obligation for decommissioning its nuclear generating stations and nuclear waste facilities after the end of their useful lives and for managing radioactive wastes that arise in connection with the decommissioning. The handling and disposal of radioactive waste in Canada is subject to federal legislation.

The radioactive wastes generated by OPG's nuclear operations include the following:

- Used nuclear fuel bundles;
- Intermediate-level waste – material that has come in close contact with the reactors, but is less radioactive than used fuel, such as ion exchange resins and reactor equipment and components; and
- Low-level waste – material used in connection with station operation that is not highly radioactive, such as tools and protective clothing.

The Company's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the following:

- management of used nuclear fuel and L&ILW;
- decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power and other nuclear facilities;
- management of the Nuclear Segregated Funds established under the ONFA to fund OPG's obligation for nuclear facilities decommissioning and the long-term management of nuclear waste; and
- Other related activities including the inspection and maintenance of the waste storage facilities.

The nuclear accretion expense, which is the increase in the carrying amount of the liabilities for nuclear fixed asset removal and nuclear waste management liabilities reported on the balance sheet due to the passage of time, and the earnings from the Nuclear Segregated Funds are reported under this segment. The Regulated – Nuclear Waste Management segment is considered rate regulated because OPG's costs associated with nuclear waste management and nuclear facilities decommissioning have been included by the OEB in the determination of regulated prices for production from OPG's Pickering and Darlington nuclear generating stations, in accordance with the methodologies established by the OEB's 2008 decision on OPG's first application for regulated prices.

Federal Government Policy

In accordance with the requirements of the *Nuclear Fuel Waste Act* (Canada) (NFWA), in 2002, OPG and the other owners of nuclear fuel waste in Canada established a separately incorporated NWMO, with a mandate to manage and coordinate the full range of activities relating to the long-term management of nuclear fuel waste in Canada. This includes the design and implementation of Canada's plan for the long-term management of used nuclear fuel. In 2007, the federal government approved NWMO's submitted option, the Adaptive Phased Management (APM) plan, as the long-term solution for Canada's nuclear fuel waste. The APM plan contemplates the eventual long-term permanent disposal of radioactive nuclear fuel waste in a deep geologic repository (DGR) after a collaborative process of communication and engagement with Canadians aimed at selecting a suitable geological site with an informed and willing host community. The NWMO is in the process of undertaking a multi-year site selection process for the used fuel DGR.

The NFWA also requires the nuclear fuel waste owners in Canada to establish and make payments into trust funds for the purpose of funding the implementation of the long-term management plan for used fuel. Accordingly, OPG has established the Ontario NFWA Trust, which forms part of the Nuclear Segregated Funds under the ONFA. For additional details, see *Description of the Business – Regulated – Nuclear Waste Management Segment – Funding Mechanisms.*

Current Practices

Used Nuclear Fuel

Bundles of used nuclear fuel from OPG's reactors and leased reactors at the Bruce site are temporarily stored at the nuclear generating stations in water-filled pools, known as wet bays, for a cooling-off period of at least ten years, during which time their radioactivity is substantially reduced. Each nuclear generating station has sufficient capacity to store used nuclear fuel in wet bays for approximately 15 to 20 years of operation.

After bundles of used nuclear fuel have been stored for the cooling-off period, prior to the in-service of the planned used fuel DGR, the bundles are transferred from the wet bays to above-ground dry storage containers at the corresponding nuclear station site. Currently, there is used nuclear fuel in dry storage at the Pickering, Darlington and Bruce sites.

OPG's planning assumption for the long-term management of used nuclear fuel is consistent with the NWMO's APM concept. The NWMO has indicated that it currently expects an in-service date of 2043 at the earliest for the used fuel DGR.

Low and Intermediate Level Waste

OPG's L&ILW is stored at the radioactive waste management facility at WWMF located on the Bruce site. This facility, which continues to be owned and operated by OPG following the lease of the Bruce generating stations, operates under a separate licence issued by the CNSC. OPG's planning assumption for the long-term management of L&ILW is the placement of this nuclear waste in a separate L&ILW DGR.

For additional details, see *Description of the Business – Regulated – Nuclear Waste Management Segment – Deep Geologic Repository for Low and Intermediate Level Waste.*

Station Decommissioning

OPG's planning assumption for the decommissioning of its nuclear generating stations is a deferred dismantlement strategy. Under this strategy, each station will be de-watered and de-fueled immediately after it has ceased operations and prepared for safe storage and monitoring. Thereafter, OPG intends to monitor the station for approximately 30 years while in safe storage, after which time the station will be dismantled and the site restored over a period of approximately ten years. This strategy has been communicated to the CNSC through regular updates of OPG's preliminary decommissioning plans and liability estimates for the nuclear generating stations. OPG's operating licences have been issued based on, amongst other things, CNSC's understanding of this strategy.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations and their eventual decommissioning. Agreement has been reached with local municipalities for OPG to develop the L&ILW DGR on lands adjacent to the WWMF in Kincardine, Ontario.

Under the NSCA, OPG requires licences from the CNSC for activities to be undertaken with respect to the L&ILW DGR project. Before the CNSC can make licensing decisions for the proposal, an EA must be conducted in compliance with the requirements of the *Canadian Environmental Assessment Act*. As part of the EA process for the L&ILW DGR, Environmental Impact Statement, Preliminary Safety Report, and Technical Support Documents were submitted to the CNSC in 2011. The purpose of these submissions was to obtain EA approval and a site preparation and construction licence from the JRP for the project. The responsibility of the JRP, which was appointed by the Canadian Environmental Assessment Agency (CEAA) and the CNSC in 2012, was to examine the environmental effects of the proposed DGR to meet the requirements of the *Canadian Environmental Assessment Act.* In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In August 2015, OPG responded to the CEAA's list of potential environmental conditions relating to the JRP report. In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and the impact on environmental effects if Canada's planned used fuel deep geologic repository being developed by the NWMO were located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following a review by the CEAA and a period of public comment, an EA Decision Statement by the Minister is expected by the third quarter of 2017. Based on the information submitted to the Minister, the L&ILW DGR at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

In 2013, OPG suspended design activities on the project, pending receipt of a site preparation and construction licence. If the decision on the EA is positive, the licensing process will resume. Upon receipt of the site preparation and construction licence, OPG will complete detailed design and development of a project schedule and a budget. In parallel, OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The approval of OPG's Board of Directors must also be obtained in order to proceed with construction. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

Funding Mechanisms

On April 1, 1999, Ontario Hydro's obligation for nuclear facilities decommissioning and nuclear waste management was transferred to OPG. The responsibility for funding the liabilities for nuclear decommissioning and the long-term nuclear waste management between the Province and OPG is described in the ONFA. The key provisions of the ONFA are: (i) for OPG to establish two segregated funds, the Used Fuel Segregated Fund to fund future costs of long-term nuclear used fuel waste management and the Decommissioning Segregated Fund to fund the future life cycle costs of nuclear decommissioning, long-term L&ILW management, and certain costs for used fuel storage incurred after the nuclear stations are shut down; (ii) for the OEFC to be responsible for funding approximately $2.4 billion present value as at April 1, 1999 that had been an accumulated liability of Ontario Hydro, which the OEFC has since then fully funded; (iii) for the Province to limit OPG's financial exposure in relation to the cost of used fuel management for the first 2.23 million bundles of used fuel; and (iv) for the Province to provide financial guarantees to the CNSC for OPG's nuclear decommissioning and nuclear waste management obligations, if required by the CNSC.

The Used Fuel Segregated Fund and the Decommissioning Segregated Fund are administered by a third party custodian and held in accounts segregated from OPG's other assets. OPG has granted a security interest in both funds to the Province. As a result, these funds are not available to satisfy the claims of OPG's creditors.

OPG's required contributions to the Used Fuel Segregated Fund and the Decommissioning Segregated Fund are determined based on reference plans and associated life cycle cost estimates periodically approved by the Province under the ONFA. These reference plans are prepared by OPG with the assistance of external consultants and based on external practices and international benchmarks. Under the ONFA reference plans, OPG estimates the total present value of its future nuclear facilities decommissioning and nuclear waste management costs based on cost estimates and a set of major planning assumptions, including remaining useful lives of the nuclear stations, proposed methods and timing of nuclear waste disposal, and economic indicators. Given the long-term duration of these life cycle programs, the multiple assumptions involved and the evolving technology to handle nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the underlying costs, which may increase or decrease over time.

The limits to OPG's financial exposure under the ONFA with respect to the life cycle cost of long-term storage and disposal of the first 2.23 million bundles of used fuel are as follows (all amounts are expressed in January 1, 1999 present value dollars): (i) OPG will bear all costs up to $4.6 billion; (ii) OPG and the Province will share, on an equal basis, costs incurred between $4.6 billion and $6.6 billion; (iii) OPG will be responsible for 10 percent of the costs incurred between $6.6 and $10 billion, and the Province will be responsible for the remaining 90 percent; (iv) the Province will be wholly responsible for any costs above $10 billion. As a result, OPG's liability for these used fuel costs under the ONFA is capped at $5.9 billion in January 1, 1999 present value dollars, which is equivalent to approximately $15 billion in December 31, 2016 present value dollars. OPG is responsible for all incremental costs relating to the management of used fuel bundles in excess of 2.23 million. As at December 31, 2016, approximately 2.5 million bundles of used fuel waste had been produced. The 2.23 million fuel bundles threshold was established as of April 1999 and represents the estimated total life cycle bundles based on the existing useful lives of the nuclear stations at that time.

Under the ONFA, the Province guarantees OPG's annual return earned in the Used Fuel Segregated Fund at 3.25 percent plus the rate of change in the Ontario Consumer Price Index, as defined in the ONFA, for funding related to the first 2.23 million used fuel bundles. Therefore, upon approval of a new ONFA reference plan, the Province is obligated to make an additional contribution to the Used Fuel Segregated Fund if the fund earned a rate of return that is less than the guaranteed rate of return. If the return on the assets in the fund attributable to the first 2.23 million used fuel bundles exceeds the Province's guaranteed rate of return, the Province is entitled to the excess, which it can withdraw, partly or in full, upon approval of a new ONFA reference plan. OPG is subject to financial risk associated with the portion of the fund attributable to the used fuel bundles in excess of the 2.23 million threshold. OPG is also responsible for the risks associated with cost increases and investment returns in the Decommissioning Segregated Fund.

The investments in the Nuclear Segregated Funds include a diversified portfolio of equities and fixed income securities that are invested across geographic markets, as well as investments in real assets including infrastructure, real estate and agriculture. As the Nuclear Segregated Funds are invested to fund long-term liability requirements, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While the Nuclear Segregated Funds are manage to achieve, in the long term, the target return rate based on the discount rate specified in the ONFA, the rates of return earned in a given period may be subject to various external factors including financial market conditions and changes in the Ontario Consumer Price Index, which can be volatile in the short-term and cause fluctuations in the Company's financial results. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Contributions to the Nuclear Segregated Funds

OPG's contribution requirements under the ONFA are recalculated each time there is an approved new or amended reference plan and under certain other events. Reference plans are required to be prepared at least every five years and more frequently if required, or if there is an underlying change in the assumptions of the reference plan that both OPG and the Province agree are significant enough to trigger a recalculation of the contribution levels during the five-year period.

The ONFA Reference Plan in effect, during the 2012-2016 period was approved by the Province effective January 1, 2012 (2012 ONFA Reference Plan). Pursuant to the 2012 ONFA Reference Plan, OPG had been making contributions to the Used Fuel Segregated Fund. No contributions were required to the Decommissioning Segregated Fund pursuant to the 2012 ONFA Reference Plan. Based on the funded status of the Used Fuel Fund and the Decommissioning Segregated Fund reflecting the revised lower life cycle liability estimates per the 2017 ONFA Reference Plan, no overall contributions to the Nuclear Segregated Funds are currently required starting in 2017. Future contributions to the funds may be required should either or both of the funds be in an underfunded position when a new reference plan is prepared. Such may be the case as a result of future variability in asset performance due to volatility inherent in financial markets. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the underlying obligations in subsequent ONFA reference plans.

OPG is required to make annual contributions to the Ontario NFWA Trust based on a funding formula approved by the federal Minister of Natural Resources for OPG and the other nuclear fuel waste owners in Canada. The trust forms part of the Used Fuel Segregated Fund. Any OPG contributions to the Used Fuel Segregated Fund as well as any portion of the Used Fuel Segregated Fund currently not in the trust can be applied to satisfy the trust's annual contribution requirements. The funds in the Ontario NFWA Trust will be used for the purposes of long-term management of nuclear used fuel waste. OPG and the Province are beneficiaries of the trust.

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund and the Used Fuel Segregated Fund, which is the excess of the fair market value of the fund assets over the as associated liabilities per the most recently approved ONFA Reference Plan. If there is a surplus in the Decommissioning Segregated Fund such that the liabilities, as defined by the

most recently approved ONFA Reference Plan, are at least 120 percent funded, OPG may direct, at the time a new or amended reference plan is approved, up to 50 percent of the surplus over 120 percent to be treated as a contribution to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount.

Under the ONFA, if there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province shall have the right at any time to access the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus above the 100 percent funded threshold.

Changes to OPG's contributions to the Nuclear Segregated Funds depend on any changes to the ONFA reference plans and associated cost estimates, as well as changes in asset values of the funds and any changes in the tax treatment of fund earnings. OPG's required contributions could increase, for example, if cost estimates increased, if the operating lives of the nuclear stations were revised, if fund assets earned less than the target rate of return, if the income earned in the funds became subject to tax, or if the NWMO were unable to receive the same sales tax treatment that OPG would be entitled to receive if the NWMO had not been established.

OPG has the responsibility for managing the storage of used nuclear fuel and L&ILW generated by the Bruce generating stations and for the eventual decommissioning of these stations. Funding of these obligations on the part of OPG is recovered from Bruce Power through annual rent payments and volume based fees per the Bruce Lease and related agreements. Further details on the 2015 amendments to these agreements are found in *General Development of the Business – Nuclear Business Development – Bruce Power Refurbishment and Bruce Lease Agreement*.

Provincial Guarantee

In accordance with the NSCA, the CNSC requires OPG to have sufficient funds available to discharge the current nuclear waste management and nuclear decommissioning liabilities. As required by the terms of the ONFA, the Province provides a guarantee to the CNSC, on behalf of OPG, for any shortfall between the CNSC financial guarantee requirement and the value of the Nuclear Segregated Funds. The CNSC process requires the CNSC financial guarantee requirement to be updated once every five years and for OPG to provide an annual report to the CNSC on the assumptions, asset values, and resulting financial guarantee requirements. The CNSC financial guarantee requirement calculations differ slightly from the life cycle ONFA liabilities calculations, as is the CNSC calculations are based on a shutdown scenario at the end of each calendar year that does not take into account waste expected to be generated in the future. In December 2012, the CNSC accepted OPG's proposed 2013-2017 CNSC financial guarantee requirement resulting in a Provincial Guarantee amount of $1,551 million for the 2013-2017 period. OPG is currently updating the CNSC financial guarantee requirement for the 2018-2022 period and expects to file it with the CNSC in the first half of 2017. **[MONITOR]** OPG pays the Province an annual guarantee fee equal to 0.5 percent of the amount of the Provincial Guarantee.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-regulated, non-hedging activities. As part of trading activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, transactions related to financial risk management energy-related products, and sales of other energy-related products.

In addition, the segment includes the results of OPGET, which engages in U.S.-based wholesale energy trading activities in the U.S. northeast. The activities of OPGET include trading electricity in the U.S. using over-the-counter energy-related derivatives. OPGET retains a Federal Energy Regulatory Commission Licence.

The segment also includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and Nanticoke generating stations sites.

Indigenous Relations

The Aboriginal and treaty rights of Indigenous communities are recognized and affirmed in the *Constitution Act, 1982*. OPG's corporate governance includes an Indigenous Relations policy to help build and develop mutually beneficial working relationships with Indigenous communities proximate to the Company's present and future operations. The policy focuses on building respectful relationships with Indigenous communities, businesses and organizations through partnership, collaboration, and support for procurement, employment and educational opportunities. The Company seeks to establish and maintain relationships with Indigenous communities based on a foundation of respect for their languages, customs, and political, social and cultural organizations.

OPG may be subject to claims by Indigenous communities or other Indigenous groups and individuals. These claims may stem from generation development activities, historic operations of Ontario Hydro that may have impacted Aboriginal and treaty rights, or the absence of legal permits, rights-of-way, or easements. Legal precedents created by court rulings may impact negotiations and resolution of past grievances. To date, OPG has resolved 23 past grievance claims, achieving final settlement agreements.

In line with the company's Indigenous Relations policy, OPG is pursuing prospective generation-related developments and other joint projects with Indigenous communities. OPG currently has four generation development partnerships with Indigenous communities. OPG's first such partnership was established in early 2009 as part of the Obishikokaang Waasiganikewigamig/Lac Seul GS project. The signing of the "*Amisk-oo-Skow*" Agreement with the Moose Cree First Nation (MCFN) in early 2010 marked the second such partnership. In 2011, the Lower Mattagami Limited Partnership agreement was amended and restated to include the MCFN and their wholly owned Amisk-oo-Skow Finance Corporation as limited partners and to enable the MCFN to acquire up to 25 percent limited partnership interest in the Lower Mattagami River project. During 2014, the MCFN acquired a 25 percent interest in the assets through its investment in the Lower Mattagami Limited Partnership as incremental units of the project were placed in-service.

In November 2008, OPG and Coral Rapids Power L.P., a wholly owned subsidiary of Taykwa Tagamou Nation, negotiated a suite of agreements regarding what is now known as the Peter Sutherland Sr. GS development project, including a partnership agreement. Under the partnership agreement, Coral Rapids Power L.P. is pursuing an equity interest in the partnership.

Following selection by the IESO in March 2016, OPG and a subsidiary of the Six Nations of Grand River Development Corporation have partnered, through the Nanticoke Solar LP, to develop a new 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands.

Other joint projects with Indigenous partners include two shoreline remediation projects completed in 2016. The Whitesand First Nation, working closely with OPG, completed a project to remediate nearly two kilometers of shoreline, while the Long Lake #58 First Nation undertook the management of a five-year shoreline remediation project. OPG also has been engaging proactively with Indigenous communities regarding the Company's nuclear operations, including both regularly scheduled meetings and an outreach effort in connection with OPG's proposed L&ILW DGR and the re-licensing of the PWMF and the WWMF.

In November 2016, OPG was recognized for its ongoing commitment to engaging local Indigenous communities with the Canadian Electricity Association's (CEA) 2016 Sustainable Electricity award for Leadership in External Collaboration and Partnerships.

Workplace Safety and Public Safety

Workplace Health and Safety

In the area of workplace safety, OPG is committed to achieving excellent safety performance through continuous improvement and a strong safety culture, with the ultimate goal of zero injuries. Overall, OPG's workplace safety performance has been one of the best amongst its comparator Canadian electrical utilities. In 2016, OPG received the CEA President's Gold Award recognizing three consecutive years, 2013 to 2015, of sustained top quartile safety performance within the comparator group.

Workplace safety performance is measured using two primary indicators at OPG, All Injury Rate (AIR) and Accident Severity Rate (ASR). OPG's AIR and ASR results for employee workplace safety were as follows for the year ended December 31:

	2016	**2015**	**2014**
AIR *(injuries per 200,000 hours worked)*	**0.56**	0.39	0.36
ASR *(days lost per 200,000 hours)*	**2.59**	0.50	1.31

In 2016, OPG's AIR and ASR safety performance was worse than in 2015. OPG's analysis of the underlying events indicated that major contributors to the injuries and near misses included inadequate situational awareness and attention to detail, and suboptimal risk-based decisions, rather than missing or inadequate standards or programs. OPG is implementing a number of initiatives to target the injury trends based on the analysis of the safety events, with a focus on the use of human performance tools including increased field supervisory oversight, situational awareness, communication, and procedural use and adherence.

In 2016, OPG launched an organization-wide "iCare Enough to Act" initiative aimed at renewing employees' commitment to their own and each other's safety and well-being. Plans to further strengthen safety as a foundational element of the Company's values-based culture are being developed through leadership forums and other engagement activities.

Contractors are required to conduct work safely at OPG sites. In support of this requirement, OPG utilizes an independent contractor pre-qualification process, provides on-site safety support for many of OPG's major projects, and works with contract partners to improve their health and safety programs to meet OPG's requirements. To further strengthen contractors' safety performance, in 2016, OPG updated its contractor's safety requirements and related governance, and implemented additional oversight and field monitoring to ensure ongoing compliance. In the past eight years, OPG has consistently shown a better than average Construction Contractor AIR as compared to the Health and Safety Association Contractor AIR, a metric of construction contractor safety performance across Ontario

Since 2014, OPG has been operating under a single integrated health and safety management system and set of operational risk control procedures across the Company, providing consistent performance expectations for all employees. The control procedures are designed to ensure continued enterprise-wide monitoring of health and safety performance and to support continuous learning and improvement in these areas. Oversight and reporting by corporate and site safety functions is in place to provide senior management with regular information on the effectiveness of the safety management efforts, compliance with legal and corporate requirements, and safety performance trends. OPG's incident management system requires that all incidents, including near misses, be reported and investigated and that corrective action plans be developed and completed in order to prevent reoccurrences.

In 2014, OPG launched a Total Health initiative that aims to embed a health culture that supports employees and their families in their efforts to achieve an optimal level of health and functioning, through health education, health promotion, disease and injury prevention, and crisis intervention. In 2016, the Company launched the Mental Health First Aid training course for employees, an accredited training

program facilitated by the Mental Health Commission of Canada. The training aims to increase awareness and empathy for mental illness, reduce stigma, support affected employees, and improve return to work outcomes.

Nuclear Radiation Safety

OPG manages a radiation protection program designed to minimize detrimental health effects to employees and members of the public. OPG follows developments in the field of radiation protection as documented by the International Commission on Radiological Protection (ICRP), the United Nations Scientific Committee on the Effects of Atomic Radiation, and the U.S. National Council on Radiation Protection and Measurements. Widely recognized as the main source of expert advice regarding protection from the harmful effects of ionizing radiation, the ICRP periodically issues recommendations concerning principles of radiation protection. These recommendations are usually adopted by most countries without significant modification and are incorporated into the applicable laws. The Canadian Radiation Protection Regulations are based on the recommendations of the ICRP, and OPG's nuclear facilities conform to these regulations. The CNSC is the federal agency that regulates radiation protection in Canada.

Radiation exposures to station personnel and the public are limited by station design and adherence to approved operating procedures. Over the years, OPG has been a leader in applying the principles of keeping radiation doses as low as reasonably achievable. OPG's internal operating limits for occupational exposure are set well below the regulatory limits to ensure that the regulatory limits are not exceeded. OPG's operating targets for radiological emissions are set at even more restrictive levels and typically represent small fractions of the regulatory limits.

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for those individuals who live or work near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), an international unit of radiation dose measurement. For 2015, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.5 μSv and 1.2 μSv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000 μSv. While the public doses from OPG's nuclear operations for the 2016 operating year will not be finalized until the second quarter of 2017, they are not expected to differ significantly from the 2015 levels.

As a condition of receiving operating licences for its nuclear facilities, OPG has developed comprehensive emergency plans that detail the Company's planned response to reactor accidents, as well as accidents involving the transportation of radioactive materials. These plans dictate how OPG will work with municipal, regional, provincial, and federal agencies to safeguard station personnel and members of the public in the unlikely event of a radiation emergency at one of OPG's facilities. Station staff are required to regularly participate in emergency exercises to maintain and continuously improve response capability for such events.

Dam Safety and Waterways Public Safety

OPG manages dam safety and other risks associated with the production of hydroelectric power through OPG's Safe Operations Policy and Dam Safety Program. The Safe Operations Policy directs that dams be designed, constructed, operated, and maintained in a manner that meets all regulatory requirements, or, in the absence of regulations, the safety guidelines published by the Canadian Dam Association or other industry best practices. OPG is one of the first dam owners in Canada to have developed and implemented a dam safety program and is considered an industry leader in many aspects of the program.

In addition to effectively managing the safety of dams against catastrophic failure, OPG has developed a number of technical standards and procedures concerning public safety around dams, and materials to educate the public and raise awareness of the hazards associated with the operation of the hydroelectric facilities. This includes the implementation of control measures in the form of signage, safety booms,

buoys, fencing and audible alerts at the appropriate facilities. These measures are actively managed to maintain their effectiveness. OPG also strives to entrench a "Stay Clear – Stay Safe" message as part of its public education program, through strategically placed advertisements and engagement of other agencies, such as the MNRF, Ontario Provincial Police, Life Saving Society, Ontario Waterpower Association, and other stakeholders.

Since 2007, OPG has engaged an independent advisory panel consisting of internationally recognized experts to conduct an annual review of its Dam Safety Program. The Chair of the independent panel establishes areas of in-depth review and presents the observations to the OPG's Board of Directors. The panel has consistently found that the risks associated with the dams owned and operated by OPG are being managed in alignment with industry best practices and guidelines.

For additional details on the regulatory regime related to dams and waterways, see *Description of the Business – Water Rights.*

Environment

Overview

OPG is committed to meeting all legal requirements and any environmental commitments that it makes, with the objective of exceeding the legal requirements where it makes business sense. OPG's Environmental Policy specifically commits the Company to:

- Establish an environmental management system (EMS) and maintain registration for this system to the ISO 14001 Environmental Management System standard;
- Work to prevent or mitigate adverse effects on the environment with a long-term objective of continual improvement; and
- Manage sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern.

The policy is implemented through OPG's EMS. Within the EMS, OPG sets environmental goals and maintains planning, operational control, and monitoring programs to manage its negative and positive impacts on the environment. The most significant environmental aspects of OPG's operations include: chemical emissions to water, spills, fish impingement and entrainment, thermal effluent emissions, displacement of fossil fuels, enhancement and disruption of wildlife habitat, tritium and carbon-14 emissions, radioactive waste generation, and water flow and level changes. The policy is reviewed annually as part of the EMS to ensure that it remains appropriate to the nature, scale and environmental impacts of OPG's activities.

Details of OPG's environmental performance and initiatives to fulfill the Environmental Policy can be found in OPG's annual *Sustainability Report*, which is available on the Company's website at www.opg.com. ***Unless otherwise specifically stated, none of the information contained on, or connected to the Company's website nor any of the contents of the Sustainability Report are incorporated by reference herein.***

OPG communicates its environmental performance to external and internal stakeholders through a range of engagement methods such as reports and correspondence to regulators, meetings, newsletters, open houses, consultations, news releases, advertising campaigns, social media, and participation in community events.

Environmental Compliance

OPG must comply with a large number of environmental requirements contained in statutes, regulations, by-laws, licences, permits and approvals. Failure to comply with applicable environmental laws may result in enforcement action, including the potential for orders or charges. OPG reports any incidents of

non-compliance to the appropriate federal, provincial or municipal authorities as required, with corrective action plans developed and implemented accordingly.

Changes in environmental regulatory requirements may result in existing operations being in a state of non-compliance, a potential inability to comply, and potential costs and liabilities for OPG. To ensure compliance, such circumstances may require OPG to install control technologies, develop new processes, allowances or offsets, or place constraints on electricity production.

Protection of Fish

Electricity generating facilities located on waterways can impact fish in a number of ways. At nuclear and thermal stations, the intake of water for equipment cooling purposes can result in fish being impinged on station equipment and fish larvae and eggs being entrained in the water as it passes through the station. The warmer water returned to the water body also has the potential to impact aquatic organisms and habitat near the station. At hydroelectric stations, the flow of water through the station turbines can result in fish impingement and entrainment, while physical barriers such as dams can prevent the migration of fish.

OPG utilizes measures such as fish ladders, trap and transport programs, stocking programs, barriers and deterring structures, water flow alterations, habitat protection and creation, and station effluent temperature limits to manage and mitigate impacts to fish. Potential regulatory changes being monitored and managed as risks by the Company include electricity production constraints and water flow management requirements to protect fish and fish habitat, and expanded fish passage requirements.

Biodiversity and Habitat Stewardship

The generation of electricity can have an impact on biodiversity, either directly through habitat loss and fragmentation or indirectly through emissions to the environment. OPG is committed to managing its sites in a manner that strives to maintain significant natural areas and associated species of concern. OPG also works with its community partners to support regional ecosystems and biodiversity through science-based habitat stewardship. OPG's regional biodiversity program is strategically focused on funding and promoting efforts which contribute to the protection and restoration of a natural system of habitat cores and corridors across Ontario.

Climate Change Mitigation and Air Quality

OPG's operational and growth strategies support reductions in GHG emissions and improved air quality. After safely ending coal-fired generation in the province, OPG has become Ontario's largest clean energy provider, producing and selling electricity that is over 99 percent free of GHG and smog-causing emissions. The elimination of coal-fired electricity production at OPG's generating stations resulted in coal being reduced from one-quarter of Ontario's energy supply mix in 2003 to zero in 2014.

OPG monitors and reports GHG emissions from its facilities in accordance with the regulatory requirements set out by Environment and Climate Change Canada and the Ontario Ministry of the Environment and Climate Change. In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating GHG emissions in Ontario and includes a cap and trade program, with the first compliance from January 1, 2017 to December 31, 2020. The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. The program requirements are expected to result in increased fuel costs for some OPG-owned and co-owned generating facilities. Fuel costs for these stations are generally recovered from the electricity market. With OPG's low GHG emitting fleet, this is not expected to have a material adverse financial impact on the Company. OPG has established the necessary processes to comply with the cap and trade program requirements.

OPG is monitoring actions being taken by the Government of Ontario and the Government of Canada to reduce GHG emission levels and transition to a low-carbon economy. In support of efforts to mitigate climate change, the Company continues to evaluate and implement plans to increase the generation capacity of its hydroelectric generating fleet, where economic, and invest in other low-carbon technologies.

Radiological Emissions

Very low levels of radioactivity are released to air and water as a result of operating the reactors at OPG's nuclear generating stations. OPG maintains an effluent monitoring and control program to ensure radiological emissions are kept well below the release limits specified in the station operating licences. OPG also has environmental monitoring programs in the vicinity of the nuclear stations to ensure operations have no adverse impacts on human health and the environment. These programs are designed to assess impacts, demonstrate compliance with regulatory limits, validate the effectiveness of containment and effluent controls, and verify predictions made by environmental risk assessments. Results from the monitoring programs have confirmed OPG's radiological emissions are a small fraction of the regulatory release limits.

In June 2016 and August 2016, the CNSC released sampling results from its independent environmental monitoring program, which confirmed that the public and the environment around OPG's nuclear generating stations continued to be safe.

For further details, see *Workplace Safety and Public Safety – Nuclear Radiation Safety.*

People and Culture

Workforce Resourcing Strategies

Electricity generation involves complex technologies that require highly skilled and trained workers, and a well trained and engaged workforce is fundamental to the achievement of OPG's strategic imperatives. The Company is focused on improving the capability of its workforce through leadership development, knowledge management, diversity and inclusion programs, and hiring in key areas. Ability to secure the right talent mix in order to effectively meet the Company's immediate and longer term business needs on a timely basis is supported through workforce planning, resourcing and on-boarding strategies, both to acquire external talent into the organization and to develop existing employees. The goal of resourcing strategies and workforce planning is to ensure that the Company's workforce is diverse and has the right skill set and capability for the safe and effective operation of the generating facilities and successful delivery of major projects, including the refurbishment of the Darlington GS. These strategies are being designed to take into account anticipated staffing requirements to the end of planned commercial operations of the Pickering GS, through to the end of the planned period to de-fuel, de-water and place the station in a safe state condition.

As part of the strategy to develop and engage employees and to build leadership talent, the Company has an active succession planning program with a focus on accelerating development. OPG also has a talent management monitoring process to proactively assess staffing risks, challenges and opportunities. In 2015, OPG implemented a company-wide high potential leadership development program. This 18-month cross-functional, competitive-entry program is designed to identify and develop candidates for future leadership positions while they are still relatively early in their career.

Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification. In addition to maintaining its internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners, and educational institutions to meet the required level of qualification.

Effective January 1, 2017, OPG implemented a new Executive Compensation Program that is compliant with *Ontario Regulation 304/16: Executive Compensation Framework*, introduced in September 2016.

The regulation sets out how all employers designated under the *Broader Public Sector Executive Compensation Act, 2014*, including OPG, must establish and post compensation programs for executives. OPG's new Executive Compensation Program is designed to provide compensation that is at the 50th percentile of the market and focused on at-risk, performance based pay. The program will better enable OPG to attract, align and retain the executive talent critical to delivering Shareholder and customer value, while ensuring continued safe and reliable operations. For further information on the Executive Compensation Framework, refer to *Corporate Governance – Compensation.*

Employees

OPG's average number of full-time employees and average number of seasonal, casual construction and non-regular staff (Other Staff) in 2016 were as follows:

Business Segment	Full-time Employees	Other Staff
Regulated – Nuclear Generation [1]	7,250	1,120
Regulated – Hydroelectric	1,150	45
Contracted Generation Portfolio	540	50
Services, Trading, and Other Non-Generation	130	5
Total	**9,070**	**1,220**

[1] Including employees associated with the Regulated – Nuclear Waste Management segment.

The majority of OPG's employees are represented by the PWU and The Society. The PWU includes most workers below the level of first line manager – from clerical staff to technicians and trades staff and station operators. The Society includes supervisors, professional engineers, scientists, and other professionals.

Bargaining rights with the 19 craft unions that perform construction work at OPG's generating facilities in addition to the regular workforce are established either through the EPSCA or directly with OPG. EPSCA is a voluntary association of owners and contractors who perform work in the electrical power systems sector. The primary purpose of EPSCA is negotiating and administering collective agreements on behalf of employers performing work on what is now OPG property. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. OPG currently has 17 agreements through EPSCA and two direct trade agreements. The two direct trade agreements are with the Canadian Union of Skilled Workers and the Brick and Allied Craft Union.

Insurance

The principal types of discretionary insurance carried by OPG include directors' and officers' liability, excess commercial general liability, all risks property, boiler and machinery breakdown, including statutory boiler and pressure vessel inspections, and business interruption. In addition to providing coverage for OPG's non-nuclear facilities, this insurance applies to the conventional operations at OPG's nuclear generating stations. OPG also maintains nuclear property insurance, including nuclear boiler and machinery breakdown, for damage to the nuclear portions of its generating stations, and for perils propagating from the nuclear to the conventional side of its assets. This coverage complements the conventional property insurance program.

OPG also purchases or requires contractors to purchase discretionary insurance for construction projects. For the Darlington Refurbishment project, the insurance coverage for the pre-requisite construction works was placed in 2013 and for refurbishment execution in 2016. The owner-controlled insurance program for the refurbishment consists of wrap-up liability, course of construction and marine transit insurance.

OPG purchases certain insurance coverage as required by statute, namely owned and leased motor vehicle liability and nuclear energy liability insurance. The federal *Nuclear Liability and Compensation Act* (NLCA) that came into effect on January 1, 2017, and its predecessor legislation, the *Nuclear Liability Act* (NLA), impose absolute liability on a licensed operator of a nuclear generating station for any damage to

property of, or injury to, the public arising from a nuclear incident, other than damage resulting from sabotage or acts of war. As such, the legislation protects all other persons from liability, including suppliers of nuclear fuel and components used in nuclear reactors.

The NLCA requires all operators of nuclear generating stations in Canada to maintain specified amounts of nuclear liability insurance purchased from a federal government approved insurer or other equivalent forms of financial security approved by the federal government. Under the NLCA, OPG is required to maintain an initial $650 million per incident of nuclear energy liability insurance for each of its nuclear installations as defined by the NLCA effective in 2017, for which there is no deductible amount, with successive annual increases to $750 million, $850 million, and $1 billion over the 2018-2020 period. The Pickering GS site and the Darlington GS site are considered to be two separate nuclear installations under the NLCA. OPG is also required to maintain $13 million per incident of nuclear energy liability insurance for the WWMF. OPG is not responsible for purchasing nuclear liability insurance for the Bruce nuclear generating stations. Previously, the NLA required OPG to maintain $75 million per incident of nuclear energy liability insurance for each of the Pickering GS site and the Darlington GS site and $6 million for the WWMF, purchased from a federal government approved insurer. OPG continues to maintain nuclear liability insurance or other forms of financial security that have been approved by the federal government equal to the required liability limits.

Under Part I of the NLCA, an operator is liable for all damages resulting from a nuclear incident. If, in the opinion of the Governor in Council, OPG's liability could exceed the specified insured amount in respect of a nuclear incident, or it would be in the public interest to do so, the Governor in Council shall proclaim Part II of the NLCA as applicable in respect of a nuclear incident. Under Part II of the NLCA, OPG's liability would be effectively limited to the amount of required abovementioned insurance, and the Governor in Council may authorize additional funds to be paid by the federal government as may be specified in an order.

RISK FACTORS

OPG faces a wide range of significant risks which could have a material adverse effect on the Company's business and achievement of strategic imperatives. There may be further risks and uncertainties that are not presently known, or that are not currently believed to be material, that may in the future adversely affect the Company's performance or financial condition.

The risks faced by OPG include those associated with:

- Significant inherent uncertainties regarding the outcomes of OEB rate and other proceedings for OPG's regulated operations, including the Company's May 2016 application for new regulated prices for the 2017-2021 period, the ability to recover Darlington Refurbishment costs and the OEB's sector-wide review of pension and OPEB cost recovery mechanisms;
- The ability to deliver the Darlington Refurbishment project objectives on time and on budget. The failure to carry out the refurbishment of the first unit as planned may result in a decision not to refurbish the remaining Darlington units;
- The planned extension of commercial operations of the Pickering GS to 2024;
- Availability or alignment of skilled human resources;
- Maintaining safe and reliable operations of aging generating assets and the exposure to variable output from existing generating stations;
- The cost, schedule, and technical aspects of major development projects;
- Additional nuclear regulatory and licencing requirements and changes in technical codes, regulations or laws;
- Non-performance by strategic suppliers or an inability to diversify the supplier base;
- Managing information technology (IT), including the risks of failure to meet IT requirements and effectively deal with cyber security threats;
- Uncertainty inherent in cost estimates for nuclear waste management and decommissioning obligations;

- Uncertainty associated with nuclear waste management operations, including proposed waste disposal facilities such as the L&ILW DGR;
- Potential non-compliance with applicable environmental laws;
- The impact of changes in various market factors, such as equity prices, interest rates, inflation, and commodity prices, on the market value of investments held by OPG's Nuclear Segregated Funds and registered pension plan;
- Changes in the opinion of various stakeholders regarding OPG's public profile, including the impact thereon of OPG's inability to achieve operational excellence and project excellence safely and reliably and to maintain financial strength;
- The quality of OPG's relationships with Indigenous communities, including exposure to potential claims by, and the outcome of negotiations with, these communities;
- Changes in post-employment benefit obligations;
- Employee and contractor occupational safety risks and hazards;
- Inability to file consolidated financial statements beyond 2018 based on US GAAP upon expiry of the current exemptive relief from the Ontario Securities Commission; further details regarding the exemptive relief can be found in the Company's 2016 annual MD&A under the heading, *Exemptive Relief for Reporting under US GAAP* in the section *Critical Accounting Policies and Estimates;*
- The obligation of OPG's shareholder, the Province of Ontario, to respond to a broad range of matters in its role as the Government of Ontario competing with OPG's commitment to maximize the return on the shareholder's investment in the Company. This includes, but is not limited to, the Province's response to mitigate the impact of rising electricity prices on consumers.
- Deterioration in counterparty credit and non-performance by suppliers and contractors;
- Electricity market conditions including new participants in the market, competitive actions of market participants, electricity demand, economic growth, SBG conditions, changes in the regulatory environment, and wholesale prices in interconnected markets;
- Increases in operating costs and other business impacts arising from federal and provincial legislation and regulation, including potential changes therein;
- Volatility in electricity trading activities;
- Impact of a successful challenge by tax authorities of a tax position taken by OPG that is not recoverable from customers;
- Movements in the U.S. dollar and other foreign currencies relative to the Canadian dollar;
- Ability to cost effectively meet liquidity requirements including funding for business development initiatives;
- Delays or cancellations of development projects in the initial stages of development;
- Changes in the market price of fuels used to produce electricity;
- Contracted generation assets, which may not meet performance targets as specified in the ESAs or other long-term contracts. Additionally, upon expiry, subsequent ESAs may not be available;
- Uncertainty in U.S. government policy that may impact OPG's operations; and
- Business continuity events, including disruptions due to extreme weather, natural disasters, technology and human factors.

The above list of risk factors is not exhaustive. For a detailed discussion of risks that could materially adversely affect OPG, including its business, strategy, generating stations, reputation, financial condition, operating results and projects, see the Company's 2016 annual MD&A under the section *Risk Management*, which risk factors are incorporated by reference herein.

DIVIDENDS

In 1999, OPG's Board of Directors established a policy to pay a dividend of 35 percent of net income after taxes. The declaration and payment of dividends remains at the sole discretion of OPG's Board of Directors and is dependent on the results of OPG's operations, the Company's financial condition and cash requirements, securities legislation requirements, and other factors considered relevant by the Board of Directors in exercising its discretion and judgment on an ongoing basis. OPG did not declare or pay any dividends for the years 2014 to 2016.

There are no restrictions in the articles of the Company that could prevent the Company from paying dividends. However, the declaration and payment of dividends are subject to financial tests set forth in the OBCA.

DESCRIPTION OF CAPITAL STRUCTURE

The authorized share capital of OPG consists of an unlimited number of common shares (the voting shares of the Company). As at December 31, 2016, OPG had 256,300,010 common shares issued and outstanding, all of which are owned directly by the Province at a stated value of $5,126 million. OPG is authorized to issue an unlimited number of common shares without nominal or par value. Holders of common shares are entitled to one vote per share at meetings of the shareholders of the Company and to receive dividends if, as, and when declared by the Board of Directors of the Company. Holders of common shares would participate, pro rata to their holding of common shares, in any distribution of the assets of the Company upon its liquidation, dissolution, or winding up. Any issue of new shares is subject to the consent of all of OPG's shareholders.

All of the Company's voting securities are held by the Province. Accordingly, the Company is controlled by the Province.

CREDIT RATINGS

DBRS Limited (DBRS) and S&P Global Ratings (S&P) provide credit ratings for commercial entities. A credit rating generally provides investors with an independent measure of credit quality of an issue of securities. Credit rating categories for long-term debt instruments range from highest credit quality (generally 'AAA') to default in payment (generally 'D').

In April 2016, DBRS re-affirmed the long-term credit rating on OPG's debt at 'A (low)', and the commercial paper rating at 'R-1 (low)', each with a stable outlook. In July 2016, S&P re-affirmed OPG's long-term credit rating at BBB+ with a stable outlook. On July 7, 2015, S&P lowered OPG's long-term corporate credit rating from 'A-' to 'BBB+' with a stable outlook. S&P's rating action followed its July 6, 2015 downgrade to the Province's rating from 'AA-' to 'A+'. The link between the Province and OPG through ownership and financial support may impact OPG's credit rating. S&P's commercial rating for OPG is 'A-1 (low)'.

Long-term debt instruments that are rated in the 'A' category by DBRS are considered to be of good credit quality. The capacity for the payment of financial obligations by the obligor of such instruments is considered to be substantial, but of lesser credit quality than higher-rated entities. Entities in the 'A' category may be vulnerable to future events, but qualifying negative factors are considered manageable. The addition of a "high" or "low" modifier indicates relative standing within the rating category.

A 'BBB' rating category by S&P for long-term debt instruments means that the obligor has adequate capacity to meet its financial commitments, but is considered more subject to adverse economic conditions than higher-rated entities. The addition of a plus '+' or minus '-' designation after a rating indicates the relative standing within a particular rating category.

DBRS's commercial paper credit rating scale ranges from 'R-1(high)' to 'D', which represents the highest to lowest quality of such securities rated. The rating of 'R-1(low)' is the third highest and is considered to be of good credit quality. S&P's Canadian commercial paper rating scale ranges from 'A-1 (high)' to 'D', which represents the highest to lowest quality of such securities rated. The rating of 'A-1 (low)' is the third highest and is considered to be satisfactory.

There can be no assurance that a credit rating will remain in effect for any given period of time or that a credit rating will not be lowered, withdrawn or revised by either or both rating agencies if, in their judgment, circumstances so warrant. The rating of any securities is not a recommendation to buy, sell or hold such securities, and such ratings do not comment as to market price or suitability for a particular investor.

During the past two years, OPG has made payments to DBRS and S&P's credit rating agencies for their credit rating services and for other services. OPG reasonably expects such payments will continue in the future for the services acquired.

MARKET FOR SECURITIES

None of the Company's securities are listed and posted for trading or quoted on any exchange or quotation system.

CORPORATE GOVERNANCE

National Instrument 58-101 *Disclosure of Corporate Governance Practices* (NI 58-101), has been implemented by Canadian securities regulatory authorities to provide greater transparency for the marketplace regarding issuers' corporate governance practices. OPG's corporate governance practices align with NI 58-101 and National Policy 58-201 *Corporate Governance Guidelines.* In addition, OPG has reviewed its governance practices against the principles discussed in the 2013 Report on Building High Performance Boards issued by the Canadian Coalition for Good Governance and concluded that OPG compares favourably to those principles that apply to OPG.

Information with respect to OPG's Board of Directors is as follows:

Board of Directors

OPG's Board of Directors (Board) is made up of 14 individuals with the following capabilities:

- managing large businesses;
- managing and operating nuclear stations;
- managing capital intensive companies;
- overseeing regulatory, government and public relations;
- human resources management;
- financial, legal and corporate governance expertise;
- knowledge of Indigenous communities; and
- stakeholder management.

The Board exercises its independent supervision over management as follows: the majority of members of the Board are independent of the Company; meetings of the Board are held at least five times a year; a formal Charter for the Board and for each Board Committee has been adopted and the charters are reviewed annually; the Board and each Board committee is chaired by an independent Director; and a portion of each Board and Board committee meeting is reserved for independent Directors to meet without management present.

OPG has a written position description for the Chief Executive Officer (CEO). This position is accountable to the Board for: ensuring a culture of integrity and ethical conduct; increasing Shareholder value; defining and executing a corporate strategy, including a sustainable business model that will service the long-term power generation needs of the province; and providing a standard of leadership that will achieve operational excellence with respect to matters of safety, stakeholder relationships, financial performance, asset reliability, and health, environmental and regulatory compliance. In addition, the Board delineates the President and CEO role and responsibilities through the By-laws, the Board Charter, the Board policies, and the corporate and CEO annual goals and objectives. The Board sets and monitors performance against annual corporate and CEO targets and objectives.

Director Independence

On an annual basis, the Compensation, Leadership and Governance Committee of the Board reviews the disclosures made by Directors in the annual Director Questionnaire and reviews each disclosed affiliation's relationship with OPG in order to determine whether the Director is (or remains) independent. The Compensation, Leadership and Governance Committee reports on its review to the Board.

Based on the meaning of Independence in Section 1.4 of National Instrument 52-110 *Audit Committees* (NI 52-110) and a review of the applicable factual circumstances against this standard, the Compensation, Leadership and Governance Committee has determined that all Directors listed are independent, except for Jeffrey Lyash, who is considered to have a material relationship with OPG by virtue of his position as President and CEO of OPG.

The Board has a Board of Directors Conflict of Interest Policy and Procedure that governs the disclosure and mitigation of Director conflicts or potential conflicts of interest and has adopted an annual process of written disclosure by Directors in order to:

(i) identify potential conflicts of interest for the purposes of complying with the Board of Directors Conflict of Interest Policy and the OBCA;
(ii) validate the Directors' independence and financial literacy for the purposes of complying with securities regulations related to boards of directors and audit committees; and
(iii) satisfy other disclosures and regulatory filings.

To further minimize potential conflicts of interest, the Board has a policy on interlocking directorships. This policy states that no more than two OPG Directors may sit on a board of directors of another reporting issuer at the same time. Directors must confirm that they are in compliance with OPG's policy on interlocking directorships when disclosing to the Board Chair appointments to other boards of directors.

Strategic Planning

OPG's Board holds an annual strategy session and devotes a significant portion of each regular Board meeting to discussion of strategic matters. Management is responsible for developing the strategy and presenting it to the Board for discussion.

In 2016, the Board received reports on key strategic issues, risks, competitive developments, and corporate opportunities facing the Company. Management ensures that the key strategic elements are incorporated into OPG's annual budget and business plan, which are reviewed and approved by the Board. The Board also periodically receives briefings from external advisors on broad energy industry developments and/or special strategic matters.

Overseeing the Management of Risk

The Board oversees OPG's approach of identifying, reporting and mitigating the risks that could significantly impact the Company's capacity to achieve its long-term strategic objectives, as well as specific business plan objectives. To fulfill its risk oversight responsibilities, the Board has established a Corporate Risk Management Policy and an Audit and Risk Committee, comprised of independent Directors. The committee's mandate includes oversight of the Enterprise Risk Management (ERM) framework that management uses to manage the Company's risk profile. The ERM framework assists the Board in understanding how risks may affect the Company and how they are being addressed by management. The Audit and Risk Committee receives quarterly reports from OPG's Chief Risk and Audit Executive (CRAE) on enterprise-wide risks.

Through the Compensation, Leadership and Governance Committee, the Board also monitors the risks associated with the executive compensation program, to preclude the Company's decision-makers from taking excessive risk in order to achieve incentives under the compensation plans. The CRAE and Senior Vice President, People, Culture & Communications jointly review the executive compensation

framework on an annual basis to identify any potential for unintended risk-taking. The CRAE and Senior Vice President, People, Culture & Communications provide an annual joint report to the Compensation, Leadership and Governance Committee on the results of their review. **[MONITOR]**

Directors

The following tables set forth the name, age, municipality of residence, position with the Company and principal occupation of each of the Directors of the Company as of March 10, 2017. Each Director holds office until he or she resigns or a successor is elected or appointed. For a discussion of the Board Committee structure, refer to the heading, *Committees of the Board of Directors*.

Bernard Lord
Age: 51
Moncton, New Brunswick, Canada

Bernard Lord was appointed Board Chair for Ontario Power Generation on April 1, 2014. Mr. Lord is the CEO of Médavie, a not-for-profit Canadian medical care insurance company headquartered in Moncton, New Brunswick.

Mr. Lord earned a bachelor's degree with a major in economics as well as a bachelor's degree in common law from l'Université de Moncton. He has also received honorary doctorate degrees from University of New Brunswick, l'Université de Moncton and Saint Thomas University. He was admitted to the New Brunswick Law Society in 1993 and was appointed as Queen's Counsel in 2011.

He was the CEO of the Canadian Wireless and Telecommunications Association from October 2008 until August 2016. He also served on several other Boards.

In 1999, Mr. Lord became one of Canada's youngest Premiers at the age of 33. His majority government was re-elected in 2003 and he served as Premier of New Brunswick until October 2006. He was elected four times as a Member of the New Brunswick Legislative Assembly.

Mr. Lord's government introduced several new initiatives to support the development of natural resources while also protecting the environment, including a new energy policy that lead to the restructuring of NB Power and the refurbishment of the Point Lepreau nuclear generating station.

During Mr. Lord's terms as Premier, New Brunswick saw the lowest unemployment rate in 30 years and tax cuts each year, combined with balanced budgets and debt reduction. His government made record investments in health care and education while strengthening local democracy and modernizing the Official Languages Act.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since November 2013)	8 of 8	100%
The Board Chair is not a member of any standing Committee. The Board Chair attends all Committee meetings.	18 of 18	100%

Principal Occupation: CEO of Médavie

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Jeffrey Lyash
Age: 55
Toronto, Ontario, Canada

Jeff Lyash is the President and CEO of OPG. Mr. Lyash was formerly the president of CB&I Power, a position he held from 2013 to 2015, where he was responsible for a full range of engineering, procurement and construction of multi-billion dollar electrical generation projects in both domestic and international markets. He also provided operating plant services for nuclear, coal, gas, oil and renewable generation.

Prior to joining CB&I in 2013, Mr. Lyash served as Executive Vice President of Energy Supply for Duke Energy from 2008 to 2012. He led engineering, maintenance and operations of the company's 42,000-megawatt generation fleet, fuel procurement, power trading, major projects and construction, environmental programs, and health and safety programs.

Before the merger of Progress Energy and Duke Energy, Mr. Lyash served as Executive Vice President of Energy Supply for Progress Energy. In this role, he oversaw Progress Energy's diverse 22,000-megawatt fleet of generating resources including nuclear, coal, oil, natural gas and hydroelectric stations. In addition, he was responsible for generating fleet fuel procurement and power trading operations.

Mr. Lyash began his career in the utility industry in 1981, joining Progress Energy in 1993. Before assuming the role of Executive Vice President of Energy Supply, he served as Executive Vice President of Corporate Development, President and Chief Executive Officer of Progress Energy Florida, Senior Vice President of Energy Delivery Florida, and Vice President of Transmission. He also held a wide range of management and executive roles in Progress Energy's nuclear program, including Operations Manager, Engineering Manager, Plant Manager, and Director of Site Operations.

Before joining Progress Energy, Mr. Lyash worked for the U.S. Nuclear Regulatory Commission (NRC) in a number of senior technical and management positions throughout the northeast United States and in Washington, D.C, receiving the NRC Meritorious Service Award in 1987.

Mr. Lyash earned a Bachelor's Degree in Mechanical Engineering from Drexel University, and was honored with the Drexel University Distinguished Alumnus Award in 2009. He has held a Senior Reactor Operator License from the NRC, and is a graduate of the U.S. Office of Personnel Management Executive Training Program and the Duke Fuqua School of Business Advanced Management Program.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since August 2015)	8 of 8	100%
The President and CEO attends all Committee meetings, excluding independent Director in-camera meetings/sessions.	18 of 18	100%

Principal Occupation: President & Chief Executive Officer, Ontario Power Generation Inc.

Board Memberships for other Reporting Issuers: None

Independence from OPG: Not Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Nicole Boivin
Age: 58
Toronto, Ontario, Canada

Nicole Boivin is a business executive and director with more than 30 years experience in financial services, public and not for profit enterprises. She brings deep expertise and experience in human resources, branding and communications.

Ms. Boivin is a national board member of Pathways to Education and serves on the human resource committee and is a former provincial appointee to the board of the Harbourfront Centre in Toronto where she was part of the executive committee and chaired the development committee.

Ms. Boivin obtained her ICD.D designation from the ICD-Rotman, Directors Education Program. In her 14 year career at Manulife, Ms. Boivin had progressive leadership roles in human resources, branding, marketing and communications and was a trusted advisor to the senior executives and board of directors of Manulife.

Ms. Boivin was the Chief Branding and Communications officer for Manulife until 2014 and before that, the head of Human Resources for the Canadian Division from 2007 to 2011. Of note, she led the creation of the global co-branding strategy following Manulife's acquisition of John Hancock in the U.S. Following the financial crisis, she also built and led the global branding and communications function focused on managing reputational risk and rebuilding overall brand presence. As a human resource executive, Ms. Boivin developed and delivered the successful first series of the Global Executive Development Program which has become a core function at Manulife.

Ms. Boivin has deep experience in talent management including succession planning, leadership development, and aligning executive compensation with performance. She also has specific expertise in global brand strategy, corporate social responsibility, reputational management, and issue and crisis management and communications.

Prior to joining Manulife, Ms. Boivin held many roles spanning the public and not for profit sector. In the early 1990's she was the executive director of the Sudbury United Way, followed by her role as the Assistant to the President at Laurentian University and prior to joining Manulife, she was a director at BCE Media/Bell Canada.

Ms. Boivin holds an MBA from Laurentian University and is fluently bilingual in French and English.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since April 2014)	8 of 8	100%
Compensation, Leadership and Governance Committee (since February 2016)	4 of 4	100%
Darlington Refurbishment Committee (since February 2016)	4 of 4	100%

Principal Occupation: Corporate Director

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

William Coley
Age: 73
Charlotte, North Carolina, U.S.A.

Bill Coley served as Chief Executive of British Energy from 2005 to 2009 when he retired following the successful combination of British Energy and EDF Energy. He was President of Duke Power from 1997 until his retirement in February 2003, holding various officer level positions in engineering, operations and senior management during his 37-year career with the company.

Mr. Coley is a director of Peabody Energy and E.R. Jahna Industries. He also served on the WANO Fukushima Commission.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since January 2013)	7 of 8	88%
Compensation, Leadership and Governance Committee (since February 2016)	4 of 4	100%
Generation Oversight Committee (since February 2016)	4 of 4	100%
Darlington Refurbishment Committee (since May 2015)	4 of 4	100%

Principal Occupation: Retired Chief Executive of British Energy

Board Memberships for other Reporting Issuers: Peabody Energy (NYSE)

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Elisabeth (Lisa) DeMarco
Age: 49
Toronto, Ontario Canada

Lisa DeMarco is a senior partner at DeMarco Allan LLP with over two decades of experience in law, regulation, policy, and advocacy relating to energy and climate change. Ms. DeMarco was previously a partner at Macleod Dixon LLP from 2002 to 2012, partner at Norton Rose Canada LLP from 2012 to 2013 and partner at Norton Rose Fulbright LLP from 2013 to 2014. She represents several governments and leading energy clients in a wide variety of natural gas, electricity and energy storage matters before various regulatory agencies, including the OEB and the National Energy Board. She has been an adjunct professor at Osgoode Hall Law School and lectures regularly.

Ms. DeMarco also assists leading Canadian energy companies on domestic and overseas power project development, renewable power projects, alternative fuel projects, cleantech development and finance, energy storage, carbon capture and storage, corporate social responsibility, environmental disclosure, clean energy finance, and sustainable business strategy.

She is ranked by Chambers Global as one of the world's leading climate change lawyers and regularly attends and advises on related United Nations negotiations. She is ranked and repeatedly recommended by LEXpert, Expert Guide, International Who's Who, and Chambers Canada as a leading energy (oil and gas) and environment lawyer. Ms. DeMarco has worked for multilateral development banks and energy companies on deals and projects in India, Brazil, Sri Lanka, Thailand, Argentina, Chile, Ireland, Africa, Mexico, China, Russia, California, Alberta, Ontario, and Québec. She plays an ongoing and active role in the development and drafting of energy and greenhouse gas emissions policy, regulation, and law throughout Canada, and in various countries around the world. She was appointed to the Premier of Ontario's now completed Climate Change Advisory Panel and continues to serve as an appointed member of Ontario's Clean Energy Task Force.

Ms. DeMarco is a member of the board of directors of the Ontario Energy Association and a member of the Toronto Atmospheric Fund Investment Committee. She is a graduate of the University of Western Ontario (BSc Hon. – 1990), the University of Toronto (MSc. – 1992), Osgoode Hall Law School, York University (LLB – 1995) and the Vermont Law School (MSEL, summa cum laude – 1995).

2016 Board/Committee Membership:	**2016 Attendance**	
Board (since April 2014)	8 of 8	100%
Audit and Risk Committee (since February 2016)	5 of 6	83%
Generation Oversight Committee (since February 2016)	4 of 4	100%

Principal Occupation: Lawyer, DeMarco Allan LLP

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Jean Paul (JP) Gladu
Age: 43
Toronto, Ontario, Canada

JP Gladu is currently the President and CEO of the Canadian Council for Aboriginal Business (CCAB) based in Toronto. Anishinaabe from Thunder Bay, Mr. Gladu is a member of Bingwi Neyaashi Anishinaabek located on the eastern shores of Lake Nipigon. Mr. Gladu has over two decades of experience in the natural resource sector including work with Aboriginal communities and organizations, environmental non-government organizations, industry and governments from across Canada including involvement in business development for the Bingwi Neyaashi Anishinaabek Nation from 2009 to 2012. He has produced a number of publications related to Aboriginal issues including: forest certification, Native values collection, biofuel opportunities, First Nation community land use plans, criteria and indicators for sustainable forestry, and cedar product development.

Mr. Gladu holds a Forest Technician Diploma from the Sault College of Applied Arts and Technology, a Bachelor of Science degree in forestry from Northern Arizona University, and an Executive Masters of Business Administration from Queens University in Kingston. In 2014, he was a recipient of the Community Service Award – Transformation Awards from Diversity Magazine. Mr. Gladu was nominated for the 2013 Premier's Award for Outstanding Ontario College Graduates, was recognized as one of five Northern Leaders in 2012 by Northern Ontario Business and was elected Class President of the 2012 Queens Executive Masters of Business Administration.

Mr. Gladu serves on the Colleges and Institutes Canada (previously the Association of Canadian Community Colleges), the Northern Policy Institute, and the Canadian Foundation for Economic Education boards of directors, is an advisory member to the Canadian Association of Petroleum Producers Renewable Clean Energy Committee, and is a committee member of the Provincial Forest Policy Committee. In the past, he has served as a director of the Centre for Research and Innovation in the Bio-Economy, a director of the Papasay Management Corporation, and a board member of the Canadian Bioenergy Association.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since November 2015)	8 of 8	100%
Compensation, Leadership and Governance Committee (since February 2016)	4 of 4	100%
Generation Oversight Committee (since February 2016)	4 of 4	100%

Principal Occupation: President and CEO, Canadian Council for Aboriginal Business
Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Brendan Hawley
Age: 64
Ottawa, Ontario, Canada

Brendan Hawley is the Principal of a national public affairs consultancy that has advised industry, corporate and government clients over the past 30 years. Covering a range of industries from energy and power, to cultural industries, Mr. Hawley has advised on issues relating to the public impact/perception of industry structure, products, and economic impact as well as government legislation and regulation.

An Ottawa native and honours graduate in history and journalism from St. Patrick's College and Carleton University in Ottawa, Mr. Hawley worked for a decade in the federal government, and then in the private sector prior to establishing his firm in 2000. He held senior positions in communications, marketing, and public affairs at several major public and private sector organizations, including the Canadian Council of Professional Engineers, Export Development Corporation, and the Canadian Petroleum Products Institute.

Mr. Hawley has extensive experience in helping clients identify organizational goals in tandem with operational business plans. He also has significant experience in managing education strategies and programs on matters of Canadian energy. He initiated an Energy Summer School for federal Members of Parliament to facilitate a greater understanding of the economics of energy, and as part of a broader mandate dealing with federal and provincial issues related to energy pricing, facilities, and products. He also authored a popular guide to conducting advocacy at the federal level.

Mr. Hawley has an ICD.D designation from the Institute of Corporate Directors.

Mr. Hawley is affiliated with a number of business and philanthropic organizations but has recently focused more time on Ottawa's Canadian Museum of Nature, Museum of Science and Technology, and the Canadian Museum of History.

2016 Board/Committee Membership:	**2016 Attendance**	
Board (since April 2014)	8 of 8	100%
Audit and Risk Committee (since February 2016)	6 of 6	100%
Darlington Refurbishment Committee (since February 2016)	4 of 4	100%

Principal Occupation: Management Consultant, Brendan Hawley & Associates

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

John Herron
Age: 63
Punta Gorda, Florida, U.S.A.

John Herron retired from Entergy in April 2013 where he was the President, CEO and Chief Nuclear Officer of Entergy Nuclear, with responsibility for Entergy's nuclear plants located in New York, Massachusetts, Vermont, Michigan, Louisiana, Mississippi and Arkansas as well as the company's management service to the Cooper Nuclear Station for the state of Nebraska.

He previously served as Entergy's Senior Vice President for Nuclear Operations handling the operational side of fleet management. Mr. Herron joined Entergy in February 2001 as Vice President, Operations at the Waterford 3 Nuclear Station in Killona, Louisiana. He then moved to New York as the Senior Vice President of the Indian Point Energy Center in February 2002.

Mr. Herron began his career in nuclear operations in 1979 at Vermont Yankee Nuclear Power Corporation. His positions there included technical services superintendent, operations manager, technical programs manager, shift supervisor, and supervisory control room operator. In 1994, he moved to Brownville, Nebraska to become plant manager at Nebraska Public Power District's Cooper Nuclear Station.

Mr. Herron then joined the Tennessee Valley Authority as plant manager at Sequoyah Nuclear Plant in Soddy-Daisy, Tennessee, from October 1996 through July 1999. From July 1999 to February 2001, Mr. Herron served as site Vice President at TVA's Browns Ferry Nuclear Plant.

Prior to his career in utilities, Mr. Herron served in the U.S. Navy from 1972 to 1978. He was attached to the USS Tullibee and the S1C NPTU Windsor, where he was an instructor at the Nuclear Submarine Prototype School.

Mr. Herron holds a bachelor's degree in Business Management from Franklin Pierce College in Rindge, New Hampshire. He also attended the Advanced Management Program at the Harvard Business School in May 2005.

Mr. Herron currently serves on the board of directors for Duke Energy. He also served on the board of directors for the Institute of Nuclear Power Operations and on the Nuclear Strategic Issues Advisory Committee of the Nuclear Energy Institute. In the aftermath of Japan's 2011 earthquake, he was named to the WANO Post-Fukushima Commission and the U.S. nuclear industry's Fukushima response steering committee.

2016 Board/Committee Membership:	**2016 Attendance**	
Board (since November 2013)	7 of 8	88%
Generation Oversight Committee* (since February 2016)	4 of 4	100%
Darlington Refurbishment Committee (since May 2015)	4 of 4	100%

Principal Occupation: Retired President, Chief Executive Officer and Chief Nuclear Officer, Entergy Nuclear

Board Memberships for other Reporting Issuers: Duke Energy (NYSE)

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

* Chair of Committee

Ira Kagan
Age: 54
Toronto, Ontario, Canada

Ira T. Kagan is a founding partner of Kagan Shastri LLP (Lawyers). He received a B.Sc. degree from the University of Toronto in 1985 and a Juris Doctor from the University of Toronto in 1988. He was called to the Ontario Bar in 1990 and since then has focused on municipal and land use planning law on behalf of both the private sector (including many of the leading developers in the Greater Toronto Area) and the public sector (including conservation authorities, local and regional municipalities).

Mr. Kagan regularly appears before the Ontario Municipal Board and many municipal councils and committees throughout the Greater Toronto Area. His practice includes all aspects of land use planning, including development applications, negotiations and mediations, appeals (both at the Ontario Municipal Board and the courts) and strategic decisions throughout. He is a regular presenter at industry and continuing legal education seminars, and has been involved in many of the leading land use planning cases in the Greater Toronto Area.

In 2005-2006, Kagan Shastri LLP was named the top municipal law firm in the Greater Toronto Area by Nova Res Urbis and since then has consistently ranked in one of the top spots.

2016 Board/Committee Membership:	**2016 Attendance**	
Board (since April 2014)	8 of 8	100%
Audit and Risk Committee (since February 2016)	6 of 6	100%
Generation Oversight Committee (since February 2016)	3 of 4	75%

Principal Occupation: Lawyer, Kagan Shastri LLP

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

M. George Lewis
Age: 56
Toronto, Ontario, Canada

From February 2007 until November 2015, George Lewis was a member of RBC's Group Executive, one of eight executives responsible for setting the overall strategic direction for Royal Bank of Canada, Canada's largest bank. In that capacity, he served as Group Head of RBC Wealth Management from 2007 and RBC Insurance from 2012. As Group Head, Wealth Management, Mr. Lewis led the RBC businesses that serve the wealth management needs of affluent clients globally, and units that provide asset management and trust products. He was also Chairman of RBC Global Asset Management Inc.

From July 2000 to May 2008, Mr. Lewis was Chief Executive Officer of RBC Global Asset Management, which under his leadership became Canada's largest single mutual-fund family (RBC Funds) and one of Canada's largest asset management firms. He previously served as Head of Wealth Management for the Canadian Personal and Business segment and, from 2003 to 2006, was Head of all banking and investment products for RBC's Canadian Business.

From 1998 to 2000, Mr. Lewis was Managing Director, Head of Institutional Equity with RBC Capital Markets, responsible for global institutional-equity sales, trading and research. He was previously a top-rated equity analyst and Director of Research. He began his career with RBC in 1986, in the investment banking division of RBC Capital Markets.

Mr. Lewis has extensive experience in the investment industry, has a Masters of Business Administration degree with distinction from Harvard University and a Bachelor of Commerce degree with high distinction from Trinity College at the University of Toronto. He is also a Chartered Financial Analyst and an FCA/FCPA and has been certified by the Institute of Corporate Directors.

Mr. Lewis serves on the board of directors of Enbridge Income Fund Holdings Inc., the Canadian Film Centre and the Anglican Diocese of Toronto Foundation. He is a current member and past chair of the Bishop's Company of the Anglican Diocese of Toronto, as well as a patron and member of the Cabinet of the United Way of Toronto and York Region. Mr. Lewis also serves as the Honorary Colonel Commandant of the Royal Canadian Chaplain Service of the Canadian Armed Forces.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since February 2005)	8 of 8	100%
Audit and Risk Committee* (since February 2016)	6 of 6	100%
Compensation, Leadership and Governance Committee (since February 2016)	4 of 4	100%

Principal Occupation: Corporate Director

Board Memberships for other Reporting Issuers: Enbridge Income Fund Holdings Inc. (TSX)

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

* Chair of Committee

Margaret (Peggy) Mulligan
Age: 58
Mississauga, Ontario, Canada

Peggy Mulligan was the Executive Vice President and Chief Financial Officer, Valeant Pharmaceuticals International, Inc. until December 2010. Prior to this, she was a Principal at Priiva Consulting, and before that she served as Executive Vice President and Chief Financial Officer of Linamar Corporation. Prior to Linamar, Mrs. Mulligan was with the Bank of Nova Scotia for eleven years as Executive Vice President, Systems and Operations and Senior Vice President, Audit and Chief Inspector. Before joining Scotiabank, she was an Audit Partner with PricewaterhouseCoopers in Toronto. She holds a B. Math (Honours) from the University of Waterloo and was named a Fellow of the Institute of Chartered Professional Accountants of Ontario in 2003.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since December 2005)	7 of 8	88%
Compensation and Leadership and Governance Committee* (since February 2016)	4 of 4	100%
Darlington Refurbishment Committee (since May 2015)	4 of 4	100%

Principal Occupation: Corporate Director
Board Memberships for other Reporting Issuers: ClearStream Energy Services Inc. (TSX) (*previously Tuckamore Capital*)

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

* Chair of Committee

Yezdi Pavri
Age: 67
North York, Ontario, Canada

Yezdi Pavri retired as Vice Chairman of Deloitte Canada in June 2012 after a career of more than 30 years. Prior to being named Vice Chairman, Mr. Pavri was a member of the firm's national Management Committee for over ten years and was the Managing Partner of the Toronto practice since June 2004. He founded Deloitte's national Enterprise Risk Services practice in 1990 and led it for 15 years. He was a founding member of the global firm's India Steering Committee and co-chaired the firm's first Diversity and Inclusion Committee.

Mr. Pavri holds a Bachelor's degree in Aeronautical Engineering from the Indian Institute of Technology in Bombay and a Master's degree in Thermal Power Engineering from Imperial College in London. He is a Fellow of the Chartered Professional Accountants of Ontario.

Mr. Pavri currently serves on the boards of ICICI Bank of Canada, Enterra Holdings Limited (the global parent of Golder Associates) and MD Financial Services, and is a past member of the board of directors of Hydro One. Mr. Pavri is also the immediate past chairman of the board of trustees of United Way Toronto.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since September 2015)	8 of 8	100%
Audit and Risk Committee (February 2016)	6 of 6	100%
Compensation, Leadership and Governance Committee (since February 2016)	4 of 4	100%

Principal Occupation: Corporate Director
Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Gerry Phillips
Age: 76
Ajax, Ontario, Canada

Gerry Phillips was the Member of Provincial Parliament in the Legislative Assembly of Ontario for the east Toronto riding of Scarborough-Agincourt from 1987 to 2011. He served in six cabinet portfolios, including twice as Ontario Minister of Energy, where he was OPG's Shareholder from 2007 to 2008 and again on an interim basis from November 2009 to January 2010, as well as, Minister responsible for Securities Regulation in Ontario. He was also the Chair of the Management Board of Cabinet from 2008 to 2011 and the Chair of the Select Committee on the TMX Transaction in 2011.

Before entering public life, Mr. Phillips graduated from the University of Western Ontario's School of Business and worked in the marketing department of Procter and Gamble. In 1970, he joined the consulting firm of Canadian Marketing Associates and became President in 1977. He later founded two successful spin-off companies – the Sales Development Group in 1979 and the Retail Resource Group in 1982. By 1987, he was Chair of all three companies, with a combined workforce of approximately 300.

Mr. Phillips has an Honours B.A. from the Western School of Business.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since January 2013)	8 of 8	100%
Audit and Risk Committee (since February 2016)	6 of 6	100%
Darlington Refurbishment Committee (since May 2015)	4 of 4	100%

Principal Occupation: Retired

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Jim Reinsch
Age: 73
Frederick, Maryland, U.S.A.

Jim Reinsch retired from the Bechtel Group where he was Senior Vice President and Partner, and past President of Bechtel Nuclear. In this role, he was responsible for the global profit/loss, customer relations, operations, project management, marketing and business development of Bechtel's three nuclear business segments: nuclear operating plant services, steam generator replacement, and operations of Bechtel's global nuclear activities. During his 40 years with Bechtel, he also presided over Bechtel Canada, and managed large regions in the United States and Asia. He served as the President of the American Nuclear Society, and was a member of the Nuclear Energy Institute as well as a member of their Executive Committee. Mr. Reinsch is also a member of several international nuclear energy organizations, including the WANO and the World Nuclear Association.

Mr. Reinsch holds a Bachelor of Science degree from the University of Maryland.

Mr. Reinsch currently serves on the board of directors for Frederick Memorial Hospital and the Hood College Board of Trustees, and is a past board member of Duke Energy and the Smithsonian National Portrait Gallery. Additionally, he serves on the Emirate Nuclear Energy Corporation's committee on nuclear power which reports to the board of directors, and is a member of the international advisory board of Terrestrial Power.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since August 2015)	8 of 8	100%
Generation Oversight Committee (since February 2016)	4 of 4	100%
Darlington Refurbishment Committee* (since August 2015)	4 of 4	100%

Principal Occupation: Corporate Director
Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

*Chair of Committee

Margaret (Peggy) Gilmour served as a Director from October 2015 to July 2016 and was a member of the Audit and Risk Committee and the Generation Oversight Committee.

Orientation and Continuing Education

The Compensation, Leadership and Governance Committee is responsible for reviewing and recommending appropriate orientation programs for new Directors. New directors are provided relevant documentation relating to OPG's governance practices and policies and to its business. Directors attend plant tours of OPG generating facilities, where they also receive comprehensive introductory briefings from OPG senior executives on OPG's operations and business activities.

The Board supports and sponsors the continuing education of OPG Directors, both in the business of OPG and in their duties as Directors. This includes plant tours of OPG's major facilities, site visits to projects with OPG's Indigenous business partners, and special presentations by internal and external experts on topical business-related issues or on specific aspects of OPG's operations. In 2016, such topics included pension plans, project management, and anti-bribery and corruption. Directors are also provided with articles and publications on current topics of interest. Board members have full access to all Board and Board committee materials and records. OPG has developed a Director Governance Handbook, which provides Directors with information necessary to fulfill their roles, including director duties and obligations under the OBCA, and relevant corporate policies and procedures. OPG also sponsors Director attendance at the Institute of Corporate Directors' Director Education Program, or equivalent, and sponsors attendance at the Goizueta Director program for members of Board committees responsible for oversight of nuclear operations.

Ethical Business Conduct

The Board has adopted a policy for ethical business behaviour and a Code of Business Conduct. The mandate of the Audit and Risk Committee requires that it receive regular reports throughout the year on the Code of Business Conduct in order to satisfy itself that appropriate code of conduct and compliance programs are in place and are being enforced, and remedial action is being taken. The Audit and Risk Committee receives quarterly reports from management on the Code of Business Conduct (including reports on substantiated cases of fraud) and the disposition of cases including disciplinary action, as well as an annual report on the Code of Business Conduct and a report on the annual review of the Board policy. The Audit and Risk Committee has procedures for the receipt, retention and treatment of complaints received pertaining to accounting, internal controls or auditing matters, and for the confidential anonymous submission by employees concerning such matters.

Nomination of Directors

The Compensation, Leadership and Governance Committee, which is comprised of six independent Directors within the meaning of NI 52-110, is responsible for conducting an annual review of the OPG Board's principles and systems of governance, and oversight of annual Board, Board committee and Director evaluations. The Compensation, Leadership and Governance Committee recommends candidates to the Shareholder. Nominations of Directors by the Shareholder may also be considered by the Compensation, Leadership and Governance Committee. When considering a potential candidate, the committee considers the qualities, experience, and skills that the Board, as a whole, should have in light of the business opportunities and risks facing OPG. The attributes the Compensation, Leadership and Governance Committee considers in a candidate include integrity, business judgment and experience, diversity, professional expertise, independence from management, financial literacy, and communication skills, as well as sufficient time available to fulfill his or her obligations as a Board member. The Board's policy on diversity is to interview a diverse candidate for every vacancy on the Board. OPG defines diversity to include: women, aboriginal peoples, people with disabilities, and visible minorities. These four enumerated groups mirror the four enumerated groups in the definition of "designated groups" in the federal *Employment Equity Act*.

From time to time, the Compensation, Leadership and Governance Committee may engage outside advisors to assist in identifying potential candidates.

Director Tenure/Board Renewal

The OPG Board Charter guideline for board tenure is 10 to 15 years. When considering board renewal, the Compensation, Leadership and Governance Committee regularly reviews the OPG Board skills profile. The Board maintains an "evergreen list" of potential Board candidates. From time to time, the committee makes recommendations to add skills to the Board that reflect OPG's business opportunities and risks.

Diversity in Leadership

Board of Directors

As noted under the heading, *Nomination of Directors*, the Compensation, Leadership and Governance Committee interviews a diverse candidate for every vacancy on the Board, where diversity is defined as: women, aboriginal peoples, people with disabilities, and visible minorities. The Board has signed on to the Catalyst Accord, set a target for "diverse" representation on the Board of 50 percent and adopted a target of 25% women on the Board by 2017. In 2016, four members were added to the Board, three of whom meet the diversity definition. As of the date of this AIF, five of the 14 members of the Board, 36 percent, meet the diversity definition. Representation of women on the Board is 21 percent (three Directors) as of the date of this AIF.

Senior Management

OPG strives to create a workforce that reflects diverse populations of the communities in which it operates. As of December 31, 2016, women filled 17 percent of Corporate Officer roles and 24 percent of senior management (senior managers and above) positions. In total, there were two women in Corporate Officer roles and 136 women in senior management positions. OPG tracks and monitors diversity succession planning metrics and strives to have a diverse candidates list for senior management positions. A target of 25 percent for representation of women in senior management roles has been established.

Compensation

Executive Compensation Framework

In September 2016, the Government of Ontario introduced *Regulation 304/16: Executive Compensation Framework*. The regulation sets out how all employers, including OPG, designated under the *Broader Public Sector Executive Compensation Act, 2014* must establish and post compensation programs for executives. The regulation requires all designated employers to have a written Executive Compensation Program that describes the compensation they may provide to executives. The program must include the compensation philosophy, salary and performance-related pay caps, comparative analysis details, and a description of other elements of compensation. The regulation also requires that designated employers post their program on their website and provide a reasonable opportunity for members of the public to provide comments. OPG met the requirements of *Ontario Regulation 304/16* and posted its new Executive Compensation Framework on the Company's website for public comment on November 30, 2016. OPG reviewed the comments received through the public consultation process and determined that they do not alter its Executive Compensation Program, which became effective on January 1, 2017. OPG's Executive Compensation Program applies to employees at the Vice President level and higher. A copy of OPG's Executive Compensation Program is available on the Company's website at www.opg.com.

Director Compensation

The OPG Director compensation structure was established in 2005. The Compensation, Leadership and Governance Committee is responsible for monitoring and reviewing the level and nature of compensation of OPG Directors. Pursuant to the recommendations of the 2007 Report of the Agency Review Panel, OPG benchmarks the Board's compensation against the 50th percentile of compensation levels for a combined private and public sector comparator group. The last review occurred in May 2012 when the Governance and Nominating Committee of the Board benchmarked OPG's Director compensation against comparable public and private companies and concluded that OPG Director compensation was at the 38th percentile of comparator companies. However, the committee recommended that no change be made to the annual board retainer of Directors at that time in view of legislative constraints on compensation of OPG's management.

As at March 10, 2017, OPG's Director compensation framework provides each Director who is not an employee of OPG with an annual retainer of $25,000. Directors also receive a $3,000 retainer for each Board committee of which they are a member. Directors serve on at least two committees. Directors receive an additional retainer for serving as committee chairs. The retainer for the chair of the Audit and Risk Committee is $8,000. The chairs of the other three committees receive retainers of $5,000.

In addition to the above, Directors are compensated for each regular and/or special meeting that they attend and receive a fee of $2,000 or $1,000, as determined by the Board Chair or respective committee chair.

In order to retain national and international expertise, non-resident Directors are compensated in U.S. dollars and Directors who travel over certain distances receive a travel fee to cover travel time related to Board and Board committee meetings they attend.

Since 2004, the Chair of the Board, in his role as non-executive Chair, receives an all-inclusive annual fee of $150,000 and is reimbursed for out-of-pocket expenses including travel and other expenses.

CEO Compensation

Among its other responsibilities, the Compensation, Leadership and Governance Committee oversees, on behalf of the Board, the setting of the CEO's annual goals and objectives and the annual review of CEO performance, and makes recommendations to the Board with respect to CEO compensation. The Committee may seek input from an independent advisor with regard to monitoring and benchmarking compensation trends.

In August 2015, when the current CEO was appointed, the CEO compensation terms were established based on the benchmarks recommended in the 2007 Report of the Agency Review Panel on Phase 1 of its Review of Ontario's Provincially Owned Electricity Agencies. The CEO's base pay and incentives compensation are compliant with *Ontario Regulation 304/16*. Other elements of the CEO's compensation will be compliant within the three-year period provided in the regulation to bring all elements of compensation into compliance. **[MONITOR]**

For details regarding compensation paid to Directors and executive officers during the financial year ended December 31, 2016, see OPG's Statement of Executive Compensation (Form 51-102F6), which is available on SEDAR at www.sedar.com and incorporated by reference herein.

Committees of the Board of Directors

Effective February 11, 2016, the OPG Board restructured and streamlined its standing committees from six to four, and appointed Directors to each committee. The following are the current standing Board committees as at March 10, 2017:

Audit and Risk Committee

This committee is responsible for the integrity, quality, and transparency of OPG's financial information, the adequacy of the financial reporting process, the systems of internal controls, and related principles, policies and procedures established by management. The Committee is responsible for the oversight of the Company's regulatory filings, financial statements, MD&A and press releases prior to their disclosures to the public, including approval of quarterly financial statements and recommending approval of the annual financial statements and various other annual disclosures to the Board. The committee is also responsible for the appointment, compensation, and oversight of the external auditor.

The committee also provides oversight of OPG's corporate financing strategies including:

- policies related to financial exposure management;
- processes for identifying major financial risks;
- performance of the OPG Pension Fund, the Used Fuel Segregated Fund and the Decommissioning Segregated Fund;
- review and approval of the audited financial statements of the OPG Pension Fund, the Used Fuel Segregated Fund and the Decommissioning Segregated Fund; and
- review and approval of the statements of investment policies and procedures for the OPG Pension Fund, the Used Fuel Segregated Fund, and the Decommissioning Segregated Fund.

The Audit and Risk Committee also oversees risk and associated risk management activities, including the review of management's assessment of significant risks to achieving OPG's business plan objectives. The committee is also responsible for ensuring that an effective Code of Business Conduct is in place at OPG and monitors compliance with this code.

As of the date of this AIF, the Audit and Risk Committee consists of George Lewis (Chair), Elisabeth (Lisa) DeMarco, Brendan Hawley, Ira Kagan, Yezdi Pavri, and Gerry Phillips.

For further details regarding the Audit and Risk Committee, see *Audit and Risk Committee Information*.

Compensation, Leadership and Governance Committee

This committee provides oversight of OPG's human resources and compensation policies and practices, including CEO objectives and compensation, disclosure on compensation and human resources matters, leadership talent review, succession planning, and collective bargaining negotiations. The committee also provides oversight of the design of OPG's benefit and pension plans.

The Compensation, Leadership and Governance Committee oversees the Board's governance program and practices to ensure that they are consistent with high standards of corporate governance, including annually reviewing and assessing the Board's system of corporate governance with a view to maintaining these high standards. The committee is also responsible for overseeing OPG's reputation management plan, and for identifying and recommending to the Board candidates for nomination to the Shareholder. Finally, the committee oversees OPG's processes for Board, Board committee, and Director assessments, as well as Director compensation and new Director orientation.

As of the date of this AIF, the Compensation, Leadership and Governance Committee consists of Margaret (Peggy) Mulligan (Chair), Nicole Boivin, Bill Coley, JP Gladu, George Lewis and Yezdi Pavri.

Darlington Refurbishment Committee

The Darlington Refurbishment Committee is responsible for the oversight of the execution of the Darlington Refurbishment project, including retaining external independent oversight advisors. The committee was also responsible for making a recommendation to the Board with respect to a final budget and schedule for the Darlington Refurbishment project, which subsequently was approved by the Board of Directors in November 2015. The committee monitors and reports on the progress of the refurbishment

project against the approved budget and schedule. The committee will make a recommendation to the Board with respect to the refurbishment of subsequent Darlington units, and other recommendations for approvals related to the refurbishment project as may be required from time to time.

As of the date of this AIF, the Darlington Refurbishment Committee consists of Jim Reinsch (Chair), Nicole Boivin, Bill Coley, Brendan Hawley, John Herron, Margaret (Peggy) Mulligan and Gerry Phillips.

Generation Oversight Committee

This committee is responsible for the oversight of safe, secure and efficient operations of OPG's generating facilities. Additionally, the committee is responsible for the development, risk management, financing, and execution of the Company's major generation projects including those related to nuclear waste management, other than the Darlington Refurbishment project. The committee is also responsible for the oversight of OPG's environment and dam safety management systems and OPG's Indigenous relations. The committee reviews reports of internal and external advisors/assessors in respect of OPG's generation operations and management's response to the findings from such assessments. The committee provides oversight to ensure that OPG's generating facilities are in compliance with nuclear safety, industrial and occupational health and safety, and environmental laws and regulations.

As of the date of this AIF, the Generation Oversight Committee consists of John Herron (Chair), Bill Coley, Elisabeth (Lisa) DeMarco, JP Gladu, Ira Kagan and Jim Reinsch.

Assessments

The Compensation, Leadership and Governance Committee is responsible for the annual process for evaluating the performance of the Board, its committees and individual Directors. The Board and committee evaluations are based upon the completion of confidential questionnaires regarding assessment of performance and compliance with the Board and Committee Charters. The individual Director evaluations are based on self-assessment questionnaires, which are submitted in confidence to the Board Chair and the Chair of the Compensation, Leadership and Governance Committee. In addition, the process includes a follow-up one-on-one meeting between each Director and the Board Chair. The Compensation, Leadership and Governance Committee reports the results of the evaluations and makes recommendations to the Board for enhancing the Board's governance and effectiveness.

Further Information on OPG Governance

OPG provides additional information on the Company's governance on its website (www.opg.com) including:

- Memorandum of Agreement with the Shareholder
- Shareholder Directives
- List of Corporate Officers
- Board and Committee Charters
- Board and Committee Chair Position Descriptions
- Board of Directors Conflict of Interest Policy
- Indigenous Relations Policy
- Code of Business Conduct
- Disclosure Policy
- Environmental Policy
- Employee Health and Safety Policy
- Nuclear Safety Policy
- Safe Operations Policy
- Cyber Security Policy

Unless otherwise specifically stated, none of the information contained on, or connected to the Company's website nor any of the contents of the aforementioned additional information on OPG's governance are incorporated by reference herein.

EXECUTIVE OFFICERS

The following table sets forth the name, municipality of residence, position with the Company, and the date of commencement for each of the executive officers of the Company as of March 10, 2017: **[MONITOR]**

Name and Municipality of Residence	**Current Position Held**	**Executive Officer Since**
Bernard Lord *Moncton, New Brunswick*	Board Chair	April 2014
Jeff Lyash *Toronto, Ontario*	President and Chief Executive Officer	August 2015
Carlo Crozzoli *Toronto, Ontario*	Senior Vice President, Corporate Business Development and Strategy	December 2011
Chris Ginther *Newmarket, Ontario*	Senior Vice President, Legal, Ethics and Compliance **[UPDATE]**	July 2012
Ken Hartwick *Milton, Ontario*	Senior Vice President, Finance, Strategy & Risk and Chief Financial Officer	March 2016
Glenn Jager *Clarington, Ontario*	President, OPG Nuclear and Chief Nuclear Officer	November 2013
David Kaposi *Toronto, Ontario*	Vice President, Chief Investment Officer	November 2013
Barb Keenan *Toronto, Ontario*	Senior Vice President, People Culture & Communications **[UPDATE]**	March 2010
Catriona King *Richmond Hill, Ontario*	Vice President, Corporate Secretary	February 2005
John Lee *Toronto, Ontario*	Vice President, Treasurer	July 2011
Mike Martelli *Etobicoke, Ontario*	President, Renewable Generation and Power Marketing	July 2013
Dietmar Reiner *Clarington, Ontario*	Senior Vice President, Nuclear Projects	June 2014
Jennifer Rowe **[MONITOR]** *Toronto, Ontario*	Senior Vice President, Corporate Affairs	February 2017

All of the executive officers of the Company have been engaged for more than five years in their current principal occupations, except as set out below:

- Mr. Crozzoli was Vice President, Hydroelectric Development at OPG from March 2008 to December 2011, Senior Vice President, Corporate Business Development and Chief Risk Officer at OPG from December 2011 to November 2015, Acting Senior Vice President, Finance, Strategy & Risk and Chief Financial Officer at OPG from November 2015 to March 2016 and Senior Vice-President, Corporate Business Development and Chief Risk Officer at OPG from March 2016 to August 2016.
- Mr. Ginther was Senior Vice President, Law and General Counsel and Chief Ethics Officer at OPG from July 2012 to January 2016 and Senior Vice President, Legal, Ethics and Compliance at OPG from January 2016 to February 2017. **[UPDATE]**
- Mr. Hartwick was President and CEO at Just Energy Corp. from February 2008 to April 2014, Interim President and CEO at Atlantic Power Corporation from September 2014 to January 2015 and Chief Financial Officer at Wellspring Financial Corporation from February 2015 to March 2016.
- Mr. Jager was Senior Vice President, Pickering Nuclear Generating Station at OPG from January 2010 to November 2013 and Chief Nuclear Officer at OPG from November 2014 to March 2015.
- Mr. Kaposi was Global Head of Alternatives for Mercer (Canada) Inc. from November 2007 to June 2012 and Partner, Investor Relations at Bastion Infrastructure Group Inc. from July 2012 to September 2013.
- Ms. Keenan was Senior Vice President, People and Culture at OPG from March 2012 to January 2016 and Senior Vice President, People, Culture and Communications from January 2016 to February 2017. **[UPDATE]**
- Ms. King was Vice President, Corporate Secretary at OPG from June 2005 to May 2012.
- Mr. Lee was Assistant Treasurer at OPG from April 2009 to July 2011.
- Mr. Martelli was Plant Manager for the Niagara Plant Group at OPG from June 2010 to July 2013 and Senior Vice President, Hydro-Thermal Operations at OPG from July 2013 to January 2016.
- Mr. Reiner was Senior Vice President, Nuclear Refurbishment at OPG from March 2010 to April 2014.
- Ms. Rowe was Senior Vice President and Chief Marketing Officer at Meridan Credit Union from xx, xxxx to xx, xxxx **[UPDATE]** and Senior Managing Director – Marketing and Communications and VP Corporate Affairs at Manulife from xx, xxxx to xx, xxxx. **[UPDATE]**

INDEBTEDNESS OF DIRECTORS AND EXECUTIVE OFFICERS

As of the date of this AIF, no director or executive officer of the Company or any of its subsidiaries had any outstanding indebtedness to the Company or any of its subsidiaries except routine indebtedness or had any indebtedness that was the subject of a guarantee, support agreement, letter of credit or other similar arrangement or understanding provided by the Company or any of its subsidiaries.

CEASE TRADE ORDERS, BANKRUPTCIES, PENALTIES OR SANCTIONS

To the knowledge of OPG, no director or executive officer is, at the date of the AIF, or was within 10 years before the date of the AIF, a director, chief executive officer, or chief financial officer of any company, that (a) was subject to an order that was issued while the director or executive officer was acting in the capacity as director, chief executive officer, or chief financial officer, or (b) was subject to an order that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer, or chief financial officer.

To the knowledge of OPG, no director or executive officer of OPG, or a shareholder holding a sufficient number of securities of OPG to affect materially the control of OPG (a) is, as at the date of the AIF, or has been within the 10 years before the date of the AIF, a director or executive officer of any company (including OPG) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or

insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or (b) has, within the 10 years before the date of the AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager, or trustee appointed to hold the assets of the director, executive officer, or shareholder, except for:

- Bernard Lord was a director of AEA Technology from the fall of 2010 until the fall of 2012 when it became insolvent.
- William Coley is a director of Peabody Energy Corporation which declared voluntary Chapter 11 bankruptcy protection in April 2016 for most of its U.S. entities and currently is restructuring.

AUDIT AND RISK COMMITTEE INFORMATION

NI 52-110 has been implemented by Canadian securities regulatory authorities to encourage reporting issuers to establish and maintain strong, effective, and independent audit committees, to enhance the quality of financial disclosure, and to foster increased investor confidence in Canada's capital markets. The Audit and Risk Committee's Charter is attached to this AIF as Appendix A. Information on OPG's Audit and Risk Committee is as follows:

Composition of the Audit and Risk Committee

As at March 10, 2017, the members of the Audit and Risk Committee were George Lewis (Chair), Elisabeth (Lisa) DeMarco, Brendan Hawley, Ira Kagan, Yezdi Pavri and Gerry Phillips. All members are independent within the meaning of NI 52-110 and have experience in business and financial matters. Each member has an understanding of internal controls and procedures for financial reporting. As part of OPG's Continuing Education Program for Directors, Audit and Risk Committee members are provided with access to both internal and external educational resources, including seminars and courses, in order to maintain or enhance their financial literacy.

Activities of the Audit and Risk Committee

The Chartered Professional Accountants of Canada (CPA Canada) and the Canadian Public Accountability Board have recommended that audit committees perform a comprehensive review of the external audit firm at least once every five years. CPA Canada issued guidelines in early 2014 to assist audit committees in implementing these recommendations. The Audit and Finance Committee of the Board conducted its first comprehensive review of the Company's external auditor, Ernst & Young LLP (E&Y) in 2014, for the period from 2009 to 2013, using the guidelines and format recommended by CPA Canada. E&Y has been OPG's external auditor since the Company's inception in 1999. E&Y provides audit and audit related services to OPG, including the audit of OPG's annual consolidated financial statements, reviews of OPG's quarterly financial statements, and audits of the financial statements of OPG's consolidated subsidiaries and other financial information.

In conducting the 2016 review of E&Y's performance, the Audit and Risk Committee considered input from management, E&Y, and OPG's internal audit function. The Committee performed this review taking into consideration the information submitted by these parties, as well as their individual experience. The results of the 2016 annual review were discussed at the Audit and Risk Committee meeting in August 2016. As part of the review, the Committee considered factors such as the auditor's independence, engagement team quality including the Committee's involvement in the selection of E&Y's lead engagement partner, and communication effectiveness between E&Y and the Company. Upon completion of the review, the Committee was satisfied with the performance of E&Y, concluded that their reappointment was in the best interests of OPG, and in November 2016, recommended that the Board reappoint E&Y as the Company's auditor for the 2017 fiscal year. The Board reappointed E&Y as the Company's auditor for the 2017 fiscal year in November 2016.

External Auditor Service Fees

The following fees were billed by Ernst & Young LLP:

(thousands of dollars)	**2016**	**2015**
Audit fees	**2,034**	1,963
Audit-related fees	**543**	623
All other fees [1]	**17**	17

[1] Comprised of fees related to the subscription of an online accounting research tool and training.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Relationship with the Province and the OEFC

Relationship with the Shareholder

As a corporation created under and governed by the OBCA, OPG's management is supervised by its Board of Directors, which is obligated by law to act in the best interests of the Company. The Company's sole Shareholder, the Province, owns all of the Company's issued and outstanding common shares and thereby has the power to determine the composition of the Company's Board of Directors.

As one of several wholly-owned government business enterprises of the Province, OPG has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

Memorandum of Agreement

On August 17, 2005, OPG entered into the MOA with the Shareholder regarding OPG's role and responsibility as a power producer in Ontario. In July 2015, the MOA was revised. The MOA serves as the basis of agreement between OPG and the Shareholder regarding OPG's mandate, governance, performance, reporting and communications, and establishes the accountabilities between OPG and the Province. OPG's strategic imperatives are based on the Company's mandate as set out in the MOA. The MOA was reaffirmed for continuance by both the Ontario Minister of Energy and the OPG Board of Directors' Chair in the fourth quarter of 2016, as required by the MOA following a change in the Minister of Energy.

A copy of the MOA can be found on the Company's website at www.opg.com. ***Unless otherwise specifically stated, none of the information contained on, or connected to the Company's website nor any of the contents of the MOA are incorporated by reference herein.***

Shareholder Directives

The Shareholder may at times direct OPG to undertake special initiatives. A Shareholder directive is issued when the Shareholder finds it necessary to assume decision-making power and authority over certain aspects of the business operations of the Corporation. Under a Shareholder directive, the Shareholder assumes all the rights, powers, duties and liabilities of the Directors to manage or supervise the management of the business and the Directors are relieved of their duties and liabilities. Shareholder directives are communicated as written pursuant to section 108 of the OBCA. Copies of each Shareholder directive can be found on the Company's website at www.opg.com. ***Unless otherwise specifically stated, none of the information contained on, or connected to the Company's website nor any of the contents of the Shareholder directives are incorporated by reference herein.*** The Shareholder directives issued by the Shareholder to date are listed below in reverse chronological order:

- Sale of the Corporation's Lakeview site (June 9, 2016);

- Sale of the Corporation's Head Office (December 14, 2015);
- Bruce Power L.P. Lease Agreement and Used Fuel Agreement (November 30, 2015) – For further details, see *General Development of Business – Nuclear Business Development – Bruce Power Refurbishment and Bruce Lease Agreement*;
- Bruce Power L.P. Amended and Restated Heavy Water and Associated Services Agreement (November 30, 2015) – For further details, see *General Development of Business – Nuclear Business Development – Bruce Power Refurbishment and Bruce Lease Agreement*;
- Conversion of One Unit of Thunder Bay Generating Station to Advanced Biomass (May 1, 2014);
- Thunder Bay Generating Station Conversion (December 16, 2013);
- Early Closure of Ontario Power Generation's Lambton and Nanticoke Coal-Fired Generation Stations (March 7, 2013);
- First Nation Directive (April 1, 2011) – OPG was directed to pay a part of the Shareholder's portion of the settlement liability with a First Nation on its behalf;
- Atikokan Generating Station Conversion (March 8, 2011);
- Addressing Carbon Dioxide Emissions from the Use of Coal at Coal-Fired Generating Stations (May 20, 2010);
- Request for Indicative Prices for the Supply of Wood Pellet Fuel Declaration (Atikokan) (March 18, 2010);
- Request for Expressions of Interest for Supply and Transportation of Solid Biomass Fuel Declaration (January 13, 2009) ;
- Addressing Carbon Dioxide Emissions from the Use of Coal at Coal-Fired Generating Stations (May 15, 2008);
- Thunder Bay Gas Conversion Cancellation (July 12, 2006);
- Nuclear Directive (June 16, 2006) – OPG was directed to begin feasibility studies on refurbishing existing nuclear units, an environmental assessment on refurbishing Pickering B units, and federal approvals processes (including environmental assessment) for new nuclear units;
- Lower Mattagami River Agreement (May 23, 2006);
- Bruce Power Lease Agreement (October 14, 2005); and
- Thunder Bay Gas Conversion Declaration (October 6, 2005).

Ontario Nuclear Funds Agreement

The ONFA between OPG and the Province sets out the responsibility for funding the liabilities for the decommissioning of OPG's nuclear facilities and the long-term management of OPG's used nuclear fuel and other nuclear waste. Pursuant to the ONFA, the Company has established a Used Fuel Segregated Fund and a Decommissioning Segregated Fund to fund the future costs of these activities. For additional details, see *Description of the Business – Regulated – Nuclear Waste Management Segment – Funding Mechanisms*.

OPG Debt Held by the OEFC

OPG's long-term debt has been financed predominantly by the OEFC. As at December 31, 2016, the OEFC held approximately $3.3 billion of OPG's long-term debt with maturities ranging from one month to 30 years. For additional details, see Note 6 to the Company's audited annual financial statements as at and for the year ended December 31, 2016.

Payments-In-Lieu of Corporate Income Taxes and Property Taxes

OPG and its wholly-owned subsidiaries are exempt from tax under the *Income Tax Act* (Canada) and *Taxation Act, 2007* (Ontario). However, under the *Electricity Act, 1998*, OPG is required to make proxy tax payments to the OEFC. These payments are calculated in accordance with the *Income Tax Act*

(Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations.

OPG is subject to income tax audits by the Ontario Ministry of Finance. As of the date of this AIF, income tax audits up to and including the 2012 taxation year have been completed.

The *Electricity Act, 1998* also provides that OPG and certain of its subsidiaries are required to make payments in lieu of property tax to the OEFC on their non-hydroelectric generating station buildings and structures. These payments generally equal the difference between property taxes that would be otherwise payable if these assets were privately owned, and the amount payable to municipalities in respect of these assets as determined under the *Assessment Act, 1990* (Ontario). As with other hydroelectric generators in Ontario, OPG's hydroelectric generation operations are not subject to payments in lieu of property taxes because they are subject to the GRC regime. For additional details on the GRC regime, see *Description of the Business – Generation Operations – Hydroelectric (Regulated – Hydroelectric and Contracted Generation Portfolio segments) – Gross Revenue Charge and Water Payments*.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

Legal Proceedings

OPG is potentially the subject of various legal proceedings and claims that arise in the ordinary course of business. The outcome of these proceedings and claims is uncertain. Based on information available as of the date of this AIF, management believes that none of the proceedings and claims, individually and in the aggregate, are expected to have a material impact on OPG.

British Energy Claim

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered by June 30, 2017, as required by the timetable.

Regulatory Actions

OPG is not aware of any penalties or sanctions imposed by a court or securities regulatory authority or other regulatory body against the Company, nor has the Company entered into any settlement agreements before a court or with a securities regulatory authority.

MATERIAL CONTRACTS

Except for contracts entered into in the ordinary course of business (unless otherwise required by applicable securities requirements to be disclosed), there were no material contracts entered into by the Company or its subsidiaries during the most recently completed financial year, or before the most recently completed financial year that are still in effect.

INTERESTS OF EXPERTS

The external auditor of the Company is Ernst & Young LLP, Chartered Professional Accountants, 222 Bay Street, P.O. Box 251, Toronto, Ontario M5K 1J7. Ernst & Young LLP has been the Company's auditors since OPG was formed in 1999, and is independent in accordance with the Rules of Professional Conduct of the Chartered Professional Accountants of Ontario.

GLOSSARY

ancillary service	a service necessary to maintain the reliability of the IESO-controlled grid.
availability	when used in reference to a generating unit, is a measure of mechanical reliability represented by the percentage of time a generating unit is capable of providing service, whether or not it is actually in-service, relative to the total time for the period.
baseload facilities	Baseload facilities for Ontario are made up of nuclear, run-of-the-river hydroelectric and variable generation facilities such as wind and solar. For OPG, baseload facilities include nuclear and run-of-the-river hydroelectric facilities.
bilateral contract	a contract for the purchase and sale of notional electricity usually entered into directly between a generator and an end-user, or between a generator or end-user and a market intermediary.
biomass	plant material from agricultural and forest sources that can be used to produce energy, including beneficiated biomass, which includes torrefied, carbonized, and steam exploded biomass.
CANDU	an acronym for CANada Deuterium Uranium, a family of nuclear fission reactors developed in Canada which use pressurized heavy water coolant or deuterium oxide as a moderating agent and natural uranium (uranium dioxide) as fuel.
capacity factor	the ratio (usually specified as a percentage) of the amount of energy that a generating asset actually generated over a period of time divided by the amount of energy that the generating asset would have produced over the same period of time if it had operated continuously at full capacity.
decommissioning	actions taken in the interest of health, safety, security and protection of the environment to retire a facility permanently from service and render it to a predetermined end-state condition.
detritiation	the removal of tritium from heavy water.
deuterium oxide	see heavy water.
equivalent forced outage rate	the hours of unit failure given as a percentage of the total hours of the availability of that unit.
government business enterprises	Government organizations that are separate legal entities with the power to contract in their own name, have the financial and operating authority to carry on a business, are principally focused on the selling of goods and services to individuals and non-government organizations, and are able to maintain their operations and meet their obligations through revenues generated outside the government reporting entity.
heavy water (deuterium oxide)	water containing significantly more than the natural proportion of heavy hydrogen (deuterium) atoms to ordinary hydrogen atoms, used as a moderator in CANDU reactors.
in-service capacity	the portion of installed capacity (the highest level of output which a generating unit is designed to maintain indefinitely without damage to the unit) that has not been removed from service.

interconnection	a transmission line which carries power across the service area boundary of geographically adjacent jurisdictions.
International Joint Commission	An international organization created by the Boundary Waters Treaty, signed by Canada and the United States in 1909.
kWh	a kilowatt hour, the commercial unit of electric energy (the amount of electricity consumed by ten 100 watt light bulbs burning for one hour).
load	the quantity of electricity consumption measured as either the energy consumed over a given period of time or the rate of energy consumption at a given time by a particular customer or group of customers.
MW	a megawatt, equal to 1,000,000 watts or 1,000 kilowatts.
MWh	a megawatt hour, equal to 1,000 kWh.
OEFC	The Ontario Electricity Financial Corporation is the legal continuation of the former Ontario Hydro. The OEFC is responsible for managing the debt and certain other obligations not transferred to other successor companies of Ontario Hydro.
ONFA	The Ontario Nuclear Funds Agreement, between OPG and the Province, sets out the responsibility for funding the liabilities for the decommissioning of OPG's nuclear stations and the long-term management of OPG's used nuclear fuel and other nuclear waste.
Ontario NFWA Trust	a trust established by OPG pursuant to the Nuclear Fuel Waste Act for the purpose of funding the implementation of its long-term nuclear fuel waste management plan.
operating reserve	the capacity that can be called upon on short notice by the IESO to replace scheduled energy supply that is unavailable as a result of an unexpected outage or to augment scheduled energy as a result of unexpected demand or other contingencies.
proxy tax	pursuant to the *Electricity Act, 1998*, an amount payable to the OEFC in each taxation year in lieu of taxes under the *Income Tax Act* (Canada) and *Taxation Act, 2007* (Ontario).
reactive support	the control and maintenance of prescribed voltages on the IESO-controlled grid.
refurbishment	the work needed to extend the life of a reactor unit by replacing the major life-limiting components (such as pressure tubes, steam generators, etc.).
Shareholder	the sole shareholder of OPG, the Province of Ontario.
surplus baseload generation	a condition that occurs when electricity generation from baseload facilities is greater than the electricity market demand.
tonne	1,000 kilograms or 2,204.6 pounds.
tritium	a radioactive substance that is created within CANDU reactors as a result of heavy water in the reactor moderator and heat transport systems.

TWh	a terawatt hour, equal to 1,000,000 MWh.
unit	an electrical generator, together with its driving turbine and auxiliary equipment.
watt	a scientific unit of electric power representing the rate of work of one joule per second.

APPENDIX A

ONTARIO POWER GENERATION INC.

AUDIT AND RISK COMMITTEE CHARTER

Audit and Risk Committee Charter

Purpose

The function and purpose of the Audit and Risk Committee is to assist the Board of Directors in their responsibility for oversight of matters relating to:

- The integrity of OPG's financial statements and reporting
- The integrity and adequacy of internal controls and standards of Codes of Conduct and ethics
- The performance of OPG's internal audit function
- The performance and independence of OPG's external auditors
- Business and financial planning
- The performance of OPG's pension, nuclear decommissioning, and used fuel investment funds
- OPG's Enterprise Risk Management
- Assessment of committee performance and board policies.

Management is responsible for the preparation, presentation and integrity of OPG's interim and annual financial statements and related disclosure documents. Management is responsible for maintaining appropriate accounting and financial reporting principles and policies and systems of internal and disclosure controls and procedures to comply with accounting standards and applicable laws and regulations which provide reasonable assurance that the assets of the Company are safeguarded and transactions are authorized, executed, recorded and properly reported.

Management is also responsible for the identification, assessment, monitoring, and management of the risks to achieving OPG's strategic and business plan objectives and the development and implementation of policies and procedures to respond to such risks.

The Committee's role is to provide oversight that ensures the Company's assets are protected and safeguarded within reasonable business limits and report such to the Board.

Committee Responsibilities and Duties

The Committee shall perform the duties set out in this Charter and shall perform such other duties as may be necessary or appropriate under applicable law or securities rules, or as may be delegated to the Committee by the Board from time to time.

1. *The integrity of OPG's financial statements and reporting*

   The Committee reviews and makes recommendations to the Board with respect to:

   a) appointment or replacement of the Chief Financial Officer.
   b) OPG's annual financial statements and external audit report, including financial statements, Management's Discussion and Analysis (MD&A), related footnotes and any documentation required by the Securities Act to be prepared and filed by OPG or that OPG otherwise files with securities regulators.
   c) OPG's Annual Information Form, if required, prior to filing with securities regulators.

   The Committee reviews and approves:

   d) OPG's quarterly financial statements and interim financial information and disclosures in the MD&A and earnings press release, prior to filing.

   In carrying out its responsibilities for oversight of the integrity of OPG's financial statements and reporting the Committee will include in its review:

e) Adequacy of procedures in place for the review of OPG's public disclosure of financial information extracted or derived from OPG's financial statements.
f) significant accounting principles and reporting issues and impact on the financial statements, including complex or unusual transactions, highly judgmental areas, major issues regarding or changes to OPG's selection/application of accounting principles, financial presentations, the effect of regulatory and accounting initiatives, as well as off-balance sheet arrangements on OPG's financial statements.
g) analysis prepared by Management and/or the external auditor detailing financial reporting issues and judgments made in connection with the preparation of financial information, including analysis of the effects of alternative generally accepted accounting principles methods.
h) whether any other matters related to conduct have come to the Committee's attention that causes it to believe that the financial statements contain an untrue statement of material fact or omit to state a necessary material fact.

2. *Integrity and adequacy of Internal Controls and standards of Codes of Conduct and ethics*

In carrying out its responsibilities for the integrity and adequacy of internal controls, including compliance with legal and regulatory requirements and standards of codes of conduct and ethics, the Committee reviews:

a) legal, tax, or regulatory matters that may have a material impact on OPG's operations and the financial statements, including, but not limited to, violations of securities law or breaches of fiduciary duty.
b) the scope of review of internal control over financial reporting, significant findings, recommendations and Management's responses for implementation of actions to correct weaknesses in internal controls.
c) disclosures made by the Chief Executive Officer and Chief Financial Officer during the certification process regarding significant deficiencies in the design or operation of internal controls or any fraud that involves Management or other employees who have a significant role in OPG's internal controls.
d) procedures for the receipt, recording and treatment of complaints received by OPG regarding accounting, internal accounting controls, or auditing matters, and procedures for the confidential and anonymous submission by OPG employees of concerns regarding accounting or auditing matters.
e) expenses of the Board Chair, Board of Directors, President/CEO and the President/CEO's direct reports on an annual basis, and of any other senior officers and employees the Committee considers appropriate.
f) reports from the Chief Ethics Officer on independent reviews and investigations of fraud allegations, matters that may involve fraud and/or Codes of Conduct violations and compliance.

3. *Performance of OPG's internal audit function*

The Committee reviews and makes recommendations to the Board with respect to:

a) Appointment or replacement of the Chief Risk and Audit Executive.

The Committee reviews and approves:

b) The annual internal audit plan and all major changes to the plan, including the organizational structure, budget and the adequacy of resources.
c) the charter of the internal audit function annually.

In carrying out its responsibilities for the performance of OPG's internal audit function the Committee reviews:

d) results of Internal audit reports, including: significant findings, the adequacy of the control processes, Management's response and the timetable for implementation of Management actions to correct weaknesses, any difficulties encountered in the course of their work (such as restrictions on the scope of their work or access to information).
e) Internal Audit's confirmation of organizational independence and disclosure of any conflict of interest.
f) Internal Audit performance relative to the annual internal audit plan.

4. *Performance and Independence of External Auditor*

The Committee reviews and makes recommendations to the Board with respect to:

a) the external auditor to be annually appointed on behalf of the Shareholder, and related compensation, including results of a cyclical performance review, and a comprehensive review of the external audit firm at least once every five years.

The Committee reviews and approves:

b) pre-approval of additional audit services and fees to be provided by the external auditors if such services are required further to the annual compensation approved by the Board. The Committee may delegate such pre-approval authority to the Committee Chair up to a limit of $250,000. Any decisions of the Committee Chair to whom pre-approval authority is delegated must be presented to the full Audit and Risk Committee at its next scheduled meeting.

In carrying out its responsibilities for the performance and independence of OPG's external audit function the Committee reviews:

c) the work and report of the external auditor engaged for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for OPG, including the resolution of disagreements between Management and the external auditor regarding financial reporting.
d) the independence and qualifications of the external auditor.
e) the annual report by the external auditor describing the auditing firm's internal quality control procedures, any material issues raised by the most recent internal quality-control review or peer review of the auditing firm or by any inquiry or investigation by governmental or professional authorities within the preceding five years respecting one or more independent audits carried out by the external auditor and any steps taken to deal with any such issues and all relationships between the external auditors and OPG.
f) scope and approach of the annual audit plan with the external auditors.
g) quality and acceptability of OPG's accounting principles including all critical accounting policies and practices used, any alternative treatments that have been discussed with Management as well as any other material communications with Management.
h) external auditor's process for identifying and responding to key audit and internal control risks.
i) rotation of the lead audit partner and other audit partners every seven years, and consider regular rotation of the audit firm.
j) all related-party transactions.
k) OPG's hiring policies regarding partners, employees and former partners and employees of the present and former external auditor of OPG.

5. *Business and Financial Planning*

The Committee reviews and makes recommendations to the Board on:

a) OPG's business plan, including overall financing plan in support of the Company's capital expenditures and medium – long term forecast.

b) OPG's rate applications to the Ontario Energy Board, including proposed payment amounts and any agreement arising from a Settlement Conference with intervenors.
c) corporate financing vehicles, credit facilities, including any plans to access capital debt markets and other related financing activities. The Board may delegate to an officer of the company authority to enter into such financing activities in such a manner as the Board shall determine at the time of such delegation. Any decisions of the officer to whom authority is delegated must be presented to the full Audit and Risk Committee at its next scheduled meeting.

6. *Pension, Nuclear Decommissioning and Used Fuel Investment Funds*

The Committee reviews and makes recommendations to the Board on:

a) the appointment or replacement of the Chief Investment Officer.
b) The appointment of the auditor for the OPG Pension Fund and the Used Fuel Segregated Fund and Decommissioning Segregated Fund.
c) The broad objectives, governance frameworks and risk posture for the OPG Pension Fund and the Used Fuel Segregated Fund and Decommissioning Segregated Fund and annual status report on these Funds.
d) The tri-ennial valuation of the Pension Fund and annual valuation of the Supplementary Employee Retirement Pension Plans. (*The Committee provides advice to the Compensation, Leadership and Governance Committee on the affordability of proposed pension benefit changes.)*

The Committee reviews and approves:

e) the appointment of the members of OPG's Pension Committee. In addition, the Committee may, at any time, remove or replace any member of the Pension Committee or fill a vacancy on the Pension Committee. The Pension Committee Chair may temporarily appoint a senior management employee to fill a vacancy on the Pension Committee until the next regularly scheduled Audit and Risk Committee meeting.
f) the annual audited financial statements for the OPG Pension Fund, the Used Fuel Segregated Fund and the Decommissioning Segregated Fund.
g) the investment policies and procedures, including the design of modifications, for the OPG Pension Fund, as required by the *Ontario Pension Benefits Act* and its regulations, and for the Decommissioning Segregated Funds, as required by the Ontario Nuclear Funds Agreement.
h) the appointment of the Pension Plan actuary.

In carrying out its responsibilities for the oversight of financial planning and investment funds the Committee reviews:

i) reports on a quarterly, annual or by exception basis, on compliance with and appropriateness of the asset mix policy; total fund and asset class returns relative to benchmarks; material compliance with breaches of policies or procedures; and work conducted by the plan actuary.
j) periodic reports on the calculation of OPG's nuclear waste liability.

7. *OPG's Enterprise Risk Management*

The Committee reviews and makes recommendations to the Board on:

a) the appointment or replacement of the Chief Risk and Audit Executive.
b) the Company's enterprise risk policy, framework, overall risk appetite and targets.

In carrying out its responsibilities for oversight of OPG's Enterprise Risk Management the Committee reviews:

c) the processes employed by Management for identifying and assessing the Company's principal risks.
d) periodic reports on Management's assessment of the principal risks to achieving the Company's strategic and business plan objectives, and the strategies for monitoring, managing and responding to those risks.
e) periodic reports on significant emerging and evolving risks and relevant external events that could potentially impact OPG's risk profile.
f) compliance metrics related to OPG's commercial operations trading, treasury, and fuels management.
g) regular reports on OPG's cyber security position and programs.
h) periodic reports on OPG's Insurance Program.

8. *Assessment of committee performance and board policies*

In carrying out its responsibilities for assessment of committee performance and board policies the Committee shall:

a) Review and assess Committee performance, including a review of the adequacy of and its compliance with this Charter, in accordance with the evaluation process approved by the Board and taking into account all legislative and regulatory requirements applicable to the Committee as well as any best practice guidelines recommended by regulators with whom OPG has a reporting relationship.
b) Provide oversight of the implementation of the following Board of Directors' policies, as well as the development of any new policies deemed necessary by the Committee, and reviewing these policies annually to ensure their continuing adequacy:

    i. Delegation and Exercise of Authority Policy
    ii. Disclosure Policy
    iii. Code of Business Conduct and Supplier Code of Conduct, including anti-bribery and corruption
    iv. Enterprise Risk Management Policy
    v. Cyber Security Policy

<u>Organization</u>

Members

The Audit and Risk Committee shall consist of three or more Directors as determined by the Board of Directors. All members of the Committee shall be independent as defined by the Ontario Securities Commission, and not "affiliated" with OPG.

The Board shall appoint the members of the Committee and the Chair of the Committee annually. The Board may appoint a member to fill a vacancy which occurs in the Committee between annual elections of Directors. Any member of the Committee may be removed or replaced at any time by the Board.

If a member of the Committee becomes "affiliated" with OPG, the member may continue as a member of the Committee with the approval of the Board Chair, in consultation with the Corporate Secretary.

As a "venture issuer", OPG is exempt from the statutory requirements of National Instrument 52-110 requiring members of Audit Committees be independent and financially literate. However, OPG considers such independence and financial literacy to be "best practice" and therefore each of the members of the Audit and Risk Committee shall satisfy the applicable independence and financial literacy requirements of the laws and regulations governing Audit Committees.

The Board of Directors shall confirm that each member of the Audit and Risk Committee is financially literate; as such qualification is interpreted by the Board of Directors in its business judgment, and in compliance with National Instrument 52-110 and its Companion Policy.

Meetings

The Committee shall meet as frequently as it determines but not less than quarterly. During quarterly meetings, the Committee will hold separate in camera sessions with the external auditors, the Chief Risk and Audit Executive and Management to discuss any matters that the Committee believes should be discussed and to provide a forum for any relevant issues to be raised.

Notice of the time and place of each meeting of the Committee must be given to each member of the Committee not less than 48 hours before the time of the meeting.

A quorum of the Committee shall be a majority of its members, but not less than two. The powers of the Committee may be exercised at a meeting at which a quorum of the Committee is present in person or by telephone or other electronic means, or by a resolution signed by all members entitled to vote on that resolution at a meeting of the Committee. Each member is entitled to one vote in Committee proceedings.

The Chair shall preside at all meetings of the Committee at which he or she is present (or if not able to be present designate another member of the Committee to chair the meeting) and shall develop the agenda for each Committee meeting. The agenda for each meeting of the committee shall be delivered to each member of the Committee at least 48 hours prior to any meeting of the Committee, together with such other materials as the chair determines necessary.

Minutes shall be kept of all meetings of the Committee and shall be maintained by OPG's Corporate Secretary. The procedure at meetings is to be determined by the Committee unless otherwise determined by the by-laws of OPG, by a resolution of the Board or by this Charter.

The Committee may meet in camera (without management present) at any time during the meeting consistent with the Board guideline on the conduct of in camera sessions and the keeping of minutes from in camera sessions.

The Committee may invite any Director, officer or employee of OPG or OPG's counsel or any other person to attend meetings of the Committee to assist in the discussion and examination of the matters under consideration by the Committee.

Reports

The Committee will report its activities and actions to the Board of Directors with recommendations, as the Committee deems appropriate.

The Committee will provide for inclusion in OPG's financial information or regulatory filings any report from the Audit and Risk Committee required by applicable laws and regulations and stating among other things whether the Committee has:

(i) Reviewed and discussed the audited financial statements with Management.
(ii) Discussed pertinent matters with the internal and external auditors.
(iii) Received disclosures from the external auditors regarding the auditors' independence and discussed with the auditors their independence.
(iv) Recommended to the Board of Directors that the audited financial statements be included in OPG's Annual Report.

<u>Authority</u>

The Audit and Risk Committee shall have the authority to:

a) conduct or authorize investigations into any matters within the Committee's scope of responsibilities.
b) set and pay the compensation for any advisors employed by the Committee.
c) to communicate directly with the internal and external auditors.

While the Audit and Risk Committee has the responsibilities and powers set forth in this Charter, it is not the duty of the Audit and Risk Committee to plan or conduct audits or risk assessments, or to determine that OPG's financial statements and disclosures are complete and accurate and are in accordance with generally accepted accounting principles and applicable rules and regulations. These are the responsibility of Management and, as appropriate, the external auditor.

Delegation of Authority

The Committee may not delegate its oversight responsibilities. The Committee may delegate to a sub-committee, the Chief Executive Officer or any employee of OPG the authority to exercise any right, power or responsibility that the Committee may have on such terms and conditions and within such limits as the Committee deems appropriate provided that the sub-committee, Chief Executive Officer or employee subsequently advises the Committee of any right, power or responsibility so exercised.

Access to Management and Outside Advisors

The Audit and Risk Committee shall have unrestricted access to members of Management and relevant information.

The Audit and Risk Committee has the authority to retain legal counsel, accountants or other advisors to assist it in the conduct of any investigation, as it determines necessary to carry out its duties.

From:	HO Philip -FIN & C CTRL
To:	"Shruti.Talwar@ontario.ca"; Sunita Chander (ENERGY); Ronald Kwan; John Kim
Cc:	MAK Ricky -FIN & C CTRL
Subject:	OPG Q1 2017 Submission to Province
Date:	Friday, April 28, 2017 5:04:19 PM
Attachments:	Q1 2017 FS - DRAFT - PROVINCE MAILING.docx Q1 2017 MDA - DRAFT - PROVINCE MAILING.docx

Hi All,

Please find attached OPG's draft Q1 2017 Management's Discussion and Analysis (MD&A) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, May 2nd**.

These documents will be filed with the Ontario Securities Commission on **Friday, May 12th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q1 2017 MD&A:

Highlights	
Recent Developments	MD&A p.9-11
Darlington Refurbishment	MD&A p.9; 13-14
Ontario's Fair Hydro Plan	MD&A p.10
Peter Sutherland Sr. GS project	MD&A p.9, 13

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation
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ONTARIO POWER GENERATION INC.

INTERIM CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

MARCH 31, 2017

[DRAFT]

INTERIM CONSOLIDATED STATEMENTS OF INCOME (UNAUDITED)

Three Months Ended March 31 *(millions of dollars except where noted)*	**2017**	**2016**
Revenue *(Note 12)*	**1,176**	1,478
Fuel expense *(Note 12)*	**155**	172
Gross margin *(Note 12)*	**1,021**	1,306
Expenses *(Note 12)*		
Operations, maintenance and administration	**708**	686
Depreciation and amortization	**167**	312
Accretion on fixed asset removal and nuclear waste management liabilities	**238**	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Income from investments subject to significant influence	**(10)**	(8)
Property taxes	**11**	12
	925	1,087
Income before other gains, interest and income taxes	**96**	219
Other gains *(Note 12)*	**(3)**	(23)
Income before interest and income taxes	**99**	242
Net interest expense *(Note 5)*	**19**	33
Income before income taxes	**80**	209
Income tax expense	**12**	81
Net income	**68**	128
Net income attributable to the Shareholder	**64**	123
Net income attributable to non-controlling interest	**4**	5
Basic and diluted net income per common share *(dollars)*	**0.25**	0.48
Common shares outstanding *(millions)*	**256.3**	256.3

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (UNAUDITED)

Three Months Ended March 31 *(millions of dollars)*	**2017**	**2016**
Net income	**68**	128
Other comprehensive income, net of income taxes *(Note 7)*		
Reclassification to income of amounts related to pension and other post-employment benefits [1]	**3**	3
Reclassification to income of losses on derivatives designated as cash flow hedges [2]	**4**	4
Unrealized gain on available-for-sale securities [3]	**5**	-
Other comprehensive income for the period	**12**	7
Comprehensive income	**80**	135
Comprehensive income attributable to the Shareholder	**76**	130
Comprehensive income attributable to non-controlling interest	**4**	5

[1] Net of income tax expenses of $1 million for each of the three months ended March 31, 2017 and 2016, respectively.

[2] Net of income tax expenses of $1 million for each of the three months ended March 31, 2017 and 2016, respectively.

[3] Net of income tax expenses of $1 million and nil for the three months ended March 31, 2017 and 2016, respectively.

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

Three Months Ended March 31 *(millions of dollars)*	**2017**	**2016**
Operating activities		
Net income	**68**	128
Adjust for non-cash items:		
Depreciation and amortization	**167**	312
Accretion on fixed asset removal and nuclear waste management liabilities	**238**	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Pension and other post-employment benefit costs *(Note 8)*	**113**	117
Deferred income taxes	**11**	1
Mark-to-market on derivative instruments	**(2)**	3
Provision for used nuclear fuel and low and intermediate level nuclear waste	**27**	33
Regulatory assets and liabilities	**(28)**	(12)
Provision for materials and supplies	**4**	4
Other gains	**(1)**	(23)
Other	**(4)**	(4)
	404	644
Contributions to nuclear fixed asset removal and nuclear waste management funds	**-**	(37)
Expenditures on fixed asset removal and nuclear waste management	**(76)**	(58)
Reimbursement of eligible expenditures on nuclear fixed asset removal and nuclear waste management	**22**	15
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans	**(88)**	(116)
Expenditures on restructuring	**(1)**	(2)
Distributions received from investments subject to significant influence	**14**	18
Net changes to other long-term assets and liabilities	**11**	24
Net changes to non-cash working capital balances *(Note 13)*	**(168)**	(122)
Cash flow provided by operating activities	**118**	366
Investing activities		
Proceeds from deposit note *(Note 4)*	**45**	10
Investment in property, plant and equipment and intangible assets	**(408)**	(320)
Cash flow used in investing activities	**(363)**	(310)
Financing activities		
Issuance of long-term debt *(Note 4)*	**200**	-
Repayment of long-term debt	**(50)**	-
Distribution to non-controlling interest	**(4)**	(4)
Issuance of short-term notes *(Note 5)*	**589**	1,010
Repayment of short-term notes	**(456)**	(986)
Cash flow provided by financing activities	**279**	20
Net increase in cash and cash equivalents	**34**	76
Cash and cash equivalents, beginning of period	**186**	464
Cash and cash equivalents, end of period	**220**	540

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at *(millions of dollars)*	March 31 2017	December 31 2016
Assets		
Current assets		
Cash and cash equivalents	**220**	186
Available-for-sale securities	**218**	212
Receivables from related parties	**362**	429
Nuclear fixed asset removal and nuclear waste management funds	**19**	24
Fuel inventory	**297**	310
Materials and supplies	**95**	100
Prepaid expenses	**224**	198
Other current assets	**216**	298
	1,651	1,757
Property, plant and equipment	**29,721**	29,315
Less: accumulated depreciation	**9,473**	9,317
	20,248	19,998
Intangible assets	**503**	503
Less: accumulated amortization	**410**	404
	93	99
Other assets		
Nuclear fixed asset removal and nuclear waste management funds	**16,138**	15,960
Long-term materials and supplies	**339**	345
Regulatory assets *(Note 3)*	**5,892**	5,855
Investments subject to significant influence *(Note 14)*	**317**	321
Other long-term assets	**33**	37
	22,719	22,518
	44,711	44,372

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at *(millions of dollars)*	March 31 2017	December 31 2016
Liabilities		
Current liabilities		
Accounts payable and accrued charges	**1,014**	1,164
Short-term debt *(Note 5)*	**135**	2
Deferred revenue due within one year	**12**	12
Long-term debt due within one year *(Note 4)*	**1,328**	1,103
Income taxes payable	**6**	123
	2,495	2,404
Long-term debt *(Note 4)*	**4,342**	4,417
Other liabilities		
Fixed asset removal and nuclear waste management liabilities *(Note 6)*	**19,683**	19,484
Pension liabilities	**2,963**	3,012
Other post-employment benefit liabilities	**2,920**	2,897
Long-term accounts payable and accrued charges	**203**	213
Deferred revenue	**311**	298
Deferred income taxes	**841**	829
Regulatory liabilities *(Note 3)*	**369**	310
	27,290	27,043
Equity		
Common shares [1]	**5,126**	5,126
Retained earnings	**5,598**	5,534
Accumulated other comprehensive loss *(Note 7)*	**(283)**	(295)
Equity attributable to the Shareholder	**10,441**	10,365
Equity attributable to non-controlling interest	**143**	143
Total equity	**10,584**	10,508
	44,711	44,372

[1] 256,300,010 common shares outstanding at a stated value of $5,126 million as at March 31, 2017 and December 31, 2016.

Commitments and Contingencies *(Notes 4, 10, and 11)*

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (UNAUDITED)

Three Months Ended March 31 *(millions of dollars)*	**2017**	**2016**
Common shares	**5,126**	5,126
Retained earnings		
Balance at beginning of period	**5,534**	5,098
Net income attributable to the Shareholder	**64**	123
Balance at end of period	**5,598**	5,221
Accumulated other comprehensive loss, net of income taxes		
Balance at beginning of period	**(295)**	(319)
Other comprehensive income	**12**	7
Balance at end of period	**(283)**	(312)
Equity attributable to the Shareholder	**10,441**	10,035
Equity attributable to non-controlling interest		
Balance at beginning of period	**143**	140
Distribution to non-controlling interest	**(4)**	(4)
Net income attributable to non-controlling interest	**4**	5
Balance at end of period	**143**	141
Total equity	**10,584**	10,176

See accompanying notes to the interim consolidated financial statements

NOTES TO THE INTERIM CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

For the three months ended March 31, 2017 and 2016

1. BASIS OF PRESENTATION

These interim consolidated financial statements for the three months ended March 31, 2017 and 2016 include the accounts of Ontario Power Generation Inc. (OPG or the Company) and its subsidiaries. The Company consolidates its interest in entities over which it is able to exercise control and attributes the results to its sole shareholder, the Province of Ontario (Province). Interests owned by other parties are reflected as non-controlling interest. These interim consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States (US) Securities and Exchange Commission for interim financial statements. These interim consolidated financial statements do not contain all of the disclosures required by US GAAP for annual financial statements. Accordingly, they should be read in conjunction with the annual consolidated financial statements of the Company as at and for the year ended December 31, 2016. All dollar amounts are presented in Canadian dollars.

Certain of the 2016 comparative amounts have been reclassified from financial statements previously presented to conform to the 2017 interim consolidated financial statement presentation.

Use of Management Estimates

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the interim consolidated financial statements, and the reported amounts of revenue and expenses during the reporting periods. Management evaluates the Company's estimates on an ongoing basis based on historical experience, current conditions and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefits (OPEB) liabilities, asset retirement obligations, income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments, depreciation and amortization, valuation of the nuclear fixed assets and nuclear waste management funds, and inventories. Actual results may differ significantly from these estimates.

2. SIGNIFICANT ACCOUNTING POLICIES AND ESTIMATES

Change in Accounting Estimate

Pension and Other Post-Employment Benefits

Accounting Assumptions

Effective January 1, 2017, OPG changed the method used to estimate the current service and interest cost components of pension and OPEB costs. OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs in the first quarter of 2017 was largely offset by the

impact of OEB-authorized variance and deferral accounts.

Recent Accounting Pronouncements Not Yet Adopted

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. In March 2017, the American Institute of Certified Public Accountants posted *Revenue Recognition Implementation Issue #13-1, Scope Clarification Regarding Tariff Sales to Regulated Customers*, on its website. This implementation issue discusses whether revenues from sales under a regulated utility's tariff are within the scope of Topic 606. The guidance concludes that tariff-based revenue from the provision of regulated utility service to a utility's customers is within the scope *of ASC 606 – Revenue from Contracts with Customers.* OPG does not expect a material impact to its accounting for the base regulated payment amounts.

OPG is continuing to assess the impact of the new revenue standard on its other revenue streams. The Company is in the process of concluding on the method of adoption, as well as evaluating the impact of the new standard on its consolidated financial statements.

Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost

In March 2017, the FASB issued ASU No. 2017-07, *Compensation – Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. Under the new guidance, employers that sponsor defined benefit plans for pensions and/or other postretirement benefits are required to present the service cost component of net periodic benefit cost in the same statement of income line item as other employee compensation costs arising from services rendered during the period. The other components of the net periodic benefit cost are presented separately from the line item that includes the service cost and outside of any subtotal of income from operations. The changes would allow only the service cost component of net benefit cost to be eligible for capitalization.

This guidance is effective for fiscal years beginning after December 15, 2017, and interim periods within those years. This update will not have a material impact on OPG's consolidated financial statements since OPG currently capitalizes the service cost component of postretirement benefits costs only. As OPG already includes the service cost component with other compensation costs within the operations, maintenance and administration expenses line item in the consolidated statement of income and does not show a subtotal of income from operations, the proposed presentation change would not affect OPG.

3. REGULATORY ASSETS AND LIABILITIES

In March 2017, the OEB approved a settlement agreement reached by OPG and intervenors on a limited set of issues in OPG's application (Settlement Agreement). Among the settled issues, the agreement provided for the continuation of all applicable existing variance and deferral accounts and accepted a number of variance and deferral account balances for recovery, as requested in OPG's application. The balances of the Nuclear Liability Deferral Account, the Bruce Lease Net Revenues Variance Account, and the nuclear portion of the Capacity Refurbishment Variance Account were excluded from the scope of the Settlement Agreement. The periods of recovery or repayment for the accepted variance and deferral account balances also are excluded from the scope of the Settlement Agreement. In addition, the Settlement Agreement accepted OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017 to 2021 period.

The regulatory assets and liabilities recorded as at March 31, 2017 and December 31, 2016 are as follows:

(millions of dollars)	**March 31 2017**	**December 31 2016**
Regulatory assets		
Variance and deferral accounts authorized by the OEB		
Pension and OPEB Cost Variance Account	**716**	716
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 8)*	**517**	497
Hydroelectric Surplus Baseload Generation Variance Account	**232**	210
Bruce Lease Net Revenues Variance Account	**113**	95
Nuclear Deferral and Variance Over/Under Recovery Variance Account	**74**	74
Other variance and deferral accounts	**43**	33
	1,695	1,625
Pension and OPEB Regulatory Asset *(Note 8)*	**3,348**	3,392
Deferred Income Taxes	**849**	838
Total regulatory assets	**5,892**	5,855
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Capacity Refurbishment Variance Account	**98**	102
Other variance and deferral accounts	**271**	208
Total regulatory liabilities	**369**	310

As at March 31, 2017 and December 31, 2016, regulatory assets for other variance and deferral accounts included amounts for the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Liability Deferral Account, the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account, the Nuclear Development Variance Account, and the Pickering Life Extension Depreciation Variance Account. As at March 31, 2017 and December 31, 2016, regulatory liabilities for other variance and deferral accounts included the Impact Resulting from Changes in Station-End-of-Life Dates Deferral Account, the Pension & OPEB Cash Payment Variance Account, the Hydroelectric Water Conditions Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account.

4. LONG-TERM DEBT

Long-term debt consists of the following:

(millions of dollars)	**March 31 2017**	**December 31 2016**
Notes payable to the Ontario Electricity Financial Corporation	**3,445**	3,295
UMH Energy Partnership	**184**	184
PSS Generating Station Limited Partnership	**245**	245
Lower Mattagami Energy Limited Partnership	**1,795**	1,795
Other	**15**	15
	5,684	5,534
Less: bond issuance fees	**(14)**	(14)
Less: due within one year	**(1,328)**	(1,103)
Long-term debt	**4,342**	4,417

In the fourth quarter of 2015, PSS Generating Station Limited Partnership, a subsidiary of OPG, issued long-term debt totalling $245 million in support of the Peter Sutherland Sr. GS project. The majority of the debt proceeds,

totalling $180 million, were invested in a structured deposit note with staggered maturity dates ranging from January 2016 to April 2017. As at March 31, 2017, the remaining deposit note balance of $25 million (December 31, 2016 - $70 million) was reported as Other current assets on the interim consolidated balance sheets, based on the terms of the deposit note.

In February 2017, OPG issued senior notes payable to the Ontario Electricity Financial Corporation totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent.

5. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. As at March 31, 2017, there was $133 million of commercial paper outstanding under OPG's commercial paper program. There were no amounts outstanding under the bank credit facility.

As at March 31, 2017, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at March 31, 2017, there was no external commercial paper outstanding under LME's commercial paper program (December 31, 2016 – nil). There were also no amounts outstanding under LME's bank credit facility as at March 31, 2017.

As at March 31, 2017, OPG maintained $25 million of short-term, uncommitted overdraft facilities and $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at March 31, 2017, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the Portland Energy Centre (PEC).

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at March 31, 2017, there were Letters of Credit outstanding under this agreement of $150 million (December 31, 2016 – $150 million), which were issued in support of OPG's supplementary pension plans.

In October 2014, UMH Energy Partnership entered into an $8 million short-term, uncommitted overdraft facility and $16 million of irrevocable, standby Letters of Credit facilities in support of its operations. As at March 31, 2017, total Letters of Credit of $14 million had been issued under these facilities.

The following table summarizes the net interest expense:

(millions of dollars)	Three Months Ended March 31 2017	2016
Interest on long-term debt	**70**	72
Interest on short-term debt	**-**	1
Interest income	**-**	(2)
Interest capitalized to property, plant and equipment and intangible assets	**(42)**	(31)
Interest related to regulatory assets and liabilities [1]	**(9)**	(7)
Net interest expense	**19**	33

[1] Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Bruce Lease Net Revenues Variance Account, the Capacity Refurbishment Variance Account, and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

6. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES

The liabilities for fixed asset removal and nuclear waste management on a present value basis as at March 31, 2017 and December 31, 2016 consist of the following:

(millions of dollars)	March 31 2017	December 31 2016
Liability for nuclear used fuel management	**11,425**	11,292
Liability for nuclear decommissioning and nuclear low and intermediate level waste management	**7,877**	7,811
Liability for non-nuclear fixed asset removal	**381**	381
Fixed asset removal and nuclear waste management liabilities	**19,683**	19,484

7. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of accumulated other comprehensive loss (AOCL), net of income taxes are as follows:

	Three Months Ended March 31, 2017			
(millions of dollars)	Unrealized Gains and Losses on Cash Flow Hedges [1]	Pension and OPEB [1]	Available-for-sale Securities [1]	Total [1]
AOCL, beginning of period	**(87)**	**(207)**	**(1)**	**(295)**
Unrealized loss on available-for-sale securities	**-**	**-**	**5**	**5**
Amounts reclassified from AOCL	**4**	**3**	**-**	**7**
Other comprehensive income for the period	**4**	**3**	**5**	**12**
AOCL, end of period	**(83)**	**(204)**	**4**	**(283)**

[1] All amounts are net of income taxes.

(millions of dollars)	Three Months Ended March 31, 2016 Unrealized Gains and Losses on Cash Flow Hedges [1]	Pension and OPEB [1]	Total [1]
AOCL, beginning of period	(106)	(213)	(319)
Amounts reclassified from AOCL	4	3	7
Other comprehensive income for the period	4	3	7
AOCL, end of period	(102)	(210)	(312)

[1] All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the three months ended March 31, 2017 and 2016 are as follows:

(millions of dollars)	Amount Reclassified from AOCL 2017	2016	Statement of Income Line Item
Amortization of losses from cash flow hedges			
Losses	**5**	5	Net interest expense and fuel expense
Income tax recovery	**(1)**	(1)	Income tax expense
	4	4	
Amortization of amounts related to pension and OPEB			
Actuarial losses and past service costs	**4**	4	See (1) below
Income tax recovery	**(1)**	(1)	Income tax expense
	3	3	
Total reclassifications for the period	**7**	7	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 8 for additional details).

8. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

OPG's pension and OPEB costs for the three months ended March 31, 2017 and 2016 are as follows:

(millions of dollars)	Registered Pension Plans 2017	2016	Supplementary Pension Plans 2017	2016	Other Post-Employment Benefits 2017	2016
Components of Cost Recognized for the period						
Current service costs	**68**	69	**1**	2	**17**	17
Interest on projected benefit obligation	**137**	158	**3**	3	**27**	33
Expected return on plan assets, net of expenses	**(191)**	(183)	**-**	-	**-**	-
Amortization of net actuarial loss [1]	**46**	48	**2**	1	**-**	5
Costs recognized [2]	**60**	92	**6**	6	**44**	55

[1] The amortization of past service costs and net actuarial loss was recognized as an increase to Other Comprehensive Income. This increase in the first quarter of 2017 was partially offset by a decrease in the Pension and OPEB Regulatory Asset of $44 million (three months ended March 31, 2016 – $50 million).

[2] These pension and OPEB costs for the three months ended March 31, 2017 exclude the addition of costs resulting from the recognition of an addition to the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account of $20 million and a reduction of the regulatory asset for the Pension & OPEB Cash Payment Variance Account of $23 million (three months ended March 31, 2016 – exclude the reduction of costs resulting from the recognition of additions to the regulatory assets of $34 million and $2 million, respectively).

9. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect the Company's assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are denominated in, or tied to, US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the Independent Electricity System Operator (IESO) administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at March 31, 2017 was less than $1 million. OPG's fair value derivatives totalled a net liability of $23 million as at March 31, 2017 (December 31, 2016 - $24 million).

Existing net losses of $20 million deferred in AOCL as at March 31, 2017 are expected to be reclassified to net income within the next 12 months.

10. FAIR VALUE MEASUREMENTS

The fair value of financial instruments traded in active markets is based on quoted market prices at the interim consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments. The fair value hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the interim consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for

calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Certain alternative investments are measured at fair value by their investment managers using net asset value (NAV). Investments measured at NAV as a practical expedient for determining their fair value are excluded from the fair value hierarchy.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The following is a summary of OPG's financial instruments and their fair value as at March 31, 2017 and December 31, 2016:

	Fair Value		Carrying Value [1]		
(millions of dollars)	**2017**	**2016**	**2017**	**2016**	**Balance Sheet Line Item**
Nuclear Segregated Funds (includes current portion) [2]	**16,157**	15,984	**16,157**	15,984	Nuclear fixed asset removal and nuclear waste management funds
Investment in Hydro One shares	**218**	212	**218**	212	Available-for-sale securities
Payable related to cash flow hedges	**(46)**	(48)	**(46)**	(48)	Long-term accounts payable and accrued charges
Long-term debt (includes current portion)	**(6,206)**	(6,033)	**(5,670)**	(5,520)	Long-term debt
Other financial instruments	**(18)**	(18)	**(18)**	(18)	Various

[1] The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other current assets, short-term debt, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

[2] The Nuclear Segregated Funds are comprised of the Decommissioning Segregated Fund and the Used Fuel Segregated Fund.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs. The following tables present financial assets and financial liabilities measured at fair value in accordance with the fair value hierarchy as at March 31, 2017 and December 31, 2016:

	March 31, 2017			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**5,763**	**4,483**	**-**	**10,246**
Investments measured at NAV [1]				**1,150**
				11,396
Due to Province				**(2,155)**
Used Fuel Segregated Fund, net				**9,241**
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**4,294**	**3,310**	**-**	**7,604**
Investments measured at NAV [1]				**952**
				8,556
Due to Province				**(1,640)**
Decommissioning Segregated Fund, net				**6,916**
Investment in available-for-sale securities	**218**	**-**	**-**	**218**
Other financial assets	**5**	**2**	**7**	**14**
Liabilities				
Other financial liabilities	**(28)**	**(4)**	**-**	**(32)**

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

(millions of dollars)	Level 1	Level 2	Level 3	December 31, 2016 Total
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	5,602	4,394	-	9,996
Investments measured at NAV [1]				1,086
				11,082
Due to Province				(1,938)
Used Fuel Segregated Fund, net				9,144
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	4,171	3,243	-	7,414
Investments measured at NAV [1]				903
				8,317
Due to Province				(1,477)
Decommissioning Segregated Fund, net				6,840
Investments in available-for-sale securities	212	-	-	212
Other financial assets	6	2	9	17
Liabilities				
Other financial liabilities	(29)	(6)	-	(35)

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

During the three months ended March 31, 2017, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3 for the three months ended March 31, 2017:

(millions of dollars)	Other financial instruments
Opening balance, January 1, 2017	**9**
Realized losses included in revenue	**(1)**
Purchases	**1**
Closing balance, March 31, 2017	**9**

Nuclear Segregated Funds

The fair value of the investments within the Nuclear Segregated Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value. Alternative investments are measured at fair value using NAV as a practical expedient.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Segregated Funds that are reported on the basis of NAV as at March 31, 2017:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Alternative Investments				
Infrastructure	**1,251**	**650**	**n/a**	**n/a**
Real Estate	**776**	**413**	**n/a**	**n/a**
Agriculture	**75**	**123**	**n/a**	**n/a**
Pooled Funds				
Short-term Investments	**19**	**n/a**	**Daily**	**1 - 5 Days**
Fixed Income	**554**	**n/a**	**Daily**	**1 - 5 Days**
Equity	**832**	**n/a**	**Daily**	**1 - 5 Days**
Total	**3,507**	**1,186**		

The fair value of the pooled funds is classified as Level 2. Infrastructure, real estate and agriculture investments are measured using NAV as a practical expedient for determining their fair value.

Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

Real Estate

This class includes investments in institutional-grade real estate property. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests to another party, as stipulated in the partnership agreement. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements.

Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations, and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally

managed portfolios. The fair value of the investments in this class has been estimated using NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

11. COMMITMENTS AND CONTINGENCIES

Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power L.P. (Bruce Power) by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered by June 30, 2017, as required by the timetable.

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at March 31, 2017, the total amount of guarantees OPG provided to these entities was $83 million. OPG may terminate some of these guarantees within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at March 31, 2017, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at March 31, 2017, are as follows:

(millions of dollars)	**2017** [1]	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Fuel supply agreements	115	169	96	76	62	103	621
Contributions to the OPG registered pension plan [2]	185	251	-	-	-	-	436
Long-term debt repayment	1,053	398	368	663	413	2,789	5,684
Interest on long-term debt	173	204	185	163	134	2,451	3,310
Commitments related to Darlington Refurbishment project [3]	492	-	-	-	-	-	492
Commitments related to Peter Sutherland Sr. GS project	33	-	-	-	-	-	33
Commitments related to Ranney Falls GS	29	22	5	-	-	-	56
Commitments related to Little Long GS	11	25	8	-	-	-	44
Operating licences	33	37	23	24	28	115	260
Operating lease obligations [4]	20	26	25	25	23	93	212
Unconditional purchase obligations	46	59	58	56	5	-	224
Short-term debt	135	-	-	-	-		135
Accounts payable and accrued charges	749	-	-	-	-	18	767
Other	45	7	2	2	1	65	122
Total	3,119	1,198	770	1,009	666	5,634	12,396

[1] Represents amounts for the remainder of the year.

[2] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[3] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[4] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises in the second quarter of 2017.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

12. BUSINESS SEGMENTS

Segment Income (Loss) for the Three Months Ended March 31, 2017 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydroelectric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	652	27	363	143	17	(26)	1,176
Fuel expense	68	-	73	14	-	-	155
Gross margin	584	27	290	129	17	(26)	1,021
Operations, maintenance and administration	589	29	76	39	1	(26)	708
Depreciation and amortization	107	-	34	19	7	-	167
Accretion on fixed asset removal and nuclear waste management liabilities	-	234	-	2	2	-	238
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(189)	-	-	-	-	(189)
Income from investments subject to significant influence	-	-	-	(10)	-	-	(10)
Property taxes	6	-	-	2	3	-	11
Other gains	-	-	-	-	(3)	-	(3)
Income (loss) before interest and income taxes	(118)	(47)	180	77	7	-	99

Segment Income (Loss) for the Three Months Ended March 31, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydroelectric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	926	34	385	145	21	(33)	1,478
Fuel expense	81	-	79	12	-	-	172
Gross margin	845	34	306	133	21	(33)	1,306
Operations, maintenance and administration	563	36	76	40	4	(33)	686
Depreciation and amortization	230	-	56	19	7	-	312
Accretion on fixed asset removal and nuclear waste management liabilities	-	228	-	2	2	-	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(147)	-	-	-	-	(147)
Income from investments subject to significant influence	-	-	-	(8)	-	-	(8)
Property taxes	7	-	-	2	3	-	12
Other gains	(1)	-	(22)	-	-	-	(23)
Income (loss) before interest and income taxes	46	(83)	196	78	5	-	242

13. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	Three Months Ended March 31 2017	2016
Receivables from related parties	**67**	(4)
Prepaid expenses	**(26)**	(24)
Other current assets [1]	**36**	(6)
Fuel inventory	**13**	11
Materials and supplies	**5**	1
Income taxes payable	**(117)**	15
Accounts payable and accrued charges	**(146)**	(115)
	(168)	(122)

[1] Represents other accounts receivable.

14. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of the PEC gas-fired combined cycle generating station and the Brighton Beach gas-fired combined cycle generating station (Brighton Beach), which are accounted for using the equity method. Details of the balances as at March 31, 2017 and December 31, 2016 are as follows:

(millions of dollars)	**March 31 2017**	**December 31 2016**
PEC		
Current assets	**15**	18
Long-term assets	**252**	256
Current liabilities	**(6)**	(8)
Long-term liabilities	**(5)**	(5)
Brighton Beach		
Current assets	**6**	5
Long-term assets	**166**	168
Current liabilities	**(17)**	(16)
Long-term liabilities	**(8)**	(7)
Long-term debt	**(86)**	(90)
Investments subject to significant influence	**317**	321

15. NON-CONTROLLING INTEREST

Nanticoke Solar LP

Nanticoke Solar LP (NSLP) was formed between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation during 2016. The project is to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands is planned to commence as early as in the fourth quarter of 2017. In the first quarter of 2017, OPG acquired all of SECCLP's interests in NSLP which represented a 25 percent equity interest in NSLP. Subsequent to the acquisition, OPG owned 89 percent of equity interest in NSLP with approximately $2 million in value.

16. SUBSEQUENT EVENT

Shareholder Declaration and Shareholder Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. An active program to locate a buyer was initiated in October 2016. As such, in the fourth quarter of 2016, OPG reclassified the net book value of $96 million for these assets out of Property, plant and equipment of the Services, Trading, and Other Non-Generation segment into Other current assets. Depreciation on the assets ceased in the fourth quarter of 2016. In December 2016, a purchase and sale agreement was executed, and the sale was completed in April 2017. An estimated after-tax gain on sale in excess of approximately $280 million **[MONITOR]** was recognized upon completion of the transaction. Pursuant to the December 2015 Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act 2014*, OPG is required to transfer the proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund.

Peter Sutherland Sr. GS LP

PSS Generating Station LP (PSS) is a limited partnership between OPG, Coral Rapids Power Corporation (CRP), and PSS Generating Station Inc. OPG and PSS GS Inc. are general partners, and CRP is a limited partner in the Partnership. CRP is a wholly owned subsidiary of the Taykwa Tagamou Nation. The principal business of the Partnership is the development, construction, ownership, operation and maintenance of a 28 megawatt hydroelectric generating station (GS) on the New Post Creek. In March 2017, the GS was placed in-service and, in April 2017, CRP acquired a 33 percent interest in PSS under the partnership agreement. CRP made contributions of approximately $21 million to acquire their equity interest.

ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

2017 FIRST QUARTER REPORT

[DRAFT]

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ONTARIO POWER GENERATION

ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the unaudited interim consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the three months ended March 31, 2017. OPG's unaudited interim consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

For a complete description of OPG's corporate strategies, risk management, corporate governance, and the effect of critical accounting policies and estimates on OPG's results of operations and financial condition, this MD&A should also be read in conjunction with OPG's audited consolidated financial statements, accompanying notes, the Annual Information Form, and the MD&A as at and for the year ended December 31, 2016.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Exemptive Relief for Reporting under US GAAP,* in OPG's 2016 annual MD&A. This MD&A is dated May 12, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy, and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), Total Generating Cost (TGC) and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at March 31, 2017, OPG's electricity generation portfolio had an in-service capacity of 16,205 megawatts (MW). OPG operates two nuclear generating stations, 66 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report. A description of OPG's segments is provided in OPG's 2016 annual MD&A in the section, *Business Segments*.

All of OPG's owned and co-owned generating facilities are located in Ontario. OPG does not operate PEC, Brighton Beach, the Bruce A GS and the Bruce B GS.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of March 31, 2017 and December 31, 2016 was as follows:

(MW)	As at March 31 2017	As at December 31 2016
Regulated – Nuclear Generation [1]	**5,728**	5,728
Regulated – Hydroelectric	**6,421**	6,421
Contracted Generation Portfolio [2]	**4,056**	4,028
Total	**16,205**	16,177

[1] The in-service generating capacity as of March 31, 2017 and December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

During the three months ended March 31, 2017, the total in-service capacity increased by 28 MW. The increase was due to the completion of Peter Sutherland Sr. hydroelectric GS, which was placed in-service on March 31, 2017. The Peter Sutherland Sr. GS is discussed in the section, *Highlights* under the heading, *Recent Developments*.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's unaudited interim consolidated operating results. Significant factors which contributed to OPG's results during the three months ended March 31, 2017, compared to the same period in 2016, are discussed below.

(millions of dollars – except where noted) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**1,176**	1,478
Fuel expense	**155**	172
Gross margin	**1,021**	1,306
Operations, maintenance and administration	**708**	686
Depreciation and amortization	**167**	312
Accretion on fixed asset removal and nuclear waste management liabilities	**238**	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Income from investments subject to significant influence	**(10)**	(8)
Property taxes	**11**	12
	925	1,087
Income before other gains, interest, and income taxes	**96**	219
Other gains	**(3)**	(23)
Income before interest and income taxes	**99**	242
Net interest expense	**19**	33
Income before income taxes	**80**	209
Income tax expense	**12**	81
Net income	**68**	128
Net income attributable to the Shareholder	**64**	123
Net income attributable to non-controlling interest [1]	**4**	5
Electricity production (TWh) [2]	**18.6**	21.0
Cash flow		
Cash flow provided by operating activities	**118**	366

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $64 million for the first quarter of 2017, a decrease of $59 million compared to 2016. Income before interest and income taxes was $99 million for 2017, a decrease of $143 million compared to 2016. The following summarizes the significant factors which contributed to the variance:

Significant factors that reduced income before interest and income taxes:

- As expected, lower revenue from the nuclear base regulated price of approximately $134 million, partially offset by the largely associated decrease in fuel expense of $13 million, reflecting lower electricity generation of 2.3 terawatt hours (TWh) from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. Existing base regulated prices continue to be in effect pending the OEB's decision on OPG's current application for new regulated prices, expected in the second half of 2017. The lower nuclear generation was primarily due to the ongoing

refurbishment of Unit 2 at the Darlington GS since October 2016. The existing base regulated prices were set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. OPG has requested January 1, 2017 as the effective date of the new regulated prices. Further details on OPG's current application for new regulated prices can be found under the heading, *Recent Developments – OPG's Application for New Regulated Prices.*

- Higher operations, maintenance and administration (OM&A) expenses of $22 million, mainly in the Regulated – Nuclear Generation segment, reflecting use of temporary staff and planned hiring to fill vacant positions due to attrition, and higher material costs related to maintenance work at the nuclear stations.
- A gain of $22 million recorded in the first quarter of 2016 to reflect the OEB's decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices.

Significant factors that increased income before interest and income taxes:

- Higher earnings on the nuclear fixed asset removal and nuclear waste management funds (Nuclear Segregated Funds) of $42 million, primarily due to higher earnings on the Used Fuel Segregated Fund
- Higher hydroelectric incentive mechanism revenue of $7 million from the Regulated – Hydroelectric segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts (regulatory accounts) on December 31, 2016 contributed to the decrease in revenue in the first quarter of 2017, compared to the same period in 2016, but was primarily offset by a decrease in the amortization expense related to regulatory account balances. New rate riders have been requested in OPG's application for new regulated prices with the OEB, effective January 1, 2017.

Net interest expense decreased by $14 million in the first quarter of 2017, compared to the same quarter in 2016, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project.

Income tax expense decreased by $69 million in the first quarter of 2017, compared to the same quarter in 2016, primarily due to lower income before income taxes in the first quarter of 2017 and a higher income tax expense in the first quarter of 2016 due to a reduction in regulatory assets related to income taxes.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	Three Months Ended March 31	
	2017	**2016**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**(118)**	46
Regulated – Hydroelectric	**180**	196
Contracted Generation Portfolio	**77**	78
Total electricity generation business segments	**139**	320
Regulated – Nuclear Waste Management	**(47)**	(83)
Services, Trading, and Other Non-Generation	**7**	5
	99	242

Electricity Generation

Electricity generation was as follows:

(TWh)	Three Months Ended March 31 2017	2016
Regulated – Nuclear Generation	**10.0**	12.3
Regulated – Hydroelectric	**8.0**	7.9
Contracted Generation Portfolio [1]	**0.6**	0.8
Total OPG electricity generation	**18.6**	21.0
Total electricity generation by other generators in Ontario [2]	**18.6**	18.9

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the Independent Electricity System Operator (IESO), minus OPG electricity generation.

The lower electricity generation from the Regulated – Nuclear Generation segment in the first quarter of 2017 compared to the same quarter in 2016 was primarily a result of the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment that began in October 2016. This decrease in electricity generation was partially offset by an increase in generation from the Pickering GS, primarily due to a decrease in the number of planned outage days.

The higher electricity generation from the Regulated – Hydroelectric generating segment in the first quarter of 2017 was primarily due to a lower volume of water spilled as a result of less prevalent SBG conditions, largely offset by the impact of lower water flows on the eastern and northeastern Ontario river systems, compared to the first quarter in 2016.

The lower electricity generation from the Contracted Generation Portfolio segment was primarily the result of lower water flows on the northeastern Ontario river systems.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. For the first quarter of 2017, Ontario's electricity demand as reported by the IESO was 34.3 TWh compared to 35.2 TWh for the same quarter in 2016, which excludes electricity exports out of the province.

Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric, other grid-connected renewable resources and nuclear stations. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. While baseload generation supply surplus in Ontario was less prevalent in the first quarter of 2017 compared to the same period in 2016, OPG lost 0.8 TWh of hydroelectric generation due to SBG conditions in the first quarter of 2017. OPG lost 1.7 TWh of hydroelectric generation due to SBG conditions during the first quarter of 2016. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions during these periods was offset by the impact of a regulatory variance account authorized by the OEB. OPG did not forgo any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The same base regulated prices for electricity generated by these segments, authorized by the OEB effective November 1, 2014, were in effect during the first quarter of 2017 as in 2016. These prices will remain in effect until such time as the OEB approves new regulated prices based on OPG's current application, discussed under the heading, *Recent Developments – OPG's Application for New Regulated Prices.* The base regulated prices established in 2014 are discussed in OPG's 2016 annual MD&A in the section, *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment was 5.8 cents per kilowatt hour (¢/kWh) during the first quarter of 2017, compared to 7.0 ¢/kWh during the same quarter in 2016. The decrease in the average sales price was primarily due to the expiry, on December 31, 2016, of the OEB-authorized nuclear rate rider of $10.84 per megawatt hour (MWh) for the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment was 4.2 ¢/kWh during the first quarter of 2017, compared to 4.4 ¢/kWh during the same quarter in 2016. The decrease in average sales price was primarily due to the expiry, on December 31, 2016, of a regulated hydroelectric rate rider of $3.19/MWh for the recovery of variance and deferral account balances. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years. As such, the year-over-year changes in revenue from the rate riders were largely offset by changes in amortization expense related to regulatory account balances. There were no rate riders in effect during the first quarter of 2017 for either nuclear or regulated hydroelectric generation, pending the outcome of OPG's current application with the OEB for new regulated prices, including rate riders.

Cash Flow from Operations

Cash flow provided by operating activities for the three months ended March 31, 2017 was $118 million, compared to $366 million for the same period in 2016. As expected, the decrease in cash flow provided by operating activities in the first quarter of 2017, compared to the same quarter in 2016, was primarily due to lower generation revenue receipts reflecting lower generation from the Regulated – Nuclear Generation segment as a result of the ongoing refurbishment of Unit 2 at the Darlington GS and the expiry, on December 31, 2016, of the OEB-authorized rate riders for nuclear and regulated hydroelectric generation. The decrease in cash flow in the first quarter of 2017 was also due to higher income tax installments and higher OM&A expenditures, compared to the same quarter in 2016. The decrease in cash flow provided by operating activities was partially offset by lower pension plan contributions reflecting an updated actuarial valuation of the OPG registered pension plan filed with the Financial Services Commission of Ontario in September 2016, and lower contributions to the Used Fuel Segregated Fund and the Decommissioning Segregated Fund. Both the Used Fuel Segregated Fund and the Decommissioning Segregated Fund were determined to be fully funded based on an updated estimate of OPG's nuclear waste management and nuclear facilities decommissioning obligations pursuant to a reference plan approved by the Province, for years 2017 to 2021, under the Ontario Nuclear Funds Agreement (ONFA), effective January 1, 2017. Pursuant to the ONFA, the reference plan is required to be updated at least once every five years. Contributions to either or both of the Nuclear Segregated Funds may be required in the future should the funds be in an underfunded position at the time of the next ONFA reference plan update. The year-over-year decrease in cash flow also was partially offset by the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to a period in 2015. The lease agreement for the Bruce nuclear generating stations giving rise to this rebate was amended in late 2015 to eliminate this provision going forward.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. FFO Adjusted Interest Coverage was 5.1 times for the 12 month-periods ended March 31, 2017 and December 31, 2016. FFO Adjusted Interest Coverage in 2017 reflected a year-over-year decrease in FFO before interest due to lower cash flow provided by operating activities, offset by the

impact of a lower adjusted interest expense due to a decrease in the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets.

The decrease in the excess of interest on pension and OPEB benefit obligations over expected return on pension plan assets in 2017 was primarily due to the change in the method used to estimate the interest cost and current service cost component of pension and OPEB costs. Effective January 1, 2017, OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs in the first quarter of 2017 was largely offset by the impact of OEB-authorized variance and deferral accounts. Further details on the full yield curve approach can be found in the 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Pension and Other Post-Employment Benefits*. **[UPDATE]**

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for the 12 months ended March 31, 2017 was 3.5 percent, compared to 4.2 percent for the 12 months ended December 31, 2016. The decrease was primarily due to lower net income attributable to the Shareholder. As expected, reduced revenue due to the continuation of existing base regulated prices that do not reflect the lower nuclear generation as a result of the Unit 2 refurbishment outage at the Darlington GS negatively impacted net income and ROE Excluding AOCI for the 12-month period ended March 31, 2017. The continuation of existing base regulated prices until such time as new regulated prices are approved by the OEB later in 2017 will negatively affect OPG's ROE Excluding AOCI.

Enterprise Total Generating Cost per MWh

The Enterprise TGC per MWh was $47.86 for the three months ended March 31, 2017, compared to $41.82 for the same period in 2016. The increase in Enterprise TGC per MWh for the three months ended March 31, 2017, compared to the same period in 2016, was expected and primarily due to the decrease in electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $69.87 for the three months ended March 31, 2017, compared to $56.37 for the same period in 2016. The increase in Nuclear TGC per MWh for the three months ended March 31, 2017, compared to the same period in 2016, was expected and primarily due to the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $19.79 for the three months ended March 31, 2017, which was comparable to $19.94 for the same period in 2016.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow provided by operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016 and de-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017. Islanding of Unit 2, the physical separation of the unit under refurbishment from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second segment commenced immediately following the islanding of Unit 2. The second segment continues preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening the reactor air lock doors, installation of shielding, setting up specialized tooling and equipment, and commencing the disassembly and removal of reactor components. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. The project is tracking on schedule and budget.

The Darlington Refurbishment project is discussed further in the section, *Core Business, Strategy, and Outlook* under the heading, *Project Excellence.*

Peter Sutherland Sr. Hydroelectric GS

In March 2017, the project to construct the 28 MW two-unit Peter Sutherland Sr. hydroelectric GS successfully completed final testing and commissioning of the turbine and generator units and both units were declared substantially complete. On March 31, 2017, the project received a permit from the Ministry of Environment and Climate Change (MOECC) to take water for operations to allow the station to operate commercially. This in-service date is well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. The project is expected to close below the approved budget of $300 million, following the completion of site remediation, camp dismantling, demobilization and other project close-out activities.

The project was constructed in partnership with the Coral Rapids Power Corporation (CRP), a corporation wholly owned by the Taykwa Tagamou Nation, through the PSS Generating Station Limited Partnership (PSS). Under the partnership agreement, as the unit is placed in-service, the CRP may acquire up to a 33 percent partnership interest through its investment in PSS. In April 2017, the CRP acquired a 33 percent interest in PSS.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017, on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. For the hydroelectric facilities, the application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021, based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production. The application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment through rate riders that were in effect to December 31, 2016. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed further in the section, *Balance Sheet Highlights* under the heading, *Pension & OPEB Cash Versus Accrual Differential Deferral Account*.

Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application submission in May 2016 incorporated a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved annual nuclear revenue requirements during the period from January 1, 2017 to the end of the Darlington Refurbishment project in a deferral account for future collection.

In March 2017, the Province amended *Ontario Regulation 53/05* to require that the portion of the approved annual nuclear revenue requirements deferred for future collection under rate smoothing be determined with a view of making more stable year-over-year changes in OPG's weighted-average nuclear and hydroelectric regulated prices, including rate riders. Previously, the regulation required that the deferred amounts be determined with a view of making more stable year-over-year changes in OPG's nuclear regulated prices only, excluding rate riders. The amendment is intended to make more predictable the impact on customer bills resulting from changes in OPG's overall regulated prices, reducing the average year-over-year change in customer bills over the term of OPG's current application. Following the amendment, in March 2017, OPG submitted a modified rate smoothing proposal to the OEB to reflect the new requirements of the regulation, as part of the application for new regulated prices. OPG expects to recognize amounts deferred under rate smoothing as income in the period to which the underlying approved revenue requirements relate.

In March 2017, the OEB approved a settlement agreement reached by OPG and intervenors on a limited set of issues in OPG's application (Settlement Agreement). Among the settled issues, the agreement provided for the continuation of all applicable existing variance and deferral accounts and accepted a number of variance and deferral account balances for recovery, as requested in OPG's application. In addition, the Settlement Agreement accepted OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017 to 2021 period. The Settlement Agreement did not impact OPG's financial results for the three months ended March 31, 2017.

The OEB conducted 23 public oral hearing days on the unsettled issues in OPG's application between February 27, 2017 and April 13, 2017, as part of an overall public proceeding on the application. Final arguments in the proceeding are scheduled to be completed by June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected in the second half of 2017.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 percent on average for all residential consumers in the province. As part of the Plan, the Province has proposed refinancing a portion of the Global Adjustment costs over a longer time period for Regulated Price Plan eligible customers (e.g., residential, farm, small businesses). On May 11, 2017, the Province introduced legislation that, if passed, will enable the IESO and OPG to work together to implement this financing as requested by the Province. Any final agreement to implement OPG's involvement with the Plan is subject to approval by OPG's Board of Directors, which has established a Special Committee to provide oversight on behalf of the Board of Directors. **[MONITOR]**

Shareholder Declaration and Shareholder Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution requiring the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. A purchase and sale agreement was executed in December 2016, and the sale was completed in April 2017. An after-tax gain on sale of approximately $280 million **[MONITOR]** was recognized upon completion of the transaction in the second quarter of 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the act, into the Province's Consolidated Revenue Fund. OPG is working with the Ministry of Finance to finalize the prescribed costs incurred in connection with the disposition of the sale and the designated proceeds that will be transferred into the Trillium Trust Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. OPG is in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund. **[MONITOR]**

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business, and are reported under the Services, Trading, and Other Non-Generation segment.

CORE BUSINESS, STRATEGY, AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

The following sections provide an update to OPG's disclosures in the 2016 annual MD&A related to its four key strategic imperatives – operational excellence, project excellence, financial strength, and social licence. A detailed discussion of these strategic imperatives is included in the 2016 annual MD&A in the section, *Core Business, Strategy, and Outlook*.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Public Safety

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for individuals living or working near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), which is an international unit of radiation dose measurement. For 2016, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.6 μSv and 1.5 μSv, respectively, which is approximately 0.1 percent and 0.2 percent of the annual legal limit of 1,000 μSv, respectively.

Electricity Generation Production and Reliability

- As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will remain fit for service for operation to 2024. OPG is also nearing completion of component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently set at the end of 2020, are expected to be reassessed, after the required fuel channel maintenance strategies in support of extended operations have been implemented on the initial units, taking into account the requirement for the Canadian Nuclear Safety Commission's (CNSC) approval, discussed below.
- OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. Work on the Pickering licence renewal application is proceeding and is expected to be filed August 31,

2017 for the CNSC's approval in 2018. The requested licence renewal will span the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. OPG will submit a Periodic Safety Review, Global Assessment Report, and Integrated Implementation Plan (IIP) for the station to the CNSC as part of the licence renewal.

- In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications were presented to the CNSC at public hearings in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018. Renewal decisions on the WWMF and PWMF licences are expected to be issued prior to expiry of the respective current licences. **[MONITOR]**
- During the first quarter of 2017, OPG completed the reservoir refurbishment at Sir Adam Beck Pump GS and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.
- Work continues on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 1 of the Sir Adam Beck Pump GS, and the overhaul and upgrade of Unit 1 of the Harmon GS.
- Work continues work on the replacement of the Station Service System at R.H. Saunders GS and Synchronizing Breakers at Lennox GS.
- OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS.
- Later in 2017, OPG will be starting definition phase activities, including engineering studies, condition assessments, and stakeholder engagement, as part of a Water Conveyance System project to restore structural integrity, flow capacity and ensure safe and reliable operations, of the Sir Adam Beck 1 GS canal and associated structures, for approximately the next 50 years.

As part of streamlining OPG's hydroelectric operations, OPG will be reducing from five regional hydroelectric offices to four by integrating the Central Operations group into its existing operations. This will result in operational efficiency improvements. Currently, work is in progress to plan and implement this change.

OPG continues to progress on its plan to remove site structures from Nanticoke GS. Project milestones in 2017 include the elimination of coal yard equipment and structures and removal of ash silos, and the selection of a contractor to remove the stacks, the powerhouse, interior equipment and supporting site structures.

Environmental Performance

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. OPG has an internal program to meet its GHG emissions compliance obligations. With OPG's low GHG emitting fleet, these obligations do not have a material financial impact on the Company. The Ontario MOECC held the first quarterly auction of GHG allowances on March 22, 2017.

Disclosures related to the Company's environmental policy and environmental risks can be found in OPG's 2016 annual MD&A.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. The status updates for OPG's major projects as of March 31, 2017 are outlined in the following table with further details below.

Project	Capital expenditures		Approved budget	Expected in-service date	Current status
(millions of dollars)	Year-to-date	Life-to-date			
Darlington Refurbishment	306	3,491	12,800 [1]	First unit - 2020 Last unit - 2026	Islanding of Unit 2 was completed in April 2017. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies is in progress. The project is tracking on schedule and on budget.
Peter Sutherland Sr. Hydroelectric GS	22	258	300	2017	The station was placed in-service on March 31, 2017, ahead of the originally planned schedule, and is expected to close below the approved budget. Refer to the section, *Core Business, Strategy, and Outlook* under the heading, *Recent Developments* for further details.
Sir Adam Beck Pump GS Reservoir Refurbishment	2	48	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget.
Ranney Falls Hydroelectric GS	2	5	77	2019	Project definition work has been completed and site clearing and mobilization work has commenced.
Nanticoke Solar Facility	1	2		2019	Project definition work is in progress and construction is planned to commence as early as in the fourth quarter of 2017.
Deep Geologic Repository for low and intermediate level radioactive waste (L&ILW)	2 [2]	197 [2]			Additional information requested by the Canadian Environmental Assessment Agency (CEAA) based on their review of the material submitted by OPG in December 2016 is being prepared and will be submitted by May 26, 2017.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, ahead of schedule, with a total of 480 fuel channels de-fuelled. Islanding of Unit 2, the physical separation of the refurbishment unit from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second segment commenced immediately following the islanding of the unit. The second segment continues the preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening the reactor air lock doors, installation of shielding, setting up specialized tooling and equipment, and commencing the disassembly and removal of reactor components. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. The project is tracking on schedule and budget.

A number of pre-requisite projects in support of the execution phase of the project, including construction of facilities, infrastructure upgrades and installation of safety enhancements, have been completed. This includes the Containment Filtered Venting System and the Third Emergency Power Generator safety enhancement projects that were placed in-service in April 2017 **[MONITOR]**. Completion of the Heavy Water Storage and Drum Handling Facility has been delayed due to challenges with construction. Remediation measures are in progress **[UPDATE]**. This delay will not impact the overall Darlington Refurbishment project schedule, as the Heavy Water Storage and Drum Handling Facility is not on the critical path. The remaining projects are tracking for completion within the overall refurbishment execution schedule. **[UPDATE]**

In addition to the de-fuelling and islanding of Unit 2 completed, the following other key project activities are continuing in 2017:

- Completion of preparation activities to support Retube and Feeder Replacement work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Re-tube Waste Processing Building Facility.
- Continued construction of the Heavy Water Storage and Drum Handling.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of Unit 3, and is entering into associated commitments to procure major components that require long-lead times. As of March 31, 2017, $43 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The work on the project included installation of a new partial liner and construction of a grout

curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

In the first quarter of 2017, OPG completed the contractor selection process and awarded contracts for the construction of a 10 MW single-unit powerhouse on the existing Ranney Falls GS site, as part of the Regulated – Hydroelectric segment. The new unit will replace an existing unit that reached its end of life in 2014. The civil contractor has begun site clearing and mobilization. The expected in-service date is in the fourth quarter of 2019 with a budget of $77 million.

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands under a Large Renewable Procurement contract with the IESO, through Nanticoke Solar LP, is planned to commence as early as in the fourth quarter of 2017. In the first quarter of 2017, OPG purchased SunEdison Canadian Construction LP's (SECCLP) interests in Nanticoke Solar LP, originally a partnership between OPG, SECCLP and a subsidiary of the Six Nations of the Grand River Development Corporation, and is working to obtain approvals and permits required to enable the commencement of construction. The facility is expected to be completed in the first quarter of 2019.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the Environmental Assessment (EA) to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and potential for cumulative environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization were to be located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following CEAA's review of OPG's submission and a period of public comment, the CEAA has requested additional information from OPG. OPG has reviewed the information request and will respond to the CEAA by May 26, 2017. An EA Decision Statement by the Minister is expected by the fourth quarter of 2017. Based on the information submitted to the Minister in December 2016, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

OPG anticipates a site preparation and construction licence may be issued in the first half of 2018, if the EA Decision Statement supports licensing. OPG has initiated work to ensure all licensing-related submissions will be completed and ready to be submitted to the CNSC for an expeditious license review. In addition, work has been initiated to seek OPG's Board of Directors' approval to proceed to the definition phase work in 2018. This includes completion of engineering design activities. OPG also continues its engagement with the Saugeen Ojibway Nations toward

securing community support for the L&ILW DGR. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction. **[CONFIRM]**

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application incorporates a rate smoothing proposal, as amended in March 2017. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impacts on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the nuclear rate base, effective in early 2020, to reflect the planned placement in service of approximately $4.8 billion of capital expenditures upon the scheduled return to service of Unit 2 at the Darlington GS as part of the Darlington Refurbishment project and, effective in 2017, an increase in the deemed capital structure applied to the total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt reflected in the existing regulated prices. If approved, this would improve OPG's return on Shareholder's investment.

A public oral hearing on OPG's application commenced in late February 2017 and was completed in April 2017, with final arguments scheduled to be completed by June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected in the second half of 2017. Further details on OPG's rate application can be found in the section, *Highlights* under the heading, *Recent Developments*.

For generation assets that do not form part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements. In line with this strategy, virtually all of OPG's non-regulated operating facilities and assets under construction are subject to long-term Energy Supply Agreements (ESAs) or other long-term contracts with the IESO. This includes the Peter Sutherland Sr. GS, which will begin earning contracted revenue under its hydroelectric ESA once the IESO confirms commercial operation, but effective on March 31, 2017. The ESA expires in 2067. **[CONFIRM]**

Ensure Availability of Cost Effective Funding

In April 2017, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook.

Social Licence

As the largest electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish these relationships based on

a foundation of respect for the languages, customs, and political, social and cultural organizations of the Indigenous communities. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, such as the construction of the Peter Sutherland Sr. GS in partnership with Taykwa Tagamou Nation and the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River. In March 2017, the Peter Sutherland Sr. GS was placed in-service and, in April 2017, the Taykwa Tagamou Nation acquired a 33 percent interest in PSS under the partnership agreement. OPG also continues to engage with Indigenous communities regarding the Company's regulated nuclear waste operations, through regularly scheduled meetings and ongoing dialogue in connection with OPG's proposed L&ILW DGR, and the re-licensing of the PWMF and the WWMF.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of costs and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's current application for new regulated prices is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017 in its decision on the application. This would allow OPG to recover the difference between the approved new regulated prices and the existing regulated prices for the period between January 1, 2017 and the implementation date of the new prices based on the OEB's order.

The continuation of existing regulated prices until the OEB's decision on OPG's application is issued is expected to continue to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI during 2017, compared to 2016. In large part, this is due to the year-over-year reduction in nuclear electricity generation resulting from the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined in 2014 based on a higher production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision issuance, could have a significant impact on OPG's financial results during 2017. OPG's application for new regulated prices is further discussed in the section, *Highlights* under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. As expected, combined with the expiry of rate riders in effect to the end of 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment outage, this will result in lower cash flow from operations and a lower FFO Adjusted Interest Coverage ratio in 2017, compared to 2016. The continuation of existing base regulated prices until such time as new prices are determined and implemented by the OEB also is expected to contribute to lower cash flow from operations in 2017. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements.

Lower nuclear generation due to the Darlington refurbishment outages will continue to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Variability in sustaining capital investment expenditures, including major sustaining projects for the hydroelectric operations, also will impact the Enterprise TGC in future periods.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, these variance accounts include those related to the revenue impact of variability in water flows and forgone production due to SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Considering the impact of the variance and deferral accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow from operations going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric and other development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI. In the short term, these factors can be volatile and cause fluctuations in the Company's income. This volatility is partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account and, as discussed below, the funded status of the two segregated funds.

As does not have the right to withdraw surplus amounts from the Nuclear Segregated Funds when the segregated funds are overfunded relative to the life cycle funding liability pursuant an approved ONFA Reference Plan, OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle funding liability per the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus in the Decommissioning Segregated Fund that it may direct to the Used Fuel Fund in accordance with the ONFA, up to the amount, if any, by which the Used Fuel Fund is underfunded. This reduces the volatility of earnings on the Nuclear Segregated Funds reflected in net income when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at March 31, 2017, the Decommissioning Segregated Fund was overfunded by approximately 24 percent, and the Used Fuel Segregated Fund was marginally overfunded, by less than one percent, based on the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**652**	926
Fuel expense	**68**	81
Gross margin	**584**	845
Operations, maintenance and administration	**589**	563
Depreciation and amortization	**107**	230
Property taxes	**6**	7
(Loss) income before other losses, interest, and income taxes	**(118)**	45
Other gains	**-**	(1)
(Loss) income before interest and income taxes	**(118)**	46

Segment earnings decreased by $164 million during the first quarter of 2017, compared to the same quarter in 2016. The decrease in earnings was expected and primarily due to reduced revenue from the nuclear base regulated price of approximately $134 million, partly offset by the largely associated decrease in fuel expense of $13 million, reflecting lower electricity generation of 2.3 TWh and the continuation of the existing nuclear base regulated price set by the OEB in 2014. The existing regulated price continues to be in effect pending the OEB's decision on OPG's application for new regulated prices, proposed to be effective on January 1, 2017. The lower nuclear generation was primarily due to the ongoing Unit 2 refurbishment outage at the Darlington GS that began October 2016. The existing regulated price does not reflect the lower generation as a result of the refurbishment outage, as that price were set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume based on the 2014 and 2015 outage profile that did not include a refurbishment outage. The year-over-year reduction in nuclear electricity generation was partially offset by the impact of the decreased number of planned outage days at the Pickering GS in the first quarter of 2017, compared to the same quarter in 2016.

The increase in OM&A expenses of $26 million in the first quarter of 2017, compared to the same quarter in 2016, also contributed to lower segment earnings. The increase in OM&A expenses reflected use of temporary staff and planned hiring to fill vacant positions due to attrition, and higher material costs related to maintenance work at the nuclear stations.

The expiry of an OEB-authorized nuclear rate rider on December 31, 2016 contributed to the decrease in segment revenue in the first quarter of 2017, compared to the same quarter in 2016. As rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this decrease in revenue was largely offset by a decrease in amortization expense related to regulatory account balances. A new rate rider has been requested in OPG's application with the OEB for new regulated prices effective January 1, 2017.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2017 and 2016 were as follows:

	Three Months Ended March 31 2017	2016
Unit Capability Factor *(%)* [1]		
Darlington GS	**85.3**	97.2
Pickering GS	**78.5**	72.8

[1] The nuclear Unit Capability Factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS decreased in the first quarter of 2017, compared to the same quarter in 2016, primarily due to a higher number of unplanned outage days at the station in the first quarter of 2017.

The increase in the Unit Capability Factor at the Pickering GS in the first quarter of 2017, compared to the same quarter in 2016, was primarily due to a lower number of planned outage days at the station in the first quarter of 2017.

Regulated – Nuclear Waste Management Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**27**	34
Operations, maintenance and administration	**29**	36
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**234**	228
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Loss before interest and income taxes	**(47)**	(83)

Earnings from the segment improved by $36 million in the first quarter of 2017 compared to the same quarter in 2016. The year-over-year improvement in earnings was primarily due to higher earnings from the Nuclear Segregated Funds.

Higher earnings on the Used Fuel Segregated Fund, net of the impact of the Bruce Lease Net Revenue Variance Account, were the primary reasons for the higher Nuclear Segregated Fund earnings during the first quarter of 2017, compared to the same period in 2016. As the Used Fuel Segregated Fund was overfunded as at December 31, 2016 and March 31, 2017, the earnings on the fund recorded in income during the first quarter of 2017 were based at the growth rate of the present-value used fuel life cycle funding liability per the 2017 ONFA Reference Plan. During the first quarter of 2016, the Used Fuel Segregated Fund was underfunded based on the ONFA reference plan then in effect and therefore earnings on the fund reflected the CPI-adjusted rate of return guaranteed by the Province under the ONFA for funding related to the initial 2.23 million used fuel bundles and market returns on the portion of the fund not guaranteed by the Province.

As of December 31, 2016, OPG recorded a decrease of approximately $1,570 million to the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities) and associated asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to reflect the comprehensive update of the underlying assumptions and baseline cost estimates for these liabilities carried out as part of the 2017 ONFA Reference Plan update process. The resulting year-over-year decreases in accretion on fixed asset removal and nuclear waste management liabilities recorded in the Regulated – Nuclear Waste Management segment and depreciation and fuel expenses recorded in the Regulated – Nuclear Generation segment during the first quarter of 2017, compared to the same quarter in 2016, were largely offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account authorized by the OEB. Further details on the change in the estimate of the Nuclear Liabilities as of December 31, 2016 are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Asset Retirement Obligation*.

Under the current OEB-approved cost recovery methodology, the changes in expenses associated with the year-end 2016 adjustment to the Nuclear Liabilities are not expected to materially affect OPG's income during 2017, as the associated impact on expenses is expected to continue to be largely offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently to be offset by the impact of the new regulated prices.

Regulated – Hydroelectric Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue [1]	**363**	385
Fuel expense	**73**	79
Gross margin	**290**	306
Operations, maintenance and administration	**76**	76
Depreciation and amortization	**34**	56
Income before other gains, interest and income taxes	**180**	174
Other gains	**-**	(22)
Income before interest and income taxes	**180**	196

[1] During the three months ended March 31, the Regulated – Hydroelectric segment revenue included incentive payments of $8 million in 2017 and $1 million in 2016 related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $16 million during the first quarter of 2017, compared to the same period in 2016, was primarily due to a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to a motion by OPG. The decrease in income was partially offset by higher hydroelectric incentive mechanism payments in the first quarter of 2017.

The decrease in revenue was largely due to the expiry of an OEB-authorized rate rider on December 31, 2016. As the rider allowed for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, the resulting reduction in revenue was largely offset by lower amortization expense related to the regulatory account balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	Three Months Ended March 31 2017	2016
Hydroelectric Availability *(%)*	**89.5**	94.8

The Hydroelectric Availability decreased in the first quarter of 2017, compared to the same period in 2016, primarily due to the reservoir refurbishment project at the Sir Adam Beck Pump GS and a higher number of unplanned outage days for the regulated hydroelectric stations.

Contracted Generation Portfolio Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**143**	145
Fuel expense	**14**	12
Gross margin	**129**	133
Operations, maintenance and administration	**39**	40
Depreciation and amortization	**19**	19
Accretion on fixed asset removal liabilities	**2**	2
Property taxes	**2**	2
Income from investments subject to significant influence	**(10)**	(8)
Income before interest and income taxes	**77**	78

Income before interest and income taxes decreased by $1 million during the first quarter of 2017, compared to the same period in 2016. The decrease primarily resulted from lower revenues from the Lower Mattagami River generating stations. The decrease was partially offset by higher gross margin from the Lennox GS, which was primarily due to increased market demand.

The Hydroelectric Availability and the Thermal Equivalent Forced Outage Rate (EFOR) for the Contracted Generation Portfolio segment were as follows:

	Three Months Ended March 31 2017	2016
Hydroelectric Availability *(%)*	**83.6**	83.9
Thermal EFOR *(%)*	**12.6**	0.9

The Hydroelectric Availability in the first quarter of 2017, was comparable to the same period in 2016. The higher thermal EFOR in the first quarter of 2017, compared to the same period in 2016, was primarily due to a higher number of unplanned outage days at a Lennox GS unit as a result of a transmission outage.

Services, Trading, and Other Non-Generation Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**17**	21
Gross margin	**17**	21
Operations, maintenance and administration	**1**	4
Depreciation and amortization	**7**	7
Accretion on fixed asset removal liabilities	**2**	2
Property taxes	**3**	3
Loss before other losses, interest, and income taxes	**4**	5
Other gains	**(3)**	-
Income before interest and income taxes	**7**	5

Segment earnings increased by $2 million during the first quarter of 2017, compared to the same quarter in 2016, due to lower OM&A expenses reflecting the decision, in the fourth quarter of 2016, to proceed with the decommissioning of the Lambton GS, and dividend income from OPG's investment in Hydro One Limited (Hydro One) shares acquired in April 2016. OPG acquired the shares for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union and The

Society of Energy Professionals. The increase in segment earnings was partially offset by lower revenues from the Company's electricity trading activities in the first quarter of 2017.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies, to undertake major projects, to fund long-term obligations such as contributions to the pension fund and the Nuclear Segregated Funds, to make payments under the OPEB plans, to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, and to service and repay long-term debt.

Changes in cash and cash equivalents for the three months ended March 31, 2017 and 2016 were as follows:

	Three Months Ended March 31	
(millions of dollars) (unaudited)	**2017**	**2016**
Cash and cash equivalents, beginning of period	**186**	464
Cash flow provided by operating activities	**118**	366
Cash flow used in investing activities	**(363)**	(310)
Cash flow used in financing activities	**279**	20
Net increase	**34**	76
Cash and cash equivalents, end of period	**220**	540

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details in the section, *Highlights* under the heading, *Overview of Results*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities during the first quarter of 2017 increased by $53 million compared to the same quarter in 2016. The increase was primarily due to higher expenditures on the Darlington Refurbishment project, offset by the staggered maturity of a structured deposit note entered in 2015 in support of the Peter Sutherland Sr. GS project. The principal amount of the deposit note that matured in the first quarter of 2017 was higher than in the same quarter in 2016. The final maturity date of the deposit note was in April 2017.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG expects to renew and extend the expiry date of both tranches from May 2021 to May 2022. There were no amounts outstanding under the bank credit facility as at March 31, 2017.

There was $133 million of commercial paper outstanding under OPG's commercial paper program as at March 31, 2017.

As at March 31, 2017, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at March 31, 2017, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust, expiring on November 30, 2018. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. As at March 31, 2017, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

As at March 31, 2017, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at March 31, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at March 31, 2017. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. As at March 31, 2017, there were outstanding long-term borrowings of $200 million under this credit facility.

As at March 31, 2017, OPG's long-term debt outstanding was $5,684 million, including $1,328 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent.

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's unaudited interim consolidated financial position using selected balance sheet data:

(millions of dollars) (unaudited)	As At March 31 2017	As At December 31 2016
Property, plant and equipment – net	**20,248**	19,998
The increase was primarily due to capital expenditures on the Darlington Refurbishment project, partially offset by depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**16,157**	15,984
The increase was primarily due to earnings on the Nuclear Segregated Funds, partially offset by reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Short-term debt	**135**	2
The increase was due to commercial paper issued under OPG's commercial paper program.		
Long-term debt *(current and non-current portions)*	**5,670**	5,520
The increase was primarily due to the issuance of senior notes payable to the OEFC totalling $200 million in February 2017.		
Fixed asset removal and nuclear waste management liabilities	**19,683**	19,484
The increase was primarily as a result of accretion expense representing the increase in the present value liabilities due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		

Pension & OPEB Cash Versus Accrual Differential Deferral Account

In setting OPG's regulated prices effective November 1, 2014, the OEB limited the recovery of the regulated portion of OPG's pension and OPEB costs to the Company's cash expenditures for its pension and OPEB plans. Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account, which records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and OPG's corresponding actual cash expenditures for these plans. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The Company has recognized the amount set aside in the Pension & OPEB Cash Versus Accrual Differential Deferral account as a regulatory asset. As at March 31, 2017, the regulatory asset balance was $517 million, which represents the excess of pension and OPEB costs calculated using the accrual basis in accordance with US GAAP over the corresponding cash expenditures for the period from November 1, 2014 to March 31, 2017.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and OPG's corresponding cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the OEB's consultation process. If, as part of the above consultation process or another proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory asset for the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's interim consolidated financial statements or are recorded in the Company's interim consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies are outlined in Note 3 to the audited consolidated financial statements as at and for the year ended December 31, 2016. A discussion of recent accounting pronouncements is included in Note 2 to OPG's unaudited interim consolidated financial statements as at and for the three months ended March 31, 2017 under the heading, *Significant Accounting Policies and Estimates*. Disclosure regarding OPG's critical accounting policies is included in OPG's 2016 annual MD&A.

RISK MANAGEMENT

The following provides an update to the discussion of the Company's risks and risk management activities included in OPG's 2016 annual MD&A. As such, the disclosure in this section should be read in conjunction with the *Risk Management* section included in the annual MD&A.

Financial Risks

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017 [1]	2018	2019
Estimated fuel requirements hedged [2]	75%	74%	63%

[1] Based on actual fuel requirements hedged for the three months ended March 31, 2017 and forecast for the remainder of the year.

[2] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to, US dollars. To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at March 31, 2017, OPG had no foreign exchange contracts outstanding.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. For the first quarter of 2017, the VaR utilization ranged between $0.1 million and $0.3 million.

Credit

Deterioration in energy markets counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

OPG manages its exposure to suppliers or counterparties by evaluating their financial condition and negotiating appropriate collateral or other forms of security. OPG's credit exposure relating to energy markets transactions as at March 31, 2017 was $361 million, including $348 million to the IESO. Management considers the Company's risk exposure relating to electricity sales through the IESO-administered spot market to be low as the IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market. Of the $13 million remaining exposure as at March 31, 2017, over 95 percent was related to investment grade counterparties.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The

transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions are summarized below:

	Three Months Ended March 31			
	2017		2016	
(millions of dollars) (unaudited)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**4**	**-**	2	-
Services	**1**	**5**	1	5
Dividends	**2**			
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**163**	-	(177)
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**217**	-	(159)
Hydroelectric gross revenue charge	**-**	**28**	-	31
ONFA guarantee fee	**-**	**2**	-	2
OEFC				
Gross revenue charge	**-**	**38**	-	37
Interest expense on long-term notes	**-**	**41**	-	42
Income taxes, net of investment tax credits	**-**	**12**	-	32
IESO				
Electricity related revenue	**1,073**	**6**	1,364	10
	1,080	**512**	1,367	(177)

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at March 31, 2017 and December 31, 2016, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,795 million and $3,415 million, respectively. The details of accounting for the Nuclear Funds are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars) (unaudited)	**March 31 2017**	**December 31 2016**
Receivables from related parties		
Hydro One	**1**	1
IESO	**348**	421
OEFC	**5**	1
PEC	**4**	4
Province of Ontario	**4**	2
Available-for-sale securities		
Hydro One shares	**218**	212
Accounts payable and accrued charges		
Hydro One	**-**	-
OEFC	**45**	61
Province of Ontario	**7**	2
IESO	**2**	2
Long-term debt (including current portion)		
Notes payable to OEFC	**3,445**	3,295

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at March 31, 2017, the Nuclear Segregated Funds and the registered pension fund held $1,650 million and $237 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

The Company maintains a comprehensive system of policies, procedures, and processes that represents its framework for internal controls over financial reporting and for its disclosure controls and procedures (together, ICOFR). There were no changes in the Company's internal control system during the current interim period that has or is reasonably likely to have a material impact to the ICOFR.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected financial information from OPG's unaudited interim consolidated financial statements for each of the eight most recently completed quarters.

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**March 31 2017**	**December 31 2016**	**September 30 2016**	**June 30 2016**
Revenue	**1,176**	**1,388**	**1,400**	**1,387**
Net income (loss)	**68**	**(8)**	**198**	**135**
Less: Net income attributable to non-controlling interest	**4**	**5**	**4**	**3**
Net income (loss) attributable to the Shareholder	**64**	**(13)**	**194**	**132**
Per common share, attributable to the Shareholder *(dollars)*	**$0.25**	**($0.05)**	**$0.76**	**$0.51**

(millions of dollars – except where noted) *(unaudited)*	**March 31 2016**	**December 31 2015**	**September 30 2015**	**June 30 2015**
Revenue	1,478	1,312	1,426	1,383
Net income (loss)	128	(100)	85	193
Less: Net income attributable to non-controlling interest	5	1	5	4
Net income (loss) attributable to the Shareholder	123	(101)	80	189
Per common share, attributable to the Shareholder *(dollars)*	$0.48	($0.39)	$0.31	$0.74

Trends

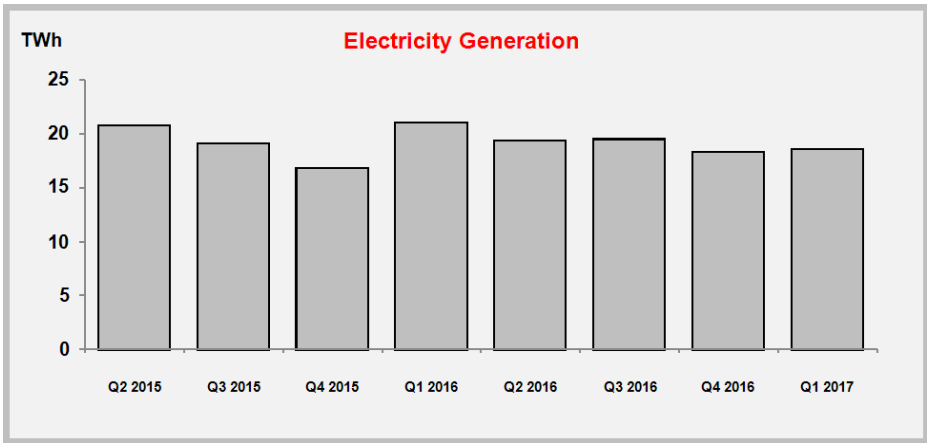
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues have been higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of forgone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

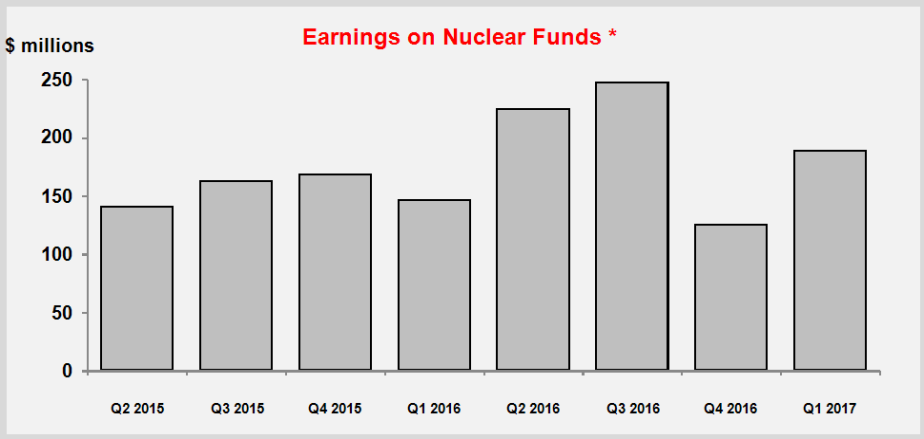
The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington Vacuum Building Outage (VBO), which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

During the fourth quarter of 2016 and the first quarter of 2017, OPG's electricity generation was reduced as a result of the Unit 2 refurbishment outage at the Darlington GS, which began in October 2016 and is expected to continue until early 2020.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items that affected net income in certain quarters above are described in OPG's 2016 annual MD&A in the section, *Quarterly Financial Highlights*.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder, improve cost performance, and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow provided by operating activities, or any other measure in accordance with US GAAP, but as indicators of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE Excluding AOCI is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended March 31 2017	December 31 2016
ROE Excluding AOCI		
Net income attributable to the Shareholder	**377**	436
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,834**	10,442
ROE Excluding AOCI *(percent)*	**3.5**	4.2

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended March 31 2017	December 31 2016
FFO before interest		
Cash flow provided by operating activities	**1,457**	1,705
Add: Interest paid	**268**	269
Less: Interest capitalized to fixed and intangible assets	**(152)**	(141)
Add: Changes to non-cash working capital balances	**(22)**	(68)
FFO before interest	**1,551**	1,765
Adjusted interest expense		
Net interest expense	**106**	120
Add: Interest income	**5**	7
Add: Interest capitalized to fixed and intangible assets	**152**	141
Add: Interest related to regulatory assets and liabilities	**32**	30
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**10**	45
Adjusted interest expense	**305**	343
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.1

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding the Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation from OPG-operated generating stations plus electricity generation forgone due to SBG conditions during the period.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Enterprise TGC		
Total OM&A expenses	**708**	686
Total fuel expense	**155**	172
Total capital expenditures	**408**	320
Less: Darlington Refurbishment capital and OM&A costs	**(309)**	(205)
Less: Other generation development project capital and OM&A costs	**(17)**	(38)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(11)**	18
Less: Nuclear fuel expense for non OPG-operated stations	**(13)**	(17)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**11**	18
Less: OM&A expenses ancillary to electricity generation business	**(5)**	(5)
Other adjustments	**(2)**	(5)
	925	944
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**18.6**	21.0
Adjust for electricity generation forgone due to SBG conditions and OPG's share of electricity generation from co-owned facilities	**0.7**	1.6
	19.3	22.6
Enterprise TGC per MWh *($/MWh)* [1]	**47.86**	**41.82**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**589**	563
Regulated – Nuclear Generation fuel expense	**68**	81
Regulated – Nuclear Generation capital expenditures	**366**	249
Less: Darlington Refurbishment capital and OM&A costs	**(309)**	(205)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(2)**	24
Less: Nuclear fuel expense for non OPG-operated stations	**(13)**	(17)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(1)**	(1)
Other adjustments	**-**	(1)
	698	693
Nuclear electricity generation *(TWh)*	**10.0**	12.3
Nuclear TGC per MWh *($/MWh)* [1]	**69.87**	56.37

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation forgone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**76**	76
Regulated – Hydroelectric Generation fuel expense	**73**	79
Contracted Generation Portfolio OM&A expenses	**39**	40
Contracted Generation Portfolio fuel expense	**14**	12
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**37**	59
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(16)**	(37)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(39)**	(37)
Less: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(9)**	(7)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**11**	18
Other adjustments	**(1)**	2
	185	205
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**8.0**	7.9
Contracted Generation Portfolio electricity generation	**0.6**	0.8
Adjust for hydroelectric electricity generation forgone due to SBG conditions and non-hydroelectric electricity generation of the Contracted Generation Portfolio	**0.7**	1.6
	9.3	10.3
Hydroelectric TGC per MWh *($/MWh)*[1]	**19.79**	19.94

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

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Cc:	MAK Ricky -FIN & C CTRL; DYKXHOORN Sandra -STAKEREL
Subject:	OPG Q2 2017 Submission to Province
Date:	Friday, July 28, 2017 5:13:21 PM
Attachments:	Q2 2017 DRAFT MDA - VP MAILING.docx 2017 Q2 DRAFT PR - VP MAILING.docx Q2 2017 DRAFT OPG FS - VP MAILING.docx

Hi All,

Please find attached OPG's draft Q2 2017 Financial Results Press Release, Management's Discussion and Analysis (MD&A), and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, Aug 1st**.

These documents will be filed with the Ontario Securities Commission on **Friday, August 11th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q2 2017 MD&A:

Highlights	
Recent Developments	MD&A p.10-12
Darlington Refurbishment	MD&A p.14-15
Ontario's Fair Hydro Plan	MD&A p.11
Sale of Head Office Premises	MD&A p.11

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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

2017 SECOND QUARTER REPORT

[DRAFT]

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ONTARIO POWER GENERATION

ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the unaudited interim consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the three and six months ended June 30, 2017. OPG's unaudited interim consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

For a complete description of OPG's corporate strategies, risk management, corporate governance, and the effect of critical accounting policies and estimates on OPG's results of operations and financial condition, this MD&A should also be read in conjunction with OPG's audited consolidated financial statements, accompanying notes, the Annual Information Form, and the MD&A as at and for the year ended December 31, 2016.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Exemptive Relief for Reporting under US GAAP,* in OPG's 2016 annual MD&A. This MD&A is dated August 11, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out in the section, *Risk Management,* and forecasts discussed in the section, *Core Business, Strategy, and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), Total Generating Cost (TGC) and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at June 30, 2017, OPG's electricity generation portfolio had an in-service capacity of 16,210 megawatts (MW). OPG operates two nuclear generating stations, 66 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report. A description of OPG's segments is provided in OPG's 2016 annual MD&A in the section, *Business Segments*.

All of OPG's owned and co-owned generating facilities are located in Ontario. OPG does not operate PEC, Brighton Beach, the Bruce A GS and the Bruce B GS.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as at June 30, 2017 and December 31, 2016 was as follows:

	As at	
(MW)	**June 30 2017**	**December 31 2016**
Regulated – Nuclear Generation [1]	**5,728**	5,728
Regulated – Hydroelectric	**6,426**	6,421
Contracted Generation Portfolio [2]	**4,056**	4,028
Total	**16,210**	16,177

[1] The in-service generating capacity as of June 30, 2017 and December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

During the six months ended June 30, 2017, the total in-service capacity increased by 33 MW. The increase was primarily due to the completion of the Peter Sutherland Sr. hydroelectric GS, which was placed in-service at the end of the first quarter of 2017, and the upgrade of Unit 10 of the Sir Adam Beck 1 hydroelectric GS, which was completed in June 2017.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's unaudited interim consolidated operating results. Significant factors which contributed to OPG's results during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, are discussed below.

(millions of dollars – except where noted) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue	**1,146**	1,387	**2,322**	2,865
Fuel expense	**178**	182	**333**	354
Gross margin	**968**	1,205	**1,989**	2,511
Operations, maintenance and administration	**711**	709	**1,419**	1,395
Depreciation and amortization	**172**	316	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**236**	232	**474**	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(194)**	(225)	**(383)**	(372)
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
Property taxes	**11**	11	**22**	23
	928	1,034	**1,853**	2,121
Income before other gains, interest and income taxes	**40**	171	**136**	390
Other gains	**(380)**	(1)	**(383)**	(24)
Income before interest and income taxes	**420**	172	**519**	414
Net interest expense	**16**	31	**35**	64
Income before income taxes	**404**	141	**484**	350
Income tax expense	**97**	6	**109**	87
Net income	**307**	135	**375**	263
Net income attributable to the Shareholder	**303**	132	**367**	255
Net income attributable to non-controlling interest [1]	**4**	3	**8**	8
Electricity production (TWh) [2]	**18.0**	19.4	**36.6**	40.4
Cash flow provided by operating activities	**143**	348	**261**	714

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership, the 33 percent interest of Coral Rapids Power Corporation (CRP), a corporation wholly owned by the Taykwa Tagamou Nation, in the PSS Generating Station Limited Partnership (PSS), and the 10 percent interest of a corporation wholly owned by the Six Nations of Grand River Development Corporation in the Nanticoke Solar LP.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Second Quarter

Net income attributable to the Shareholder was $303 million for the second quarter of 2017, an increase of $171 million compared to the same quarter in 2016. Income before interest and income taxes for the second quarter of 2017 was $420 million, an increase of $248 million compared to the same quarter in 2016.

Significant factor that increased income before interest and income taxes:

- Higher earnings of $381 million from the Services, Trading, and Other Non-Generation segment, primarily as a result of the gain on sale of OPG's head office premises and associated parking facility, a non-core asset

of the business. A gain on sale of $283 million, which is net of tax effects of $95 million, was recognized in net income upon completion of the transaction in the second quarter of 2017. The sale was undertaken pursuant a Shareholder Declaration and a Shareholder Resolution. Further details can be found under the heading, *Recent Developments – Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties*.

Significant factors that reduced income before interest and income taxes:

- Lower earnings from the nuclear base regulated price of approximately $72 million, partially offset by a decrease in nuclear fuel expense of $11 million, reflecting lower electricity generation of 1.3 terawatt hours (TWh) from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. The lower nuclear generation was primarily due to the ongoing refurbishment of Unit 2 at the Darlington GS since October 2016. The base regulated prices set in 2014 continue to be in effect pending the OEB's decision on OPG's current application for new regulated prices, expected later in 2017. The existing nuclear base regulated price was set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. OPG has requested January 1, 2017 as the effective date of the new regulated prices.
- Lower earnings on the nuclear fixed asset removal and nuclear waste management funds (Nuclear Segregated Funds) of $31 million, primarily due to lower earnings on the Used Fuel Segregated Fund.
- Higher depreciation and amortization expense of $11 million, excluding amortization expense related to balances in OEB-authorized regulatory variance and deferral accounts (regulatory accounts), primarily due to new assets in service in the Regulated – Nuclear Generation segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory accounts on December 31, 2016 contributed to the decrease in revenue for the three months ended June 30, 2017, compared to the same period in 2016, but was largely offset by a decrease in the amortization expense related to these balances. OPG has requested new rate riders in its current application to the OEB for new regulated prices, with a proposed effective date of January 1, 2017.

Net interest expense decreased by $15 million during the second quarter of 2017, compared to the same quarter in 2016, primarily due to a higher amount of interest costs deferred in OEB-authorized regulatory accounts and a higher amount of interest costs capitalized for the Darlington Refurbishment project expenditures.

Income tax expense for the three months ended June 30, 2017 was $97 million, compared to $6 million for the same period in 2016. The increase in income tax expense was primarily due to higher income before taxes, a lower change in reserves from the resolution of uncertainties, and a higher amount of tax expense deferred in regulatory assets in 2017.

Year-To-Date

Net income attributable to the Shareholder was $367 million for the first six months of 2017, an increase of $112 million compared to the same period in 2016. Income before interest and income taxes for the six months ended of 2017 was $519 million, an increase of $105 million compared to the same period in 2016.

Significant factors that increased income before interest and income taxes:

- Higher earnings of $383 million from the Services, Trading, and Other Non-Generation segment, primarily as a result of the gain on sale of OPG's head office premises and associated parking facility recognized in the second quarter of 2017.

Significant factors that reduced income before interest and income taxes:

- Lower earnings from the nuclear base regulated price of approximately $206 million, partially offset by a decrease in nuclear fuel expense of $24 million, reflecting lower electricity generation of 3.6 TWh from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. The lower nuclear generation was primarily due to the ongoing refurbishment of Unit 2 at the Darlington GS since October 2016.
- Higher OM&A expenses of $24 million, mainly in the Regulated – Nuclear Generation segment, reflecting planned expenditures related to major maintenance expenditures occurring at the nuclear stations.
- A gain of $22 million recorded in the first quarter of 2016 to reflect the OEB's decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices.
- Higher depreciation and amortization expense of $20 million, excluding amortization expense related to regulatory account balances, primarily due to new assets in service in the Regulated – Nuclear Generation segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory accounts on December 31, 2016 contributed to the decrease in revenue in the first half of 2017, compared to the same period in 2016, but was primarily offset by a decrease in the amortization expense related to these balances.

Net interest expense decreased by $29 million for the six months ended June 30, 2017, compared to the same period in 2016, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project expenditures and a higher amount of interest costs deferred in OEB-authorized regulatory accounts.

Income tax expense for the six months ended June 30, 2017 was $109 million, compared to $87 million for the same period in 2016. The increase in income tax expense was primarily due to higher income before income taxes and a lower change in reserves from the resolution of uncertainties, partly offset by a lower amount of tax expense deferred in regulatory assets in 2017.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars)	**2017**	**2016**	**2017**	**2016**
(Loss) income before interest and income taxes				
Regulated – Nuclear Generation	**(169)**	(76)	**(287)**	(30)
Regulated – Hydroelectric	**172**	187	**352**	383
Contracted Generation Portfolio	**77**	67	**154**	145
Total electricity generation business segments	**80**	178	**219**	498
Regulated – Nuclear Waste Management	**(40)**	(5)	**(87)**	(88)
Services, Trading, and Other Non-Generation	**380**	(1)	**387**	4
	420	172	**519**	414

Electricity Generation

Electricity generation for the three and six month periods ended June 30, 2017 and 2016 was as follows:

(TWh)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Regulated – Nuclear Generation	**9.3**	10.6	**19.3**	22.9
Regulated – Hydroelectric	**8.2**	8.0	**16.2**	15.9
Contracted Generation Portfolio [1]	**0.5**	0.8	**1.1**	1.6
Total OPG electricity generation	**18.0**	19.4	**36.6**	40.4
Total electricity generation by all other generators in Ontario [2]	**16.5**	15.5	**35.1**	34.4

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.
[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the Independent Electricity System Operator (IESO), minus OPG electricity generation.

Total OPG electricity generation decreased by 1.4 TWh during the second quarter of 2017, compared to the same quarter in 2016, and by 3.8 TWh during the six months ended June 30, 2017, compared to the same period in 2016. As expected, the lower electricity generation from the Regulated – Nuclear Generation segment was primarily the result of the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment, which began in October 2016. This decrease in electricity generation was partially offset by an increase in generation from the Pickering GS, primarily due to favourable unit conditions and execution of planned outage work resulting in a lower number of planned outage days at the station.

The higher electricity generation of 0.2 TWh and 0.3 TWh from the Regulated – Hydroelectric segment for the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, was largely due to higher water flows primarily on the eastern Ontario river systems, net of water spilled as a result of SBG conditions, discussed below.

The lower electricity generation of 0.3 TWh and 0.5 TWh from the Contracted Generation Portfolio segment for the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, was primarily due to a higher volume of water spilled as a result of SBG conditions.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. For the three and six month periods ended June 30, 2017, Ontario's electricity demand as reported by the IESO was 30.6 TWh and 64.9 TWh, respectively, compared to 31.9 TWh and 67.1 TWh for the same periods in 2016, respectively, excluding electricity exports out of the province.

Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric, other grid-connected renewable resources and nuclear stations. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. Baseload generation supply surplus in Ontario continued to be prevalent in 2017, resulting in forgone hydroelectric generation for OPG of 2.6 TWh and 3.4 TWh due to SBG conditions in the three and six month periods ended June 30, 2017, respectively, compared to 1.7 TWh and 3.4 TWh of forgone hydroelectric generation for OPG due to SBG conditions during the same periods in 2016, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions during these periods was offset by the impact of a regulatory variance account authorized by the OEB. OPG did not forgo any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The same base regulated prices for electricity generated by these segments, authorized by the OEB effective November 1, 2014, were in effect during the first six months of 2017 as in 2016. These prices will remain in effect until such time as the OEB approves new regulated prices based on OPG's current application. The base regulated prices established in 2014 are discussed in OPG's 2016 annual MD&A in the section, *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment was 5.7 and 5.8 cents per kilowatt hour (¢/kWh) during the three and six month periods ended June 30, 2017 respectively, compared to 6.9 ¢/kWh during the same periods in 2016. The decrease was primarily due to the expiry, on December 31, 2016, of an OEB-authorized nuclear rate rider of $10.84 per megawatt hour (MWh) for the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment was 4.0 ¢/kWh and 4.1 ¢/kWh during the three and six month periods ended June 30, 2017, respectively, compared to 4.4 ¢/kWh during the same periods in 2016. The decrease in the average sales price was primarily due to the expiry, on December 31, 2016, of an OEB-authorized regulated hydroelectric rate rider of $3.19/MWh for the recovery of variance and deferral account balances. The rate riders were established to recover approved balances recorded in the variance and deferral accounts in prior years. As such, the year-over-year changes in revenue from the rate riders were largely offset by changes in amortization expense related to these balances. There were no rate riders in effect during the first half of 2017 for either nuclear or regulated hydroelectric generation, pending the outcome of OPG's current application with the OEB for new regulated prices.

Cash Flow from Operations

Cash flow provided by operating activities was $143 million for the three months ended June 30, 2017 and $261 million for the six months ended June 30, 2017, compared to $348 million and $714 million for the same periods in 2016, respectively. The decrease in cash flow provided by operating activities was expected and primarily due to lower generation revenue receipts reflecting lower generation from the Regulated – Nuclear Generation segment as a result of the ongoing refurbishment of Unit 2 at the Darlington GS and the expiry, on December 31, 2016, of the OEB-authorized rate riders for nuclear and regulated hydroelectric generation. The decrease in cash flow in the first half of 2017 was also due to higher income tax instalments, compared to the same period in 2016.

The decrease in cash flow provided by operating activities for the three and six month periods ended June 30, 2017 was partially offset by lower pension plan contributions in 2017 reflecting an updated actuarial valuation of the OPG registered pension plan filed with the Financial Services Commission of Ontario in September 2016, and lower contributions to the Used Fuel Segregated Fund and the Decommissioning Segregated Fund in 2017. Both the Used Fuel Segregated Fund and the Decommissioning Segregated Fund were determined to be fully funded based on an updated estimate of OPG's nuclear waste management and nuclear facilities decommissioning obligations pursuant to a reference plan approved by the Province, for years 2017 to 2021, under the Ontario Nuclear Funds Agreement (ONFA), effective January 1, 2017. Pursuant to the ONFA, the reference plan is required to be updated at least once every five years. Contributions to either or both of the Nuclear Segregated Funds may be required in the future should the funds be in an underfunded position at the time of the next ONFA reference plan update. The year-over-year decrease in cash flow also was partially offset by the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to a period in 2015. The lease agreement for the Bruce nuclear generating stations giving rise to this rebate was amended in late 2015 to eliminate this provision going forward.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with the Company's strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period.

ROE Excluding AOCI was 5.0 percent for the 12 months ended June 30, 2017, compared to 4.2 percent for the 12 months ended December 31, 2016. The increase was primarily due to higher net income attributable to the Shareholder for the 12 months ended June 30, 2017, which reflected the gain on sale of OPG's head office premises and associated parking facility recorded in the second quarter of 2017, partly offset by the lower earnings from the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS without a corresponding increase in the nuclear base regulated price, as expected. The lower nuclear generation as a result of the refurbishment outage will continue to negatively affect OPG's ROE Excluding AOCI until such time as new regulated prices are approved by the OEB later in 2017.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flows. The indicator is measured over a 12-month period. FFO Adjusted Interest Coverage for the 12 months ended June 30, 2017 was 4.5 times, compared to 5.1 times for the 12 months ended December 31, 2016. FFO Adjusted Interest Coverage in 2017 reflected a year-over-year decrease in FFO before interest due to lower cash flow provided by operating activities, partially offset by the impact of a lower adjusted interest expense due to a decrease in the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets.

The decrease in the excess of interest on pension and OPEB benefit obligations over expected return on pension plan assets in the first half of 2017 was primarily due to the change in the method used to estimate the interest cost and service cost component of pension and OPEB costs. Effective January 1, 2017, OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs for the three and six month periods ended June 30, 2017 did not have a material impact on net income as it was largely offset by the impact of OEB-authorized variance and deferral accounts in the regulated business segments. Further details on the full yield curve approach can be found in the 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Pension and Other Post-Employment Benefits*.

Enterprise Total Generating Cost per MWh

The Enterprise TGC per MWh increased to $48.72 for the three months ended June 30, 2017, compared to $48.48 for the same quarter in 2016. The increase was mainly due to reduction in nuclear electricity generation due to the Unit 2 refurbishment outage at the Darlington GS and higher capital expenditures, largely offset by higher SBG-adjusted hydroelectric electricity generation reflecting higher water flows and lower OM&A expenses before the impact of regulatory accounts.

The Enterprise TGC per MWh was $48.35 for the six months ended June 30, 2017, an increase compared to $45.01 for the same period in 2016. The increase was expected and mainly a result of lower electricity generation due to the Unit 2 refurbishment outage at the Darlington GS and higher capital expenditures, partially offset by lower OM&A expenses before the impact of regulatory accounts.

If Unit 2 at the Darlington GS was not currently undergoing refurbishment and had continued to operate in a manner consistent with the performance of the remaining units at the Darlington GS and adjusting for generation constraints on the remaining units related to the transition of the station toward refurbishment, the Enterprise TGC would have been approximately $3 to $4 per MWh lower for the three and six months ended June 30, 2017. This sensitivity was calculated using the estimated incremental electricity that would have been generated under these circumstances and the associated estimated fuel cost that would have been incurred.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $76.87 for the three months ended June 30, 2017, compared to $69.25 for the same quarter in 2016. The Nuclear TGC per MWh was $73.24 for the six months ended June 30, 2017, compared to $62.44 for the same period in 2016. The increase in the Nuclear TGC per MWh for these periods was expected and primarily due to the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $19.83 for the three months ended June 30, 2017, compared to $22.14 for the same quarter in 2016. The decrease was primarily due to higher SBG-adjusted hydroelectric electricity production reflecting higher water flows and lower capital expenditures. The Hydroelectric TGC per MWh was $19.81 for the six months ended June 30, 2017, compared to $21.08 for the same period in 2016. The decrease was primarily due to lower capital expenditures.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow provided by operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

OEB's Report on Regulatory Treatment of Pension and OPEB Costs

On May 18, 2017, the OEB issued a report on the regulatory treatment of pension and OPEB costs based on a consultation process aimed at developing standard principles to guide the OEB's future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including OPG, that began in May 2015. The report establishes the accrual basis of accounting as the method of determining pension and OPEB amounts for rate-setting purposes, unless the OEB finds that this method does not result in just and reasonable rates in the circumstances of a particular utility. The report also provides for the establishment of a generic variance account to record asymmetric carrying charges in favour of ratepayers on the differences between the forecast pension and OPEB accrual costs recovered by a utility through regulated rates and the actual cash payments made by it for pension and OPEB plans. Carrying charges on this differential are to be assessed at the OEB's prescribed interest rate, on a prospective basis from the effective date of the new variance account. The prescribed interest rate is set quarterly by the OEB based on the quarterly return of a mid-term corporate bond index yield. Certain implementation matters related to the report's requirements remain to be finalized by the OEB. This includes the effective date of the new variance account, the application of carrying charges, and the timing of disposition of both the new and previously established variance and deferral accounts related to pension and OPEB costs.

The report requires utilities, such as OPG, that have been previously directed to record differences between pension and OPEB accrual costs and cash payments in a separate variance or deferral account to continue to defer such differences in that account, until such time as the OEB approves the utility to resume the accrual basis of recovery. The future recovery of amounts recorded in such an account will be subject to this approval. In setting OPG's existing regulated prices effective November 1, 2014, the OEB limited the recovery of pension and OPEB costs to the regulated portion of the Company's cash expenditures for the pension and OPEB plans. It also required OPG to defer, effective November 1, 2014, the difference between its actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and the Company's actual cash payments for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of an

OEB generic proceeding on the regulatory treatment of pension and OPEB costs. Similarly, in its current application for new regulated prices filed with the OEB in May 2016, OPG has proposed to continue recording the difference between actual pension and OPEB accrual costs and actual cash payments for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the OEB's consultation process. The Company recognizes the amount set aside in the Pension & OPEB Cash Versus Accrual Differential Deferral account as a regulatory asset, which has a balance of $533 million as at June 30, 2017.

As currently outlined in the report, OPG does not expect that it would be subject to carrying charges on the differences between pension and OPEB accrual costs and cash payments until either it begins to recover, through future rate riders, amounts deferred in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, or the OEB establishes OPG's base regulated prices to reflect pension and OPEB amounts on an accrual basis. As such, the OEB's report did not impact OPG's financial results for the three and six month periods ended June 30, 2017.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Fair Hydro Plan) aimed at reducing electricity bills for all residential consumers in the province on average by 25 percent. As part of the Fair Hydro Plan, the Province has proposed refinancing a portion of the Global Adjustment costs over a longer time period for Regulated Price Plan and other eligible customers (e.g., residential, farm, small businesses). On June 1, 2017, the Province enacted *Bill 132 – An Act to enact the Ontario Fair Hydro Plan Act, 2017, and to make amendments to the Electricity Act, 1998 and the Ontario Energy Board Act, 1998* (Bill 132). Bill 132 establishes a framework under which the costs and benefits associated with the Government of Ontario's clean energy initiative are to be allocated among present and future consumers of electricity, appoints OPG as the Financial Services Manager of the Fair Hydro Plan, unless OPG is not in a position to do so, and provides for a financing entity to be established by the Financial Services Manager for the purpose of funding a portion of the Global Adjustment. Bill 132 also made certain amendments to other legislation, which will enable the IESO and OPG to work together to implement this financing.

OPG's Board of Directors, which had established a Special Committee to provide oversight on behalf of the Board of Directors, has conditionally approved OPG's involvement with the Fair Hydro Plan on commercial terms. The form of the financing entity to be established by OPG is being determined, and the specific operating protocol between the IESO, OPG and the financing entity and the requirements for financing the Fair Hydro Plan are being negotiated. OPG continues to prepare for financing activities of the financing entity that are expected to commence later in 2017. **[MONITOR]**

Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution requiring the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. A purchase and sale agreement was executed in December 2016, and the sale was completed in April 2017. A gain on sale of $283 million, which is net of tax effects of $95 million, was recognized in net income upon completion of the transaction in the second quarter of 2017. The pre-tax gain on sale was recorded as Other gain in the interim consolidated statement of income in the Service, Trading and Other Non-Generation segment. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the Act, into the Province's Consolidated Revenue Fund. OPG expects that the amount of designated proceeds to be transferred into the Consolidated Revenue Fund will be largely consistent with the after-tax gain, and is working with the Ontario Ministry of Finance to finalize the amount. The transfer is expected to take place later in 2017. **[MONITOR]**

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. An active program to locate a buyer for the property was initiated in June 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed

deductions under the Act, into the Province's Consolidated Revenue Fund. In accordance with the Shareholder Resolution, approximately one-third of the site is to be transferred to the City of Mississauga, by the purchaser, for parkland, institutional, and cultural uses.

CORE BUSINESS, STRATEGY, AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

The following sections provide an update to OPG's disclosures in the 2016 annual MD&A related to its four key strategic imperatives – operational excellence, project excellence, financial strength, and social licence. A detailed discussion of these strategic imperatives is included in the 2016 annual MD&A in the section, *Core Business, Strategy, and Outlook*.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Electricity Generation Production and Reliability

- As part of the plan to extend Pickering operations, OPG is continuing to undertake the required technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will remain fit for service for operation to 2024. OPG is also nearing completion of component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently set at the end of 2020, will be reassessed based on the fuel channel analysis and safety case consistent with submissions for the Canadian Nuclear Safety Commission's (CNSC) approval, discussed below. OPG's current application with the OEB for new base regulated prices, currently pending the OEB's decision, reflects OPG's plans to extend Pickering operations to 2024 and requests inclusion of the corresponding cost and generation impacts in the determination of the nuclear regulated price.
- OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. On June 28, 2017, OPG confirmed to the CNSC that it intends to cease commercial operation of all Pickering units on December 31, 2024. Work on the Pickering licence renewal application is proceeding and the application is expected to be filed by August 31, 2017 for the CNSC's approval in 2018. The requested licence renewal will span the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe storage state in 2028. Through an extensive Periodic Safety Review, OPG will submit a Global Assessment Report and Integrated Implementation Plan (IIP) for the station to the CNSC as part of the licence renewal.
- In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications were presented to the CNSC at public hearings in April 2017. On May 30, 2017, the CNSC announced that the WWMF licence was renewed for a period of ten years and is now valid

from June 1, 2017 to May 31, 2027. A renewal decision on the PWMF licence is expected to be issued prior to the expiry of the current licence on March 31, 2018.

- During the second quarter of 2017, OPG completed the upgrade of Unit 10 of the Sir Adam Beck 1 hydroelectric GS, increasing the capacity of the station by 6 MW.
- Work continues on the rehabilitation of Unit 1 of the Sir Adam Beck Pump hydroelectric GS and the overhaul and upgrade of the following hydroelectric units: Unit 1 of the Harmon GS, Unit 2 of the DeCew Falls GS, and Unit 2 of the Lower Notch GS.
- OPG commenced definition phase activities for the Water Conveyance System project to rehabilitate the Sir Adam Beck 1 GS canal and associated structures, ensuring their continued safe and reliable operations for approximately the next 50 years.
- As part of the process to decommission the Nanticoke and Lambton generating stations, OPG is continuing to develop a demolition plan that will ensure that the stations are closed safely, securely and in an environmentally responsible manner. Project milestones in 2017 include the elimination of coal yard equipment and structures, removal of ash silos, and the selection of a contractor to remove the stacks, powerhouse, interior equipment and supporting site structures for the Nanticoke GS. An update of the associated asset retirement obligations related to these stations is expected to be finalized later in 2017. A demolition contract for the removal of the Nanticoke powerhouse was awarded in July 2017. A demolition contract for the removal of the Lambton powerhouse is expected to be awarded in 2018.

Environmental Performance

There were no significant changes to environmental legislation affecting the Company during the second quarter of 2017. Disclosures related to the Company's environmental policy and environmental risks can be found in OPG's 2016 annual MD&A.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. OPG remains focused on delivering projects safely, on time, on budget and with high quality. The status updates for OPG's major projects as at June 30, 2017 are outlined in the following table, with further details below.

Project	Capital expenditures		Approved budget	Expected in-service date	Current status
(millions of dollars)	Year-to-date	Life-to-date			
Darlington Refurbishment	608	3,793	12,800 [1]	First unit - 2020 Last unit - 2026	Islanding of Unit 2 was completed in April 2017. Preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening of the reactor air lock doors and installation of shielding, was completed in the second quarter of 2017. The setup of specialized tooling and equipment needed for the removal and replacement of the reactor components is in progress. The project is tracking on schedule and budget.
Peter Sutherland Sr. Hydroelectric GS	32	268	300	2017	The station was placed in-service on March 31, 2017, ahead of the originally planned schedule, and is expected to close below the approved budget. Project close-out activities are in progress. In April 2017, CRP exercised its right under the partnership agreement to increase its interest in PSS to 33 percent.
Ranney Falls Hydroelectric GS	9	12	77	2019	Civil engineering design work and site clearing and mobilization have been completed. Work is progressing to expand forebay and tailrace channels. The project is tracking on schedule and budget.
Nanticoke Solar Facility	1	2		2019	Project definition work is continuing, with construction planned to commence as early as in the fourth quarter of 2017.
Deep Geologic Repository for low and intermediate level radioactive waste (L&ILW)	5 [2]	200 [2]			On June 26, 2017, the Canadian Environmental Assessment Agency (CEAA) advised that it was satisfied with the additional information submitted by OPG on May 26, 2017, and that a draft report was being prepared for public review. The Environmental Assessment (EA) Decision Statement by the federal Minister of Environment and Climate Change is expected in the fourth quarter of 2017.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities).

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017 with a total of 480 fuel channels de-fuelled. Islanding of Unit 2, the physical separation of the refurbishment unit from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second major segment, which includes preparatory work and the removal of reactor components, commenced immediately following the islanding of Unit 2. Preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening of the reactor air lock doors and installation of shielding, was completed in the second quarter of 2017. The setup of specialized tooling and equipment needed for the removal and replacement of the reactor components is in progress. The Re-tube Tooling Platform, which will host the tooling for the removal, inspection, and installation activities, was completed in July 2017, and the disassembly of reactor components commenced immediately thereafter. **[MONITOR]** Other key project activities completed during the second segment include the drain and vacuum dry of the primary heat transport system, commencement of the major turbine generator overhaul and continuation of the major electrical scope. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the overall project. The project is tracking on schedule and budget.

A number of pre-requisite projects in support of the execution phase of the project, including construction of facilities, infrastructure upgrades and installation of safety enhancements, have been completed. Completion of the Heavy Water Storage and Drum Handling Facility has been delayed due to challenges with construction. OPG suspended the project in the second quarter of 2017 to evaluate the best approach to optimize cost and schedule and complete the project. Remediation measures are in progress. This delay will not impact the overall Darlington Refurbishment project schedule, as the Heavy Water Storage and Drum Handling Facility is not on the project's critical path. The remaining projects are tracking for completion in line with the refurbishment execution schedule.

In addition to the refurbishment activities on Unit 2 completed to date, other key project activities in 2017 are as follows:

- Completion of preparation activities to support Retube and Feeder Replacement work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Re-tube Waste Processing Building.
- Commencement of the fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG is continuing planning activities for the refurbishment of the second unit, Unit 3, and is entering into associated commitments to procure major components that require long lead times. As of June 30, 2017, $51 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Ranney Falls Hydroelectric GS

During the second quarter of 2017, OPG continued construction work of a 10 MW single-unit powerhouse on the existing Ranney Falls GS site, as part of the Regulated – Hydroelectric segment. The new unit will replace an existing unit that reached its end of life in 2014. Civil engineering design work and site clearing and mobilization have been completed. Construction is progressing to expand the existing forebay and tailrace channels to accommodate the new powerhouse. The project's expected in-service date is in the fourth quarter of 2019, with a budget of $77 million. The project is tracking on schedule and budget.

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands under a Large Renewable Procurement contract with the IESO, through Nanticoke Solar LP, a partnership between OPG and a subsidiary of the Six Nations of Grand River Development Corporation, is planned to commence as early as in the fourth quarter of 2017. During the second quarter of 2017, the partnership continued work to obtain approvals and permits required to enable the commencement of construction, and progressed procurement activities for equipment and for engineering and construction services. The facility is expected to be completed in the first quarter of 2019.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project. OPG completed the requested studies and submitted the requested information in December 2016, as planned. Following the CEAA's review of OPG's submission and a period of public comment, the CEAA requested additional information from OPG. OPG provided the additional information on May 26, 2017 and, on June 26, 2017, the CEAA notified OPG that it had sufficient and adequate information to proceed with the next step of the environmental assessment process and advised that a draft report and updated terms and conditions will be prepared for public review. An EA Decision Statement by the Minister is expected in the fourth quarter of 2017. Based on the additional information submitted, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW. Alternative locations reviewed in the Canadian Shield or Southwest Ontario, while technically feasible, would result in greater negative environmental impacts and higher costs, as well as a project delay of 15 years or more, while offering no additional benefits in safety.

If the EA Decision Statement supports licensing, a number of conditions will need to be met before construction begins. In addition, OPG continues its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. Consistent with the requirements of *Ontario Regulation 53/05*, the application incorporates a rate smoothing proposal that would defer, for future collection, a portion of the approved annual nuclear revenue requirement for the period from January 1, 2017 to the end of the Darlington Refurbishment project, with a view to making more stable year-over-year changes in OPG's regulated prices. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impacts on customers. OPG expects to recognize amounts deferred under rate smoothing as income in the periods to which the underlying approved revenue requirements relate.

The application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of nuclear and hydroelectric regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework, which forms the basis for the ratemaking methodologies reflected in the application.

The application seeks an increase in the nuclear rate base, effective in early 2020, to reflect the planned placement in service of approximately $4.8 billion of capital expenditures upon the scheduled return to service of Unit 2 at the Darlington GS as part of the Darlington Refurbishment project and, effective in 2017, an increase in the deemed capital structure applied to the total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt reflected in the existing regulated prices. If approved, this would improve OPG's return on Shareholder's investment. The application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the portion of these balances approved for recovery or repayment through rate riders previously in effect.

A public oral hearing on the application took place between February 2017 and April 2017, with the final arguments completed on June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected later in 2017.

For generation assets that do not form part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements. In line with this strategy, virtually all of OPG's non-regulated operating facilities and assets under construction are subject to long-term Energy Supply Agreements (ESAs) or other long-term contracts with the IESO. This includes the Peter Sutherland Sr. GS, which began receiving contracted revenue under its hydroelectric ESA following IESO's confirmation, in June 2017, of commercial operation of the station effective as of March 31, 2017. The ESA expires in 2067.

Ensure Availability of Cost Effective Funding

In April 2017, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2017, S&P Global Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

Social Licence

As the largest electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish these relationships based on a foundation of respect for the languages, customs, and political, social and cultural organizations of the Indigenous communities.

In June 2017, OPG launched an Indigenous Business Engagement (IBE) Initiative. The purpose of this initiative is to increase access to procurement opportunities for Indigenous businesses interested in supplying materials and services to OPG. The IBE Initiative is based on a strategy that will identify opportunities in contracts, scopes of work and business plans for potential Indigenous business engagement; include criteria in procurement proposals relating to supplier's ability to engage or partner with Indigenous people or businesses; and invest in relationships with Indigenous communities by increasing outreach efforts to enhance understanding of how to do business with OPG.

As part of its commitment to help de-carbonize Ontario's transportation sector, OPG is a founding sponsor of Plug'n Drive, a non-profit organization working to accelerate the adoption of electric vehicles and to maximize their environmental and economic benefits. In May 2017, Plug'n Drive announced the opening of the world's first experiential learning facility dedicated to electric vehicle education and awareness, with OPG sponsoring the Centre's training facility. Ontario's climate change plan aims for electric and hydrogen passenger vehicles to represent five percent of new vehicle sales in the province by 2020.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of costs and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's current application for new regulated prices, currently pending the OEB's decision, is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. Considering the timing of OPG's application and OPG's procedural adherence throughout the proceeding, the Company believes that the OEB could make the new regulated prices effective January 1, 2017. This would allow OPG to recover the difference between the approved new regulated prices and the existing regulated prices for the period between January 1, 2017 and the implementation date of the new prices based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected later in 2017. The continuation of existing regulated prices until the issuance of the OEB's decision is expected to continue to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and, excluding the gain on sale of the Company's head office premises and associated parking facility recorded in the second quarter of 2017, lower ROE Excluding AOCI during 2017, compared to 2016. In large part, this is due to the year-over-year reduction in nuclear electricity generation resulting from the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined in 2014 based on a higher production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision issuance, could have a significant impact on OPG's financial results during 2017.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues to future periods. Combined with the expiry of rate riders in effect to the end of 2016 and a year-over-year reduction in nuclear generation due to the Unit 2 refurbishment outage at the Darlington GS, as expected, this will result in lower cash flow from operations and a lower FFO Adjusted Interest Coverage ratio in 2017, compared to 2016. The continuation of existing base regulated prices until such time as the new prices are determined and implemented by the OEB also is contributing to lower cash flow from operations in 2017. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements.

Lower nuclear generation due to the Darlington Refurbishment outages will continue, as planned, to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Variability in sustaining capital investment expenditures, including major sustaining projects for the hydroelectric operations, also will impact the Enterprise TGC in future periods.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, the variance accounts include those related to the revenue impact of variability in water flows and forgone production due to SBG conditions at the regulated hydroelectric stations. As there are no variance or deferral accounts in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings. OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to ESAs with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow from operations going forward.

OPG's total forecast capital expenditures for the 2017 year are approximately $1.9 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric and other development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major projects are discussed in the section, *Project Excellence*.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and, for the portion of the Used Fuel Segregated Fund guaranteed by the Province under the ONFA, changes in the Ontario consumer price index (CPI). In the near term, these factors can be volatile and cause fluctuations in the Company's income. This volatility is partially mitigated by the impact of the OEB-authorized Bruce Lease Net Revenues Variance Account and, as discussed below, the funded status of the two segregated funds.

As OPG does not have the right to withdraw surplus amounts from the Nuclear Segregated Funds when the segregated funds are overfunded relative to the life cycle funding liability per the most recently approved ONFA Reference Plan, OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value of such life cycle funding liability. This reduces the volatility of earnings on the Nuclear Segregated Funds reflected in net income when the funds are in a fully funded or overfunded position. As at June 30, 2017, the Decommissioning Segregated Fund was overfunded by approximately 24 percent, and the Used Fuel Segregated Fund was marginally overfunded, by less than one percent, based on the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue	**609**	820	**1,261**	1,746
Fuel expense	**68**	79	**136**	160
Gross margin	**541**	741	**1,125**	1,586
Operations, maintenance and administration	**593**	581	**1,182**	1,144
Depreciation and amortization	**110**	231	**217**	461
Property taxes	**7**	6	**13**	13
Loss before other gains, interest, and income taxes	**(169)**	(77)	**(287)**	(32)
Other gains	**-**	(1)	**-**	(2)
Loss before interest and income taxes	**(169)**	(76)	**(287)**	(30)

For the three and six month periods ended June 30, 2017, segment losses before interest and income taxes increased by $93 million and $257 million, respectively, compared to the same periods in 2016. The decrease in earnings was expected and primarily due to reduced revenue from the nuclear base regulated price of approximately $72 million and $206 million, partly offset by a decrease in fuel expense of $11 million and $24 million, respectively. The decrease in revenue during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, reflected lower electricity generation of 1.3 TWh and 3.6 TWh, respectively, primarily due to the ongoing Unit 2 refurbishment outage at the Darlington GS that began in October 2016, without a corresponding increase in the base regulated price. The existing nuclear base regulated price set by the OEB in 2014 continues to be in effect pending the OEB's decision on OPG's application for new regulated prices, proposed to be effective on January 1, 2017. The existing price does not reflect the lower generation as a result of the refurbishment outage, as it was set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. The reduction in nuclear electricity generation for the three and six month periods ended June 30, 2017 was partially offset by the higher electricity generation from the Pickering GS.

The increases in OM&A expenses of $12 million and $38 million during the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, also contributed to a year-over-year reduction in segment earnings. The higher OM&A expenses reflected planned expenditures related to major maintenance expenditures occurring at the nuclear stations.

Depreciation and amortization expense, excluding amortization expense related to regulatory account balances, increased by $11 million and $20 million during the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, primarily due to new assets in service.

The expiry of an OEB-authorized nuclear rate rider on December 31, 2016 contributed to the decrease in segment revenue for the three and six month periods ended June 30, 2017, compared to the same periods in 2016. As rate riders allow for recovery of approved balances in OEB-authorized regulatory accounts, this decrease in revenue was largely offset by a decrease in amortization expense related to these balances. There was no rate rider in effect during the first half of 2017 pending the outcome of OPG's current application to the OEB for new regulated prices.

The Unit Capability Factors for the Darlington and Pickering generating stations were as follows:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Unit Capability Factor *(%)* [1]				
Darlington GS	**64.6**	75.9	**74.9**	86.6
Pickering GS	**84.2**	71.4	**81.4**	72.1

[1] The nuclear Unit Capability Factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS decreased in the second quarter of 2017, compared to the same quarter in 2016, primarily due to the higher number of planned and unplanned outage days during the second quarter of 2017. The lower Unit Capability Factor at the Darlington GS for the six months ended June 30, 2017, compared to the same period in 2016, reflected the higher number of planned outage days, largely driven by constraints related to the transition of the station toward refurbishment.

The increase in Unit Capability Factor at the Pickering GS for the three and six month periods ended June 30, 2017 was primarily due to favourable unit conditions and execution of planned outage work resulting in a lower number of planned outage days at the station compared to 2016.

Regulated – Nuclear Waste Management Segment

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars) (unaudited)	**2017**	**2016**	**2017**	**2016**
Revenue	**30**	32	**57**	66
Operations, maintenance and administration	**32**	34	**61**	70
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**232**	228	**466**	456
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(194)**	(225)	**(383)**	(372)
Loss before interest and income taxes	**(40)**	(5)	**(87)**	(88)

The segment loss before interest and income taxes increased by $35 million in the second quarter of 2017 compared to the same quarter in 2016. The decline in earnings was primarily due to lower earnings from the Nuclear Segregated Funds. The segment loss before interest and income taxes for the six months ended June 30, 2017 was comparable to the same period in 2016.

Lower earnings on the Used Fuel Segregated Fund, net of the impact of the Bruce Lease Net Revenue Variance Account, were the primary reason for the lower Nuclear Segregated Funds earnings during the second quarter of 2017. As the Used Fuel Segregated Fund was overfunded as at March 31, 2017 and June 30, 2017, the earnings on the fund recorded in income during the second quarter of 2017 reflected the growth in the present value of the used fuel life cycle funding liability per the 2017 ONFA Reference Plan. During the second quarter of 2016, the Used Fuel Segregated Fund was underfunded based on the ONFA reference plan then in effect, and therefore earnings on the fund reflected the CPI-adjusted rate of return guaranteed by the Province under the ONFA for funding related to the initial 2.23 million used fuel bundles and market returns for the portion of the fund not guaranteed by the Province.

As of December 31, 2016, OPG recorded a decrease of approximately $1,570 million to the Nuclear Liabilities and associated asset retirement costs capitalized as part of the carrying value of the nuclear generating stations. The resulting year-over-year decreases in accretion on fixed asset removal and nuclear waste management liabilities recorded in the Regulated – Nuclear Waste Management segment, and depreciation and fuel expenses recorded in

the Regulated – Nuclear Generation segment during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, were offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account authorized by the OEB.

Under the current OEB-approved cost recovery methodology, these changes in expenses are not expected to materially affect OPG's income during the rest of 2017, as they are expected to continue to be largely offset by the impact of the regulatory accounts until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of such new regulated prices. Further details on the change in the estimate of the Nuclear Liabilities as of December 31, 2016 are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Asset Retirement Obligation*.

Regulated – Hydroelectric Segment

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue [1]	**379**	413	**742**	798
Fuel expense	**97**	92	**170**	171
Gross margin	**282**	321	**572**	627
Operations, maintenance and administration	**75**	75	**151**	151
Depreciation and amortization	**35**	57	**69**	113
Income before other losses (gains), interest and income taxes	**172**	189	**352**	363
Other losses (gains)	**-**	2	**-**	(20)
Income before interest and income taxes	**172**	187	**352**	383

[1] During the three and six month periods ended June 30, 2017, the Regulated – Hydroelectric segment revenue reflected incentive payment reductions of $3 million and incentive payments of $5 million, respectively, related to the OEB-approved hydroelectric incentive mechanism (three and six month periods ended June 30, 2016 – incentive payments of $1 million and $2 million, respectively). The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers. The incentive payments are reduced to remove incentive revenues arising in connection with SBG conditions.

The decrease in income before interest and income taxes of $15 million during the second quarter of 2017, compared to the same quarter in 2016, was primarily the result of the income impact of OEB-approved variance accounts and lower hydroelectric incentive mechanism payments.

The decrease in income before interest and income taxes of $31 million during the six months ended June 30, 2017, compared to the same period in 2016, was primarily due to a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to a motion by OPG. The income impact of OEB-approved variance accounts also contributed to the year-over-year decrease in income for the period.

The decrease in revenue for the three and six month periods ended June 30, 2017, compared to the same periods in 2016, was largely due to the expiry of an OEB-authorized rate rider on December 31, 2016. As the rider allowed for the recovery of approved balances in OEB-authorized regulatory accounts, the resulting reduction in revenue was largely offset by lower amortization expense related to these balances. There was no rate rider in effect during the first half of 2017 pending the outcome of OPG's current application to the OEB for new regulated prices.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Hydroelectric Availability *(%)*	**90.1**	90.4	**89.8**	92.6

The Hydroelectric Availability in the second quarter of 2017 was comparable to the same period in 2016. The decrease in Hydroelectric Availability during the six months ended June 30, 2017, compared to the same period in 2016, was primarily due to a higher number of unplanned outage days at the regulated hydroelectric stations.

Contracted Generation Portfolio Segment

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars) (unaudited)	**2017**	**2016**	**2017**	**2016**
Revenue	**147**	137	**290**	282
Fuel expense	**13**	11	**27**	23
Gross margin	**134**	126	**263**	259
Operations, maintenance and administration	**40**	45	**79**	85
Depreciation and amortization	**20**	18	**39**	37
Accretion on fixed asset removal liabilities	**2**	2	**4**	4
Property taxes	**3**	3	**5**	5
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
Income before interest and income taxes	**77**	67	**154**	145

Income before interest and income taxes increased by $10 million and $9 million during the three and six month periods June 30, 2017, compared to the same periods in 2016, respectively. The increase in earnings for the three months ended June 30, 2017 mainly resulted from revenues from the Peter Sutherland Sr. GS that was placed in-service at the end of the first quarter of 2017, higher revenues from the Lennox GS primarily due to increased production to support electricity system requirements, and lower OM&A expenses. For the six months ended June 30, 2017, the increase in earnings was primarily due to higher revenues from Lennox GS primarily due to increased production to support electricity system requirements, and lower OM&A expenses, partially offset by lower revenues from the Lower Mattagami River hydroelectric generating stations.

The Hydroelectric Availability and the Thermal Equivalent Forced Outage Rate (EFOR) for the Contracted Generation Portfolio segment were as follows:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Hydroelectric Availability *(%)*	**81.4**	87.0	**82.5**	85.5
Thermal EFOR *(%)*	**2.7**	1.0	**7.8**	1.0

Lower Hydroelectric Availability during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, was primarily due to an increase in the number of unplanned outage days at the Lower Mattagami River hydroelectric generating stations.

The higher Thermal EFOR during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, was primarily due to a higher number of unplanned outage days at the Lennox GS unit as a result of a transmission outage in 2017.

Services, Trading, and Other Non-Generation Segment

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue	**10**	16	**27**	37
Gross margin	**10**	16	**27**	37
Operations, maintenance and administration	**-**	5	**1**	9
Depreciation and amortization	**7**	10	**14**	17
Accretion on fixed asset removal liabilities	**2**	2	**4**	4
Property taxes	**1**	2	**4**	5
Income (loss) before other gains, interest, and income taxes	**-**	(3)	**4**	2
Other gains	**(380)**	(2)	**(383)**	(2)
Income (loss) before interest and income taxes	**380**	(1)	**387**	4

Segment earnings increased by $381 million and $383 million for the three and six month periods ended June 30, 2017, compared to the same periods in 2016, respectively. The increase in earnings mainly reflected the gain on sale of OPG's head office premises and associated parking facility recorded during the second quarter of 2017, as further discussed in the section, *Highlights* under the heading, *Recent Developments – Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties*.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies, to undertake major projects, to fund long-term obligations such as contributions to the pension fund and the Nuclear Segregated Funds, to make payments under the OPEB plans, to fund expenditures on Nuclear Liabilities not reimbursable from the Nuclear Segregated Funds, and to service and repay long-term debt.

Changes in cash and cash equivalents for the three and six month periods ended June 30 are as follows:

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Cash and cash equivalents, beginning of period	**220**	540	**186**	464
Cash flow provided by operating activities	**143**	348	**261**	714
Cash flow provided by (used in) investing activities	**58**	(586)	**(305)**	(896)
Cash flow (used in) provided by financing activities	**(179)**	(7)	**100**	13
Net increase (decrease)	**22**	(245)	**56**	(169)
Cash and cash equivalents, end of period	**242**	295	**242**	295

For a discussion of cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details in the section, *Highlights* under the heading, *Overview of Results*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to

increase the generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow provided by investing activities during the second quarter of 2017 was $58 million, compared to cash flow used of $586 million for the same period in 2016. Cash flow used in investing activities decreased by $591 million for the six months ended June 30, 2017, compared to the same period in 2016. The decrease in cash flow used in investing activities during these periods was primarily due to the receipt of proceeds from the sale of OPG's head office premises and associated parking facility in the second quarter of 2017 and the acquisition of nine million common shares of Hydro One Limited (Hydro One) in the second quarter of 2016, partially offset by higher expenditures on the Darlington Refurbishment project in 2017. OPG acquired the Hydro One shares for investment purposes, to mitigate the risk of future price volatility related to the Company's future share delivery obligations under the collective agreements with the Power Workers' Union and The Society of Energy Professionals.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG renewed and extended the expiry date of both tranches from May 2021 to May 2022. There were no amounts outstanding under the bank credit facility as at June 30, 2017.

There was no commercial paper outstanding under OPG's commercial paper program as at June 30, 2017.

As at June 30, 2017, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $462 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at June 30, 2017, a total of $387 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $37 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust, expiring on November 30, 2018. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. As at June 30, 2017, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

As at June 30, 2017, Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. In the third quarter of 2017, OPG expects to extend the maturity of the $300 million tranche to August 2022, and to reduce the $200 million tranche to $100 million while extending its maturity date to August 2018. As at June 30, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at June 30, 2017.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. As at June 30, 2017, there were outstanding long-term borrowings of $300 million under this credit facility. In August 2017, the credit facility was increased to $2,350 million, which expires in December 2018. [**CONFIRM**]

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent. In June 2017, OPG issued senior notes payable to the OEFC totalling $100 million and maturing in June 2047. The effective interest rate and coupon interest rate of these notes was 3.65 percent.

As at June 30, 2017, OPG's long-term debt outstanding was $5,622 million, including $1,218 million due within one year.

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's unaudited interim consolidated financial position using selected balance sheet data:

(millions of dollars) (unaudited)	As At June 30 2017	As At December 31 2016
Property, plant and equipment - net	**20,510**	19,998
The increase was primarily due to capital expenditures on the Darlington Refurbishment project, partially offset by depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**16,343**	15,984
The increase was primarily due to earnings on the Nuclear Segregated Funds, partially offset by reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Fixed asset removal and nuclear waste management liabilities	**19,876**	19,484
The increase was primarily a result of accretion expense representing the increase in the liabilities due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's interim consolidated financial statements or are recorded in the Company's interim consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies are outlined in Note 3 to the audited consolidated financial statements as at and for the year ended December 31, 2016. A discussion of recent accounting pronouncements and change in accounting estimate are included in Note 2 to OPG's unaudited interim consolidated financial statements as at and for the three and six month periods ended June 30, 2017 under the heading, *Significant Accounting Policies and Estimates*. Disclosure regarding OPG's critical accounting policies is included in OPG's 2016 annual MD&A.

RISK MANAGEMENT

The following provides an update to the discussion of the Company's risks and risk management activities included in OPG's 2016 annual MD&A. As such, the disclosure in this section should be read in conjunction with the *Risk Management* section included in the annual MD&A.

Risks to Achieving Project Excellence

Darlington Refurbishment

During the second quarter of 2017, OPG continued to mitigate and manage risks related to the Darlington Refurbishment project portfolio. Further risk treatment and remediation measures are being developed or implemented for the projects and their upcoming work windows. Several initiatives and plans are also being developed to manage risks associated with reintegration of the refurbished Unit 2 with the other units, which involves coordination between vendors, project teams and station operations.

Risks to Maintaining Financial Strength

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix, and as such, are subject to change as these forecasts are updated.

	2017 [1]	2018	2019
Estimated fuel requirements hedged [2]	75%	74%	70%

[1] Based on actual fuel requirements hedged for the six months ended June 30, 2017 and forecast for the remainder of the year.

[2] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar (USD) relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are denominated in, or tied to, US dollars. To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at June 30, 2017, OPG had one foreign exchange contract outstanding with a notional value of USD $5 million.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio

based on normal market conditions over a set period of time. For the second quarter of 2017, the VaR utilization ranged between $0.1 million and $0.3 million.

Credit

Deterioration in energy markets counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

OPG manages its exposure to suppliers or counterparties by evaluating their financial condition and negotiating appropriate collateral or other forms of security. OPG's credit exposure relating to energy markets transactions as at June 30, 2017 was $362 million, including $347 million with the IESO. Management considers the Company's risk exposure relating to electricity sales through the IESO-administered spot market to be low as the IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market. Of the $15 million remaining exposure as at June 30, 2017, over 95 percent was related to investment grade counterparties.

Ontario's Fair Hydro Plan

OPG's involvement with Ontario's Fair Hydro Plan could have significant financial and reputational impacts on the Company.

The *Ontario Fair Hydro Plan Act, 2017* received Royal Assent on June 1, 2017 and regulations under this Act came into force in June and early July. The regulations clarify aspects of the structure and programs that are required for OPG, appointed as the Financial Services Manager of the Fair Hydro Plan, to refinance a portion of the Global Adjustment through a financing entity. OPG's credit rating and reputation could potentially be adversely impacted by the Fair Hydro Plan, through financial implications to the Company from its involvement with the Fair Hydro Plan and through stakeholder opinions related to this involvement.

Recovery of Pension and OPEB Costs

On May 18, 2017, the OEB issued its report on the guiding principles and the policy for recovery mechanisms of pension and OPEB costs. This report established accrual basis as the default rate-setting method. This outcome reduces OPG's risk related to the recovery of actual pension and OPEB accrual costs and the recovery of the balance in the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Further details can be found in the section, *Highlights* under the heading, *Recent Developments*.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions are summarized below:

	Three Months Ended June 30			
	2017		2016	
(millions of dollars) (unaudited)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**1**	**-**	1	-
Services	**-**	**-**	-	4
Dividends	**2**	**-**	2	-
Province of Ontario				
Decommissioning Fund excess funding [1]	**-**	**45**	-	113
Used Fuel Fund rate of return guarantee and excess funding [1]	**-**	**39**	-	54
Gross revenue charges	**-**	**29**	-	32
ONFA guarantee fee	**-**	**2**	-	2
Other	**-**	**1**	-	-
OEFC				
Gross revenue charges	**-**	**56**	-	53
Interest expense on long-term notes	**-**	**41**	-	43
Income taxes, net of investment tax credits	**-**	**97**	-	52
IESO				
Electricity related revenue	**1,029**	**1**	1,239	5
	1,032	**311**	1,242	358

(millions of dollars) (unaudited)	Six Months Ended June 30			
	2017		2016	
	Revenue	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**5**	**-**	3	-
Services	**1**	**5**	1	9
Dividends	**4**	**-**	2	-
Province of Ontario				
Decommissioning Fund excess funding [1]	**-**	**208**	-	(64)
Used Fuel Fund rate of return guarantee and excess funding [1]	**-**	**256**	-	(105)
Gross revenue charges	**-**	**57**	-	63
ONFA guarantee fee	**-**	**4**	-	4
Other	**-**	**1**	-	-
OEFC				
Gross revenue charges	**-**	**94**	-	90
Interest expense on long-term notes	**-**	**82**	-	85
Income taxes, net of investment tax credits	**-**	**109**	-	84
IESO				
Electricity related revenue	**2,102**	**7**	2,601	15
	2,112	**823**	2,607	181

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at June 30, 2017 and December 31, 2016, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,879 million and $3,415 million, respectively. The details of accounting for the Nuclear Segregated Funds are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars) (unaudited)	June 30 2017	December 31 2016
Receivables from related parties		
Hydro One	**-**	1
IESO	**347**	421
OEFC	**8**	1
PEC	**4**	4
Province of Ontario	**8**	2
Available-for-sale securities		
Hydro One shares	**195**	212
Accounts payable and accrued charges		
OEFC	**66**	61
Province of Ontario	**7**	2
IESO	**2**	2
Long-term debt (including current portion)		
Notes payable to OEFC	**3,385**	3,295

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at June 30, 2017, the Nuclear Segregated Funds held $1,663 million of interest-bearing Province of Ontario bonds, while the registered pension fund had no such holdings. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

There have been no related party transactions related to the Fair Hydro Plan and associated financing activities.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

The Company maintains a comprehensive system of policies, procedures, and processes that represents its framework for internal controls over financial reporting and for its disclosure controls and procedures (together, ICOFR). There were no changes in the Company's internal control system during the current interim period that has or is reasonably likely to have a material impact to the ICOFR.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected financial information from OPG's unaudited interim consolidated financial statements for each of the eight most recently completed quarters.

(millions of dollars - except where noted) *(unaudited)*	**June 30 2017**	**March 31 2017**	**December 31 2016**	**September 30 2016**
Revenue	**1,146**	1,176	1,388	1,400
Net income (loss)	**307**	68	(8)	198
Less: Net income attributable to non-controlling interest	**4**	4	5	4
Net income (loss) attributable to the Shareholder	**303**	64	(13)	194
Per common share, attributable to the Shareholder *(dollars)*	**$1.18**	$0.25	($0.05)	$0.76

(millions of dollars - except where noted) *(unaudited)*	**June 30 2016**	**March 31 2016**	**December 31 2015**	**September 30 2015**
Revenue	1,387	1,478	1,312	1,426
Net income (loss)	135	128	(100)	85
Less: Net income attribute to the non-controlling interest	3	5	1	5
Net income (loss) attributable to the Shareholder	132	123	(101)	80
Per common share, attributable to the Shareholder *(dollars)*	$0.51	$0.48	($0.39)	$0.31

Trends

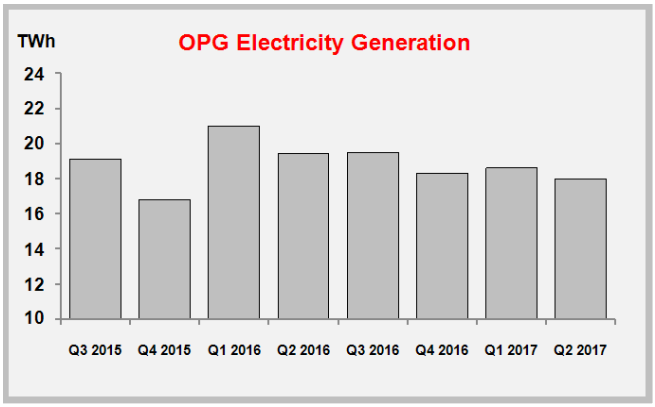
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues have been higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and

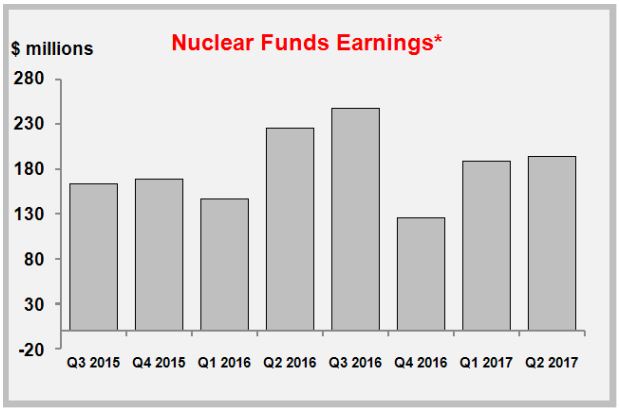
cooling demands. The financial impact of forgone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are mitigated by regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the fourth quarter of 2016 and the first half of 2017, OPG's electricity generation was reduced as a result of the Unit 2 refurbishment outage at the Darlington GS, which began in October 2016 and is expected to continue until early 2020.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items that affected net income in certain quarters above are described in OPG's 2016 annual MD&A under the section, *Quarterly Financial Highlights*.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder, improve cost performance, and ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow provided by operating activities, or any other measure in accordance with US GAAP, but as indicators of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) **ROE Excluding AOCI** is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE Excluding AOCI is measured over a 12-month period and is calculated as follows:

	Twelve Months Ended	
(millions of dollars – except where noted) (unaudited)	**June 30 2017**	**December 31 2016**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**548**	436
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,894**	10,442
ROE Excluding AOCI *(percent)*	**5.0**	4.2

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended June 30 2017	Twelve Months Ended December 31 2016
FFO before interest		
Cash flow provided by operating activities	**1,252**	1,705
Add: Interest paid	**267**	269
Less: Interest capitalized to fixed and intangible assets	**(158)**	(141)
Less: Changes to non-cash working capital balances	**(36)**	(68)
FFO before interest	**1,325**	1,765
Adjusted interest expense		
Net interest expense	**91**	120
Add: Interest income	**5**	7
Add: Interest capitalized to fixed and intangible assets	**158**	141
Add: Interest related to regulatory assets and liabilities	**41**	30
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets [1]	**-**	45
Adjusted interest expense	**295**	343
FFO Adjusted Interest Coverage *(times)*	**4.5**	5.1

[1] A value of nil is used in the calculation when interest on pension and OPEB projected benefit obligations is lower than expected return on pension plan assets.

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding the Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation from OPG-operated generating stations plus electricity generation forgone due to SBG conditions during the period.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**	**2017**	**2016**
Enterprise TGC				
Total OM&A expenses	**711**	709	**1,419**	1,395
Total fuel expense	**178**	182	**333**	354
Total capital expenditures	**451**	398	**859**	718
Less: Darlington Refurbishment capital and OM&A costs	**(306)**	(243)	**(615)**	(448)
Less: Other generation development project capital and OM&A costs	**(19)**	(41)	**(36)**	(79)
(Less) Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(12)**	23	**(23)**	41
Less: Nuclear fuel expense for non OPG-operated stations	**(16)**	(15)	**(29)**	(32)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**23**	15	**34**	33
Less: OM&A expenses ancillary to electricity generation business	**(4)**	(7)	**(9)**	(12)
Other adjustments	**(2)**	2	**(4)**	(3)
	1,004	1,023	**1,929**	1,967
Adjusted electricity generation *(TWh)*				
Total OPG electricity generation	**18.0**	19.4	**36.6**	40.4
Adjust for electricity generation forgone due to SBG conditions and OPG's share of electricity generation from co-owned facilities	**2.6**	1.7	**3.3**	3.3
	20.6	21.1	**39.9**	43.7
Enterprise TGC per MWh *($/MWh)* [1]	**48.72**	48.48	**48.35**	45.01

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

(millions of dollars – except where noted) (unaudited)	**Three Months Ended June 30**		**Six Months Ended June 30**	
	2017	**2016**	**2017**	**2016**
Nuclear TGC				
Regulated – Nuclear Generation OM&A expenses	**593**	581	**1,182**	1,144
Regulated – Nuclear Generation fuel expense	**68**	79	**136**	160
Regulated – Nuclear Generation capital expenditures	**375**	308	**741**	557
Less: Darlington Refurbishment capital and OM&A costs	**(306)**	(243)	**(615)**	(448)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**3**	29	**1**	53
Less: Nuclear fuel expense for non OPG-operated stations	**(16)**	(15)	**(29)**	(32)
Less: Regulated - Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(1)**	(2)	**(2)**	(3)
Other adjustments	**(2)**	(3)	**(2)**	(4)
	714	734	**1,412**	1,427
Nuclear electricity generation (TWh)	**9.3**	10.6	**19.3**	22.9
Nuclear TGC per MWh (*$/MWh*) [1]	**76.87**	69.25	**73.24**	62.44

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation forgone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**	**2017**	**2016**
Hydroelectric TGC				
Regulated – Hydroelectric OM&A expenses	**75**	75	**151**	151
Regulated – Hydroelectric fuel expense	**97**	92	**170**	171
Contracted Generation Portfolio OM&A expenses	**40**	45	**79**	85
Contracted Generation Portfolio fuel expense	**13**	11	**27**	23
Regulated – Hydroelectric and Contracted Generation Portfolio capital expenditures	**48**	80	**85**	139
Less: Regulated – Hydroelectric and Contracted Generation Portfolio generation development project capital and OM&A costs	**(19)**	(39)	**(35)**	(76)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(41)**	(38)	**(80)**	(75)
Less: Regulated – Hydroelectric OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(15)**	(5)	**(24)**	(12)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**23**	15	**34**	33
Other adjustments	**2**	(2)	**1**	-
	223	234	**408**	439
Adjusted hydroelectric electricity generation *(TWh)*				
Regulated – Hydroelectric electricity generation	**8.2**	8.0	**16.2**	15.9
Contracted Generation Portfolio electricity generation	**0.5**	0.8	**1.1**	1.6
Adjust for hydroelectric electricity generation forgone due to SBG conditions and non-hydroelectric electricity generation of the Contracted Generation Portfolio, including OPG's share of electricity generation from co-owned facilities	**2.6**	1.7	**3.3**	3.3
	11.3	10.5	**20.6**	20.8
Hydroelectric TGC per MWh *($/MWh)* [1]	**19.83**	22.14	**19.81**	21.08

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense.

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ONTARIO POWER GENERATION

News
from Ontario Power Generation

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[DRAFT]

Aug. 11, 2017

OPG REPORTS 2017 SECOND QUARTER FINANCIAL RESULTS

Company Reports Strong Performance at Pickering Nuclear Plant While Continuing to Safely Execute Darlington Refurbishment Project

Toronto: – Ontario Power Generation Inc. (OPG or Company) today reported net income attributable to the Shareholder of $303 million for the second quarter of 2017, compared to $132 million for the same period in 2016.

"Our Pickering Nuclear plant continues to demonstrate strong performance this year," said Jeff Lyash, OPG President and CEO. "We're executing outages as planned and generating units are producing the clean electricity Ontario homes and businesses rely on. So far this year, our Pickering plant has produced 1.2 terawatt hours more than last year."

Lyash went on to say, "We're also having strong success with the Darlington Refurbishment Project, which continues to progress on schedule and on budget."

The second quarter's results, year-over-year, were impacted by the expected decline in generation revenue, reflecting lower nuclear electricity generation due to the refurbishment outage for Unit 2 at the Darlington Generating Station (GS) without the resetting of base regulated prices. The sale of OPG's head office premises and associated parking facility, and the associated one-time gain, offset the earnings impact of the refurbishment outage and was the main driver of the increase in net income for the second quarter of 2017.

OPG provides electricity at a price that is 40 per cent less than other generators and is the only electricity generator in Ontario that has its prices set through a public hearing process by the Ontario Energy Board (OEB). In April 2017, OPG completed the public hearing for its current application with the OEB that will set prices for the Company's nuclear and most of its hydroelectric generation for the next five years, with a proposed effective date of January 1, 2017. Final arguments on the application were completed in June 2017, and the OEB is expected to make a decision on the rate application later in the year. In the meantime, OPG is operating under base regulated prices that were set in 2014 and do not reflect reduced nuclear electricity generation, which is primarily due to the Darlington Refurbishment. The continuation of these prices has negatively affected revenue and net income in the second quarter of 2017. The outcome of the current rate application and the effective date of the new regulated prices are expected to affect OPG's revenue and net income in the second half of 2017.

Generating and Operating Performance

Electricity generated during the three months ended June 30, 2017 was 18.0 terawatt hours (TWh) compared to 19.4 TWh for the same quarter in 2016. Total electricity generated during the six months ended June 30, 2017 decreased to 36.6 TWh from 40.4 TWh for the same period in 2016.

Regulated – Nuclear Generation Segment

Lower nuclear generation was primarily due to the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment that began in October 2016 and is expected to continue until early 2020. Partially offsetting the reduction in generation from the Darlington GS was an increase in generation of 0.9 TWh and 1.2 TWh from the strong performance of the Pickering GS during the three and six month periods ended June 30, 2017, respectively.

For the three months ended June 30, 2017, the unit capability factor at the Darlington GS was 64.6 per cent compared to 75.9 per cent for the same quarter in 2016. For the six months ended June 30, 2017, the unit capability factor at the Darlington GS for operating units was 74.9 per cent, compared to 86.6 per cent for the same period in 2016. The decrease was primarily a result of a higher number of planned and unplanned outage days at the station in the second quarter of 2017, and a higher number of planned outage days in the first half of 2017 largely driven by constraints related to the transition of the station toward refurbishment.

At the Pickering GS, the unit capability factor increased to 84.2 per cent and 81.4 per cent for the three and six month periods ended June 30, 2017, compared to 71.4 and 72.1 per cent for the same periods in 2016, respectively, primarily due to favourable unit conditions and execution of planned outage work resulting in a lower number of planned outage days at the station in 2017.

Regulated – Hydroelectric Segment

Higher regulated hydroelectric generation due to higher water flows, primarily on the eastern Ontario river systems, partially offset the reduction in nuclear electricity generation. The availability of 90.1 per cent at OPG's regulated hydroelectric generating stations in the second quarter of 2017 was comparable to 90.4 per cent for the same quarter in 2016. For the six months ended June 30, 2017, the availability of the regulated hydroelectric generating stations decreased to 89.8 per cent, from 92.6 per cent for the same period in 2016. The decrease in the availability was primarily due to a higher number of unplanned outage days.

Contracted Generation Portfolio Segment

Lower generation from the Contracted Generation Portfolio contributed to the decrease in total electricity generation, mainly due to lower generation from the segment's hydroelectric plants.

For the contracted hydroelectric stations, the availability for the three months ended June 30, 2017 was 81.4 per cent compared to 87.0 per cent for the same quarter in 2017. The availability for the six months ended June 30, 2017 was 82.5 per cent

compared to 85.5 per cent for the same period in 2016. The decrease in the availability was primarily due to an increase in the number of unplanned outage days.

Total Generating Cost

The Enterprise Total Generating Cost per megawatt hour (MWh) for the three months ended June 30, 2017 was $48.72, compared to $48.48 for the same quarter in 2016. The marginal increase was mainly due to the expected reduction in nuclear electricity generation due to the Unit 2 refurbishment outage at the Darlington GS and higher sustaining capital expenditures, largely offset by higher adjusted hydroelectric electricity generation, adjusted for surplus baseload generation, reflecting higher water flows and lower OM&A expenses before the impact of regulatory variance and deferral accounts. The Enterprise Total Generating Cost per MWh for the six months ended June 30, 2017 was $48.35, compared to $45.01 for the same period in 2016. The increase was expected and mainly a result of lower electricity generation due to the Unit 2 refurbishment outage at the Darlington GS and higher sustaining capital expenditures, partially offset by lower OM&A expenses before the impact of regulatory variance and deferral accounts.

If Unit 2 at the Darlington GS was not currently undergoing refurbishment and had continued to operate in a manner consistent with the performance of the remaining units at the Darlington GS and adjusting for generation constraints on the remaining units related to the transition of the station toward refurbishment, the Enterprise TGC would have been approximately $3 to $4 per MWh lower for the three and six months ended June 30, 2017. This sensitivity was calculated using the estimated incremental electricity that would have been generated under these circumstances and the associated estimated fuel cost that would have been incurred.

Generation Development

OPG is undertaking a number of generation development and life extension projects in support of Ontario's electricity planning initiatives. Significant developments during the second quarter of 2017 were as follows:

Darlington Refurbishment

The Darlington Refurbishment project is expected to extend the operating life of the station by approximately 30 years. In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016 and de-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017. Islanding of Unit 2, the physical separation of the unit under refurbishment from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project.

Preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening of the reactor air lock doors and installation of shielding, was completed in the second quarter of 2017 as part of the second segment of the project. The setup of specialized tooling and equipment needed for the removal and replacement of the reactor components is in progress. The Re-tube Tooling Platform, which will host the tooling for the removal, inspection, and installation activities, was

completed in July 2017, and the disassembly of reactor components commenced immediately thereafter. **[MONITOR]** The overall project continues to track on schedule and budget. Unit 2 is scheduled to be returned to service, after a 40-month refurbishment outage, in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the overall project. Life-to-date capital expenditures were approximately $3.8 billion as at June 30, 2017.

In addition to the execution of refurbishment activities for Unit 2, OPG is continuing planning activities for the refurbishment of the second unit, Unit 3, and is entering into associated commitments to procure major components that require long lead times. As of June 30, 2017, $51 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Ranney Falls Hydroelectric GS

In the second quarter of 2017, OPG continued construction work of a 10 MW single-unit powerhouse on the existing Ranney Falls GS site, as part of the Regulated – Hydroelectric segment. The new unit will replace an existing unit that reached its end of life in 2014. Civil engineering design work and site clearing and mobilization have been completed. Construction is progressing to expand the existing forebay and tailrace channels to accommodate the new powerhouse. The project's expected in-service date is in the fourth quarter of 2019, with a budget of $77 million. The project is tracking on schedule and budget.

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands through a partnership between OPG and a subsidiary of the Six Nations of Grand River Development Corporation is planned to commence as early as in the fourth quarter of 2017. During the second quarter of 2017, the partnership continued work to obtain approvals and permits required to enable the commencement of construction, and progressed procurement activities for equipment and for engineering and construction services. The facility is expected to be completed in the first quarter of 2019.

FINANCIAL AND OPERATIONAL HIGHLIGHTS

(millions of dollars – except where noted)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue	**1,146**	1,387	**2,322**	2,865
Fuel expense	**178**	182	**333**	354
Gross margin	**968**	1,205	**1,989**	2,511
Operations, maintenance and administration	**711**	709	**1,419**	1,395
Depreciation and amortization	**172**	316	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**236**	232	**474**	464
Earnings on Nuclear Segregated Funds - (a reduction to expenses)	**(194)**	(225)	**(383)**	(372)
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
Other net (gains) expenses	**(369)**	10	**(361)**	(1)
Income before interest and income taxes	**420**	172	**519**	414
Net interest expense	**16**	31	**35**	64
Income tax expense	**97**	6	**109**	87
Net income	**307**	135	**375**	263
Net income attributable to the Shareholder	**303**	132	**367**	255
Net income attributable to non-controlling interest [1]	**4**	3	**8**	8
Income before interest and income taxes				
Electricity generation business segments	**80**	178	**219**	498
Regulated – Nuclear Waste Management	**(40)**	(5)	**(87)**	(88)
Services, Trading, and Other Non-Generation	**380**	(1)	**387**	4
Total income before interest and income taxes	**420**	172	**519**	414
Cash flow				
Cash flow provided by operating activities	**143**	348	**261**	714
Electricity generation (TWh)				
Regulated – Nuclear Generation	**9.3**	10.6	**19.3**	22.9
Regulated – Hydroelectric	**8.2**	8.0	**16.2**	15.9
Contracted Generation Portfolio [2]	**0.5**	0.8	**1.1**	1.6
Total electricity generation	**18.0**	19.4	**36.6**	40.4
Nuclear unit capability factor (per cent)				
Darlington Nuclear GS	**64.6**	75.9	**74.9**	86.6
Pickering Nuclear GS	**84.2**	71.4	**81.4**	72.1
Availability (per cent)				
Regulated – Hydroelectric	**90.1**	90.4	**89.8**	92.6
Contracted Generation Portfolio – hydroelectric stations	**81.4**	87.0	**82.5**	85.5
Equivalent forced outage rate				
Contracted Generation Portfolio – thermal stations	**2.7**	1.0	**7.8**	1.0
Enterprise Total Generating Cost (TGC) per MWh for the three and six month periods ended June 30, 2017 and June 30, 2016 ($/MWh) [4]	**48.72**	48.48	**48.35**	45.01
Return on Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI) for the twelve months ended June 30, 2017 and December 31, 2016 (%) [4]			**5.0**	4.2
Funds from Operations (FFO) Adjusted Interest Coverage for the twelve months ended June 30, 2017 and December 31, 2016 (times) [4]			**4.5**	5.1

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership, the 33 percent interest of Coral Rapids Power Corporation, a corporation wholly owned by the Taykwa Tagamou Nation, in the PSS Generating Station Limited Partnership, and the 10 percent interest of a corporation wholly owned by the Six Nations of Grand River Development Corporation in the Nanticoke Solar LP.

[2] Includes OPG's share of generation volume from its 50 per cent ownership interests in the Portlands Energy Centre and Brighton Beach GS.

[3] Nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Unit 2 of the Darlington GS is excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

[4] Enterprise TGC per MWh, ROE Excluding AOCI, and FFO Adjusted Interest Coverage are non-GAAP financial measures and do not have any standardized meaning prescribed by US GAAP. Additional information about the non-GAAP measures is provided in OPG's Management's Discussion and Analysis for the three and six months ended June 30, 2017, in the sections *Highlights – FFO Adjusted Interest Coverage*, *Highlights – Return on Common Equity Excluding Accumulated Other Comprehensive Income*, and *Highlights – Enterprise Total Generating Cost per MWh*, as well as *Supplementary Non-GAAP Financial Measures.*

Ontario Power Generation Inc. is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. Our mission is providing low cost power in a safe, clean, reliable and sustainable manner for the benefit of our customers and shareholder.

Ontario Power Generation Inc.'s unaudited interim consolidated financial statements and Management's Discussion and Analysis as at and for the three and six month periods ended June 30, 2017 can be accessed on OPG's web site (www.opg.com), the Canadian Securities Administrators' web site (www.sedar.com), or can be requested from the Company.

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ONTARIO POWER GENERATION INC.

INTERIM CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

JUNE 30, 2017

[DRAFT]

ONTARIO POWER GENERATION

INTERIM CONSOLIDATED STATEMENTS OF INCOME (UNAUDITED)

(millions of dollars except where noted)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue *(Note 12)*	**1,146**	1,387	**2,322**	2,865
Fuel expense *(Note 12)*	**178**	182	**333**	354
Gross margin	**968**	1,205	**1,989**	2,511
Expenses *(Note 12)*				
Operations, maintenance and administration	**711**	709	**1,419**	1,395
Depreciation and amortization	**172**	316	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**236**	232	**474**	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(194)**	(225)	**(383)**	(372)
Property taxes	**11**	11	**22**	23
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
	928	1,034	**1,853**	2,121
Income before other gains, interest and income taxes	**40**	171	**136**	390
Other gains *(Note 12)*	**(380)**	(1)	**(383)**	(24)
Income before interest and income taxes	**420**	172	**519**	414
Net interest expense *(Note 5)*	**16**	31	**35**	64
Income before income taxes	**404**	141	**484**	350
Income tax expense	**97**	6	**109**	87
Net income	**307**	135	**375**	263
Net income attributable to the Shareholder	**303**	132	**367**	255
Net income attributable to non-controlling interest	**4**	3	**8**	8
Basic and diluted net income per common share *(dollars)*	**1.18**	0.51	**1.43**	0.99
Common shares outstanding *(millions)*	**256.3**	256.3	**256.3**	256.3

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (UNAUDITED)

(millions of dollars)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Net income	**307**	135	**375**	263
Other comprehensive income, net of income taxes *(Note 7)*				
Reclassification to income of amounts related to pension and other post-employment benefits [1]	**2**	3	**5**	6
Reclassification to income of losses on derivatives designated as cash flow hedges [2]	**5**	6	**9**	10
Unrealized (loss) gain on available-for-sale securities [3]	**(7)**	15	**(2)**	15
Other comprehensive income for the period	**-**	24	**12**	31
Comprehensive income	**307**	159	**387**	294
Comprehensive income attributable to the Shareholder	**303**	156	**379**	286
Comprehensive income attributable to non-controlling interest	**4**	3	**8**	8

[1] Net of income tax expenses of $1 million for the three months ended June 30, 2017 and 2016. Net of income tax expenses of $2 million for the six months ended June 30, 2017 and 2016.

[2] Net of income tax expense of nil for the three months ended June 30, 2017 and 2016. Net of income tax expenses of $1 million for the six months ended June 30, 2017 and 2016.

[3] Net of income tax recovery of $2 million and income tax expense of $5 million for the three months ended June 30, 2017 and 2016, respectively. Net of income tax recovery of $1 million and income tax expense of $5 million for the six months ended June 30, 2017 and 2016, respectively.

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

Six Months Ended June 30 *(millions of dollars)*	**2017**	**2016**
Operating activities		
Net income	**375**	263
Adjust for non-cash items:		
Depreciation and amortization	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**474**	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(383)**	(372)
Pension and other post-employment benefit costs *(Note 8)*	**226**	233
Deferred income taxes	**16**	(11)
Mark-to-market on derivative instruments	**(3)**	2
Provision for used nuclear fuel and low and intermediate level nuclear waste	**53**	62
Regulatory assets and liabilities	**(73)**	(68)
Provision for materials and supplies	**9**	9
Other gains	**(379)**	(24)
Other	**(9)**	(16)
	645	1,170
Contributions to nuclear fixed asset removal and nuclear waste management funds	**-**	(74)
Expenditures on fixed asset removal and nuclear waste management	**(157)**	(125)
Reimbursement of expenditures on nuclear fixed asset removal and nuclear waste management	**41**	30
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans	**(180)**	(237)
Expenditures on restructuring	**(2)**	(3)
Distributions received from investments subject to significant influence	**23**	30
Net changes to other long-term assets and liabilities	**16**	16
Net changes in non-cash working capital balances *(Note 13)*	**(125)**	(93)
Cash flow provided by operating activities	**261**	714
Investing activities		
Net proceeds from sale of property, plant and equipment	**484**	-
Purchase of available-for-sale securities	**-**	(213)
Proceeds from deposit note *(Note 4)*	**70**	35
Investment in property, plant and equipment and intangible assets	**(859)**	(718)
Cash flow used in investing activities	**(305)**	(896)
Financing activities		
Issuance of long-term debt *(Note 4)*	**300**	-
Repayment of long-term debt	**(212)**	(2)
Contribution from non-controlling interest	**19**	-
Distribution to non-controlling interest	**(7)**	(7)
Issuance of short-term notes	**864**	1,985
Repayment of short-term notes	**(864)**	(1,963)
Cash flow provided by financing activities	**100**	13
Net increase (decrease) in cash and cash equivalents	**56**	(169)
Cash and cash equivalents, beginning of period	**186**	464
Cash and cash equivalents, end of period	**242**	295

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at *(millions of dollars)*	June 30 2017	December 31 2016
Assets		
Current assets		
Cash and cash equivalents	**242**	186
Available-for-sale securities	**195**	212
Receivables from related parties	**367**	429
Nuclear fixed asset removal and nuclear waste management funds	**18**	24
Fuel inventory	**306**	310
Materials and supplies	**94**	100
Prepaid expenses	**218**	198
Other current assets	**102**	298
	1,542	1,757
Property, plant and equipment	**30,049**	29,315
Less: accumulated depreciation	**9,539**	9,317
	20,510	19,998
Intangible assets	**534**	503
Less: accumulated amortization	**418**	404
	116	99
Other assets		
Nuclear fixed asset removal and nuclear waste management funds	**16,325**	15,960
Long-term materials and supplies	**353**	345
Regulatory assets *(Note 3)*	**5,961**	5,855
Investments subject to significant influence *(Note 14)*	**316**	321
Other long-term assets	**32**	37
	22,987	22,518
	45,155	44,372

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at *(millions of dollars)*	June 30 2017	December 31 2016
Liabilities		
Current liabilities		
Accounts payable and accrued charges	**1,021**	1,164
Deferred revenue due within one year	**12**	12
Short-term debt	**-**	2
Long-term debt due within one year *(Note 4)*	**1,218**	1,103
Income taxes payable	**-**	123
	2,251	2,404
Long-term debt *(Note 4)*	**4,390**	4,417
Other liabilities		
Fixed asset removal and nuclear waste management liabilities *(Note 6)*	**19,876**	19,484
Pension liabilities	**2,914**	3,012
Other post-employment benefit liabilities	**2,939**	2,897
Long-term accounts payable and accrued charges	**260**	213
Deferred revenue	**325**	298
Deferred income taxes	**845**	829
Regulatory liabilities *(Note 3)*	**446**	310
	27,605	27,043
Equity		
Common shares [1]	**5,126**	5,126
Retained earnings	**5,903**	5,534
Accumulated other comprehensive loss *(Note 7)*	**(280)**	(295)
Equity attributable to the Shareholder	**10,749**	10,365
Equity attributable to non-controlling interest	**160**	143
Total equity	**10,909**	10,508
	45,155	44,372

[1] 256,300,010 common shares outstanding at a stated value of $5,126 million as at June 30, 2017 and December 31, 2016.

Commitments and Contingencies *(Notes 4, 10 and 11)*

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (UNAUDITED)

Six Months Ended June 30 *(millions of dollars)*	**2017**	**2016**
Common shares	**5,126**	5,126
Retained earnings		
Balance at beginning of period	**5,534**	5,098
Net income attributable to the Shareholder	**367**	255
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**2**	-
Balance at end of period	**5,903**	5,353
Accumulated other comprehensive loss, net of income taxes		
Balance at beginning of period	**(295)**	(319)
Other comprehensive income	**12**	31
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**3**	-
Balance at end of period	**(280)**	(288)
Equity attributable to the Shareholder	**10,749**	10,191
Equity attributable to non-controlling interest		
Balance at beginning of period	**143**	140
Equity contribution from non-controlling interest	**21**	-
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**(5)**	-
Distribution to non-controlling interest	**(7)**	(7)
Income attributable to non-controlling interest	**8**	8
Balance at end of period	**160**	141
Total equity	**10,909**	10,332

See accompanying notes to the interim consolidated financial statements

NOTES TO THE INTERIM CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

For the three and six months ended June 30, 2017 and 2016

1. BASIS OF PRESENTATION

These interim consolidated financial statements for the three and six months ended June 30, 2017 and 2016 include the accounts of Ontario Power Generation Inc. (OPG or the Company) and its subsidiaries. The Company consolidates its interest in entities over which it is able to exercise control and attributes the results to its sole shareholder, the Province of Ontario (Province). Interests owned by other parties are reflected as non-controlling interest. These interim consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP). These interim consolidated financial statements do not contain all of the disclosures required by US GAAP for annual financial statements. Accordingly, they should be read in conjunction with the annual consolidated financial statements of the Company as at and for the year ended December 31, 2016. All dollar amounts are presented in Canadian dollars.

Certain of the 2016 comparative amounts have been reclassified from financial statements previously presented to conform to the 2017 interim consolidated financial statement presentation.

Use of Management Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the interim consolidated financial statements, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefit (OPEB) balances, asset retirement obligations and associated asset retirement costs capitalized as part of property, plant and equipment, income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments and investments in segregated funds, depreciation and amortization expenses, and inventories. Actual results may differ significantly from these estimates.

2. SIGNIFICANT ACCOUNTING POLICIES AND ESTIMATES

Change in Accounting Estimate

Pension and Other Post-Employment Benefits

Effective January 1, 2017, OPG changed the method used to estimate the service and interest cost components of pension and OPEB costs. OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs is estimated at approximately $35 million and $70 million for the three and six month ended June 30, 2017, respectively. Approximately 90 percent of this reduction in pension and OPEB costs was attributed to the Company's regulated business segments and therefore was offset by the impact of regulatory variance and deferral accounts authorized by the Ontario Energy Board (OEB).

Recent Accounting Pronouncements Not Yet Adopted

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

As part of the project to implement the new revenue standard, OPG is continuing to assess the impact of the standard on accounting for the Company's revenue streams and consolidated financial statements. OPG's major revenue streams include regulated generation revenue from base regulated prices and rate riders established by the OEB, as well as revenue from generation assets under long-term contractual arrangements with the Independent Electricity System Operator (IESO). In March 2017, the American Institute of Certified Public Accountants (AICPA) issued Revenue Recognition Implementation Issue #13-1*, Scope Clarification Regarding Tariff Sales to Regulated Customers*. The draft implementation guidance was developed by the AICPA Power & Utilities task force. This draft guidance concludes that tariff-based revenue from the provision of regulated utility service to a utility's customers is within the scope of Topic 606. OPG has completed its analysis of the impact of Topic 606 on its accounting for generation revenue from base regulated prices and has not identified any material differences. The Company continues to work on its assessment of the impact of Topic 606 on its other revenue streams.

The Company currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements and is in the process of concluding on the method of adoption.

Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost

In March 2017, the FASB issued ASU No. 2017-07, *Compensation – Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. Under the new guidance, employers that sponsor defined benefit plans for pensions and/or other postretirement benefits are required to present the service cost component of net periodic benefit cost in the same statement of income line item as other employee compensation costs arising from services rendered during the period. The other components of the net periodic benefit cost are to be presented separately from the line item that includes the service cost and outside of any subtotal of income from operations, if such a subtotal is presented. In addition, the new guidance requires that only the service cost component of net benefit cost be eligible for capitalization.

This guidance is effective for fiscal years beginning after December 15, 2017, including interim periods of those years. The guidance is not expected to have a material impact on OPG's consolidated financial statements, as OPG currently capitalizes only the service cost component of post-retirement benefits costs. Additionally, OPG already includes the service cost component of post-retirement benefit costs with other compensation costs, within the operations, maintenance and administration expenses line item in the consolidated statements of income, and does not show a subtotal of income from operations. As such, the new guidance is not expected to affect the presentation of OPG's consolidated financial statements.

3. REGULATORY ASSETS AND LIABILITIES

The regulatory assets and liabilities recorded as at June 30, 2017 and December 31, 2016 are as follows:

(millions of dollars)	**June 30 2017**	**December 31 2016**
Regulatory assets		
Variance and deferral accounts authorized by the Ontario Energy Board		
Pension and OPEB Cost Variance Account	**716**	716
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 8)*	**533**	497
Hydroelectric Surplus Baseload Generation Variance Account	**299**	210
Bruce Lease Net Revenues Variance Account	**123**	95
Other variance and deferral accounts	**128**	107
	1,799	1,625
Pension and OPEB Regulatory Asset *(Note 8)*	**3,304**	3,392
Deferred Income Taxes	**858**	838
Total regulatory assets	**5,961**	5,855
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Hydroelectric Water Conditions Variance Account	**119**	51
Impact Resulting from Changes in Station End-of-Life Dates Deferral Account	**106**	71
Other variance and deferral accounts	**221**	188
Total regulatory liabilities	**446**	310

OPG's May 2016 application with the OEB for new regulated prices included a request for new rate riders to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, and the portion of these balances previously approved for recovery or repayment for through rate riders previously in effect. The application also requested the continuation of all applicable existing variance and deferral accounts. In March 2017, the OEB approved a settlement agreement reached by OPG and intervenors on a limited set of issues in the application (Settlement Agreement). Among the settled issues, the agreement provided for the continuation of all applicable existing variance and deferral accounts and accepted a number of variance and deferral account balances for recovery, as requested in OPG's application. The periods of recovery or repayment for the accepted variance and deferral account balances are excluded from the scope of the Settlement Agreement. The Settlement Agreement did not impact OPG's financial results for the three and six months ended June 30, 2017. The OEB's decision on OPG's application will be issued following final arguments, which were completed in the second quarter of 2017.

As at June 30, 2017 and December 31, 2016, regulatory assets for other variance and deferral accounts included amounts for the Nuclear Deferral and Variance Over/Under Recovery Variance Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Liability Deferral Account, the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account, and the Nuclear Development Variance Account. As at June 30, 2017 and December 31, 2016, regulatory liabilities for other variance and deferral accounts included the amounts for the Pension & OPEB Cash Payment Variance Account, the Capacity Refurbishment Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account.

4. LONG-TERM DEBT

Long-term debt consists of the following:

(millions of dollars)	**June 30 2017**	**December 31 2016**
Notes payable to the Ontario Electricity Financial Corporation	**3,385**	3,295
UMH Energy Partnership	**182**	184
PSS Generating Station Limited Partnership	**245**	245
Lower Mattagami Energy Limited Partnership	**1,795**	1,795
Other	**15**	15
	5,622	5,534
Less: bond issuance fees	**(14)**	(14)
Less: due within one year	**(1,218)**	(1,103)
Long-term debt	**4,390**	4,417

In the fourth quarter of 2015, PSS Generating Station Limited Partnership (PSS), a subsidiary of OPG, issued long-term debt totalling $245 million in support of the Peter Sutherland Sr. Generating Station (GS) project. The majority of the debt proceeds, totalling $180 million, were invested in a structured deposit note with staggered maturity dates ranging from January 2016 to April 2017. As at June 2017, the deposit note balance of nil (December 31, 2016 - $70 million) was reported in Other current assets on the consolidated balance sheets.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the Ontario Electricity Financial Corporation (OEFC), which expires on December 31, 2017. In August 2017, the credit facility was increased to $2,350 million, which expires in December 2018.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent. In June 2017, OPG issued senior notes payable to the OEFC totalling $100 million and maturing in June 2047. The effective interest rate and coupon interest rate of these notes was 3.65 percent.

5. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG renewed and extended the expiry date of both tranches from May 2021 to May 2022. As at June 30, 2017, there were no amounts outstanding under the bank credit facility. There was no commercial paper outstanding under OPG's commercial paper program as at June 30, 2017.

As at June 30, 2017, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at June 30, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at June 30, 2017.

As at June 30, 2017, OPG maintained $25 million of short-term, uncommitted overdraft facilities and $462 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at June 30, 2017, a total of $387 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $37 million for general corporate purposes, and $1 million related to the operation of the Portlands Energy Centre (PEC).

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million, expiring on November 30, 2018. As at June 30, 2017, there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

UMH Energy Partnership has entered into an $8 million short-term, uncommitted overdraft facility and $16 million of irrevocable, standby Letters of Credit facilities in support of its operations. As at June 30, 2017, total Letters of Credit of $14 million had been issued under these facilities.

The following table summarizes the net interest expense:

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars)	**2017**	**2016**	**2017**	**2016**
Interest on long-term debt	**71**	72	**141**	144
Interest on short-term debt	**2**	1	**2**	2
Interest income	**(2)**	(2)	**(2)**	(4)
Interest capitalized to property, plant and equipment and intangible assets	**(40)**	(34)	**(82)**	(65)
Interest related to regulatory assets and liabilities [1]	**(15)**	(6)	**(24)**	(13)
Net interest expense	**16**	31	**35**	64

[1] Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Bruce Lease Net Revenues Variance Account, the Capacity Refurbishment Variance Account, and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

6. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES

The liabilities for fixed asset removal and nuclear waste management on a present value basis as at June 30, 2017 and December 31, 2016 consist of the following:

(millions of dollars)	**June 30 2017**	**December 31 2016**
Liability for nuclear used fuel management	**11,554**	11,292
Liability for nuclear decommissioning and nuclear low and intermediate level waste management	**7,944**	7,811
Liability for non-nuclear fixed asset removal	**378**	381
Fixed asset removal and nuclear waste management liabilities	**19,876**	19,484

7. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of accumulated other comprehensive loss (AOCL), are as follows:

	Six Months Ended June 30, 2017			
(millions of dollars)	**Unrealized Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities [1]**	**Total [1]**
AOCL, beginning of period	**(87)**	**(207)**	**(1)**	**(295)**
Unrealized loss on available-for-sale securities	**-**	**-**	**(2)**	**(2)**
Amounts reclassified from AOCL	**9**	**5**	**-**	**14**
Other comprehensive income for the period	**9**	**5**	**(2)**	**12**
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**3**	**-**	**-**	**3**
AOCL, end of period	**(75)**	**(202)**	**(3)**	**(280)**

[1] All amounts are net of income taxes.

	Six Months Ended June 30, 2016			
(millions of dollars)	**Unrealized Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities [1]**	**Total [1]**
AOCL, beginning of period	(106)	(213)	-	(319)
Unrealized gain on available-for-sale securities	-	-	15	15
Amounts reclassified from AOCL	10	6	-	16
Other comprehensive income for the period	10	6	15	31
AOCL, end of period	(96)	(207)	15	(288)

[1] All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the three and six months ended June 30, 2017 are as follows:

	Amount Reclassified from AOCL		
(millions of dollars)	**Three Months Ended June 30, 2017**	**Six Months Ended June 30, 2017**	**Statement of Income Line Item**
Amortization of losses from cash flow hedges			
Losses	**5**	**10**	Net interest expense
Income tax recovery	**-**	**(1)**	Income tax expense
	5	**9**	
Amortization of amounts related to pension and OPEB			
Actuarial losses	**3**	**7**	See (1) below
Income tax recovery	**(1)**	**(2)**	Income tax expense
	2	**5**	
Total reclassifications for the period	**7**	**14**	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 8 for additional details).

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the three and six months ended June 30, 2016 are as follows:

(millions of dollars)	Amount Reclassified from AOCL Three Months Ended June 30, 2016	Six Months Ended June 30, 2016	Statement of Income Line Item
Amortization of losses from cash flow hedges			
Losses	6	11	Net interest expense
Income tax recovery	-	(1)	Income tax expense
	6	10	
Amortization of amounts related to pension and OPEB			
Actuarial losses	4	8	See (1) below
Income tax recovery	(1)	(2)	Income tax expense
	3	6	
Total reclassifications for the period	9	16	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 8 for additional details).

8. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

OPG's pension and OPEB costs for the three months ended June 30, 2017 and 2016 are as follows:

(millions of dollars)	Registered Pension Plans 2017	Registered Pension Plans 2016	Supplementary Pension Plans 2017	Supplementary Pension Plans 2016	OPEB 2017	OPEB 2016
Components of Cost Recognized for the period						
Current service costs	**69**	69	**2**	1	**17**	17
Interest on projected benefit obligation	**136**	159	**3**	3	**27**	33
Expected return on plan assets, net of expenses	**(192)**	(184)	**-**	-	**-**	-
Amortization of net actuarial loss [1]	**46**	48	**1**	1	**-**	5
Cost recognized [2]	**59**	92	**6**	5	**44**	55

[1] The amortization of net actuarial loss is recognized as an increase to other comprehensive income. This increase for the three months ended June 30, 2017 was partially offset by a decrease in the Pension and OPEB Regulatory Asset of $44 million (three months ended June 30, 2016 – $50 million).

[2] These pension and OPEB costs for the three months ended June 30, 2017 exclude the net addition of costs of $4 million from the recognition of changes in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account (three months ended June 30, 2016 – net reduction of costs of $36 million).

OPG's pension and OPEB costs for the six months ended June 30, 2017 and 2016 are as follows:

(millions of dollars)	Registered Pension Plans 2017	Registered Pension Plans 2016	Supplementary Pension Plans 2017	Supplementary Pension Plans 2016	OPEB 2017	OPEB 2016
Components of Cost Recognized						
Current service costs	**137**	138	**3**	3	**34**	34
Interest on projected benefit obligation	**273**	317	**6**	6	**54**	66
Expected return on plan assets, net of expenses	**(383)**	(367)	**-**	-	**-**	-
Amortization of net actuarial loss [1]	**92**	96	**3**	2	**-**	10
Cost recognized [2]	**119**	184	**12**	11	**88**	110

[1] The amortization of net actuarial loss is recognized as an increase to other comprehensive income. This increase for the six months ended June 30, 2017 was partially offset by a decrease in the Pension and OPEB Regulatory Asset of $88 million (six months ended June 30, 2016 – $100 million).

[2] These pension and OPEB costs for the six months ended June 30, 2017 exclude the net addition of costs of $7 million from the recognition of changes in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account (six months ended June 30, 2016 - net reduction of costs of $72 million).

9. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect the Company's assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/United States (US) foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are denominated in, or tied to, US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the IESO administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at June 30, 2017 was less than $1 million. OPG's fair value derivatives totalled a net liability of $13 million as at June 30, 2017 (December 31, 2016 – $24 million).

Existing pre-tax net losses of $20 million deferred in AOCL as at June 30, 2017 are expected to be reclassified to net income within the next 12 months.

10. FAIR VALUE MEASUREMENTS

The fair value of financial instruments traded in active markets is based on quoted market prices at the interim consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments. The fair value hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the interim consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Certain alternative investments are measured at fair value by their investment managers using net asset value (NAV). Investments measured at NAV as a practical expedient for determining their fair value are excluded from the fair value hierarchy.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The following is a summary of OPG's financial instruments and their fair value as at June 30, 2017 and December 31, 2016:

	Fair Value		Carrying Value [1]		
(millions of dollars)	**2017**	**2016**	**2017**	**2016**	**Balance Sheet Line Item**
Nuclear Segregated Funds (includes current portion) [2]	**16,343**	15,984	**16,343**	15,984	Nuclear fixed asset removal and nuclear waste management funds
Investment in Hydro One shares	**195**	212	**195**	212	Available-for-sale securities
Payable related to cash flow hedges	**(44)**	(48)	**(44)**	(48)	Long-term accounts payable and accrued charges
Long-term debt (includes current portion)	**(6,194)**	(6,033)	**(5,608)**	(5,520)	Long-term debt
Other financial instruments	**(8)**	(18)	**(8)**	(18)	Various

[1] The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other current assets, short-term debt, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

[2] The Nuclear Segregated Funds are comprised of the Decommissioning Segregated Fund and the Used Fuel Segregated Fund.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs.

The following tables present financial assets and financial liabilities measured at fair value in accordance with the fair value hierarchy as at June 30, 2017 and December 31, 2016:

	June 30, 2017			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**5,704**	**4,612**	**-**	**10,316**
Investments measured at NAV [1]				**1,223**
				11,539
Due to Province				**(2,194)**
Used Fuel Segregated Fund, net				**9,345**
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**4,264**	**3,407**	**-**	**7,671**
Investments measured at NAV [1]				**1,012**
				8,683
Due to Province				**(1,685)**
Decommissioning Segregated Fund, net				**6,998**
Investment in available-for-sale securities [2]	**195**	**-**	**-**	**195**
Other financial assets	**6**	**6**	**9**	**21**
Liabilities				
Other financial liabilities	**(21)**	**(8)**	**-**	**(29)**

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

[2] In the second quarter of 2017, approximately 622,000 of Hydro One Inc. shares held as available-for-sale securities were distributed to eligible employees represented by the Power Workers' Union under the terms of the of the collective bargaining agreement reached in 2015. On the day of transfer, the closing price was $24.25 per share.

(millions of dollars)	Level 1	December 31, 2016 Level 2	Level 3	Total
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	5,602	4,394	-	9,996
Investments measured at NAV [1]				1,086
				11,082
Due to Province				(1,938)
Used Fuel Segregated Fund, net				9,144
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	4,171	3,243	-	7,414
Investments measured at NAV [1]				903
				8,317
Due to Province				(1,477)
Decommissioning Segregated Fund, net				6,840
Investment in available-for-sale securities	212	-	-	212
Other financial assets	6	2	9	17
Liabilities				
Other financial liabilities	(29)	(6)	-	(35)

1 Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

During the six months ended June 30, 2017, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3 for the three months ended June 30, 2017:

(millions of dollars)	Other financial instruments
Opening balance, April 1, 2017	**7**
Realized losses included in revenue	**(2)**
Purchases	**4**
Closing balance, June 30, 2017	**9**

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3 for the six months ended June 30, 2017:

(millions of dollars)	Other financial instruments
Opening balance, January 1, 2017	**9**
Unrealized losses included in revenue	**(2)**
Realized losses included in revenue	**(3)**
Purchases	**5**
Closing balance, June 30, 2017	**9**

Nuclear Segregated Funds

The fair value of the investments within the Nuclear Segregated Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value. Alternative investments are measured at fair value using NAV as a practical expedient.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Segregated Funds that are reported on the basis of NAV as at June 30, 2017:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Alternative Investments				
Infrastructure	**1,275**	**806**	**n/a**	**n/a**
Real Estate	**882**	**478**	**n/a**	**n/a**
Agriculture	**78**	**115**	**n/a**	**n/a**
Pooled Funds				
Short-term Investments	**17**	**n/a**	**Daily**	**1 - 5 Days**
Fixed Income	**540**	**n/a**	**Daily**	**1 - 5 Days**
Equity	**850**	**n/a**	**Daily**	**1 - 5 Days**
Total	**3,642**	**1,399**		

The fair value of the pooled funds is classified as Level 2. Infrastructure, real estate and agriculture investments are measured using NAV as a practical expedient for determining their fair value.

Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

Real Estate

This class includes investments in institutional-grade real estate property. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests to another party, as stipulated in the partnership agreement. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements.

Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations, and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally managed portfolios. The fair value of the investments in this class has been estimated using NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

11. COMMITMENTS AND CONTINGENCIES

Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power L.P. (Bruce Power) by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered in accordance with an extension of the original June 30, 2017 delivery deadline set out in the timetable.

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at June 30, 2017, the total amount of guarantees OPG provided to these entities was $83 million (December 31, 2016 − $83 million). OPG may terminate some of these guarantees

within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at June 30, 2017, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at June 30, 2017 are as follows:

(millions of dollars)	**2017** [1]	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Fuel supply agreements	99	169	96	76	62	103	605
Contributions to the OPG registered pension plan [2]	122	251	-	-	-	-	373
Long-term debt repayment	891	398	368	663	413	2,889	5,622
Interest on long-term debt	124	207	189	167	138	2,545	3,370
Commitments related to Darlington Refurbishment [3]	506	-	-	-	-	-	506
Commitments related to Peter Sutherland Sr. GS project	29	-	-	-	-	-	29
Commitments related to Ranney Falls GS project	14	21	4	-	-	-	39
Operating licences	20	40	41	24	28	115	268
Operating lease obligations	14	27	25	25	23	93	207
Unconditional purchase obligations	31	59	58	56	5	-	209
Accounts payable and accrued charges	730	8	8	-	-	17	763
Other	44	38	26	2	1	65	176
Total	2,624	1,218	815	1,013	670	5,827	12,167

[1] Represents amounts for the remainder of the year.

[2] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[3] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

12. BUSINESS SEGMENTS

Segment (Loss) Income for the Three Months Ended June 30, 2017 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	**609**	**30**	**379**	**147**	**10**	**(29)**	**1,146**
Fuel expense	**68**	**-**	**97**	**13**	**-**	**-**	**178**
Gross margin	**541**	**30**	**282**	**134**	**10**	**(29)**	**968**
Operations, maintenance and administration	**593**	**32**	**75**	**40**	**-**	**(29)**	**711**
Depreciation and amortization	**110**	**-**	**35**	**20**	**7**	**-**	**172**
Accretion on fixed asset removal and nuclear waste management liabilities	**-**	**232**	**-**	**2**	**2**	**-**	**236**
Earnings on nuclear fixed asset removal and nuclear waste management funds	**-**	**(194)**	**-**	**-**	**-**	**-**	**(194)**
Property taxes	**7**	**-**	**-**	**3**	**1**	**-**	**11**
Income from investments subject to significant influence	**-**	**-**	**-**	**(8)**	**-**	**-**	**(8)**
Other gains	**-**	**-**	**-**	**-**	**(380)**	**-**	**(380)**
(Loss) income before interest and income taxes	**(169)**	**(40)**	**172**	**77**	**380**	**-**	**420**

Segment (Loss) Income for the Three Months Ended June 30, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	820	32	413	137	16	(31)	1,387
Fuel expense	79	-	92	11	-	-	182
Gross margin	741	32	321	126	16	(31)	1,205
Operations, maintenance and administration	581	34	75	45	5	(31)	709
Depreciation and amortization	231	-	57	18	10	-	316
Accretion on fixed asset removal and nuclear waste management liabilities	-	228	-	2	2	-	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(225)	-	-	-	-	(225)
Property taxes	6	-	-	3	2	-	11
Income from investments subject to significant influence	-	-	-	(9)	-	-	(9)
Other (gains) losses	(1)	-	2	-	(2)	-	(1)
(Loss) income before interest and income taxes	(76)	(5)	187	67	(1)	-	172

Segment (Loss) Income for the Six Months Ended June 30, 2017 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	**1,261**	**57**	**742**	**290**	**27**	**(55)**	**2,322**
Fuel expense	**136**	**-**	**170**	**27**	**-**	**-**	**333**
Gross margin	**1,125**	**57**	**572**	**263**	**27**	**(55)**	**1,989**
Operations, maintenance and administration	**1,182**	**61**	**151**	**79**	**1**	**(55)**	**1,419**
Depreciation and amortization	**217**	**-**	**69**	**39**	**14**	**-**	**339**
Accretion on fixed asset removal and nuclear waste management liabilities	**-**	**466**	**-**	**4**	**4**	**-**	**474**
Earnings on nuclear fixed asset removal and nuclear waste management funds	**-**	**(383)**	**-**	**-**	**-**	**-**	**(383)**
Property taxes	**13**	**-**	**-**	**5**	**4**	**-**	**22**
Income from investments subject to significant influence	**-**	**-**	**-**	**(18)**	**-**	**-**	**(18)**
Other gains	**-**	**-**	**-**	**-**	**(383)**	**-**	**(383)**
(Loss) income before interest and income taxes	**(287)**	**(87)**	**352**	**154**	**387**	**-**	**519**

Segment (Loss) Income for the Six Months Ended June 30, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	1,746	66	798	282	37	(64)	2,865
Fuel expense	160	-	171	23	-	-	354
Gross margin	1,586	66	627	259	37	(64)	2,511
Operations, maintenance and administration	1,144	70	151	85	9	(64)	1,395
Depreciation and amortization	461	-	113	37	17	-	628
Accretion on fixed asset removal and nuclear waste management liabilities	-	456	-	4	4	-	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(372)	-	-	-	-	(372)
Property taxes	13	-	-	5	5	-	23
Income from investments subject to significant influence	-	-	-	(17)	-	-	(17)
Other gains	(2)	-	(20)	-	(2)	-	(24)
(Loss) income before interest and income taxes	(30)	(88)	383	145	4	-	414

Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. In December 2016, a purchase and sale agreement was executed, and the sale was completed in April 2017. A gain on sale of $283 million, which is net of tax effects of $95 million, was recognized in net income upon completion of the transaction in the second quarter of 2017. The pre-tax gain on sale was recorded as Other gains in the interim consolidated statement of income in the Services, Trading and Other Non-Generation segment. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the Act, into the Province's Consolidated Revenue Fund. OPG is working with the Ontario Ministry of Finance to finalize the prescribed costs incurred in connection with the disposition and the designated proceeds to be transferred into the Province's Consolidated Revenue Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. An active program to locate a buyer for the property was initiated in June 2017. The Lakeview GS site assets were fully depreciated prior to June 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds, net of prescribed deductions under the Act, from this disposition into the Province's Consolidated Revenue Fund.

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility represent core assets of OPG's business. They have been reported under the Services, Trading, and Other Non-Generation segment.

13. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	Six Months Ended June 30 2017	2016
Receivables from related parties	**62**	52
Prepaid expenses	**(20)**	(22)
Other current assets [1]	**22**	14
Fuel inventory	**4**	11
Income taxes payable	**(74)**	(1)
Materials and supplies	**6**	1
Accounts payable and accrued charges	**(125)**	(148)
	(125)	(93)

[1] Includes other accounts receivable.

14. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of the PEC gas-fired combined cycle generating station and the Brighton Beach gas-fired combined cycle generating station (Brighton Beach), which are accounted for using the equity method. Details of the balances as at June 30, 2017 and December 31, 2016 are as follows:

(millions of dollars)	June 30 2017	December 31 2016
PEC		
Current assets	**15**	18
Long-term assets	**248**	256
Current liabilities	**(6)**	(8)
Long-term liabilities	**(5)**	(5)
Brighton Beach		
Current assets	**6**	5
Long-term assets	**164**	168
Current liabilities	**(16)**	(16)
Long-term liabilities	**(8)**	(7)
Long-term debt	**(82)**	(90)
Investments subject to significant influence	**316**	321

15. NON-CONTROLLING INTEREST

Nanticoke Solar LP

In March 2016, Nanticoke Solar LP (NSLP), then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation, was selected through IESO's Large Renewal Procurement program to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. In the first quarter of 2017, OPG acquired all of SECCLP's interests in NSLP, which represented 25 percent of the equity interest in NSLP. Subsequent to the acquisition, OPG owns 90 percent of the equity interest in NSLP, with an approximate value of $2 million. OPG consolidates the results of the NSLP in its consolidated financial statements and reports the equity interest of the other partner as non-controlling interest.

PSS Generating Station LP

PSS is a limited partnership between OPG, Coral Rapids Power Corporation (CRP), and PSS Generating Station Inc. (PSS GS Inc.). The principal business of the partnership is the development, construction, ownership, operation and maintenance of the 28 megawatt Peter Sutherland Sr. hydroelectric GS on the New Post Creek. OPG and PSS GS Inc. are general partners and CRP is a limited partner in the partnership. CRP is a wholly owned subsidiary of the Taykwa Tagamou Nation.

The Peter Sutherland Sr. GS was placed in-service in March 2017 and, in April 2017, CRP increased its interest in the PSS to 33 percent under the partnership agreement, by making contributions of $21 million, reducing OPG's interest to 67 percent. As a result of the contributions made by OPG and CRP, PSS has met the criteria of having sufficient equity at risk to finance its activities, and ceased being classified as a variable interest entity during the second quarter of 2017. OPG continues to consolidate the results of the PSS in its consolidated financial statements. CRP's 33 percent interest in the PSS is reported as non-controlling interest. As a result of CRP increasing its interest in the partnership, PSS' AOCL and partner's deficit were proportionately allocated to CRP as a reduction to its non-controlling interest during the second quarter of 2017.

From:	DYKXHOORN Sandra -CORPRELCOMM
To:	John Kim; Ronald Kwan; "Talwar, Shruti (ENERGY)"; Sunita Chander (ENERGY)
Cc:	CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
Subject:	OPG Q4 2016 submission to Province
Date:	Wednesday, February 15, 2017 9:15:12 AM
Attachments:	OPG News Release YE 2016_DRAFT_PROVINCE MAILING.docx Q4 2016 MDA_DRAFT_PROVINCE MAILING.docx Q4 2016 FS DRAFT_PROVINCE MAILING.docx.docx 2016 AIF DRAFT_PROVINCE MAILING.docx

Good morning,

Please find attached OPG's draft Q4 2016 News Release, Management's Discussion and Analysis (MD&A), Annual Information Form (AIF) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Monday, February 27th**.

These documents will be filed with the Ontario Securities Commission on **Friday, March 10th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Sandra Dykxhoorn (copy to Alec Cheng – alec.cheng@opg.com and Philip Ho – philip.ho@opg.com).

To assist the review process, the following are the key items in the Q4 2016 MD&A:

Highlights Recent Developments	MD&A p.11-16
Darlington Refurbishment	MD&A p.11-12; 24-25
Peter Sutherland Sr. GS project	MD&A p.25
Outlook – OEB application on OPG's results, impact of ONFA update on Nuclear Segregated Funds earnings, and the expected income and cash flow trends for 2017	MD&A p.30-31

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ONTARIO POWER GENERATION

News
from Ontario Power Generation

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[DRAFT]

Mar. 10, 2017

OPG REPORTS 2016 FINANCIAL RESULTS

Solid operating and financial results position the Company for success with major generation projects

[Toronto]: – Ontario Power Generation Inc. (OPG or Company) today reported net income attributable to the Shareholder of $436 million for 2016, compared to $402 million in 2015. The increase was primarily the result of higher generation from the nuclear fleet and higher earnings from the Contracted Generation Portfolio segment. The higher nuclear production reflected more days when the Darlington nuclear units were producing electricity in 2016, compared to 2015.

"I'm pleased with OPG's 2016 financial results," said OPG President and CEO Jeff Lyash. "The continued strong financial performance of OPG benefits the Province. It is essential that we manage our operations effectively for the benefit of Ontarians."

"Both the Darlington and Pickering generating stations produce clean, reliable baseload power with virtually no smog or greenhouse gas emissions. The refurbishment of the Darlington station will provide another 30 years of operations at one of Ontario's most important public assets." said Lyash. "The $12.8 billion that we are investing in the refurbishment will provide important economic stimulus in Ontario, creating jobs and providing opportunities for more than 60 companies from over 25 communities across the province."

Higher electricity demand for stations in the Contracted Generation Portfolio segment in 2016, namely the Lennox Generating Station (GS) and the Atikokan GS, also contributed to the increase in earnings.

"We have achieved significant progress in a number of projects during the year, including the refurbishment work at the Sir Adam Beck Pump Hydroelectric Generating Station's 300-hectare reservoir, and the construction of the Peter Sutherland Sr. Hydroelectric Generating Station in northeastern Ontario. The construction of the Peter Sutherland Sr. station is our third partnership with an Indigenous community." said Lyash. "We're pleased that construction is progressing ahead of schedule and within budget. The 28 megawatt generating station is currently being commissioned and is expected to be in service this spring. This project is another example of OPG's strong partnerships with Ontario's Indigenous communities, yielding renewable power and lasting economic benefits."

Generating and Operating Performance

Electricity generated increased in 2016 to 78.2 terawatt hours (TWh) from 78.0 TWh in 2015. Higher nuclear generation of 1.1 TWh was primarily due to a lower number of planned outage days during 2016.

Higher volume of water spilled at OPG's hydroelectric stations in 2016 as a result of more prevalent surplus baseload generation (SBG) conditions partially offset the increase in nuclear generation. OPG's generation for 2016 was also affected by the Unit 2 refurbishment outage at the Darlington GS, which commenced in October 2016.

The unit capability factor at the Darlington GS increased to 89.5 percent for 2016, compared to 76.9 percent for 2015 primarily due to fewer planned and unplanned outage days at the station during 2016, compared to 2015. The unit capability factor excludes Unit 2 while it is undergoing refurbishment.

At the Pickering GS, the unit capability factor decreased to 75.2 per cent for 2016, compared to 79.4 per cent for 2015, primarily due to a higher number of additional outage days at the station in 2016 as a result of emergent discovery work during planned outages.

The availability of OPG's regulated hydroelectric generating stations decreased to 89.0 per cent for 2016, from 91.2 per cent for 2015. The decrease was primarily due to the scheduled reservoir refurbishment project at the Sir Adam Beck Pump hydroelectric GS, discussed below.

For the contracted hydroelectric stations, the availability decreased to 75.2 per cent for 2016, from 79.4 per cent for 2015. The decrease reflected an increase in planned outage days.

The Enterprise Total Generating Cost per megawatt hour (MWh) was $48.10 for the year ended December 31, 2016, compared to $50.46 for the same period in 2015. The year-over-year improvement was primarily a result of lower operations, maintenance and administration expenses, excluding the impact of regulatory variance and deferral accounts, and higher electricity generation adjusted for foregone hydroelectric generation due to SBG conditions during 2016.

Generation Development

OPG is undertaking a number of generation development and life extension projects in support of Ontario's electricity planning initiatives. Significant developments during 2016 were as follows:

Darlington Refurbishment

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit was removed from service, was safely completed in January 2017, ahead of schedule, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to

support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. The Darlington Refurbishment project is expected to extend the operating life of the station by approximately 30 years. Life-to-date capital expenditures were $3,185 million as at December 31, 2016.

Peter Sutherland Sr. GS

Construction of the new 28 MW hydroelectric generating station continued during 2016. Commissioning of the generating station began in February 2017 and the station is expected to be in-service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. **[MONITOR]** The project is tracking within the approved budget of $300 million.

Sir Adam Beck Pump GS

The Sir Adam Beck Pump GS reservoir refurbishment project began in April 2016. The 300-hectare reservoir was returned to service in February 2017 upon completion of the refurbishment, which included installation of a partial new liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The project is expected to add approximately 50 more years to the reservoir's life. The Sir Adam Beck Pump GS facility is integral to OPG’s hydroelectric fleet as it allows water to be diverted from the Sir Adam Beck complex during periods of low electricity demand and stored in the reservoir, to be used to generate up to 600 MW of electricity during subsequent periods of high demand. The project was completed ahead of the originally planned in-service date and below the approved budget of $58 million.

FINANCIAL AND OPERATIONAL HIGHLIGHTS

(millions of dollars – except where noted)	**2016**	**2015**
Revenue	**5,653**	5,476
Fuel expense	**727**	687
Gross margin	**4,926**	4,789
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	**929**	895
Earnings on Nuclear Segregated Funds - (a reduction to expenses)	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Other net expenses	**35**	65
Income before interest and income taxes	**741**	689
Net interest expense	**120**	180
Income tax expense	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest [1]	**17**	15
Income (loss) before interest and income taxes		
Electricity generation business segments	**928**	912
Regulated – Nuclear Waste Management	**(174)**	(186)
Services, Trading, and Other Non-Generation	**(13)**	(37)
Total income before interest and income taxes	**741**	689
Cash flow		
Cash flow provided by operating activities	**1,705**	1,465
Electricity generation (TWh)		
Regulated – Nuclear Generation	**45.6**	44.5
Regulated – Hydroelectric	**29.5**	30.4
Contracted Generation Portfolio [2]	**3.1**	3.1
Total electricity generation	**78.2**	78.0
Nuclear unit capability factor (per cent) [3]		
Darlington Nuclear GS	**89.5**	76.9
Pickering Nuclear GS	**75.2**	79.4
Availability (per cent)		
Regulated – Hydroelectric	**89.0**	91.2
Contracted Generation Portfolio – hydroelectric stations	**77.3**	88.6
Equivalent forced outage rate		
Contracted Generation Portfolio – thermal stations	**1.6**	11.2
Enterprise Total Generating Cost (TGC) per MWh for the twelve months ended December 31, 2016 and 2015 ($/MWh) [4]	**48.10**	50.46
Return on Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI) for the twelve months ended December 31, 2016 and 2015 (%) [4]	**4.2**	4.0
Funds from Operations (FFO) Adjusted Interest Coverage for the twelve months ended December 31, 2016 and 2015 (times) [4]	**5.1**	5.0

[1] Relates to the 25 per cent interest of a corporation wholly owned by the Moose Cree First Nation in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 per cent ownership interests in the Portlands Energy Centre and Brighton Beach GS.

[3] Nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

[4] Enterprise TGC, ROE Excluding AOCI, and FFO Adjusted Interest Coverage are non-GAAP financial measures and do not have any standardized meaning prescribed by US GAAP. Additional information about the non-GAAP measures is provided in OPG's Management's Discussion and Analysis for the year ended December 31, 2016, under the sections *Highlights – Enterprise TGC, Highlights – FFO Adjusted Interest Coverage,* and *Highlights – ROE Excluding AOCI, as well as supplementary Non-GAAP Financial Measures.*

Ontario Power Generation Inc. is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. Our mission is on providing low cost power in a safe, clean, reliable and sustainable manner for the benefit of our customers and shareholder.

Ontario Power Generation Inc.'s audited consolidated financial statements and Management's Discussion and Analysis as at and for the year ended December 31, 2016 can be accessed on OPG's web site (www.opg.com), the Canadian Securities Administrators' web site (www.sedar.com), or can be requested from the Company.

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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

DECEMBER 31, 2016

[DRAFT]

2016 YEAR-END REPORT

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ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the audited consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the year ended December 31, 2016. OPG's consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. The Ontario Securities Commission (OSC) approved an exemption that allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the heading, *Exemptive Relief for Reporting under US GAAP,* in the section *Critical Accounting Policies and Estimates.* This MD&A is dated March 10, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act (Ontario)* (OBCA) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at December 31, 2016, OPG's electricity generation portfolio had an in-service capacity of 16,177 megawatts (MW). OPG operates two nuclear generating stations, 65 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report.

All of OPG's owned and co-owned generating facilities are located in Ontario.

OPG's Reporting Structure

The composition of OPG's reportable business segments is as follows:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

OPG receives regulated prices for electricity generated from most of its hydroelectric facilities and all of the nuclear facilities that it operates (collectively, prescribed facilities or regulated facilities). This includes the following facilities:

- the six hydroelectric generating stations prescribed for rate regulation prior to 2014, as follows:
    - Sir Adam Beck 1, 2 and Pump hydroelectric generating stations
    - DeCew Falls 1 and 2 hydroelectric generating stations
    - R.H. Saunders hydroelectric GS
- the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014
- Pickering Nuclear GS (Pickering GS)
- Darlington Nuclear GS (Darlington GS).

The operating results related to these regulated facilities are described under the Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, and Regulated – Hydroelectric segments. For the remainder of OPG's operating generating facilities, the operating results are described under the Contracted Generation Portfolio segment. A description of all OPG's segments is provided under the section, *Business Segments*.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of December 31 was as follows:

(MW)	**2016**	**2015**
Regulated – Nuclear Generation [1]	**5,728**	6,606
Regulated – Hydroelectric	**6,421**	6,428
Contracted Generation Portfolio [2]	**4,028**	4,021
Total	**16,177**	17,055

[1] The in-service generating capacity as of December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

The total in-service capacity as at December 31, 2016 decreased by 878 MW compared to 2015. The decrease was primarily due to the commencement of the refurbishment of the first Darlington GS unit, Unit 2, which was taken offline in mid-October 2016. In addition, during 2016, the capacity of the regulated hydroelectric units at the Abitibi Canyon GS and the Sir Adam Beck 1 GS was reduced to reflect unit limit capability. This decrease in in-service capacity was partially offset by an increase in capacity of the Contracted Generation Portfolio segment, reflecting the completion of an upgrade and rehabilitation of Unit 2 of the Harmon hydroelectric GS during 2016.

REVENUE MECHANISMS FOR REGULATED AND NON-REGULATED GENERATION

Regulated Generation

The OEB sets the prices for electricity generated from OPG's regulated nuclear and regulated hydroelectric facilities. The following are the OEB-authorized regulated prices for electricity generated from these facilities:

	2016	**2015**	
($/MWh)		**January 1 to June 30**	**July 1 to December 31**
Regulated – Nuclear Generation			
Base regulated price	**59.29**	59.29	59.29
Rate riders	**10.84** [1]	1.33	12.17 [1]
	70.13	60.62	71.46
Regulated – Hydroelectric			
Hydroelectric generating stations prescribed for rate regulation prior to 2014			
Base regulated price	**40.20**	40.20	40.20
Rate riders	**3.19** [1]	6.04	9.23 [1]
	43.39	46.24	49.43
Hydroelectric generating stations prescribed for rate regulation effective in 2014			
Base regulated price	**41.93**	41.93	41.93
Rate rider	**3.19** [1]	-	3.19 [1]
	45.12	41.93	45.12

[1] The increase in the 2015 rate riders effective July 1, 2015 was implemented by the OEB effective October 1, 2015. As such, the OEB authorized interim period rate riders for the period from October 1, 2015 to December 31, 2016 to allow for the recovery of the increase in the riders for the period from July 1, 2015 to September 30, 2015. The revenue from the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The nuclear interim period rate rider was $2.17 per megawatt hour (MWh) and the regulated hydroelectric interim period rate rider was $0.64/MWh. These interim period rate riders have not been included in the above table. All rate riders in effect during 2016 expired on December 31, 2016.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements for the 2014 to 2015 period, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base for OPG represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital.

In accordance with *Ontario Regulation 53/05* under the *Ontario Energy Board Act, 1998*, OPG's nuclear regulated prices are reduced by the amount of OPG's revenues, net of costs, from leasing the Bruce nuclear generating stations to Bruce Power. As directed by the OEB, OPG's revenues and costs related to the Bruce nuclear generating stations are determined in accordance with US GAAP for the purposes of establishing OPG's nuclear regulated prices and are subject to the Bruce Lease Net Revenues Variance Account in accordance with *Ontario Regulation 53/05*. This includes OPG's costs related to its obligations for nuclear waste management and nuclear facilities decommissioning associated with the Bruce nuclear generating stations and the corresponding portion of earnings on the nuclear fixed asset removal and nuclear waste management segregated funds (Nuclear Segregated Funds) established pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province.

Rate riders for OPG are established to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts. Variance and deferral accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The rate riders in effect during 2015 included those established by the OEB's December 2014 order for the period from January 1, 2015 to December 31, 2015, as well as those authorized by the OEB's October 2015 order on OPG's 2014 application to recover the December 31, 2014 variance and deferral account balances, for the period from July 1, 2015 December 31, 2016. The rate riders in effect during 2016 were those authorized by the October 2015 order.

Non-Regulated Generation

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements (ESAs) with the Independent Electricity System Operator (IESO). Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO was substituted as the counterparty of ESAs and other agreements that were previously executed with the OPA.

During 2016, ESAs were in effect for the following thermal generating facilities:

- Lennox GS: Capacity provided by, and production from, the station are subject to an ESA for the period from January 1, 2013 to September 30, 2022
- Atikokan GS: Capacity provided by, and production from, the station are subject to a 10-year ESA expiring in July 2024
- Thunder Bay GS: Capacity provided by, and production from, the station are subject to a 5-year ESA expiring in January 2020.

In addition, long-term hydroelectric ESAs are in place for the following facilities, with expiry dates for currently operating stations ranging from 2059 to 2064:

- Lac Seul and Ear Falls generating stations
- Healey Falls GS
- Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations
- Little Long, Harmon, Smoky Falls, and Kipling generating stations (collectively the Lower Mattagami River generating stations)

- Peter Sutherland Sr. GS which is being commissioned. **[MONITOR]** Payments under this ESA will commence when the station achieves commercial operation. Further details on the Peter Sutherland Sr. GS project are found under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's operating results for 2016 and 2015.

(millions of dollars – except where noted)	**2016**	**2015**
Revenue	**5,653**	5,476
Fuel expense	**727**	687
Gross margin	**4,926**	4,789
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (income) loss, interest, and income taxes	**724**	703
Other (income) loss	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense	**120**	180
Income before income taxes	**621**	509
Income tax expense	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest [1]	**17**	15
Electricity production (TWh) [2]	**78.2**	78.0
Cash flow		
Cash flow provided by operating activities	**1,705**	1,465

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $436 million for 2016, an increase of $34 million compared to 2015. Income before interest and income taxes was $741 million for 2016, an increase of $52 million compared to 2015.

The following summarizes the significant factors which contributed to the variance:

Significant factors that increased income before interest and income taxes:

- Higher generation of 1.1 terawatt hours (TWh) from the Regulated – Nuclear generation segment, resulting in an increase in revenue of $65 million from the nuclear base regulated price. The year-over-year increase

in revenue from the higher nuclear rate riders in effect during the first half of 2016, compared to the same period in 2015, was primarily offset by an increase in the amortization expense related to regulatory balances.

- Higher earnings on the Nuclear Segregated Funds of $42 million, primarily due to a higher rate of return on the portion of the Used Fuel Segregated Fund that is subject to a consumer price index (CPI) adjusted rate of return guarantee by the Province pursuant to the ONFA. This increase in Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the updated ONFA reference plan, approved by the Province in December 2016
- Increase in earnings from the Services, Trading, and Other Non-Generation segment of $24 million, primarily due to lower operations, maintenance and administration (OM&A) expenses
- A gain of $22 million recorded during the first quarter of 2016, reflecting the OEB's January 2016 decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices
- Increase in earnings of $20 million from the Contracted Generation Portfolio segment, mainly as a result of an increase in the gross margin due to higher revenues from the Lower Mattagami River generating stations, the Lennox GS and the Atikokan GS.

Significant factors that reduced income before interest and income taxes:

- Higher financing expense of $32 million, which represents an increase in the present value of the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities). The financing expense, known as accretion expense, is added to the Nuclear Liabilities balance over time
- A decrease in nuclear non-electricity revenue of $21 million, primarily due to a decrease in nuclear detritiation services revenue and lower isotope sales
- Higher OM&A expenses, fuel expense and depreciation expense for the Regulated – Nuclear Generation segment. The increase in OM&A expenses of $14 million reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium costs and higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million, primarily due to new assets in service in 2016. The increase in amortization expense related to regulatory balances was largely offset by the increase in nuclear revenue related to rate riders
- Lower earnings before other gains from the Regulated – Hydroelectric segment of $28 million, primarily due to lower hydroelectric incentive mechanism revenue and the income impact of OEB-approved variance accounts.

Net interest expense decreased by $60 million in 2016, compared to 2015, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project and a higher amount of interest costs deferred in regulatory variance and deferral accounts.

Income tax expense increased by $76 million in 2016, compared to 2015, primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. Significant factors which contributed to the higher income during 2016, compared to 2015, are discussed above. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	**2016**	**2015**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**4**	2
Regulated – Hydroelectric	**642**	648
Contracted Generation Portfolio	**282**	262
Total electricity generation business segments	**928**	912
Regulated – Nuclear Waste Management	**(174)**	(186)
Services, Trading, and Other Non-Generation	**(13)**	(37)
	741	689

Electricity Generation

Electricity generation for 2016 and 2015 was as follows:

(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**45.6**	44.5
Regulated – Hydroelectric	**29.5**	30.4
Contracted Generation Portfolio [1]	**3.1**	3.1
Total OPG electricity generation	**78.2**	78.0
Total electricity generation by other generators in Ontario [2]	**72.7**	76.1

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The higher electricity generation from the Regulated – Nuclear Generation segment in 2016 was primarily a result of a lower number of non-refurbishment outage days at the Darlington GS due to the planned Vacuum Building Outage (VBO) in 2015 and a decrease in unplanned outages at the station in 2016. The VBO is a unique outage to inspect and maintain specific safety and other systems common to all four units of the station. The 2015 VBO required the shutdown of the four units for 47 days. Vacuum building outages are currently required every 12 years at the Darlington GS. The year-over-year increase in electricity generation was partially offset by a decrease in generation from the Pickering GS, primarily due to an increase in the number of unplanned outage days, and the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment beginning on October 15, 2016.

Lower electricity generation from the Regulated – Hydroelectric generating segment was primarily due to a higher volume of water spilled as a result of higher SBG conditions during 2016.

Electricity generation from the Contracted Generation Portfolio segment was 3.1 TWh for each of 2016 and 2015. Electricity generation in 2016 reflected higher production from the Lennox and Atikokan generating stations, primarily due to increased market demand. The increase was offset by a higher volume of water spilled at the contracted hydroelectric stations as a result of higher SBG conditions during 2016, and transmission system constraints in northeastern Ontario in 2016. **[CONFIRM]**

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Ontario's electricity demand as reported by the IESO was 137.0 TWh in each of 2016 and 2015, which excludes electricity exports out of the province.

Baseload generation supply surplus in Ontario was more prevalent in 2016 than in 2015, mainly due to higher water flows in the province during 2016 and limitations on the export of surplus power out of the province, primarily due to transmission constraints in the state of New York. Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric and nuclear stations and other grid-connected renewable resources. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. During 2016 and 2015, OPG lost 4.7 TWh and 3.2 TWh of hydroelectric generation due to SBG conditions, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions in 2016 and 2015 was offset by a regulatory variance account authorized by the OEB. OPG did not forego any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The regulated prices authorized by the OEB for electricity generated from OPG's nuclear and regulated hydroelectric generating stations are discussed in the section *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment during 2016 was 6.9 cents per kilowatt hour (¢/kWh), compared to 6.5 ¢/kWh during 2015. The average sales price in 2016 reflected the higher OEB-authorized nuclear rate rider of $10.84/MWh for recovery of variance and deferral account balances in effect during the year. The average sales price for the Regulated – Hydroelectric segment was 4.4 ¢/kWh, compared to 4.7 ¢/kWh during 2015. The decrease was primarily due to a lower rate rider in effect during 2016 related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years.

As such, the year-over-year changes in revenue from rate riders were largely offset by changes in amortization expense related to regulatory balances.

Cash Flow from Operations

Cash flow provided by operating activities for 2016 was $1,705 million, compared to $1,465 million for 2015. The increase in cash flow provided by operating activities for 2016, compared to 2015, was primarily due to higher generation revenue receipts reflecting higher nuclear rate riders and higher nuclear generation in 2016. The increase in cash flow was also due to lower pension plan contributions in 2016 reflecting an updated actuarial valuation of the OPG registered pension plan. The increase in cash flow was partially offset by higher OM&A expenditures during 2016, compared to 2015, and the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to the period from January 1, 2015 to December 4, 2015. The rebate was made pursuant to a provision under the lease agreement for the Bruce nuclear generating stations. This provision was eliminated effective December 4, 2015 as part of the 2015 amendments to the lease agreement.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. The FFO Adjusted Interest Coverage was 5.1 times for 2016, compared to 5.0 times for 2015. The modest increase in the FFO Adjusted Interest Coverage in 2016 reflected an increase in FFO before interest for 2016, compared to 2015, as a result of the year-over-year increase in cash flow provided by operating activities.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for 2016 was 4.2 percent, compared to 4.0 percent for 2015. ROE Excluding AOCI increased for 2016, compared to 2015, primarily due to higher net income attributable to the Shareholder. OPG's ROE Excluding AOCI reflects regulated prices established by the OEB in 2014. These prices were lower than requested by OPG based on submitted forecast cost and production levels, which has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

ROE Excluding AOCI also reflects the relatively higher equity component in the Company's capital structure, compared to the deemed capital structure used by the OEB in determining OPG's regulated prices. The OEB establishes the allowed return on OPG's investment in regulated assets, which represent the majority of the Company's operations, using the OEB's generic prescribed rate of return and an OPG-specific deemed capital structure. In setting the regulated prices in 2014, the OEB applied a deemed capital structure of 45 percent equity and 55 percent debt. OPG's actual capital structure (excluding AOCI) contains approximately 65 percent equity. The higher equity component in OPG's actual capital structure, compared to the deemed capital structure applied by the OEB, results in a reduced actual ROE Excluding AOCI. In its application for new regulated prices filed with the OEB in May 2016, OPG is seeking an increase in the deemed capital structure to 49 percent equity and 51 percent debt. For further discussion on OPG's application, refer to the heading *Recent Developments* in the section *Highlights*.

Enterprise Total Generating Cost per MWh

The Enterprise Total Generating Cost (TGC) per MWh was $48.10 for the year ended December 31, 2016, compared to $50.46 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses, excluding the impact of regulatory variance and deferral accounts, and higher electricity generation as adjusted for foregone generation due to SBG conditions during 2016.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $62.30 for the year ended December 31, 2016, compared to $66.20 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses excluding the impact of regulatory variance and deferral accounts, and higher electricity generation during 2016.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $25.57 for the year ended December 31, 2016, which was comparable to $25.26 for the same period in 2015.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow from operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in

January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The unit is scheduled to be returned to service in the first quarter of 2020. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

In April 2016, the Federal Court of Appeal unanimously dismissed the request by certain intervenors for a judicial review of the 2013 Environmental Assessment (EA) decision for the Darlington Refurbishment project by the Canadian Nuclear Safety Commission (CNSC) and Fisheries and Oceans Canada. The EA decision had confirmed that, taking into account identified mitigation measures, the project was not likely to cause significant adverse environmental effects. In dismissing the appeal, the Federal Court of Appeal determined that there were no gaps in the EA, that there was nothing unreasonable about the discretionary determinations made by the responsible authorities, and that the intervenors' arguments were not borne out by the evidence. OPG was also awarded its costs of the appeal, as the successful party.

The Darlington Refurbishment project is discussed further under the heading, *Project Excellence* in the *Core Business, Strategy and Outlook* section.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. For the first time since OPG's prescribed assets became subject to rate regulation, the new prices are expected to be determined on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. Rate-setting under incentive regulation is typically more formulaic and involves greater de-coupling of a regulated entity's allowed revenues or prices from its costs than under a cost-of-service rate-setting methodology.

For the hydroelectric facilities, OPG's May 2016 application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021 based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production.

The proposed nuclear revenue requirements reflect OPG's plans to pursue Pickering extended operations until 2024, as well as the projected impact of the scheduled return to service of the first refurbished Darlington unit in the first quarter of 2020. OPG is also seeking an increase in the deemed capital structure applied to its total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt applied by the OEB in setting the existing regulated prices.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG's application incorporates a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved nuclear revenue requirements in a deferral account for future collection, with a view of making more stable year-over-year changes in OPG's nuclear regulated prices for the period from January 1, 2017 to the end of the Darlington Refurbishment project. The regulation stipulates that the deferral account will record interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually, and that the OEB shall authorize recovery of the balance in the account on a straight line basis over a period not to exceed 10 years following the end of the Darlington Refurbishment project. OPG expects to recognize the deferred amounts as income in the period to which the approved revenue requirements relate.

OPG's application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the

Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment in 2016 through rate riders in effect to December 31, 2016. The application also requests the continuation of all applicable existing variance and deferral accounts. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed in the section *Critical Accounting Policies and Estimates,* under the heading, *Rate Regulated Accounting.*

In December 2016, the OEB issued an order granting OPG's request to declare the existing base regulated prices interim, effective January 1, 2017. This preserves the OEB's ability to make new regulated prices effective as early as January 1, 2017, which would allow OPG to recover the difference between the approved new regulated prices and the existing prices for the period between the effective date of the new regulated prices and their implementation date based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017, following a public proceeding. The public proceeding is in progress, with the oral hearing portion having commenced in February 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

In February 2017, the OEB approved a settlement agreement reached by OPG and intervenors on certain limited elements of OPG's application (Settlement Agreement). Among other elements, the Settlement Agreement accepts a number of year-end 2015 variance and deferral account balances totaling $419 million, allows for continuation of all applicable existing variance and deferral accounts, and confirms methodologies for calculating amounts to be recorded in most of the continuing accounts once new regulated prices take effect, as proposed by OPG. The balances of, and methodologies for recording future amounts in the Nuclear Liability Deferral Account, the Bruce Lease Net Revenues Variance Account and the Capacity Refurbishment Variance Account are excluded from the Settlement Agreement. The agreement also results in approval of OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017-2021 period. The Settlement Agreement does not impact OPG's 2016 financial results. **[MONITOR]**

OEB's Decision on OPG's December 2014 Motion

In January 2016, the OEB issued its decision on OPG's December 2014 motion asking the OEB to review and vary the parts of its November 2014 decision related to the disallowance of the Niagara Tunnel project expenditures, and the application of the 2013 regulatory tax loss to reduce the 2014/2015 revenue requirement. In its decision, the OEB reversed a portion of the original disallowance of the Niagara Tunnel project expenditures, and upheld the original tax loss decision. In the first quarter of 2016, OPG recorded a gain of $22 million to recognize the expected future recovery from customers of the portion of the disallowance reversed by the OEB's motion decision.

The original disallowance of the Niagara Tunnel project expenditures resulted in a write-off of $77 million that was charged to operations in 2014. The original tax loss decision resulted in a reduction of the 2014/2015 revenue requirement by approximately $70 million. As OPG's financial results have previously reflected the effect of the OEB's original tax loss decision, the motion decision on the tax loss did not impact OPG's 2016 financial results.

Ontario Nuclear Funds Agreement Reference Plan Update

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for nuclear waste management and nuclear facilities decommissioning as at December 31, 2016 was finalized as part of the required process to update the reference plan under the ONFA. As at December 31, 2016, the update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities with a corresponding decrease to the asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear facilities decommissioning at least once every five years, in line with the required ONFA reference plan update process.

The updated estimate of the obligations was reflected in a new ONFA reference plan, for years 2017 to 2021, which was approved by the Province in December 2016, effective January 1, 2017 (the 2017 ONFA Reference Plan). Based on the lower life cycle liability estimates per the 2017 ONFA Reference Plan, starting in 2017, OPG is not currently required to make overall contributions to the Used Fuel Segregated Fund or the Decommissioning Segregated Fund established under the ONFA. Prior to 2017, OPG made contributions to the Used Fuel Segregated Fund every year, including a one-time special payment in earlier years, as required by the ONFA. These contributions reflected ONFA requirements to fund the majority of the underlying used fuel liability by the end of the estimated useful lives of the nuclear stations in effect at OPG's inception in 1999, resulting in significantly higher contributions to the Used Fuel Segregated Fund in the earlier years of OPG's existence. OPG has not been required to make contributions to the Decommissioning Segregated Fund, which was fully funded at its inception and at the time of every subsequent approved ONFA reference plan. Contributions to either or both funds may be required in the future should the funds be in an underfunded position when a new reference plan is prepared. Such may be the case as a result of variability in asset performance due to volatility inherent in financial markets and Ontario CPI changes. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the underlying obligations in subsequent ONFA reference plans.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of the new regulated prices. In accordance with *Ontario Regulation 53/05*, the OEB is required to ensure that OPG recovers the revenue requirement impact of its nuclear waste management and nuclear decommissioning liabilities arising from the current approved ONFA reference plan. For further discussion on the accounting for Nuclear Liabilities, refer to the section, *Critical Accounting Policies* under the heading, *Asset Retirement Obligation*.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the amount due to the Province. This accounting adjustment represented the overfunded position of Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 relative to the value of the corresponding present value life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province as OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and as any excess funding in the Nuclear Segregated Funds upon termination of the ONFA accrues to the Province. Of the $88 million reduction in Nuclear Segregated Funds earnings, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

For further discussion of the accounting for the Nuclear Segregated Funds, refer to the section, *Critical Accounting Policies* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*. For further discussion of OPG's risks with respect to nuclear waste management and nuclear decommissioning obligations and Nuclear Segregated Funds, refer to the section, *Risk Management* under the headings, *Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds* and *Financial Markets*.

Shareholder Declaration and Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that required the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. The assets are reported under the Services, Trading and Other Non-Generation segment. An active program to locate a buyer for these real estate assets was initiated in October 2016, and a purchase and sale agreement was executed in December 2016. The sale is expected to be completed during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be

recognized upon completion of the transaction. Pursuant to the December 2015 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer a portion of the proceeds from this disposition into the Province's Consolidated Revenue Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario, an asset reported under the Services, Trading and Other Non-Generation segment. OPG is currently in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer a portion of the proceeds from this disposition into the Province's Consolidated Revenue Fund.

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business.

Contract Award for Nanticoke Solar Facility

In March 2016, Nanticoke Solar LP, then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation, was selected through the first phase of the IESO's Large Renewable Procurement (LRP) program to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands in Haldimand County, Ontario. The LRP program was a competitive bidding process for procuring large renewable energy projects in Ontario. In March 2016, Nanticoke Solar LP and the IESO executed a 20-year LRP contract, which formalized the terms and conditions for the development and operation of the new solar facility. In the first quarter of 2017 **[MONITOR]**, OPG purchased SECCLP's interests in Nanticoke Solar LP and is working to obtain approvals and permits required to enable the commencement of construction planned for the first half of 2018.

The 20-year term of the LRP contract takes effect once the station achieves commercial operation, which is expected in the first quarter of 2019. For further discussion, refer to the section, *Core Business, Strategy and Outlook* under the heading, *Project Excellence*.

Decommissioning of the Lambton GS

In November 2016, the Company announced the decommissioning of the Lambton GS, which ceased coal-fired generation in 2013, as it was determined that continuing to preserve the station beyond 2016 for future conversion was no longer economically feasible. OPG is currently developing a decommissioning plan for the Lambton GS, which will ensure that the station is closed safely, securely, and in an environmentally responsible manner.

Canadian Nuclear Safety Commission Safety Rating for the Pickering GS and the Darlington GS

The CNSC publishes an annual report on the safety performance of Canada's nuclear power plants. The report assesses how well plant operators are meeting regulatory requirements and program expectations in the areas of operational performance, safety analysis, radiation protection, waste management and conventional health and safety. In its 2015 annual report, the CNSC gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". The Pickering GS received this rating for the first time, while the Darlington GS achieved the rating for the seventh year in a row.

Acquisition of Hydro One Limited Shares

In April 2016, OPG acquired nine million common shares of Hydro One Limited (Hydro One) at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. OPG paid the same price as other investors in the offering. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union (PWU) and The Society of Energy Professional (The Society) renewed in 2015. Changes to these agreements included increases to employee pension plan contributions and provisions for existing employees represented by the PWU and The Society with eligibility to annually receive common shares of Hydro One for up to 15 years starting in

the third year of the respective agreements, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service. The shares acquired in the April 2016 transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

CORE BUSINESS, STRATEGY AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

OPG's four key strategic imperatives are as follows:

- Operational Excellence
- Project Excellence
- Financial Strength
- Social Licence.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Workplace Safety and Public Safety

Workplace safety and public safety are fundamental core values at OPG. OPG is committed to operating all of its facilities in a safe, secure, and reliable manner that minimizes risks to a reasonably achievable level. Safety is an overriding priority in all activities performed at OPG's generating and other facilities, and all employees and contractors are expected to conduct themselves in manner that ensures workplace safety and public safety in line with the Company's safety culture.

In the area of workplace safety, OPG is committed to achieving excellent safety performance through continuous improvement and a strong safety culture, with the ultimate goal of zero injuries. OPG utilizes an integrated health and safety management system and set of operational risk control procedures to ensure continued monitoring of health and safety performance and to support continuous learning and improvement in this area. Overall, OPG's workplace safety performance has been one of the best amongst its comparator Canadian electrical utilities. In 2016, OPG received the Canadian Electricity Association (CEA) President's Gold Award recognizing three consecutive years, 2013 to 2015, of sustained top quartile safety performance within the comparator group.

Workplace safety performance is measured using two primary indicators at OPG, All Injury Rate (AIR) and Accident Severity Rate (ASR). OPG's AIR and ASR results for employee workplace safety were as follows for the year ended December 31:

	2016	2015
AIR *(injuries per 200,000 hours worked)*	**0.56**	0.39
ASR *(days lost per 200,000 hours)*	**2.59**	0.50

In 2016, OPG's AIR and ASR safety performance was worse than in 2015. OPG's analysis of the underlying events indicated that major contributors to the injuries and near misses included inadequate situational awareness and attention to detail, and suboptimal risk-based decisions, rather than missing or inadequate standards or programs.

OPG is implementing a number of initiatives to target the injury trends based on the analysis of the safety events, with a focus on the use of human performance tools including increased field supervisory oversight, situational awareness, communication, and procedural use and adherence.

In 2016, OPG launched an organization-wide “iCare Enough to Act” initiative aimed at renewing employees’ commitment to their own and each other’s safety and well-being. Plans to further strengthen safety as a foundational element of the Company’s values-based culture are being developed through leadership forums and other engagement activities.

Contractors are required to conduct work safely at OPG sites. In support of this requirement, OPG utilizes an independent contractor pre-qualification process, provides on-site safety support for many of OPG’s major projects, and works with contract partners to improve their health and safety programs to meet OPG’s requirements. To further strengthen contractors’ safety performance, in 2016, OPG updated its contractor’s safety requirements and related governance, and implemented additional oversight and field monitoring to ensure ongoing compliance. In the past eight years, OPG has consistently shown a better than average Construction Contractor AIR as compared to the Health and Safety Association Contractor AIR, a metric of construction contractor safety performance across Ontario.

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG’s nuclear generating stations is estimated on an annual basis for those individuals who live or work near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (µSv), which is an international unit of radiation dose measurement. For 2015, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.5 µSv and 1.2 µSv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000 µSv. While the public doses from OPG’s nuclear operations for the 2016 operating year will not be finalized until the second quarter of 2017, they are not expected to differ significantly from the 2015 levels.

In June 2016 and August 2016, the CNSC released sampling results from its independent environmental monitoring program, which confirmed that the public and the environment around OPG’s nuclear generating stations continued to be safe. Also in 2016, the CNSC published its 2015 annual report on the safety performance of Canada's nuclear power plants, which gave both the Pickering GS and the Darlington GS the highest possible safety rating of “Fully Satisfactory”. For further details, refer to the CNSC safety rating discussion under the heading, *Recent Developments* in the *Highlights* section.

OPG remains committed to high standards of public safety on waterways around hydroelectric dams and generating stations. A Dam Safety Review Panel comprised of internationally recognized experts has previously concluded that OPG’s dam and public safety program is comparable with international best practices in a number of areas related to maintaining safe dam operations. OPG continues to develop a new risk-informed approach on behalf of the Ontario Ministry of Natural Resources and Forestry (MNRF) to prioritize and manage risks identified through dam safety assessments. In 2016, OPG continued its water safety campaign with a series of public service announcements illustrating the danger of water near hydroelectric dams and hydroelectric generating stations.

Electricity Generation Production and Reliability

Key strategic initiatives in support of operational excellence, specific to each of OPG’s core generating operations, are discussed below. Generation and reliability performance for 2016 is discussed by operating segment in the section, *Discussion of Operating Results by Business Segment*.

Nuclear Operations

OPG is pursuing a number of strategic initiatives aimed at the continued safe and reliable operation of the Pickering GS and targeting top performance at the Darlington GS.

OPG's nuclear operations are regularly benchmarked against top performing nuclear facilities around the world. This allows OPG to identify, develop and implement initiatives to further improve performance. During 2016, OPG participated in two World Association of Nuclear Operators (WANO) peer evaluations to compare its stations against standards of excellence through an in-depth, objective review by an international panel of industry experts. In May 2016, OPG hosted a WANO peer evaluation for the Darlington GS. The review maintained Darlington's excellent standing as one of the top performing nuclear plants in the world. In September 2016, OPG hosted a team of experts from the International Atomic Energy Agency at the Pickering GS to conduct a standard Operational Safety Review Team mission. The team conducted an in-depth review of performance and adherence to international safety standards. A report on the mission is expected to be released in the second quarter of 2017.

In January 2016, OPG announced its plan to pursue continued safe and reliable operation of the Pickering GS beyond 2020. OPG's objective is to maximize the operating life of the Pickering units. Under OPG's current plan, all six operating units at the station would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The Province announced its approval of OPG's plan to pursue continued operation of the Pickering GS beyond 2020 up to 2024 in January 2016. Extending operations at the Pickering GS will provide continued employment to approximately 3,000 regular employees at OPG, and will help reduce approximately 17 million tonnes of carbon dioxide emissions, which is the equivalent to removing 3.4 million cars from Ontario's roads.

As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will achieve the additional life necessary to operate to 2024. OPG is also conducting component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently established as the end of 2020, are expected to be reassessed when OPG's further technical work confirms the longer fuel channel life and the units' fitness to operate beyond 2020, taking into account the requirement for the CNSC's approval, discussed below.

OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. OPG has started work on the Pickering licence renewal application, which is expected to be filed in mid-2017 for the CNSC's approval in 2018. The requested licence renewal spans the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. A Periodic Safety Review and an Integrated Implementation Plan (IIP) for the station will be submitted to the CNSC as part of the application.

OPG strives to operate and maintain its nuclear facilities to optimize equipment, performance, availability and electricity generation, while improving the reliability and predictability of the fleet. Improved equipment reliability generally results in fewer generation interruptions. OPG continues to make investments in the performance of the Pickering GS, with a focus on improving plant reliability and maximizing the value of the asset through implementing equipment modifications and fuel handling reliability improvements, reducing equipment maintenance backlogs, and completing critical and high priority work.

Nuclear inspection and testing programs are largely driven by maintenance and regulatory requirements, and are designed to ensure that equipment is performing safely and reliably. Execution of this and other outage work continues to be a high priority. As part of its commitment to operational excellence, OPG continues to focus on improving the planning, execution, monitoring, and reporting of outage work.

Work continues to ensure the integration of life cycle management and refurbishment programs at the Darlington GS. This includes developing staffing strategies to support both ongoing station operations and the refurbishment project, planning and incorporating pre-requisite work for the refurbishment into the station's work schedule, and identifying life cycle and aging management work to sustain safe and reliable station operations for the next three decades.

OPG's longer-term efforts are aimed at positioning the Darlington GS for industry leading operating and cost performance.

Delivering solutions that provide the best combination of safety, cost and effectiveness, as well as establishing challenging financial targets based on comprehensive benchmarking continues to be a vital part of OPG's strategy to improve performance of the nuclear business unit. Financial and staffing targets continue to be reviewed and adjusted where necessary to reduce operating costs, while ensuring safety is not compromised.

In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications will be presented to the CNSC at a public hearing in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018.

Hydroelectric Operations

The objectives of OPG's hydroelectric operations include operating and maintaining the generating facilities in an efficient and cost-effective manner, while enhancing their reliability and availability. OPG continues to evaluate and implement plans to increase capacity, maintain and improve performance, and extend the operating life of its hydroelectric generating assets.

OPG's plans for its existing hydroelectric generating stations are accomplished through multi-year capital investment and other programs, including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers, and controls. The aim of OPG's runner replacement and upgrade program is to increase hydroelectric station capacity by leveraging efficiency enhancements in runner design. Where economical and practical, OPG pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations. Over the next three years, OPG plans to increase the total capacity of its hydroelectric generating fleet by approximately 135 MW, which, in addition to the runner replacement and upgrade program, includes the Peter Sutherland Sr. GS project and the Ranney Falls GS projects. Both of these projects are discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Project Excellence*. OPG is also planning to repair, rehabilitate, or replace a number of aging civil hydroelectric structures.

As part of its commitment to operational excellence, OPG continues to make investments in its existing hydroelectric generating fleet. During 2016, OPG continued to execute a number of projects, including:

- Completion of major equipment overhauls and rehabilitation work on Unit 5 of the Sir Adam Beck Pump GS, and Unit 2 of the Whitedog Falls GS
- Completion of a runner upgrade, headgate replacement and rehabilitation of Unit 2 of the Harmon GS
- Completion of headgate replacement at Units 1 and 2 of the Kipling GS
- Completion of concrete rehabilitation of the main dam at Chats Falls GS
- Continued work on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 5 of the DeCew Falls 1 GS, Unit 1 of the Harmon GS, and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.

OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS. **[MONITOR]**

Thermal Operations

OPG's thermal operations consist of biomass-fuelled generating units at each of Atikokan GS and Thunder Bay GS, and the oil/gas dual-fuelled Lennox GS.

These stations, which operate as peaking facilities, provide Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements and enable the system to accommodate the expansion of Ontario's renewable generation portfolio. The continued operation of these stations during the initial years of the refurbishment of the Darlington GS and Bruce nuclear facilities is expected to provide Ontario with over 2,000 MW of peaking generation.

During the third quarter of 2016, the Atikokan and Thunder Bay generating stations provided renewable generation when called upon to meet system requirements while utility maintenance was being conducted on a local transformer station. As a result of utility maintenance, the Atikokan GS operated continuously from late July 2016 to early September 2016, while the Thunder Bay GS operated as needed. To meet the increased demand for biomass fuels at Atikokan GS, OPG coordinated the acceleration of biomass fuel deliveries with suppliers while continuing to operate the plant safely.

As part of OPG's ongoing strategy to reduce costs and increase efficiency, the operations of the Company's hydroelectric and thermal assets have been combined into one organization. OPG continues to evaluate opportunities to consolidate departments within the stations and across regions.

Thermal stations that are no longer available to generate electricity are included in the Services, Trading and Other Non-Generation segment once they are removed from service. This includes the Lambton GS and Nanticoke GS sites, which ceased coal-fired generation in 2013. In 2015, OPG announced the decommissioning of the Nanticoke GS, as it could not commercially support continued preservation costs.

In November 2016, OPG announced the decommissioning of the Lambton GS, as further discussed in the section, *Highlights* under the heading, *Recent Developments*. OPG is currently developing decommissioning plans for the Lambton and Nanticoke generating stations, which will ensure that they are closed safely, securely and in an environmentally responsible manner. The decommissioning plan for the Nanticoke GS will accommodate the construction and operation of the Nanticoke solar facility. The costs of decommissioning the stations will be charged to a previously established decommissioning provision. OPG expects to review the decommissioning provision estimates for these sites in 2017.

Environmental Performance

OPG's Environmental Policy states that "OPG shall meet all legal requirements and any environmental commitments that it makes, with the objective of exceeding these legal requirements where it makes business sense". This policy commits OPG to:

- establish and maintain an environmental management system (EMS)
- work to prevent or mitigate adverse effects on the environment with a long-term objective of continual improvement
- manage sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern.

In 2016, OPG maintained the ISO 14001 registration of its company-wide EMS. Within the EMS, OPG has planning, operational control, and monitoring programs to manage the Company's positive and negative impacts on the environment. Significant environmental aspects of OPG's operations include: spills, chemical and thermal emissions to water, water flow and level changes, radioactive emissions, low and intermediate level radioactive waste (L&ILW), wildlife habitat, displacement of fossil fuels, and fish impingement and entrainment. Further details regarding OPG's environmental risks can be found in the section, *Risk Management* under the heading, *Environmental Risk*.

Environmental performance targets are set as part of the annual business planning process. OPG met or outperformed its 2016 targets for spills, environmental infractions, and carbon-14 emissions to air. An increase in the volume of waste generated from work activities at the Darlington GS and preparation for the Darlington Refurbishment project led to a higher than expected volume of L&ILW produced in 2016. Performance for tritium

emissions to air and water during 2016 remained less than one percent of the regulatory limit. There were no significant environmental events during 2016.

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. The program requirements are expected to result in increased fuel costs for some OPG-owned and co-owned generating facilities. Fuel costs for these stations are generally recovered from the electricity market. With OPG's low GHG emitting fleet, the program is not expected to have a material adverse financial impact on the Company. OPG has established the necessary processes to comply with the cap and trade program requirements.

OPG is monitoring actions being taken by the Government of Ontario and the Government of Canada to reduce GHG emission levels and transition to a low-carbon economy. In support of efforts to mitigate climate change, the Company continues to evaluate and implement plans to increase the generation capacity of its hydroelectric generating fleet, where economic, and invest in other low-carbon technologies.

OPG communicates its environmental performance internally to employees and to external stakeholders, including the Ontario Ministry of the Environment and Climate Change, Environment and Climate Change Canada, the CNSC, and local communities. Details of OPG's environmental performance and initiatives to fulfill the Company's Environmental Policy can be found in OPG's 2015 Sustainability Report, available on the Company's website at www.opg.com.

Improving Efficiency and Reducing Costs

As part of its commitment to operational excellence, OPG remains focused on reducing costs by pursuing efficiency and productivity improvements across operating business units and support functions, while ensuring that there is no adverse impact on the safety, reliability and environmental sustainability of the Company's operations. This includes streamlining of processes, simplifying governance, upgrading information technology, optimizing service delivery models, and, where appropriate, leveraging attrition to achieve human resource targets aligned with business requirements. Initiatives to improve cost performance and organizational capability are being implemented at the enterprise and business unit level.

To drive efficiency and performance improvement, the Company continues to leverage a more scalable, centre-led organizational model. In 2016, the reduction in OPG's regular headcount from ongoing operations, since the beginning of 2011, reached over 2,800. Improving organizational performance and building on these efficiency gains remains a key priority for the Company. OPG continues to review its cost structure, identify cost improvement strategies and embed an outcomes-driven culture that reinforces low cost, efficiency, and organizational agility as part of business decision-making. In order to enhance the overall focus on productivity, in 2016 OPG adopted Enterprise TGC per MWh as a measure of OPG's overall organizational cost performance and Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets, in addition to the existing Nuclear TGC per MWh measure. Further details regarding these measures are included in the sections, *Highlights, Key Operating and Financial Performance Indicators* and *Supplemental Non-GAAP Measures*.

People and Culture

A well trained and engaged workforce is fundamental to the achievement of OPG's strategic imperatives. To succeed in a demanding business environment, OPG is focused on building a diverse, healthy, engaged workforce and fostering a culture of collaboration, accountability and innovation. OPG also continues to communicate and

implement the values and behaviours expected from its employees in order to maintain a strong focus on safety, performance excellence, continuous improvement, and corporate citizenship.

The Company continues to focus on improving the capability of its workforce through leadership development, knowledge management, diversity and inclusion programs, and hiring in key areas. Ability to secure the right talent mix in order to effectively meet the Company's immediate and longer term business needs on a timely basis is supported through workforce planning, resourcing and on-boarding strategies, both to acquire external talent into the organization and to develop existing employees. The goal of workforce planning and resourcing strategies is to ensure that the Company's workforce is diverse and has the right skill set and capability for the safe and effective operation of the generating facilities and successful delivery of major projects, including the refurbishment of the Darlington GS. These strategies are being designed to take into account anticipated staffing requirements to the end of planned commercial operations of the Pickering GS, through to the end of the planned period to de-fuel, de-water and place the station in a safe state condition.

As part of the strategy to develop and engage employees and to build leadership talent, the Company has an active succession planning program with a focus on accelerating development. OPG also has a talent management monitoring process to proactively assess staffing risks, challenges and opportunities. Since 2015, OPG offers a company-wide high-potential leadership development program to qualified internal candidates. This 18-month cross-functional, competitive-entry program is designed to identify and develop candidates for future leadership positions while they are still relatively early in their career.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification. In addition to maintaining its internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners and educational institutions to meet the required level of qualification. Training delivery models are evaluated for effectiveness and efficiency.

Effective January 1, 2017, OPG implemented a new Executive Compensation Program that is compliant with *Ontario Regulation 304/16: Executive Compensation Framework*, introduced in September 2016. The regulation sets out how all employers designated under the *Broader Public Sector Executive Compensation Act, 2014*, including OPG, must establish and post compensation programs for executives. The program must include the compensation philosophy, salary and performance-related pay caps, comparative analysis details, and a description of other elements of compensation. OPG's new Executive Compensation Program, which applies to employees at the Vice President level and higher, is designed to provide compensation that is at the 50th percentile of the market and focused on at-risk, performance based pay. The program will better enable OPG to attract, align and retain the executive talent critical to delivering Shareholder and customer value, while ensuring continued safe and reliable operations.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. OPG also continues to plan and execute maintenance and capital improvement projects related to its existing assets. OPG strives for excellence in the planning and delivery of all projects across the Company.

OPG's vision for project excellence is to be an industry leader in project management capability and performance. As part of its commitment to project excellence, OPG continues to enhance and streamline its approach to project planning and execution, with the goal of delivering all projects safely, on time, on budget, and with high quality. Achieving project excellence at OPG involves, among other things, putting in place a common, scalable project delivery model across all business units, establishing qualified project management teams, optimizing contracting strategies, engaging qualified and experienced vendors, and effectively monitoring and controlling performance. The status updates for OPG's major projects as of December 31, 2016 are outlined below.

Project	Capital	Approved	Expected	Current status

(millions of dollars)	expenditures Year-to-date	Life-to-date	budget	in-service date	
Darlington Refurbishment	1,019	3,185	12,800 [1]	First unit - 2020 Last unit - 2026	The refurbishment of Unit 2 commenced in October 2016, as planned. De-fueling of Unit 2, the first critical path activity, was completed in January 2017, ahead of schedule. The project is tracking on budget. See update below.
Peter Sutherland Sr. Hydroelectric GS	141	236	300	2017	Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, ahead of the originally planned schedule. **[MONITOR]** See update below.
Sir Adam Beck Pump GS Reservoir Refurbishment	39	46	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget. See update below.
Ranney Falls Hydroelectric GS	2	3	77 **[MONITOR]**	2019	Project design work was completed in 2016 and construction is expected to commence in 2017. See update below. **[MONITOR]**
Nanticoke Solar Facility	1	1			Project definition work is in progress and construction is planned to commence in the first half of 2018. See update below.
Deep Geologic Repository for L&ILW	9 [2]	195 [2]			OPG has completed the additional studies required by the Canadian Environmental Assessment Agency (CEAA) and the federal Minister of Environment and Climate Change and submitted this information in December 2016. See update below.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the Darlington GS by approximately 30 years. The Darlington Refurbishment project is a multi-phase program comprising the following five major sub-projects:

- **Retube and Feeder Replacement (RFR)**, which includes the removal and replacement of fuel channel assemblies and feeder tubes in each reactor

- **Turbines and Generators**, which consists of inspections and repairs of turbine generator sets and the replacement of analog control systems with digital control systems
- **De-fuelling and Fuel Handling**, which involves the de-fuelling of the reactors and the refurbishment of the fuel handling equipment
- **Steam Generators**, which includes mechanical cleaning, water lancing, and inspection and maintenance work on the generators
- **Balance of Plant**, which consists of work on smaller projects to replace or repair certain other station components.

In January 2016, the Government of Ontario's support for the Darlington Refurbishment project was affirmed through the Ontario Minister of Energy's announcement endorsing OPG's plan to refurbish the four Darlington units at a total project budget of $12.8 billion, including capitalized interest and escalation. The Province's announcement followed the approval of the project budget and schedule by OPG's Board of Directors in November 2015. The refurbishment of the last unit is scheduled to be completed by 2026. OPG's current operating licence for the Darlington GS spans most of the planned duration of the Darlington Refurbishment project, expiring in November 2025.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. *Ontario Regulation 53/05* requires the OEB to accept the need for the Darlington Refurbishment project in light of Ontario's 2013 Long-Term Energy Plan (LTEP) and the related policy of the Province endorsing the need for nuclear refurbishment. It also requires the OEB to ensure that OPG recovers capital and non-capital costs and firm financial commitments in respect of the Darlington Refurbishment project, if the OEB is satisfied that the costs were prudently incurred and that the firm financial commitments were prudently made.

A number of pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, in support of the execution phase of the project have been completed, with the remaining projects continuing to track for completion in line with the refurbishment execution schedule.

All major contracts for the Darlington Refurbishment project that OPG expected to award were in place prior to proceeding with the Unit 2 refurbishment. This included the RFR execution phase contract awarded in January 2016 and valued at approximately $2.75 billion for work to be executed on all four units. All of the major contracts contain suspension and termination provisions.

Other key activities related to the project in 2016 included the following:

- Fabrication of the major reactor components including fuel channels and feeder tubes is in progress, with the first set of feeder tubes delivered in the fourth quarter of 2016. The remaining components have planned deliveries tracking in line with the project schedule.
- The specialized tooling for removal and replacement of feeder tubes and fuel channel assemblies in each reactor was delivered to OPG's reactor training and mock-up facility in the second quarter of 2016, as planned, and testing of the tooling has been completed.

- All 28 storage tanks have been installed in the Heavy Water Storage and Drum Handling Facility, which will provide storage and processing capability for the removal of heavy water from the units during refurbishment, as well as for continued station operations.
- The RFR Island Support Annex was completed in February 2016. The facility houses RFR field preparatory, contractor management, and project oversight activities.

In addition to the de-fuelling of the Unit 2 reactor completed in January 2017, milestones for the Darlington Refurbishment project in 2017 include:

- Completion of reactor vault preparation activities to support RFR work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Third Emergency Power Generator and Containment Filtered Venting System safety enhancement projects, which were originally scheduled to be placed in-service in 2016. Remediation measures are in progress and OPG expects both projects to be placed in-service during the first quarter of 2017. These delays will not impact the overall Darlington Refurbishment project schedule, as neither of the two projects is on the critical path.
- Completion of the Re-tube Waste Processing Building and the Heavy Water Storage and Drum Handling Facility.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of the second unit, Unit 3, at the Darlington GS and is entering into associated commitments to procure major components that require long-lead times. As of December 31, 2016, $31 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Peter Sutherland Sr. Hydroelectric GS

The project to construct the 28 MW Peter Sutherland Sr. hydroelectric GS is in the process of testing and commissioning the turbine and generator units, as well as operator training and document turnover. Work also continues on demobilization efforts, as well as site reclamation. Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. **[MONITOR]** The project is tracking within the approved budget of $300 million.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The construction work on the project included installation of a partial new liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

During 2016, OPG completed project design work for the construction of an additional 10 MW single-unit powerhouse on the existing Ranney Falls GS site. The new unit will replace an existing unit that reached its end of life in 2014. Capital expenditures for project definition work completed as of December 31, 2016 were $3 million. OPG plans to commence construction work in 2017, with an expected in-service date in the fourth quarter of 2019 and a budget of $77 million. **[MONITOR]**

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS and adjacent lands is planned to commence in the first half of 2018. It is expected to be completed in early 2019. Capital expenditures for project definition work completed as of December 31, 2016 were $1 million.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In August 2015, OPG responded to the CEAA's list of potential environmental conditions relating to the JRP report. In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and the impact on environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization (NWMO) were located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following a review by the CEAA and a period of public comment, an EA Decision Statement by the Minister is expected by the third quarter of 2017. Based on the information submitted to the Minister, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

In 2013, OPG suspended design activities on the project pending receipt of a site preparation and construction licence. If the decision on the EA is positive, the licensing process will resume. Upon receipt of the site preparation and construction licence, OPG will complete detailed design and development of a project schedule and a budget. In parallel, OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The approval of OPG's Board of Directors must also be obtained in order to proceed with construction. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

New Nuclear Units

The 2013 LTEP also indicated that the Ontario Ministry of Energy would work with OPG to maintain the site preparation licence granted by the CNSC in relation to the potential construction of these reactors. As such, OPG has been undertaking activities required to support the CNSC Power Reactor Site Preparation Licence and the

Darlington New Nuclear Project EA. The JRP Report on the EA had concluded that the project was not likely to cause significant adverse environmental effects, given mitigation. In April 2016, the Supreme Court of Canada dismissed the application for leave to appeal filed by the parties that had challenged the Darlington New Nuclear Project EA through a judicial review, concluding the litigation on the matter. The CNSC site preparation licence expires in 2022.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth. Inherent in this priority are three objectives:

- Increase revenue, reduce costs and achieve appropriate return
- Ensure availability of cost effective funding for operational needs, generation development projects and long-term obligations
- Pursue opportunities to expand the existing core business and capitalize on new growth paths.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In line with its commercial mandate, OPG is focused on increasing revenue and achieving an appropriate rate of return on the Shareholder's investment, while taking into account the impact on Ontario electricity customers.

In order to achieve the above objectives with respect to the regulated operations, OPG is focused on clearly demonstrating in its rate applications to the OEB that the costs required to operate and invest in the assets are reasonable and being prudently incurred, and should be fully recovered, and that the Shareholder's investment in these assets should earn an appropriate rate of return. OPG's existing base regulated prices, which came into effect in November 2014, were lower than requested by OPG based on its forecast costs. This has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

To improve the financial strength of the regulated operations going forward, OPG has been focused on providing appropriate, transparent evidence in support of its OEB rate requests, aligning organizational resources to support an effective rate application process, and continuing to identify opportunities for further efficiencies in the Company's cost structure. To date, OPG's focus on cost reduction and efficiency improvement initiatives has resulted in significant changes across the Company. This includes over $1 billion in cumulative savings realized across the Company since the beginning of 2011 from reductions in ongoing operations regular headcount through Business Transformation and other initiatives. OPG's cost and productivity improvement efforts are discussed further under the heading, *Operational Excellence*.

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. The OEB's decision on the application, including the effective date of the approved new regulated prices, is expected in the second half of 2017. Consistent with *Ontario Regulation 53/05*, OPG incorporated a nuclear rate smoothing proposal into its application, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impact on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the deemed capital structure applied to the regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent

debt. If approved, this would improve OPG's return on Shareholder's investment. Further details on OPG's rate application can be found under the heading, *Recent Developments* in the *Highlights* section.

For generation development projects that do not form a part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements prior to proceeding with the project. In line with this strategy, most of OPG's non-regulated operating facilities and assets under construction are subject to ESAs with the IESO. Based on these agreements, OPG expects its non-regulated generation operations, reported under the Contracted Generation Portfolio segment, to continue to provide a generally stable level of earnings and cash flow going forward.

OPG's capital structure currently reflects lower levels of debt than the deemed capital structure reflected in the Company's existing or proposed regulated prices. OPG is evaluating strategies to enhance Shareholder returns by optimizing the Company's capital structure through better alignment with the deemed capital structure, taking into account the overall financial strength of the Company and the potential impact on the Company's investment grade credit rating.

Ensure Availability of Cost Effective Funding

OPG actively monitors its funding requirements and forecasts availability of funds to ensure that it can meet the Company's operational needs, project commitments and long-term obligations. OPG utilizes multiple sources of funds, including funds from operations, commercial paper, securitization of assets, letters of credit, credit facilities, long-term corporate debt, and private placement project financing. The Company's financing strategy leverages the strength of its balance sheet to obtain cost effective long-term corporate debt. OPG also accesses the capital markets for private placement project financing, secured by the assets of the project, where the characteristics of the project support such financing. Maintaining an investment grade credit rating is critical to OPG's ability to access cost effective financing.

In April 2016, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2016, S&P Global Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

OPG intends to continue to access the capital markets, where appropriate, to obtain cost effective financing for future generation development projects. The Company also continues to evaluate arrangements that would appropriately support its financing needs and capital expenditure programs. OPG's liquidity and capital resources are discussed under the section, *Liquidity and Capital Resources.*

Pursue Business Growth Opportunities

OPG pursues commercially-based business growth opportunities through investments in its core generation portfolio, as well as emerging renewable energy project opportunities. OPG's growth strategy considers the Company's financial position and anticipated future changes in the generating fleet, including the eventual end of Pickering commercial operations. The growth strategy is also informed by industry, technological, environmental, social, and economic external factors. Growth opportunities are evaluated using financial and risk-based analyses as well as strategic considerations.

OPG's core business growth strategy focuses on the renewal and expansion of the Company's generation portfolio of nuclear, hydroelectric and thermal generating assets in Ontario, including the redevelopment and expansion of existing sites and potential new developments. The strategy leverages OPG's operating and project development expertise as well as the Company's existing diverse physical asset base. OPG considers acquisition opportunities as they arise, taking into account operating synergies, strategic benefits, financial returns and risk profile. OPG's current major generation development projects and asset life extension initiatives are discussed under the headings, *Operational Excellence* and *Project Excellence* in the *Core Business and Strategy* section.

OPG seeks to continue to expand beyond its core generation business through investments in innovation and emergent low-carbon technologies, including selective solar generation, energy storage, micro-grid, electric vehicle infrastructure and other development. OPG is also considering longer-term growth paths that include broader electricity sector opportunities, within and outside Ontario. Growth opportunities may be pursued in partnership with other commercial entities where appropriate synergies exist and are aligned with OPG's business objectives.

In March 2016, Nanticoke Solar LP was selected, through the first phase of the IESO's LRP program, to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. The partnership and the IESO executed a 20-year LRP contract in March 2016, which formalized the terms and conditions for the development and operation of the new solar facility. In September 2016, the Government of Ontario suspended the second phase of the LRP program, which does not impact the project.

From October 2016 to December 2016, the Government of Ontario conducted a consultation process to update its LTEP. OPG made a formal submission as part of the consultation as it relates to OPG's core generation business and growth opportunities. The Ontario Ministry of Energy has indicated that the development of the updated LTEP, scheduled to be published in 2017, will balance the principles of affordability, reliability, clean energy, community and Indigenous engagement, as well as conservation and demand management. OPG's business growth opportunities may be affected by the results of the 2017 LTEP.

Social Licence

As the largest, publicly-owned electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations. OPG's commitment to safety is discussed under the heading, *Workplace and Public Safety* in the *Core Business and Strategy* section.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish relationships with Indigenous communities based on a foundation of respect for their languages, customs, and political, social and cultural organizations. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, and other joint projects. Recent examples of partnerships include the Peter Sutherland Sr. GS in partnership with the Taykwa Tagamou Nation, the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River, and two recently completed shoreline remediation projects. The Whitesand First Nation, working closely with OPG, completed a project to remediate nearly two kilometers of shoreline in 2016, while the Long Lake #58 First Nation undertook the management of a five-year shoreline remediation project. OPG also has been engaging proactively with Indigenous communities regarding the Company's nuclear operations, including both regularly scheduled meetings and an outreach effort in connection with OPG's proposed L&ILW DGR and the re-licensing of the PWMF and the WWMF. In November 2016, OPG was recognized for its ongoing commitment to engaging local Indigenous communities with the CEA's 2016 Sustainable Electricity award for Leadership in External Collaboration and Partnerships.

OPG is committed to being an open, transparent, and accountable company. With operations across Ontario, OPG works to maintain public trust with stakeholders by engaging site communities, sharing information, and being transparent about performance. In addition, OPG's operations are subject to extensive regulatory oversight, with public participation, by the CNSC, the OEB, and other bodies.

As part of its commitment to environmental sustainability, OPG works with community partners to support regional ecosystems and biodiversity. In 2016, OPG continued efforts to protect and restore habitat, promote biodiversity education and awareness, and help the recovery of species at risk. In addition, OPG helps contributes to the well-being of its host communities through the Company's Corporate Citizenship Program (CCP), which supports

charitable and non-profit grassroots initiatives in the areas of environment, education, and community, which includes support for including Indigenous initiatives. In 2016, OPG's CCP provided support to over 850 initiatives, of which 87 were Indigenous.

Further details regarding OPG's commitment to sustainable development, including information regarding the Company's environmental, social and economic performance and initiatives, are provided in OPG's 2015 Sustainability Report available on the Company's website at www.opg.com.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of revenue requirement and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's application for new base regulated prices submitted to the OEB in May 2016 is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its May 2016 application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

Until the OEB's decision on OPG's application is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In large part, this is due to the expected year-over-year reduction in nuclear electricity generation resulting from the full year effect of the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined based on a production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision's issuance could have a significant impact on OPG's financial results during 2017. The application for new regulated prices is further discussed in the *Highlights* section under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. Combined with the expiry of rate riders in effect during 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment, as expected, OPG anticipates this to result in lower cash flow from operations and lower Adjusted FFO Interest Coverage ratio in 2017, compared to 2016. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements. In addition, the expected reduction in nuclear generation as a result of the planned outages at Darlington GS is expected to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Other factors that may impact the Enterprise TGC include potential hydroelectric generation losses due to surplus baseload generation conditions and planned capital expenditures.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, variance accounts include those related to the revenue impact of variability in water flows and SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Pursuant to the Settlement Agreement, these and all other applicable existing variance and deferral accounts have been approved to continue once new regulated prices take effect. Considering the impacts of these accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. **[MONITOR]**

OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to ESAs with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major development projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI, which, in the short term, can be volatile and cause fluctuations in the Company's income. This volatility has been partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account. OPG is exposed to rate of return risk for the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodologies for the Nuclear Liabilities.

As OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle liabilities per the most recently approved ONFA reference plan, the volatility of earnings on the Nuclear Segregated Funds reflected in net income is reduced when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at December 31, 2016, the Decommissioning Segregated Fund was overfunded by 21 percent, and the Used Fuel Segregated Fund was marginally overfunded by less than one percent, relative to the liabilities per the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future, which would increase earnings volatility. The 2017 ONFA Reference Plan is discussed in the *Highlights* section, under the heading *Recent Developments.* The accounting for the Nuclear Segregated Funds is discussed in the section *Critical Accounting Policies*, under the heading *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

KEY OPERATING AND FINANCIAL PERFORMANCE INDICATORS

OPG evaluates the performance of its generating stations using a number of key indicators. Key operating performance indicators aligned with corporate strategic imperatives are measures of production reliability, cost effectiveness, environmental performance, and safety performance. Certain of the measures used vary depending on the generating technology. The key financial performance indicators evaluate the Company's financial performance at the enterprise level.

In 2016, OPG adopted Enterprise TGC per MWh as an enterprise-wide measure of operational cost effectiveness. Concurrently, OPG adopted Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets and no longer reports Hydroelectric OM&A expense per MWh. The new performance measures, together with Nuclear TGC per MWh, provide the Company with a single, consistent method of evaluating cost effectiveness across the organization.

Enterprise TGC, Nuclear TGC, Hydroelectric TGC, ROE Excluding AOCI, and the FFO Adjusted Interest Coverage ratio discussed below are not measurements in accordance with US GAAP. They should not be considered as alternative measures to net income or any other measure of performance under US GAAP. However, OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the

Company's strategic imperatives and related objectives. The definition and calculation of Enterprise TGC per MWh, Nuclear TGC per MWh, Hydroelectric TGC per MWh, ROE Excluding AOCI and FFO Adjusted Interest Coverage are found in the section, *Supplementary Non-GAAP Financial Measures*.

Enterprise Total Generating Cost per MWh

Enterprise TGC per MWh is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Nuclear Total Generating Cost per MWh

Nuclear TGC per MWh is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts and expenses ancillary to OPG's nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Hydroelectric Total Generating Cost per MWh

Hydroelectric TGC per MWh is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Nuclear Unit Capability Factor

OPG's nuclear stations are baseload facilities and are not designed for fluctuating production levels to meet peaking demand. The nuclear Unit Capability Factor is a key measure of nuclear station performance. It measures the amount of energy that the unit(s) generated over a period of time, adjusted for externally imposed constraints such as transmission or demand limitations, as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. Capability factors are primarily affected by planned and unplanned outages. By industry definition, capability factors exclude production losses beyond plant management's control, such as grid-related unavailability. The nuclear Unit Capability Factor also excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS is excluded from the measure effective October 15, 2016, when the unit was taken offline as part of the Darlington Refurbishment project.

Hydroelectric Availability

OPG's hydroelectric stations operate as baseload, intermediate, or peaking stations. Hydroelectric Availability is a measure of the reliability of a hydroelectric generating unit. It represents the percentage of time the generating unit is capable of providing service, whether or not it is actually generating electricity, compared to the total time for the respective period.

Thermal Equivalent Forced Outage Rate

Equivalent Forced Outage Rate (EFOR) is an index of the reliability of a generating unit at OPG's thermal stations. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its objective to deliver value to the Shareholder. ROE Excluding AOCI is defined as net income attributable to the Shareholder for the period divided by average equity attributable to the Shareholder excluding AOCI for that period, and is measured over a period of 12 months.

Funds from Operations Adjusted Interest Coverage

The FFO Adjusted Interest Coverage ratio is an indicator of OPG's ability to meet interest obligations from operating cash flow and is consistent with the Company's objective of ensuring availability of cost effective funding. The FFO Adjusted Interest Coverage ratio is defined as FFO before interest divided by adjusted interest expense, and is measured over a period of 12 months.

Other Key Indicators

In addition to production reliability, cost effectiveness, and financial performance indicators, OPG has identified certain environmental and safety performance measures. These measures are discussed under the section, *Core Business, Strategy and Outlook*.

BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary

services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power and other facilities, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to the passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel L&ILW, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Power lease arrangement and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because OPG's costs associated with the Nuclear Liabilities have been included by the OEB in the determination of regulated prices for production from the Pickering and Darlington nuclear generating stations, in accordance with the methodologies applied since the OEB's 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. Brighton Beach operates under an energy conversion agreement between Brighton Beach and Shell Energy North America (Canada) Inc, and the PEC station is operated under the terms of an Accelerated Clean Energy Supply contract with the IESO. OPG's share of the in-service

generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of trading activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the United States (US) market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets, with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and Nanticoke generating stations' sites.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**3,481**	3,245
Fuel expense	**315**	301
Gross margin	**3,166**	2,944
Operations, maintenance and administration	**2,210**	2,196
Depreciation and amortization	**925**	717
Property taxes	**26**	26
Income before other loss, interest, and income taxes	**5**	5
Other loss	**1**	3
Income before interest and income taxes	**4**	2

Income before interest and income taxes from the segment increased to $4 million in 2016, compared to $2 million in 2015. The improvement in earnings of $2 million was primarily due to higher electricity generation in 2016, compared to 2015, which increased revenue from the nuclear base regulated price. The increase in revenue was largely offset by higher OM&A expenses, higher fuel expense, and higher depreciation and amortization expense, excluding amortization expense related to regulatory balances, in 2016, compared to 2015.

Higher nuclear production of 1.1 TWh in 2016, compared to 2015, was primarily due to the planned four-unit VBO in 2015 and a decrease in the number of unplanned outages at the Darlington GS in 2016. This was partially offset by the impact of the increased number of unplanned outage days at the Pickering GS in 2016, and the removal from service of Unit 2 of the Darlington GS in October 2016 as part of the Darlington Refurbishment project.

The increase in OM&A expenses of $14 million in 2016 reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium prices and

higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million primarily due to new assets in service in 2016.

A decrease in non-electricity generation revenue in 2016, compared to 2015, also partially offset the increase in segment earnings. The lower non-electricity generation revenue was mainly attributable to lower detritiation services revenue and lower isotope sales in 2016 and an insurance recovery recognized in 2015.

A higher OEB-authorized rate rider of $10.84/MWh effective from July 1, 2015 to the end of 2016 contributed to the increase in segment revenue in 2016, compared to 2015. In the first half of 2015, OPG received a rate rider of $1.33/MWh. As the rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this increase in revenue was largely offset by an increase in amortization expense related to the regulatory balances.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2016 and 2015 were as follows:

	2016	2015
Unit Capability Factor *(%)* [1]		
Darlington GS	**89.5**	76.9
Pickering GS	**75.2**	79.4

[1] The nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS increased in 2016, compared to 2015, primarily due to the four-unit VBO completed during 2015. In addition, a lower number of unplanned outage days at the Darlington GS during 2016, compared to 2015, also contributed to the improvement in the Unit Capability Factor.

The decrease in the Unit Capability Factor at the Pickering GS in 2016, compared to 2015, was primarily due to a higher number of unplanned outage days at the station in 2016, as a result of emergent discovery work during planned outages.

The definition of the nuclear Unit Capability Factor is found under the heading, *Key Operating and Financial Performance Indicators.*

Regulated – Nuclear Waste Management Segment

	2016	2015
Revenue	**138**	122
Operations, maintenance and administration	**146**	132
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**912**	880
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Loss before interest and income taxes	**(174)**	(186)

Earnings from the segment improved by $12 million in 2016 compared to 2015. The improvement was primarily due to higher earnings from the Nuclear Segregated Funds, partially offset by an increase in accretion expense on the Nuclear Liabilities.

The improvement in Nuclear Segregated Funds earnings was primarily due to an increase in the Used Fuel Segregated Fund earnings due to higher CPI-adjusted rate of return guaranteed by the Province for funding related to the initial 2.23 million used fuel bundles. Pursuant to the ONFA, the guaranteed annual rate of return for that portion of the Used Fuel Segregated Fund is set at 3.25 percent plus the change in the Ontario CPI. This increase in

Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the 2017 ONFA Reference Plan. The 2017 ONFA Reference Plan was approved by the Province in December 2016, and is discussed in the section, *Highlights* under the heading, *Recent Developments*. The accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section. The Nuclear Segregated Funds earnings are reported net of the impact of the Bruce Lease Net Revenue Variance Account.

The higher accretion expense on the Nuclear Liabilities during 2016, compared to 2015, reflected an upward adjustment in the liabilities recognized in December 2015 related to the revised accounting assumptions for the estimated useful lives of OPG's nuclear generating stations. The increased accretion expense was partially offset by the impact of the Bruce Lease Net Revenues Variance Account. The changes in the assumed estimated useful lives of the nuclear stations and the related adjustment to Nuclear Liabilities are discussed further in the section, *Balance Sheet Highlights* under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account*.

Regulated – Hydroelectric Segment

(millions of dollars)	**2016**	**2015**
Revenue [1]	**1,527**	1,619
Fuel expense	**353**	345
Gross margin	**1,174**	1,274
Operations, maintenance and administration	**325**	340
Depreciation and amortization	**225**	282
Property tax	**1**	1
Income before other (income) loss, interest and income taxes	**623**	651
Other (income) loss	**(19)**	3
Income before interest and income taxes	**642**	648

[1] During 2016 and 2015, the Regulated – Hydroelectric segment revenue included incentive payments of $14 million and $26 million, respectively, related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $6 million in 2016, compared to 2015, was primarily due to lower hydroelectric incentive mechanism payments and the income impact of OEB-approved variance accounts. The lower payments under the hydroelectric incentive mechanism were primarily due to the reservoir refurbishment outage at the Sir Adam Beck Pump GS during 2016. The decrease in segment income was partially offset by a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to OPG's December 2014 motion. The decrease in segment income also was partially offset by a year-over-year decrease in OM&A expenses, primarily due to higher costs incurred in 2015 for shoreline remediation work.

The decrease in segment revenues due to the lower OEB-authorized rate rider in 2016, compared to 2015, was largely offset by a corresponding decrease in amortization expense related to the regulatory balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	2016	**2015**
Hydroelectric Availability *(%)*	**89.0**	91.2

The Hydroelectric Availability decreased during 2016, compared to 2015, primarily due to the planned reservoir refurbishment project at the Sir Adam Beck Pump GS. The project was completed in February 2017.

The definition of Hydroelectric Availability is found under the heading, *Key Operating and Financial Performance Indicators*.

Contracted Generation Portfolio Segment

(millions of dollars)	2016	2015
Revenue	**573**	535
Fuel expense	**58**	39
Gross margin	**515**	496
Operations, maintenance and administration	**178**	185
Depreciation and amortization	**75**	72
Accretion on fixed asset removal liabilities	**9**	8
Property taxes	**7**	7
Income from investments subject to significant influence	**(37)**	(39)
Income before other loss, interest, and income taxes	**283**	263
Other loss	**1**	1
Income before interest and income taxes	**282**	262

Income before interest and income taxes increased by $20 million during 2016, compared to 2015. The increase primarily resulted from the higher gross margin, due to increased revenues from the Lower Mattagami River generating stations, the Lennox GS, and the Atikokan GS. Higher revenue from the Lennox GS was primarily due to increased market demand. The increase in revenue from the Atikokan GS reflected the support provided to the electricity system in northwestern Ontario as a result of an outage at a local transformer station from late July 2016 to early September 2016. The year-over-year increase in segment revenue was also due to a provision made in 2015 related to an IESO audit.

The Hydroelectric Availability and the Thermal EFOR for the Contracted Generation Portfolio segment were as follows:

	2016	2015
Hydroelectric Availability *(%)*	**77.3**	88.6
Thermal EFOR *(%)*	**1.6**	11.2

Lower Hydroelectric Availability during 2016, compared to 2015, was primarily due to a higher number of planned outage days at the Kipling and Harmon generating stations on the Lower Mattagami River. During 2016, headgate replacements were made at certain units of the Kipling GS and Harmon GS. In addition, a runner upgrade and rehabilitation work was completed at Unit 2 of the Harmon GS. The lower thermal EFOR in 2016, compared to 2015, was primarily due to an outage in 2015 to perform repair work at the Lennox GS.

The definitions of Hydroelectric Availability and Thermal EFOR are found under the heading, *Key Operating and Financial Performance Indicators*.

Services, Trading, and Other Non-Generation Segment

(millions of dollars)	2016	2015
Revenue	**68**	73
Fuel expense	**1**	2
Gross margin	**67**	71
Operations, maintenance and administration	**22**	48
Depreciation and amortization	**32**	29
Accretion on fixed asset removal liabilities	**8**	7
Property taxes	**12**	11
Restructuring	**6**	6
Loss before other loss, interest, and income taxes	**(13)**	(30)
Other loss	**-**	7
Loss before interest and income taxes	**(13)**	(37)

Segment earnings improved by $24 million in 2016 compared to 2015. The losses incurred by the segment in 2015 and 2016 largely reflect the costs associated with the Nanticoke and Lambton generating stations prior to OPG's decisions, in 2015 and November 2016, respectively, to proceed with the stations' decommissioning. These losses are partially offset by OPG's trading activities.

The improvement in earnings in 2016 primarily reflected higher OM&A expenses in 2015, including those incurred related to the Nanticoke GS prior to OPG's decision to proceed with the station's decommissioning, and a provision made in 2015 related to an IESO audit. The year-over-year decrease in OM&A expenses also reflected reduced work programs at the Lambton GS during 2016 due to lower staffing levels used to preserve the station. The preservation activities were discontinued after the announcement to decommission the station. Expenditures incurred in connection with decommissioning activities for the Nanticoke and Lambton generating stations are charged against a previously established decommissioning provision.

During each of 2016 and 2015, OPG recorded a charge against earnings to adjust the scrap value estimates for the Lambton GS. In 2016, this adjustment was offset by dividend income earned from OPG's investment in Hydro One shares, which contributed to the year-over-year improvement in earnings.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies; to undertake major projects; to fund long-term obligations such as contributions to the pension fund; to make payments under the OPEB plans; to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds; and to service and repay long-term debt.

Changes in cash and cash equivalents for 2016 and 2015 are as follows:

(millions of dollars)	**2016**	**2015**
Cash and cash equivalents, beginning of period	**464**	610
Cash flow provided by operating activities	**1,705**	1,465
Cash flow used in investing activities	**(1,807)**	(1,553)
Cash flow used in financing activities	**(176)**	(58)
Net decrease	**(278)**	(146)
Cash and cash equivalents, end of period	**186**	464

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details under the heading, *Overview of Results* in the section, *Highlights*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities in 2016 was $1,807 million, compared to $1,553 million in 2015. The increase was primarily due to higher expenditures on the Darlington Refurbishment project as it transitioned to execution phase, and the acquisition of nine million common shares of Hydro One in April 2016. The increase in cash flow used in investing activities in 2016, compared to 2015, was partially offset by the investment of proceeds from a long-term debt issuance in support of the Peter Sutherland Sr. GS project into a structured deposit note in 2015, and the subsequent receipt of proceeds from this investment on staggered maturity dates throughout 2016. The final maturity date of the deposit note is in April 2017. The acquisition of the Hydro One shares is discussed under the heading *Recent Developments* in the *Highlights* section, as well as in Note 3 of the Company's 2016 audited consolidated financial statements.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, sustaining capital investments across the generating fleet, and hydroelectric development projects including the expansion of the Ranney Falls GS and the completion of Peter Sutherland Sr. GS.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended the expiry date of both tranches from May 2020 to May 2021. As at December 31, 2016, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this

agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plan.

As at December 31, 2016, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As of December 31, 2016, there were outstanding borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

As at December 31, 2016, OPG's long-term debt outstanding was $5,534 million, including $1,103 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes is x.xx percent and x.xx percent, respectively. **[MONITOR]**

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, were as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Other Commitments

Collective Agreements

As of December 31, 2016, OPG had approximately 9,270 regular employees. Most of OPG's regular employees are represented by two unions:

- **The PWU** – This union represents approximately 5,070 OPG employees or approximately 55 percent of OPG's regular workforce as at December 31, 2016. Union membership includes operators, technicians, skilled trades, clerical, and security personnel. The current collective agreement between OPG and the PWU has a three-year term, expiring on March 31, 2018.
- **The Society** – This union represents approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce as at December 31, 2016. Union membership includes supervisors, professional engineers, scientists, and other professionals. The current collective agreement between OPG and The Society has a three-year term, expiring on December 31, 2018.

In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights at OPG facilities. These bargaining rights are established either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. All of these collective agreements currently have multi-year terms, expiring on April 30, 2020.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's audited consolidated financial position using selected balance sheet data as at December 31:

(millions of dollars)	**2016**	**2015**
Property, plant and equipment – net	**20,002**	20,595
The decrease was primarily due to a reduction in asset retirement costs of approximately $1,570 million in 2016 as a result of a reduction in the estimates for the Nuclear Liabilities to reflect the 2017 ONFA Reference Plan cost estimates. The decrease was partially offset by capital expenditures on the Darlington Refurbishment and other projects, net of depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**15,984**	15,136
The increase was primarily due to earnings on the Nuclear Segregated Funds and contributions to the Used Fuel Segregated Fund, partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded to the lower underlying obligations reflected in the updated ONFA reference plan and reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Available-for-sale securities	**212**	-
The balance as at December 31, 2016 represents the fair value of the nine million Hydro One shares acquired in April 2016, as discussed under the heading *Recent Developments* in the *Highlights* Section.		
Regulatory assets and liabilities – net *(current and non-current portions)*	**5,545**	5,808
The decrease was primarily due to the amortization of regulatory balances recovered through rate riders in effect during 2016 and an increase in regulatory liabilities resulting from a change in the estimated useful lives of OPG's nuclear stations at the end of 2015, as discussed under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account* below. This was partially offset by amounts deferred in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and other variance and deferral accounts during the year.		
Short-term debt	**2**	225
The decrease was due to the maturity of external commercial paper outstanding under LME's commercial paper program.		
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169
The decrease was primarily due to a reduction of approximately $1,570 million in the estimates for the Nuclear Liabilities at the end of 2016 to reflect the 2017 ONFA Reference Plan cost estimates, partially offset by accretion expense during the year.		
Pension liabilities	**3,012**	2,597
The increase was primarily due to the re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as discussed in the section, *Changes In Accounting Policies* under the heading, *Pension and Other Post-Employment Benefits.*		

Impact of Changes in Station End-of-Life Dates Deferral Account

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense arising from the changes in the estimated useful lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG has recognized a regulatory liability of $71 million related to the balance in the deferral account. Together with the Bruce Lease Net Revenues Variance Account discussed below, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account offset the decrease in depreciation expense in 2016, compared to 2015, as a result of the changes in estimated useful lives of OPG's nuclear stations effective December 31, 2015.

The changes to the estimated useful lives of OPG's nuclear generating station effective December 31, 2015, for accounting purposes, were as follows:

- the average service lives of the Bruce A GS and Bruce B GS were extended from 2048 to 2052 and from 2019 to 2061, respectively, to reflect the estimated end-of-life dates reflected in the updated refurbishment agreement between the IESO and Bruce Power, which was announced in December 2015
- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015
- the average service life of the Pickering GS was extended by less than one year.

To reflect the above changes, OPG recognized a total increase of $2,330 million in the Nuclear Liabilities and a corresponding increase in the related asset retirement costs, effective December 31, 2015. These increases were primarily due to the changes in the estimated useful life of the Bruce B GS. The nuclear asset retirement obligations (ARO) associated with the Pickering GS and Darlington GS was impacted by the changes to the Bruce nuclear generating stations' useful lives because the costs of the fleet-wide waste management programs are shared by all of OPG's nuclear stations based on used nuclear fuel and waste volumes. Consistent with the changes in the end-of-life dates for the Bruce nuclear generating stations and the December 2015 amendments to the Bruce Lease in connection with the Province's endorsement of Bruce Power's refurbishment plans, the term of the Bruce Lease for accounting purposes also was extended, in line with the refurbishment plans for these stations.

The impact of the above changes on OPG's revenues and costs related to the Bruce nuclear generating stations effective January 1, 2016 is recorded in the Bruce Lease Net Revenues Variance Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's consolidated financial statements or are recorded in the Company's consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

Guarantees

As part of normal business, OPG and certain of its subsidiaries and joint ventures enter into various agreements to provide financial or performance assurance to third parties. Such agreements include guarantees, standby Letters of Credit and surety bonds. For more details on OPG's guarantees, refer to Note 15 of OPG's audited consolidated financial statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies, including the impact of major recent accounting pronouncements, are outlined in Note 3 of the audited consolidated financial statements. Certain of these policies are recognized as critical accounting policies by virtue of the subjective and complex judgments and estimates required around matters that are inherently uncertain and could result in materially different amounts being reported under different conditions or assumptions. The critical accounting policies and estimates that affect OPG's US GAAP consolidated financial statements are highlighted below.

Exemptive Relief for Reporting under US GAAP

As required by *Ontario Regulation 395/11,* as amended, under the FAA, OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG has also received exemptive relief from the OSC from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board (IASB) for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

As a result of OPG's 2011 decision to adopt US GAAP, as required by the FAA regulation, OPG's earlier plan to convert to IFRS, effective January 1, 2012, was discontinued. OPG had substantively completed its IFRS conversion project, which included separate diagnostic, development, and implementation phases, when it suspended the project. If a future transition to IFRS for the purposes of OPG's consolidated financial statements is required, conversion work can be effectively restarted with sufficient lead time to evaluate and conclude on changes that occurred subsequent to the decision to suspend the project. OPG continues to monitor the IASB's current standard-setting project related to entities with rate-regulated activities and is evaluating alternatives with respect to the Company's future financial reporting.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the OEB.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998*, the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the

future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05.* The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures for its pension and OPEB plans. It is the Company's position that this decision by the OEB did not constitute a change in the basis of OPG's rate recovery of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices, or in an OEB-authorized deferral or variance account for future recovery, as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account to record the difference between OPG's actual pension and OPEB costs for the regulated business determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million, which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the above noted consultation process.

See Notes 3, 5, 8, 9, and 11 of OPG's 2016 audited consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or payable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its rate regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and in respect of investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

The Company has recognized net deferred income tax liabilities of $829 million as at December 31, 2016 (2015 – $880 million).

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset, based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

The accounting estimates related to end-of-life assumptions for PP&E and intangible assets require significant management judgment, including consideration of various operating, technological, and other factors. OPG reviews the estimated useful lives for its PP&E and intangible assets on a regular basis.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

Various assumptions and accounting estimates are required to determine whether an impairment loss should be recognized and, if so, the value of such loss. This includes factors such as short-term and long-term forecasts of prices for electricity generation under applicable revenue mechanisms, the demand for and supply of electricity, inflation, fuel prices, capital and operating expenditures, and estimated useful service lives of the assets.

The carrying value of investments accounted for under the equity method are reviewed for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Segregated Funds based on approved ONFA reference plans. Costs for L&ILW management and used fuel storage incurred during station operation are not funded by the Nuclear Segregated Funds. They are funded through the Company's operating cash flow or other sources of liquidity.

Decommissioning Segregated Fund

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the earnings it recognizes in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded.

The amount due to the Province in respect of the Decommissioning Segregated Fund could be reduced in subsequent periods in the event that the fund earns less than is target rate of return, a new ONFA reference plan is approved with a higher underlying liability, or the amount of the underfunding in the Used Fuel Segregated Fund increases.

When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets.

Used Fuel Segregated Fund

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined in the ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return on the Used Fuel Segregated Fund and the actual market return determined based on the fair value of the fund's assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount OPG would pay to, or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions attributed to the used fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province has the right at any time to access the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. Accordingly, when the Used Fuel Segregated Fund is overfunded, OPG limits the earnings it recognizes int he consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the underlying liability based on the most recently approved ONFA reference plan. In accordance with the ONFA, OPG does not have a right to direct any amounts from the Used Fuel Segregated Fund to the Decommissioning Segregated Fund.

Provincial Guarantee

In accordance with the *Nuclear Safety and Control Act* (Canada), the CNSC requires OPG to have sufficient funds available to discharge the current nuclear waste management and nuclear decommissioning liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the CNSC, on behalf of OPG, for any shortfall between the CNSC financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee equal to 0.5 percent of the amount of the Provincial Guarantee. The

current value of the Provincial Guarantee of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016. The CNSC process requires the CNSC financial guarantee requirement to be updated once every five years. OPG is currently updating the CNSC financial quarantee requirement for the 2018-2022 period and expects to file it with the CNSC in the first half of 2017. **[MONITOR]**

Pension and Other Post-Employment Benefits

The determination of OPG's pension and OPEB costs and obligations is based on accounting policies and assumptions, as discussed below.

Accounting Policy

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor) for each plan is amortized over the expected average remaining service life of the employees covered by the plan, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on its consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation, on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net

of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as amortization components of pension and OPRB costs as described above.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Accounting Assumptions

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost, and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses.

The discount rates, which are representative of the AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. In 2016 and prior years, benefit costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. A lower discount rate increases the benefit obligations and increases benefit costs. The weighted-average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

Starting in 2017, OPG expects to change the method used to estimate the current service and interest cost components of pension and OPEB costs. OPG expects to adopt a full yield curve approach in the estimation of these components of pension and OPEB cost by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Making this change will improve the correlation between projected benefit cash flows and the corresponding yield curve spot rates, and provide a more precise measurement of service and interest costs. This change does not affect the measurement of the total benefit obligations, as the change in the current service and interest components of the costs from the previous method will be offset by a corresponding change in the actuarial (gain) loss recorded in AOCI. OPG will account for this change as a change in estimate, prospectively starting in 2017. With an upward sloping yield curve and the pattern of OPG's estimated future benefit cash flows, the adoption of the full yield curve approach is expected to materially lower OPG's current service and interest cost components, reducing the overall pension and OPEB costs in the initial years following adoption.

The expected rate of return on plan assets is determined based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined under the heading, *Contractual and Commercial Commitments,* in the section *Liquidity and Capital Resources*. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation and assumptions as at December 31, 2016. As part of the valuation, the plans' demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The deficit for the registered pension plan, for accounting purposes, increased from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

Asset Retirement Obligation

OPG recognized ARO for fixed asset removal and nuclear waste management liabilities, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The ARO is comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating plant facilities and other facilities. Costs are expected to be incurred for activities such as preparation for safe storage and safe storage of nuclear stations, dismantlement, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel bundles and L&ILW material. The liabilities associated with the decommissioning of the nuclear generating stations and the long-term management of used nuclear fuel comprise the most significant amounts of the total obligation.

The nuclear decommissioning liability includes the estimated costs of closing the nuclear stations after the end of their service lives, which includes preparation and placement of the stations into a safe state condition followed by an assumed 30-year safe store period prior to station dismantlement and site restoration. Activities associated with the placement of stations into a safe state condition include de-fueling and de-watering of the nuclear reactors. Under the terms of the lease agreement with Bruce Power and as required by the CNSC, OPG is responsible for the nuclear waste management and nuclear decommissioning obligations associated with the Bruce nuclear generating stations. Pursuant to the lease agreement, Bruce Power must return the two Bruce stations to OPG together, in a de-fueled and de-watered state. These de-watering and de-fueling costs are not part of OPG's ARO.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the obligation for these costs include an L&ILW DGR facility to be constructed and operated by OPG, as discussed under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section. To estimate the liability for nuclear used fuel management, OPG has adopted an approach consistent with the Adaptive Phased Management concept approved by the Government of

Canada, which assumes a deep geologic repository or the long-term management of Canada's nuclear used fuel waste. The NWMO is responsible for the design and implementation of Canada's plan for the long-term management of used nuclear fuel.

The following costs are recognized as a liability on OPG's consolidated balance sheets:

- the present value of the costs of decommissioning the nuclear and thermal production facilities and other facilities after the end of their useful lives
- the present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed lives of the stations
- the present value of the variable cost portion of nuclear waste management programs taking into account waste volumes generated to date.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs including construction of assumed waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, decommissioning strategy, and the technology employed may result in significant changes to the value of the accrued liabilities. With programs of such long-term duration and the evolving technology to handle nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the costs for these programs. These costs may increase or decrease over time.

The estimates for the Nuclear Liabilities are reviewed on an ongoing basis as part of the overall nuclear waste management program. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically, at least once every five years, in line with the required ONFA reference plan update process. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of a net increase in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of a net decrease in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets.

The most recent comprehensive update of the baseline cost estimates for the Nuclear Liabilities is contained in the approved 2017 ONFA Reference Plan, and was completed in the fourth quarter of 2016. The update resulted in a decrease of approximately $1,570 million in the Nuclear Liabilities as at December 31, 2016, which was determined using a discount rate of 4.95 percent. The overall reduction in OPG's nuclear waste management and nuclear decommissioning obligations was due mainly to a decrease in cost estimates to reflect a proposed new, more cost effective container design and engineered barrier concept to house used nuclear fuel for disposal, updated cost escalation rates for all programs, and a later expected in-service date for the NWMO's planned deep geologic repository for the long-term permanent disposal of Canada's used nuclear fuel. These decreases were partly offset by higher cost estimates related to decommissioning activities, primarily due to an improved definition of work required during the preparation for safe storage after station shutdown and a higher volume of waste expected to be generated during decommissioning. Cost escalation rates used to estimate future undiscounted cash flows reflected in the December 31, 2016 adjustment to the Nuclear Liabilities ranged from 2.0 percent to 3.4 percent.

The December 31, 2016 adjustment to the Nuclear Liabilities and associated asset retirement costs did not impact OPG's income for 2016. The estimated impact of this adjustment on 2017 expenses, before the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account, includes a decrease to depreciation expense of approximately $8 million, a decrease to accretion expense of approximately $78 million, and a combined decrease in used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as they are expected to be largely offset by

the OEB approved variance and deferral accounts, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to Ontario Regulation 53/05. It records the revenue requirement impact associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years.

The liability for nuclear fixed asset removal and nuclear waste management on a present value basis as at December 31, 2016 was $19,103 million (2015 – $19,792 million). As at December 31, 2016, the undiscounted cash flows of expenditures for OPG's Nuclear Liabilities in 2016 dollars are as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Expenditures for nuclear fixed asset removal and nuclear waste management [1]	354	360	386	429	465	39,296	41,290

[1] The majority of the expenditures are expected to be reimbursed by the Nuclear Segregated Funds established by the ONFA. Any contributions required under the ONFA are not included in these undiscounted cash flows. Accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The liability for non-nuclear fixed asset removal was $381 million as at December 31, 2016 (2015 – $377 million). This liability primarily represents the present value of estimated costs of decommissioning OPG's thermal generating stations at the end of their service lives. The liability reflects third party cost estimates based on an in-depth review of plant sites and an assessment of required clean-up and restoration activities. For the purpose of measuring the liability, asset removal activities are assumed to take place approximately over the next one to 15 years. The amount of undiscounted estimated future cash flows associated with the thermal liabilities is approximately $500 million. With the decisions taken in 2015 and 2016 to decommission the Nanticoke and Lambton generating stations, respectively, OPG expects to review the decommissioning liability estimates for these sites. Any adjustments as a result of a change in the liability estimates for these stations will be recorded in net income in the period of change.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model.

The fair value of financial assets and liabilities for which quoted prices in an active market are available, including exchange traded derivatives and other financial instruments, are determined directly from those quoted market prices.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the

use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that may affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If the valuation technique or model is not based on observable market data, specific valuation techniques are used, primarily based on recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

OPG's use of financial instruments exposes the Company to certain risks, including credit risk, foreign currency risk and interest rate risk. A discussion of how OPG manages these and other risks is found under the section, *Risk Management*.

Variable Interest Entities

OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated. As at December 31, 2016, PSS Generating Station Limited Partnership was classified as a variable interest entity because it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership. Refer to Note 3 of OPG's 2016 audited consolidated financial statements for further details.

Recent Accounting Pronouncements

The recent US GAAP accounting pronouncements related to revenue recognition, leases, and financial instruments are described below. Other recent accounting pronouncements applicable to OPG are outlined in Note 3 of the audited consolidated financial statements.

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact that the new standard will have on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

RISK MANAGEMENT

Overview

OPG faces various risks that could significantly impact the achievement of its strategic imperatives. The objective of risk management is to identify and mitigate these risks, and to preserve and increase the value of the Shareholder's investment in the Company.

Risk Governance Structure

The Audit and Risk Committee of OPG's Board of Directors assists the Board of Directors in fulfilling its oversight responsibilities for matters relating to the identification and management of the Company's key business risks. An Executive Risk Committee (ERC), which is comprised of business unit leaders and the Chief Risk & Audit Executive (CRAE), assists the Audit and Risk Committee in fulfilling its governance and oversight responsibilities related to OPG's risk management activities.

Risk Management Activities

OPG faces a wide array of risks as a result of its business operations. OPG's Enterprise Risk Management (ERM) framework is designed to identify and evaluate risks on the basis of their potential impact on the Company's capacity to achieve specific strategic imperatives and business plan objectives.

A centralized ERM group led by the CRAE coordinates the quarterly risk management reporting activities. The activities begin with business units identifying, reviewing, and assessing risks that could prevent achievement of their objectives. The ERM group reviews, validates, and consolidates this information and prioritizes risks based on their potential to impact OPG's overall strategic imperatives. The ERM group also assesses external developments that may have implications on the corporate risk profile and facilitates the identification and assessment of emerging risks. The ERC then reviews and validates significant changes in the top risks that may impact OPG's ability to achieve its strategic imperatives, as well as any emerging risks that have been identified. The results of the ERC review and significant changes in the enterprise risk profile are reviewed by the Audit and Risk Committee.

In order to maintain an appropriate balance between risk and return, senior management sets limits for the market risk, credit risk and energy trading activities of the Company. Senior management also establishes risk management policies and processes to ensure compliance with such limits.

The key risks to OPG's strategic imperatives are briefly described below.

Risks to Achieving Operational Excellence

OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance.

Operational risks are the risks inherent in the operation of electricity generating facilities. These risks can lead to interruptions in the operations of generating stations affecting future production. The operational risks of a station are generally a function of its age, human performance, and the technology used.

Nuclear Generating Stations

Operating an aging nuclear fleet exposes OPG to unique risks such as unplanned outages, an increase in operating costs, and risks associated with nuclear waste management operations.

Operating nuclear stations exposes OPG to unique risks, such as greater-than-anticipated deterioration of station components and systems, risks associated with the nuclear industry, supply chain and vendor quality, risks related to the handling, storage and disposal of nuclear waste, and the risk of a nuclear accident. The primary implications of these risks include additional safety requirements, potentially lower than expected generation and revenues, and potentially higher operating costs.

The uncertainty associated with production by OPG's Canadian Deuterium Uranium nuclear generating units is primarily driven by the condition of station components and systems, which are all subject to the effects of aging. Fuel channels are expected to be the most life-limiting component affecting station end-of-life. Another significant factor identified to date includes degradation of primary heat transport pump motors at the Darlington GS. Additionally, there are fuel handling performance challenges at both the Darlington GS and Pickering GS. To respond to these risks, OPG continues to monitor performance, implement extensive inspection and maintenance programs, identify corrective actions and undertake projects required to operate reliably and within design parameters.

Deterioration of station components may progress in an unexpected manner, resulting in the need to increase monitoring, conduct extensive repairs, or undertake additional remedial measures. To maintain a safe operating margin, a nuclear unit could be derated resulting in reduced generation. When an unexpected condition first appears, a specific monitoring program is established. The primary impact of these conditions on OPG is an increase in the long-term cost of operations. The associated mitigation may create additional outage work, increasing the number of outages or extending planned outages.

Pickering Extended Operations to 2024

In January 2016, the Province of Ontario announced its approval of OPG's plan to pursue the continued safe and reliable operation of the Pickering GS to 2024. Under OPG's plan, all six operating units at the Pickering GS would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The current operating licence for the Pickering GS, which expires in August 2018, was issued in 2013 assuming that the station would shut down in 2020.

Inability to achieve Pickering extended operations as planned would result in a reduction of OPG's future generation revenue and cash flows and lead to the advancement of shutdown and station decommissioning expenditures.

Risk factors for continued operation of the Pickering units include the discovery of unexpected conditions, equipment failures, the state of critical plant components that are reaching end-of-life, and a requirement for significant plant modifications. To mitigate these risks, OPG continues to undertake a number of activities, including the following:

- work to confirm achievability of fuel channel life necessary to enable extended operations
- component condition assessments to identify the work required to support the extended operation of the station
- modification of the operating and maintenance strategy to support continued operation of the station.

Over the remaining lifespan of the station, risks such as performance of the fuel handling system, challenges with parts procurement, and a shortage of qualified human resources may challenge operational excellence at the Pickering GS. OPG is addressing these risks by taking appropriate actions, including undertaking fuel handling reliability improvements, equipment modifications and targeted investments in plant systems and components, supply chain initiatives, and developing workforce planning and resourcing strategies.

Nuclear Waste Management

The process of generating electricity by nuclear generating stations produces nuclear waste. As required by the CNSC, OPG is accountable for the management of used fuel and L&ILW, and decommissioning of its nuclear stations and waste management facilities, including the stations on lease to Bruce Power. Currently, there are no licenced facilities in Canada for the permanent disposal of nuclear used fuel or L&ILW. The risks to OPG's proposed L&ILW DGR for the safe long-term management of L&ILW are discussed below, under the heading, *Deep Geologic Repository for Low and Intermediate Level Waste* in the section *Risks to Achieving Project Excellence*.

The NWMO has developed a process for moving forward with Adaptive Phased Management as the long-term solution for Canada's nuclear fuel waste. The Adaptive Phased Management plan contemplates the eventual long-term permanent disposal of radioactive nuclear fuel waste in a deep geologic repository. The NWMO is in the process of undertaking a multi-year site selection process for the used fuel deep geologic repository.

In the interim, OPG is storing and managing L&ILW at the WWMF site and used fuel at its nuclear generating station sites.

Nuclear Regulatory Requirements

The uncertainty associated with nuclear regulatory requirements is primarily driven by plant aging, changes to technical codes, and challenges raised by the public at regulatory hearings, particularly in the areas of safety, environment and emergency preparedness. Addressing these requirements could add to the cost of operations, and in some instances, may result in a reduction or elimination of the productive capacity of a station, earlier than planned replacement of a station component or additional requirements for waste management. Additionally, the operations of nuclear stations are often directly impacted by circumstances or events that occur at other nuclear stations globally. These circumstances or events may lead to CNSC regulatory changes with a significant impact on the cost and future operation of OPG's nuclear fleet.

In December 2015, the CNSC granted the station a 10-year operating licence, valid until November 30, 2025. The new licence spans most of the planned duration of the Darlington Refurbishment project, which provides greater regulatory stability and reduces regulatory risk. As discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Nuclear Operations*, the plan to extend Pickering operations to 2024 is subject to the CNSC's approval of the Pickering licence renewal application and other regulatory requirements as set out by the CNSC.

In January 2014, the federal government introduced Bill C-22 which contains a new *Nuclear Liability and Compensation Act* (NLCA). This bill received Royal Assent in February 2015, and the NLCA came into effect on January 1, 2017. The NLCA requires all operators of nuclear generating stations in Canada to maintain specified amounts of nuclear liability insurance purchased from a federal government approved insurer or other equivalent forms of financial security approved by the federal government. The NLCA increases OPG's nuclear liability limit from $75 million to an initial $650 million, with successive annual increases to $750 million, $850 million, and $1 billion. OPG has met this requirement for the $650 million liability limit required by the NLCA for 2017 and is assessing the availability and premium cost of coverage for the $750 million liability limit required for 2018.

Hydroelectric Generating Stations

OPG's hydroelectric generation is exposed to risks associated with water flows, the age of plant and equipment,surplus baseload generation conditions, and dam safety requirements.

The extent to which OPG can operate its hydroelectric generation facilities depends upon the availability of water. Significant variability in weather, including impacts of climate change, could affect water flows. For OPG's regulated hydroelectric generation, the financial impact of variability in electricity production due to differences between the forecast water conditions underpinning the hydroelectric regulated prices and the actual water conditions are captured in an OEB-approved regulatory variance account.

OPG's hydroelectric generating stations have an average age of approximately 80 years, with the majority of the hydroelectric generating equipment being over 50 years old. The condition of the equipment and civil components resulting from the age of these components requires OPG to plan potentially significant work to mitigate risks to the reliability of some hydroelectric generating stations. OPG manages these risks by performing inspection and maintenance of critical components and by reviewing mitigating actions. In addition, OPG conducts detailed engineering reviews and station condition assessments on an ongoing basis. These reviews and assessments help to identify future work required to sustain and, as appropriate, upgrade a station.

SBG has, and will continue to be, an issue in Ontario when electricity supply exceeds demand. To manage SBG conditions, the IESO may require OPG to reduce hydroelectric generation and spill water. A regulatory variance account authorized by the OEB helps to mitigate the financial impact of spill due to SBG conditions for OPG's regulated hydroelectric generating stations. The Company anticipates a declining trend in SBG for its hydroelectric assets due to reduced nuclear availability resulting from the refurbishment of the Darlington GS, future refurbishment of the Bruce generating stations, and the eventual shutdown of the Pickering GS.

The hydroelectric business operates 238 dams across Ontario. Dam safety legislation does not currently exist in the province. Technical guidelines which were published by the MNRF represent the government standards for dam safety. In general, OPG's practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the MNRF technical guidelines. OPG continues to develop a new risk-informed approach in cooperation with the MNRF to prioritize the outcomes of dam safety assessments. OPG could eventually incur additional costs for certain dams that it operates in order to comply with any new requirements.

People and Culture

OPG's operations could be affected if skilled human resources are not available or aligned with its talent requirements.

The development of new leaders and retention of staff in critical roles across OPG is a key factor to OPG's success. Another success factor is related to the effective transfer of knowledge from those in critical positions throughout the organization to future leaders. The risk associated with the alignment and/or availability of skilled and experienced resources continues to exist for OPG in specific areas, including leadership and project management positions. To mitigate this risk, OPG continues to focus on succession planning, leadership development and knowledge management programs to improve the capability of its workforce. There is also a continued risk of a mismatch between attrition levels and the resource requirements to meet OPG's future business needs.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification, which requires a long-term outlook to workforce planning.

To mitigate the above risks, OPG is developing an organization-wide workforce planning and resourcing strategies and has established ongoing monitoring processes to reassess risks, challenges and opportunities related to staffing on a regular basis. OPG expects to meet the human resource needs of the business by developing existing employees and hiring in specific areas, while continuing to leverage attrition through realignment of work and streamlining of processes, where appropriate.

As of December 31, 2016, approximately 90 percent of OPG's regular labour force was represented by a union. OPG's current collective agreements with the PWU and The Society expire on March 31, 2018 and December 31, 2018, respectively, while all 19 collective agreements with craft unions expire on April 30, 2020. As a result of these agreements, OPG considers the likelihood of a labour disruption in the near future to be significantly reduced.

Health and Safety

OPG's operations involve inherent occupational safety risks and hazards.

OPG's operations involve inherent occupational safety risks and hazards that could impact the achievement of the Company's health and safety goals. OPG is committed to continuous improvement and achievement of its ultimate goal of zero injuries through a formal enterprise-wide safety management system, integrated at the operating site level, and by continuing to foster a strong health and safety culture among its employees and contractors. The safety management system serves to focus the Company on proactively managing safety risks and hazard exposures to employees and contractors. In 2016, OPG launched the organization-wide "iCare Enough to Act" initiative aimed at renewing employees' and contractors' commitments to their own and each other's safety and well-being.

Cyber Security

OPG's ability to operate effectively is, in part, dependent on the efficient operation and management of the Company's complex information technology and industrial control systems in a secure, vigilant, and resilient manner that minimizes cyber risks. Cyber security incidents may have an adverse impact on OPG's reputation, energy production, and public and employee safety.

Cyber security incidents have been on the rise for the past few years and this trend is only expected to intensify as organizations' reliance on technology increases. OPG has strategies in place to prepare for, respond to, and recover from cyber security incidents. OPG continuously monitors, assesses, and improves the effectiveness of its strategies and program considering leading industry practices and remains proactive in information and intelligence sharing to learn and adapt to the changing cyber environment.

As a registered Ontario market participant, OPG is accountable to comply with all applicable reliability obligations. Within the context of the Ontario regulatory framework, OPG is a registered generator, and is responsible for complying with the associated reliability standards. These standards apply to the relevant Bulk Electric System (BES) elements specified under North American Electric Reliability Corporation (NERC) and the relevant Bulk Power System (BPS) facilities as determined by the Northeast Power Coordinating Council. In addition, OPG's nuclear cyber assets are subject to CNSC licensing conditions and regulatory requirements. For other cyber assets not subject to applicable regulatory requirements, OPG has adopted a risk-based approach based on the National Institute of Standards and Technology Cybersecurity Framework to manage its cyber security.

To mitigate cyber risks, OPG's cyber security program focuses on educating employees, contractors, and vendors, improving processes, and upgrading technology infrastructure. In particular, OPG's program focuses on the following:

1. Complying with regulatory requirements and applicable laws
2. Improving its cyber security protection and detection capabilities to reduce known or potential exposures by engaging the services of external experts to evaluate the security of its information technology infrastructure and controls
3. Adopting industry leading practices to reduce third party cyber security risks through enhanced vendor risk assessments, introducing cyber security requirements into commercial agreements, and enhanced governance
4. Improving and exercising its incident response, recovery capability, and business continuity plans to minimize the business impact of an incident
5. Increasing the cyber security awareness and training level of its workforce through mandatory annual cyber security awareness training, specialized training for cyber specialists, social engineering tests, and periodic company-wide communications on relevant cyber security topics.

The oversight responsibility of the Audit and Risk Committee of OPG's Board of Directors over the Company's risk management activities includes the review of a semi-annual update from management on the Company's cyber security position and programs.

Suppliers

Non-performance by strategic suppliers or an inability to diversify the supplier base could adversely impact operating and project performance, financial results and reputation of OPG.

OPG's ability to operate effectively is in part dependent upon timely access to equipment, materials, and service suppliers. Loss of key equipment, materials, and service suppliers, particularly for the nuclear business, could affect OPG's ability to operate effectively and/or to execute major development projects or other capital investment programs. OPG mitigates this risk, to the extent possible, through contract negotiations, contract terms, vendor monitoring, diversification of supplier base, and business continuity plans.

Business Continuity and Emergency Management

Natural, technological or human-caused hazards may impact OPG's business continuity.

OPG is exposed to potential or actual incidents or developments resulting from extreme temperatures, precipitation, wind conditions or other natural disasters, and technological or human-caused hazards; to significant events against which it is not fully insured or indemnified; or to parties that fail to meet their indemnification obligations. These incidents have the potential to disrupt operations resulting in decreased generation revenue or additional costs to repair damages and restore operations.

OPG's business continuity program provides a framework to build resilience into critical business processes by facilitating development of risk response plans and business continuity exercises. OPG's emergency management

program is designed to ensure that the Company can manage an emergency in a timely and effective manner. OPG's plans and implementation procedures identify immediate response actions to be taken to protect the health and safety of employees and the public, and to limit the impact of the crisis on site security, production capability, and the environment. The program elements are designed to meet legal and regulatory requirements.

Risks to Achieving Project Excellence

The risks associated with the cost, schedule, technical and contractor performance aspects of the major projects could adversely impact OPG's financial performance and its corporate reputation.

OPG is undertaking several capital intensive projects with significant investments. There may be an adverse effect on the Company if it is unable to: obtain necessary approvals; raise the necessary funds; effectively manage the projects on time and on budget; or fully recover capital costs and earn an appropriate return on investment in a timely manner. These projects may also have a significant impact on OPG's borrowing capacity and credit rating. Some projects may be ultimately reassessed as being uneconomic. The risks associated with OPG's current major projects are described below.

Darlington Refurbishment

OPG is responsible for the management of the Darlington Refurbishment project, including the project's budget and schedule, and continues to systematically manage all of the risks associated with the project through robust risk management practices. There are financial and reputational risk exposures for OPG if actual costs exceed the budget or if OPG does not meet the project schedule. In addition, failure to achieve the objectives of the refurbishment project may result in future forced outages and more complex planned outages, potentially impacting the post-refurbishment performance or useful life of the station. Failure to carry out the refurbishment of the first unit as planned may result in not proceeding with the refurbishment of the remaining units, which, together with the end of commercial operations at the Pickering GS, could result in most of OPG's nuclear units shutting down by the early to mid 2020s.

There are a number of specific risks that OPG is managing and mitigating in relation to the Darlington Refurbishment project, which include OPG and vendor performance risks, delay or productivity risks, financial risks related to escalation of costs, technical risks such as equipment conditions resulting in additional scope, and execution risks such as failure to manage foreign material exclusion from the heat transport system that could lead to post refurbishment operational risks.

To mitigate the above risks and to build on major lessons learned from other nuclear refurbishments and large scale, complex projects, OPG engaged in an extensive five-year project planning phase in order to determine the project scope, rigorously estimate costs in keeping with best practices, and incorporate lessons learned from other nuclear refurbishments. In order to fully define the scope and material requirements for the project, the planning phase included the completion of detailed designs before proceeding with the execution of the unit refurbishments. Further risk mitigation has been implemented through the construction of a full scale model training reactor, which allows for simulations and training for unit refurbishment execution tasks.

A large portion of the costs for the Darlington Refurbishment project is being paid to contractors and suppliers, including vendors that will engineer, procure, and construct components of the project. There is a risk that, as the volume of work increases significantly, vendor capability, capacity, and performance shortfalls may impact project objectives and deliverables. OPG's risk management strategy aims to ensure that contractors are held accountable and appropriate off-ramps are in place. In mitigating its overall financial risk, OPG utilizes a contracting strategy that aims to share the risk with key vendors in a cost effective manner, where appropriate. There is also an increased risk of contractor initiated safety events, which may impact OPG's reputation. Mitigating actions include collaborative execution phase planning, an enhanced human performance program, active risk management, increased field presence by supervisory staff, and assisting vendors in removing barriers to work. OPG also is managing other

ongoing risks that could potentially impact the project, including those related to continuity of skilled leaders within OPG and its vendor partners, as well as the availability of technical resources to support the project through execution.

Independent, third-party oversight has been established for the execution phase of the project, for both the project executive team and OPG's Board of Directors. The Ontario Ministry of Energy has also retained an external advisor to provide oversight of the project, reporting to the Minister of Energy.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG, with the support of Bruce County municipalities, is proposing to construct and operate a deep geologic repository as the preferred solution for the safe long-term management of L&ILW. While broad local community support for the proposed L&ILW DGR is stable, there are pockets of opposition. OPG is currently awaiting a decision on the EA for the project by the federal Minister of Environment and Climate Change, before the issuance of the site preparation and construction licence may proceed. There is a risk of delay to the EA approval and/or the issuance of the site preparation and construction licence from potential political or legal challenges. OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR.

Other Development Projects

Projects that are in the initial development stages are subject to schedule delays or possible cancellation due to unforeseen delays in receiving permits or approvals, or establishing sufficient certainty regarding project cost recovery through revenue mechanisms, which may involve various external stakeholders. OPG attempts to mitigate these risks through early involvement and regular communication with applicable government agencies, close consultation with external stakeholders and ongoing monitoring of contractor compliance relative to permits. Projects in the execution phase are subject to inherent risks related to performance against approved budgets and schedules. Mitigating activities for the risks include performing detailed engineering designs before proceeding with execution, engaging qualified and experienced vendors, and effectively monitoring and controlling performance.

Development projects also could be faced with increasing costs for equipment and construction that could impact their economic viability. OPG continuously monitors such trends in costs in order to identify emerging issues and seeks to manage and limit cost increases through contracting strategies, where possible.

Risks to Maintaining Financial Strength

Risks related to rate regulation, financial markets, and long-term obligations could significantly impact OPG's financial performance. The Company is also exposed to risks such as weak electricity demand, displacement of generation by competitors and financial risk associated with energy trading.

There is a risk that future regulated prices will not allow OPG to consistently achieve financial performance that is commensurate with that of a commercial enterprise. OPG is exposed to a number of other significant financial risks, many of which arise due to decreasing demand for electricity, competing energy sources, OPG's exposure to volatility in commodity and equity markets and interest rate fluctuations. This includes the Company's pension and OPEB obligations and costs that are impacted by market and interest rate fluctuations. OPG manages this complex array of risks with a view to reduce the uncertainty and/or mitigate the potential unfavourable impact on the Company's financial results.

Rate Regulation

Significant uncertainties remain regarding the outcome of rate and generic proceedings impacting OPG's rate regulated operations.

There is an inherent risk that regulated prices established by the OEB may not provide for the recovery of all actual costs that will be incurred by OPG's regulated operations or allow the regulated operations to earn an appropriate

rate of return. This could occur if, in setting regulated prices, the OEB makes adjustments to forecasts submitted by OPG, if actual production and costs significantly differ from the forecasts approved by the OEB, or if OPG is unable to achieve additional efficiencies to meet the OEB-approved stretch factors included in regulated prices under incentive ratemaking. Differences between OPG's actual and forecast production and costs could be due to factors such as outages or project execution risks. In providing evidence in support of its applications for regulated prices, OPG aims to clearly demonstrate to the OEB that the costs for the regulated operations are reasonable, being prudently incurred and should be fully recovered.

Certain differences between elements of OEB-approved revenue requirements and OPG's actual results are recorded in OEB-approved variance and deferral accounts for future review by the OEB, including a number of the variance and deferral accounts that are subject to an OEB prudence review. There is inherent uncertainty associated with the outcomes of future proceedings for the clearance of these balances.

Proposed Incentive Regulation Ratemaking Methodologies

In May 2016, OPG submitted a 5-year application to the OEB for new regulated prices effective January 1, 2017, on the basis of an incentive regulation rate making methodology for the hydroelectric operations and a custom incentive regulation ratemaking framework for the nuclear operations. If accepted by the OEB, both approaches would result in greater decoupling of OPG's revenues for the regulated operations from their costs. The OEB's decision on OPG's application is expected in the second half of 2017.

Effective Date of New Regulated Prices

There are inherent uncertainties regarding the effective date that the OEB will establish for the new regulated prices. OPG has requested January 1, 2017 as the effective date. The OEB's decision on the effective date and the timing of the decision issuance could have a significant impact on OPG's 2017 results. Until the OEB's decision is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017.

Nuclear Rate Smoothing Proposal

Consistent with *Ontario Regulation 53/05*, OPG's May 2016 application includes a nuclear rate smoothing proposal, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. There is an inherent risk that the magnitude of the deferral ordered by the OEB will result in regulated prices that do not provide sufficient cash flow to the Company for meeting its financial objectives in an optimal manner, including ensuring sufficient liquidity, cost effectively funding the Darlington Refurbishment project and other expenditures, and maintaining the Company's investment grade credit rating. Maintaining adequate levels of credit metrics will support OPG's investment grade credit rating. As such, OPG has advanced credit metrics as a key criterion for the OEB to apply in determining the smoothed nuclear base rates.

Recovery of Pension and OPEB Costs

The OEB is currently conducting a consultation in the gas and electricity sectors to develop standard principles to guide the OEB's review of pension and OPEB costs for rate-regulated utilities, including establishing appropriate regulatory mechanisms for cost recovery. The OEB's November 2014 decision establishing OPG's existing regulated prices indicated that a change in the recovery methodology for OPG's pension and OPEB costs from the accrual basis, if required, would be addressed in OPG's next rate proceeding, having been informed by the outcome of the OEB's generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The decision also stated that the future recovery, if any, of amounts recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account authorized by that decision also would be subject to the outcome of the generic proceeding. As such, the outcome of the current consultation could have a material impact on OPG's ability to recover the balance in

the Pension & OPEB Cash Versus Accrual Differential Deferral Account and full pension and OPEB costs in the future. This would have significant adverse implications on OPG's future financial results. OPG is participating in the OEB consultation and has advanced its position in support of the appropriateness of using the accrual basis for cost recovery purposes.

Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds

Changes in cost estimates or strategies for nuclear waste management and nuclear facilities decommissioning obligations could impact OPG's future contributions to the Nuclear Segregated Funds to cover these obligations.

As required by the CNSC, OPG is responsible for the management of used nuclear fuel and L&ILW and the decommissioning of its nuclear stations and waste management facilities. The cost estimates for OPG's nuclear waste management and decommissioning obligations are based on multiple underlying assumptions and estimates that are inherently uncertain and may evolve over time. The assumptions include station end-of-life dates, waste volumes, waste disposal methods, the timing of construction of assumed waste disposal facilities, waste packaging systems, decommissioning strategy, and financial indicators. To address the inherent uncertainty, OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates at least once every five years, in line with the required ONFA Reference Plan update process.

The most recent comprehensive update of the nuclear waste management and decommissioning obligations was performed as part the 2017 ONFA Reference Plan approved by the Province in December 2016. An approved ONFA Reference Plan determines OPG's contributions to the Nuclear Segregated Funds. The changes in contribution levels are impacted by changes in the values of the Nuclear Segregated Funds as well as changes in the associated nuclear waste management and nuclear facilities decommissioning obligations. Based on the 2017 ONFA Reference Plan, no contributions are currently required to the Nuclear Segregated Funds. Contributions may be required in the future should the Nuclear Segregated Funds be in an underfunded position relative to the funding requirement of a new approved reference plan.

Financial Markets

The market value of investments held by OPG's Nuclear Segregated Funds and registered pension plan could be significantly affected by changes in various market factors such as equity prices, interest rates, inflation, and commodity prices.

Nuclear Segregated Funds Market Risk

Investments in the Nuclear Segregated Funds are allocated to certain asset classes including fixed income securities, domestic and international equity securities, pooled funds, infrastructure, agriculture and real estate. These funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, in order to fund the expenditures associated with the long-term management of used fuel and L&ILW after station shutdown, and the decommissioning of OPG's nuclear stations and waste management facilities. The rates of return earned on these segregated funds are subject to various factors including the current and future financial market conditions, which are inherently uncertain. The asset mix of the funds is determined jointly by OPG and the Province in accordance with the ONFA.

For the Used Fuel Segregated Fund, the Province guarantees the annual rate of return at 3.25 percent plus the change in the Ontario CPI, as defined by the ONFA, for the portion of the fund attributed to the first 2.23 million nuclear fuel bundles. As such, a change in the portion of the fund's value attributed to the first 2.23 million bundles impacts OPG's earnings to the extent of changes in the Ontario CPI. OPG is subject to the market risk for the investment of funds set aside in the Used Fuel Segregated Fund for incremental bundles in excess of 2.23 million.

In accordance with the cost recovery methodology established by the OEB, the performance of the portion of the Nuclear Segregated Funds attributed to the nuclear generating stations leased to Bruce Power has been subject to the Bruce Lease Net Revenues Variance Account. The variance account partially mitigates rate of return risk related to the Nuclear Segregated Funds, as it captures the differences between actual and forecast earnings from the Nuclear Segregated Funds related to these stations. Forecast earnings are those approved by the OEB in setting nuclear regulated prices. OPG is exposed to rate of return risk related to the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodology. The income statement impact of rate of return risk is reduced when the Nuclear Segregated Funds are in a fully funded position.

Post-Employment Benefit Obligations Risk

OPG's post-employment benefit obligations include pension, group life insurance, health care benefits, and LTD benefits. OPG's post-employment benefit obligations and costs, and pension plan contributions could be materially affected in the future by numerous factors, including: changes in discount rates, inflation rates, and other actuarial assumptions; future investment returns; experience gains and losses; the funded status of the pension plans; changes in benefits; changes in the regulatory environment including potential changes to the *Pension Benefits Act* (Ontario); changes in OPG's operations; and the measurement uncertainty incorporated into the actuarial valuation process.

The OPG registered pension plan, which covers most of OPG's employees and retirees, is a contributory defined benefit plan that is indexed to inflation. Contributions to the OPG registered pension plan are determined by actuarial valuations, which are filed with the appropriate regulatory authorities at least every three years. The most recent actuarial valuation of the OPG registered pension plan, covering the three-year period to the end of 2018, was completed as of January 1, 2016. There is an inherent risk that future actuarial valuations could increase OPG's funding requirements due to market and economic-related conditions. A significant decline in the financial markets could trigger an immediate requirement to update the actuarial valuation based on declines in the funded status. OPG continues to assess the requirements for contributions to the registered pension plan, including the timing of future actuarial valuations. The next actuarial valuation of the OPG registered plan must have an effective date no later than January 1, 2019. OPG's OPEB obligations are not funded and the associated employee benefits are paid from cash flow provided by operating activities or other sources of liquidity.

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017	2018	2019
Estimated fuel requirements hedged[1]	75%	76%	65%

[1] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars (USD). To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at December 31, 2016, OPG had total foreign exchange contracts outstanding with a notional value of USD $9 million.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. During 2016, the VaR utilization ranged between nil and $1.5 million, compared to between nil and $1.5 million in 2015.

Credit

Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

The Company's credit risk exposure is a function of its electricity sales, trading and hedging activities, treasury activities including investing, and commercial transactions with various suppliers of goods and services. OPG's credit risk exposure relating to electricity sales is considered low as the majority of sales are through the IESO-administered spot market. The IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market.

Other major components of OPG's credit risk exposure include those associated with vendors that are contracted to provide services or products. OPG manages its exposure to various suppliers or counterparties by evaluating their financial condition and ensuring that the Company holds appropriate collateral or other forms of security.

The following table summarizes OPG's credit exposure to all counterparties from electricity transactions and trading as at December 31, 2016:

Credit Rating [1]	Number of Counterparties [2]	Potential Exposure [3] *(million of dollars)*	Potential Exposure for Largest Counterparties: Number of Counterparties	Potential Exposure for Largest Counterparties: Counterparty Exposure *(millions of*
Investment grade	11	11	5	9
IESO[4]	1	421	1	422
Total	12	432	6	431

[1] Credit ratings are based on OPG's own analysis, taking into consideration external rating agency analysis where available, as well as recognizing explicit credit support provided through parental guarantees, Letters of Credit or other forms of security.

[2] OPG's counterparties are defined on the basis of individual master agreements.

[3] Potential exposure is OPG's statistical assessment of maximum exposure over the life of each transaction at a 95 percent confidence interval.

[4] Credit exposure is an estimate of the receivable amount arising from OPG's electricity sales into the IESO market. The credit exposure and associated receivable vary each month based on electricity sales. The monthly receivable from the IESO is typically paid to OPG in the subsequent month as per the IESO payment schedule.

Liquidity

Rising liquidity requirements can impact OPG's capital investment projects and ability to meet financial obligations.

OPG operates in a capital intensive business. Significant financial resources are required to fund major development and other capital improvement projects, including the Darlington Refurbishment project. In addition, the Company has other significant disbursement requirements including pension contributions, payments towards OPEB and other benefit plans, expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, debt maturities with the OEFC, and investments in new generating capacity and other business growth opportunities. OPG must ensure that it has the financial capacity and sufficient access to cost effective financing sources to fund its capital requirements and other disbursements. In support of this objective, OPG utilizes multiple sources and forecasts availability of funds, actively monitors funding requirements, and is focused on maintaining its investment grade credit rating. A discussion of corporate liquidity is included under the section, *Liquidity and Capital Resources*.

Contracted Generation

OPG may incur costs if its contracted generating assets do not meet performance targets as specified in the ESAs with the IESO or other long-term contracts. There is also a risk that, upon expiry, subsequent ESAs may not be available.

The Company's generating stations operating under ESAs with the IESO or other long-term contracts are subject to availability and production targets specified in their respective contracts. OPG could incur charges and other costs if these facilities fail to operate at required capacity or production levels, as required. This risk is mitigated through the implementation of maintenance, capital investment and other programs, as appropriate.

OPG's owned and co-owned thermal generating stations operate under ESAs with the IESO or other long-term agreements. In December 2016, the Ontario and Quebec governments signed an electricity trade agreement that will allow Ontario to import up to 2 TWh of hydroelectric power from Quebec annually from 2017 to 2023. This is expected to replace some gas-fired generation in Ontario. While OPG expects that its thermal generating stations will continue to provide capacity to the market over the term of the respective agreements, there is a risk that, upon expiry of the current agreements, subsequent contracts for these stations may not be available or may not be available on financially viable terms.

Ontario Electricity Market

Ontario electricity market conditions could impact OPG's revenue and operations.

OPG's revenue can be impacted by external factors related to the electricity market including: the entrance of new participants into the Ontario market; the competitive actions of market participants; Ontario electricity demand; changes in the regulatory environment; and wholesale electricity prices in the interconnected markets.

The structure of the Ontario electricity market is subject to regulation and market rules, changes to which may affect OPG's revenue. The Province, the IESO, the OEB, or another entity or regulatory body may change or institute regulations or rules that can impact OPG's capability to generate revenue or ability to recover appropriate costs and earn a return on the assets.

Ownership by the Province

OPG's commitment to maximize the return on the Shareholder's investment in the Company may compete with the obligation of the Shareholder to respond to a broad range of matters in its role as the Government of Ontario.

The Province owns all of OPG's issued and outstanding common shares. Accordingly, the Province, as represented by the Ontario Ministry of Energy, has the authority to make appointments to OPG's Board of Directors. OPG could be subject to Shareholder direction, under Section 108 of the OBCA, that can directly influence major decisions including those related to project development, timing and strategy of applications for regulated prices, asset divestitures, financing and capital structure, that could require OPG to undertake activities that result in increased expenditures, or that reduce revenues or cash flows relative to the business activities or strategies that would have otherwise been undertaken. In addition, the obligation of OPG's Shareholder to respond to a broad range of matters in its role as the Government of Ontario may compete with OPG's commitment to maximize the return on the Shareholder's investment in the Company. This includes, but is not limited to, the Province's response to mitigate the impact of rising electricity prices on consumers.

Government Legislation and Regulation Change

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on the Company's operations and financial position.

OPG's core business and strategy may be impacted by changes in federal and provincial legislation and regulations. Matters that are subject to regulation include, among others, rate regulation, electricity generating operations, nuclear waste management and nuclear decommissioning, and taxation. Regulatory bodies may change or enact regulations or rules, such as new nuclear fitness for duty requirements, that could increase OPG's costs, decrease OPG's revenue, or limit the Company's ability to recover appropriate costs or earn a return on the assets.

Since legal requirements are subject to change and to interpretation, OPG is unable to predict the impact of such changes on the Company and its operations. To mitigate legislative risks, OPG continues to monitor and actively engage with the federal and provincial governments in order to determine if future legislation will impact the Company.

Risks to Maintaining Social Licence

OPG is exposed to risks associated with its social licence and public profile due to changes in the opinions of various stakeholders, including local communities, Ontario customers, government agencies, and Indigenous Communities. Additionally, inability to achieve operational excellence and project excellence safely and reliably and to maintain financial strength could impact OPG's social licence.

Maintaining public trust and meeting stakeholders and Indigenous communities' expectations are critical to OPG's success. OPG focuses on building and maintaining its social licence and corporate reputation through safe, reliable,

environmentally-responsible operations as well as corporate citizenship initiatives across the province. The inability to maintain safe, reliable operations could negatively impact OPG's reputation and result in a loss of public support.

OPG has transparent governance practices and works continuously towards effective communication and consultation with Indigenous communities and stakeholders. Efforts to reinforce OPG's social licence include various media campaigns that highlight the Company's contribution as a clean power generator with a commitment to safety, environment and community partnerships. OPG undertakes various assurance and risk management activities to effectively manage the risks to its social licence and corporate reputation. Issue management and response plans are developed to address specific concerns as they arise.

Indigenous Communities

The quality of OPG's relationships and the outcome of negotiations with Indigenous communities may impact OPG's project and financial performance, as well as its social licence to operate.

OPG may be subject to claims by Indigenous communities. These claims stem from projects and generation development related to the operations of OPG and historic operations of OPG's predecessor company, Ontario Hydro, which may have impacted the Aboriginal and/or Treaty rights of Indigenous communities.

OPG has an Indigenous Relations Policy, which sets out the Company's commitment to proactively build and maintain positive relationships with Indigenous communities. OPG has been successful in resolving a number of past grievances by Indigenous communities. However, the outcome of the ongoing and any future negotiations depends on a number of factors, including legislation and regulations and precedents created by court rulings, which are subject to change over time. OPG pursues generation-related developments in partnerships with Indigenous communities on the basis of long-term mutually beneficial commercial arrangements.

Environmental Risks

OPG may be subject to orders or charges if it is not in compliance with applicable environmental laws. Changes in environmental regulatory requirements can result in existing operations being in a state of non-compliance, a potential inability to comply, and potential costs and liabilities for OPG.

Changes to environmental laws could create compliance risks and result in potential liabilities that may be addressed by the installation of control technologies, development of new processes, allowances or offsets, or constraints on electricity production. A failure to comply with applicable environmental laws may result in enforcement actions, including the potential for orders or charges. In addition, some of OPG's activities have the potential to impair natural habitat, damage aquatic or terrestrial plant and wildlife, or cause contamination to land or water that may require remediation. There is also a risk that OPG may incur additional costs to meet heritage conservation program requirements under the *Ontario Heritage Act*.

Potential environmental regulatory changes being managed as risks by the Company include electricity production constraints and water flow management requirements to protect fish and fish habitat, expanded fish passage requirements, and lower drinking and ground water tritium concentration standards. These changes could impact plant operations and increase costs. OPG continues to monitor and address risks associated with changes to environmental laws and regulatory requirements. There were no significant changes to environmental legislation applicable to OPG during 2016.

OPG recognizes that efforts are required to plan for the effects of climate change and has identified climate change adaptation as a strategic issue for the company. OPG monitors developments in climate science, adaptation activities, and potential changes to policy and regulatory requirements. OPG continues to work with stakeholders to better define adaptation requirements through analysis and understanding of climate change impacts on watersheds and electricity supply and demand. Once adaptation requirements are better known, a risk-based analysis will help OPG determine the extent of efforts it will undertake to reduce the impact of climate change on its operations.

A carbon cap and trade program became effective in Ontario in January 2017. The program is not expected to have a material adverse economic impact on OPG due to the Company's low GHG emitting generating fleet. Further details can be found under the heading, *Environmental Performance*, in the section, *Core Business, Strategy and Outlook*.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		**2015**	
(millions of dollars)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**15**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,070**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

Management, including the President and Chief Executive Officer (President and CEO) and the Chief Financial Officer (CFO), are responsible for maintaining Disclosure Controls and Procedures (DC&P) and Internal Controls over Financial Reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements in accordance with US GAAP.

There were no other changes in OPG's ICOFR during the year ended December 31, 2016 that have materially affected or are reasonably likely to materially affect OPG's ICOFR.

Management, including the President and CEO and the CFO, concluded that, as of December 31, 2016, OPG's DC&P and ICOFR (as defined in National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings*) were effective.

FOURTH QUARTER

Discussion of Results

(millions of dollars) (unaudited)	Three Months Ended December 31 2016	2015
Revenue	**1,388**	1,312
Fuel expense	**186**	175
Gross margin	**1,202**	1,137
Operations, maintenance and administration	**686**	788
Depreciation and amortization	**316**	354
Accretion on fixed asset removal and nuclear waste management liabilities	**233**	223
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(126)**	(169)
Income from investments subject to significant influence	**(9)**	(9)
Property taxes	**11**	11
Restructuring	**6**	5
Income (loss) before other loss, interest, and income taxes	**85**	(66)
Other loss	**6**	12
Income (loss) before interest and income taxes	**79**	(78)
Net interest expense	**28**	44
Income (loss) before income taxes	**51**	(122)
Income tax expense (recovery)	**59**	(22)
Net loss	**(8)**	(100)
Net loss attributable to the Shareholder	**(13)**	(101)
Net income attributable to non-controlling interest	**5**	1

Net loss attributable to the Shareholder for the fourth quarter was $13 million, compared to a net loss of $101 million for the same quarter in 2015.

Income before interest and income taxes was $79 million during the fourth quarter of 2016, an increase of $157 million compared to loss before interest and income taxes of $78 million during the same period in 2015. The following summarizes the significant factors which caused the variance:

Significant factors that increased income before other loss, interest and income taxes:

- Lower number of outage days increased nuclear generation by 2.2 TWh during the fourth quarter in 2016, compared to the same period in 2015, primarily due to the four-unit Darlington VBO that was completed on October 30, 2015 and a lower number of unplanned outage days at the Darlington GS. The increase in nuclear generation resulted in an increase in revenue from the nuclear base regulated price of approximately $130 million.
- Lower OM&A expenses of $77 million in the Regulated – Nuclear Generation segment primarily due to increased outage activities in 2015, including the Darlington VBO.

Significant factors that decreased income before other loss, interest and income taxes:

- Decrease in earnings from the Nuclear Segregated Funds of $43 million during the fourth quarter of 2016, compared to the same quarter in 2015, mainly due to an accounting adjustment recorded during the fourth quarter of 2016 to limit the funds asset values recognized on OPG's consolidated balance sheet to the lower underlying obligations as reflected in the 2017 ONFA Reference Plan.
- Higher accretion expense of $10 million, reflecting the increase in the Nuclear Liabilities recognized in December 2015 in connection with the changes in the estimated useful life assumptions for OPG's nuclear stations, net of the impact of the Bruce Lease Net Revenues Variance Account.

The increase in income tax expense during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets in 2016.

Average Sales Prices

The average sales price for the Regulated – Nuclear Generation segment during the fourth quarter of 2016 was 6.9 ¢/kWh, compared to 7.0 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of an OEB-authorized nuclear rate rider of $1.33/MWh related to the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment during the fourth quarter of 2016 was 4.5 ¢/kWh, compared to 4.8 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of a rate rider of $6.04 per MWh related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014.

The income impact of changes in revenue from rate riders was largely offset by changes in amortization expense related to regulatory balances.

Electricity Generation

OPG's electricity generation for the three months ended December 31, 2016 and 2015 was as follows:

	Three Months Ended December 31	
(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**11.0**	8.8
Regulated – Hydroelectric	**6.7**	7.3
Contracted Generation Portfolio [1]	**0.6**	0.7
Total OPG electricity generation	**18.3**	16.8
Total electricity generation by all other generators in Ontario [2]	**18.9**	19.6

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The increase in OPG's electricity generation of 1.5 TWh during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher electricity generation of 2.2 TWh from the Regulated – Nuclear Generation segment as a result of fewer outage days at the Darlington GS during the fourth quarter of 2016, which was primarily due to the Darlington VBO that occurred during the fourth quarter of 2015. The increase in generation was partially offset by reduced generation from the Regulated – Hydroelectric Segment of 0.6 TWh, primarily due to lower water flows in eastern Ontario during the fourth quarter of 2016.

Ontario's electricity demand as reported by the IESO was 33.2 TWh during the fourth quarter of 2016, compared to 32.7 TWh during the fourth quarter of 2015.

Liquidity and Capital Resources

Cash flow provided by operating activities during the three months ended December 31, 2016 was $437 million, compared to $111 million for the same period in 2015. The increase in cash flow was primarily due to higher generation revenue receipts, lower pension plan contributions and lower OM&A expenditures during the fourth quarter of 2016. Higher generation revenue receipts reflected higher nuclear generation in the fourth quarter of 2016, compared to the same period in 2015.

Cash flow used in investing activities during the three months ended December 31, 2016 was $497 million, compared to $571 million during the same period in 2015. The decrease was primarily due to partial maturity, in the fourth quarter of 2016, of a structured deposit note invested in the fourth quarter of 2015, partially offset by higher expenditures for the Darlington Refurbishment project. The deposit note invested proceeds from the long-term debt issued in support of the Peter Sutherland Sr. GS project in October 2015.

Cash flow used by financing activities during the three months ended December 31, 2016 was $180 million, compared to cash flow provided in financing activities of $356 million for the same period in 2015. The decrease in cash flow provided by financing activities was due to the net repayment of short-term notes and lower net issuance of long-term debt in the fourth quarter of 2016.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected annual financial information for the last three years and financial information for each of the eight most recently completed quarters. This information is derived from OPG's unaudited interim consolidated financial statements and the audited consolidated financial statements, and has been prepared in accordance with US GAAP.

Annual Financial Information

(millions of dollars – except where noted)	**2016**	**2015**	**2014**
Revenue	**5,653**	5,476	4,963
Income before extraordinary item attributable to the Shareholder	**436**	402	561
Net income attributable to the Shareholder	**436**	402	804
Net income per common share before extraordinary item *(dollars)*	**$1.70**	$1.57	$2.19
Net income per common share *(dollars)*	**$1.70**	$1.57	$3.14
Total assets	**44,372**	44,250	41,645
Total long-term liabilities	**31,460**	32,404	30,483
Common shares outstanding *(millions)*	**256.3**	256.3	256.3

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**2016 Quarters Ended**				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	**1,388**	**1,400**	**1,387**	**1,478**	**5,653**
Net (loss) income	**(8)**	**198**	**135**	**128**	**453**
Less: Net income attributable to non-controlling interest	**5**	**4**	**3**	**5**	**17**
Net (loss) income attributable to the Shareholder	**(13)**	**194**	**132**	**123**	**436**
Per common share, attributable to the Shareholder *(dollars)*	**($0.05)**	**$0.76**	**$0.51**	**$0.48**	**$1.70**

Quarterly Financial Information

(millions of dollars – except where noted) (unaudited)	2015 Quarters Ended				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	1,312	1,426	1,383	1,355	5,476
Net (loss) income	(100)	85	193	239	417
Less: Net income attributable to non-controlling interest	1	5	4	5	15
Net (loss) income attributable to the Shareholder	(101)	80	189	234	402
Per common share, attributable to the Shareholder *(dollars)*	($0.39)	$0.31	$0.74	$0.91	$1.57

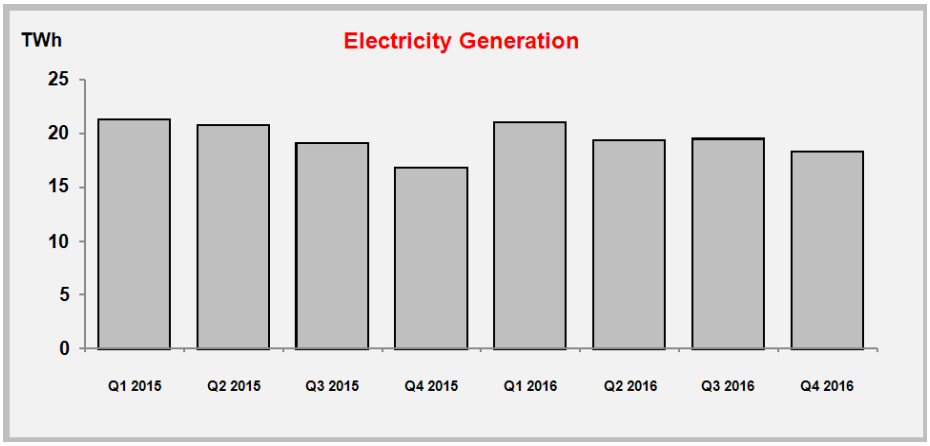
Trends

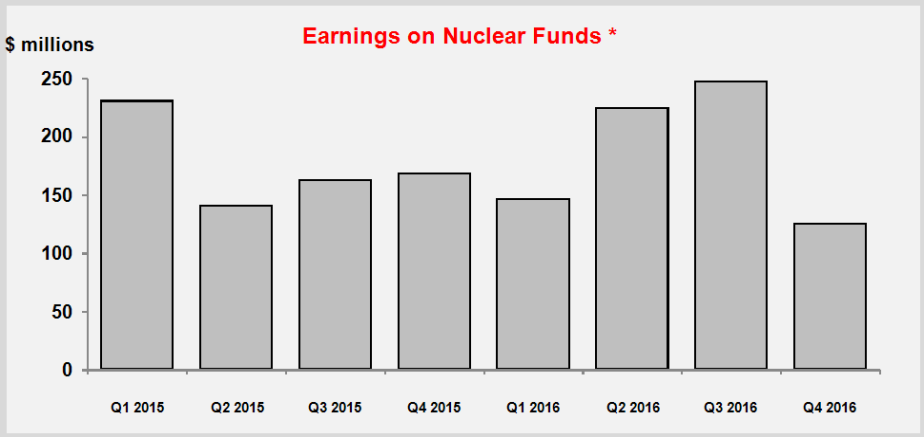
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues are higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of foregone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington VBO, which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items which affected net income (loss) in certain quarters above are described below:

- A gain of $22 million recorded during the first quarter of 2016 reflecting the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to Niagara Tunnel project expenditures.
- Lower earnings of $16 million during the first quarter of 2015, compared to the same quarter in 2016, in the Contracted Generation Portfolio segment, primarily as a result of a provision made in that quarter related to an IESO audit.
- Higher OM&A expenses of $105 million for the Regulated – Nuclear Generation segment during the first half of 2016, compared to the same period in 2015, primarily resulting from an increase in planned outage activities and the timing of planned outage activities during the year.
- Lower OM&A expenses of $91 million for the Regulated – Nuclear Generation segment during the last half of 2016, compared to the same period in 2015, primarily as a result of the VBO at the Darlington GS in the third and fourth quarters of 2015.

Additional information about OPG, including its audited consolidated financial statements and notes thereto, can be found on SEDAR at www.sedar.com.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow from operations, or any other measure in accordance with US GAAP, but as an indicator of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period.

ROE Excluding AOCI is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**436**	402
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,442**	10,023
ROE Excluding AOCI *(percent)*	**4.2**	4.0

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
FFO before interest		
Cash flow provided by operating activities	**1,705**	1,465
Add: Interest paid	**269**	269
Less: Interest capitalized to fixed and intangible assets	**(141)**	(102)
Add: Changes to non-cash working capital balances	**(68)**	100
FFO before interest	**1,765**	1,732
Adjusted interest expense		
Net interest expense	**120**	180
Add: Interest income	**7**	9
Add: Interest capitalized to fixed and intangible assets	**141**	102
Add: Interest related to regulatory assets and liabilities	**30**	2
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**45**	53
Adjusted interest expense	**343**	346
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.0

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Enterprise TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Enterprise TGC		
Total OM&A expenses	**2,747**	2,783
Total fuel expense	**727**	687
Total capital expenditures	**1,704**	1,376
Less: Darlington Refurbishment capital and non-capital costs	**(1,022)**	(707)
Less: Other generation development project capital and OM&A costs	**(162)**	(197)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**62**	250
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(55)
Add: Hydroelectric gross revenue charge due to electricity foregone due to SBG conditions	**49**	34
Less: OM&A expenses ancillary to electricity generation business	**(24)**	(27)
Other adjustments	**(25)**	(46)
	3,989	4,098
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**78.2**	78.0
Add: Electricity generation foregone due to SBG conditions	**4.7**	3.2
	82.9	81.2
Enterprise TGC per MWh *($/MWh)* [1]	**48.10**	**50.46**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Nuclear TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**2,210**	2,196
Regulated – Nuclear Generation fuel expense	**315**	301
Regulated – Nuclear Generation capital expenditures	**1,338**	1,023
Less: Darlington Refurbishment capital and OM&A costs	**(1,022)**	(708)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**81**	230
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(62)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(6)**	(6)
Other adjustments	**(8)**	(28)
	2,841	2,946
Nuclear electricity generation *(TWh)*	**45.6**	44.5
Nuclear TGC per MWh *($/MWh)* [1]	**62.30**	66.20

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Hydroelectric TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**325**	340
Regulated – Hydroelectric Generation fuel expense	**353**	345
Contracted Generation Portfolio OM&A expenses	**178**	185
Contracted Generation Portfolio fuel expense	**58**	39
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**333**	311
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(158)**	(197)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(177)**	(163)
(Less) Add: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(24)**	18
Add: Hydroelectric gross revenue charge and water rental payments due to electricity generation foregone due to SBG conditions	**49**	34
Other adjustments	**(1)**	-
	936	912
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**29.5**	30.4
Contracted Generation Portfolio electricity generation	**3.1**	3.1
Add: Hydroelectric electricity generation foregone due to SBG conditions	**4.7**	3.2
Less: Non-hydroelectric electricity generation of the Contracted Generation Portfolio	**(0.7)**	(0.6)
	36.6	36.1
Hydroelectric TGC per MWh *($/MWh)*[1]	**25.57**	25.26

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

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ONTARIO POWER GENERATION INC.

CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2016

[DRAFT]

STATEMENT OF MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL INFORMATION

Ontario Power Generation Inc.'s (OPG) management is responsible for the presentation and preparation of the annual consolidated financial statements and Management's Discussion and Analysis (MD&A).

The consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States Securities and Exchange Commission for annual financial statements. The MD&A has been prepared in accordance with the requirements of securities regulators, including National Instrument 51-102 of the Canadian Securities Administrators and its related published requirements.

The consolidated financial statements and information in the MD&A necessarily include amounts based on informed judgments and estimates of the expected effects of current events and transactions with appropriate consideration to materiality. Something is considered material if it is reasonably expected to have a significant impact on the Company's earnings, cash flow, value of an asset or liability, or reputation. In addition, in preparing the financial information, we must interpret the requirements described above, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect the reported information. The MD&A also includes information regarding the impact of current transactions and events, sources of liquidity and capital resources, operating trends, and risks and uncertainties. Actual results in the future may differ materially from our present assessment of this information because future events and circumstances may not occur as expected.

In meeting our responsibility for the reliability of the financial information, we maintain and rely on a comprehensive system of internal controls and internal audits, including organizational and procedural controls and internal controls over financial reporting. Our system of internal controls includes: written communication of our policies and procedures governing corporate conduct and risk management; comprehensive business planning; effective segregation of duties; delegation of authority and personal accountability; careful selection and training of personnel; and accounting policies, which we regularly update. This structure ensures appropriate internal controls over transactions, assets and records. We also regularly test internal controls. These controls and testing are designed to provide us with reasonable assurance that the financial records are reliable for preparing financial statements and other financial information, assets are safeguarded against unauthorized use or disposition, liabilities are recognized, and we are in compliance with all regulatory requirements.

Management, including the President and Chief Executive Officer (CEO) and the Chief Financial Officer (CFO), is responsible for maintaining disclosure controls and procedures (DC&P) and internal controls over financial reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements in accordance with US GAAP.

An evaluation of the effectiveness of the design and operation of OPG's DC&P and ICOFR was conducted as of December 31, 2016. Accordingly, we, as OPG's President and CEO and CFO, will certify OPG's annual disclosure documents filed with the Ontario Securities Commission, which includes attesting to the design and effectiveness of OPG's DC&P and ICOFR.

The Board of Directors, based on recommendations from its Audit and Risk Committee, reviews and approves the consolidated financial statements and the MD&A, and oversees management's responsibilities for the presentation and preparation of financial information, maintenance of appropriate internal controls, management and control of major areas of financial risk, and assessment of significant and related party transactions.

The consolidated financial statements have been audited by Ernst & Young LLP, independent external auditors appointed by the Board of Directors. The Independent Auditors' Report outlines the auditors' responsibilities and the scope of their examination and their opinion on OPG's consolidated financial statements. The independent external auditors, as confirmed by the Audit and Risk Committee, had direct and full access to the Audit and Risk Committee, with and without the presence of management, to discuss their audit and their findings therefrom, as to the integrity of OPG's financial reporting and the effectiveness of the system of internal controls.

Jeff Lyash
President and Chief Executive Officer

Ken Hartwick
Senior Vice President, Finance, Strategy, Risk and Chief Financial Officer

March 10, 2017

INDEPENDENT
AUDITORS' REPORT

To the Shareholder of Ontario Power Generation Inc.

We have audited the accompanying consolidated financial statements of Ontario Power Generation Inc., which comprise the consolidated balance sheets as at December 31, 2016 and 2015, and the consolidated statements of income, comprehensive income, cash flows, and changes in shareholder's equity for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with United States generally accepted accounting principles, and for such internal controls as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Ontario Power Generation Inc. as at December 31, 2016 and 2015 and the results of its operations and its cash flows for the years then ended in accordance with United States generally accepted accounting principles.

Toronto, Canada

March 10, 2017

Ernst & Young LLP

Chartered Professional Accountants,
Licensed Public Accountants

CONSOLIDATED STATEMENTS OF INCOME

Years Ended December 31 *(millions of dollars except where noted)*	**2016**	**2015**
Revenue *(Note 16)*	**5,653**	5,476
Fuel expense *(Note 16)*	**727**	687
Gross margin *(Note 16)*	**4,926**	4,789
Expenses *(Note 16)*		
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization *(Note 4)*	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities *(Note 8)*	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (gains) losses, interest and income taxes	**724**	703
Other (gains) losses *(Note 16)*	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense *(Note 7)*	**120**	180
Income before income taxes	**621**	509
Income tax expense *(Note 9)*	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest	**17**	15
Basic and diluted net income per common share *(dollars)*	**1.70**	1.57
Common shares outstanding *(millions)*	**256.3**	256.3

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Years Ended December 31 *(millions of dollars)*	2016	2015
Net income	**453**	417
Other comprehensive income, net of income taxes *(Note 10)*		
Actuarial (loss) gain and past service costs on re-measurement of liabilities for pension and other post-employment benefits [1]	**(6)**	148
Reclassification to income of amounts related to pension and other post-employment benefits [2]	**12**	18
Net loss on derivatives designated as cash flow hedges [3]	**-**	(5)
Reclassification to income of losses on derivatives designated as cash flow hedges [4]	**19**	16
Unrealized loss on available-for-sale securities [5]	**(1)**	-
Other comprehensive income	**24**	177
Comprehensive income	**477**	594
Comprehensive income attributable to the Shareholder	**460**	579
Comprehensive income attributable to non-controlling interest	**17**	15

[1] Net of income tax recoveries of $2 million and income tax expenses of $49 million for 2016 and 2015, respectively.

[2] Net of income tax expenses of $4 million and $7 million for 2016 and 2015, respectively.

[3] Net of income tax recoveries of nil and $2 million for 2016 and 2015, respectively.

[4] Net of income tax expenses of $2 million for each of 2016 and 2015.

[5] Net of income tax expenses of nil for each of 2016 and 2015.

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years Ended December 31 *(millions of dollars)*	2016	2015
Operating activities		
Net income	**453**	417
Adjust for non-cash items:		
Depreciation and amortization *(Note 4)*	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities *(Note 8)*	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(746)**	(704)
Pension and other post-employment benefit costs *(Note 11)*	**464**	483
Deferred income taxes and other accrued charges	**(36)**	23
Mark-to-market on derivative instruments	**3**	(218)
Provision for used nuclear fuel and low and intermediate level waste	**118**	117
Regulatory assets and liabilities	**(170)**	141
Provision for materials and supplies	**42**	28
Other (gains) losses	**(17)**	14
Other	**(8)**	5
	2,289	2,301
Contributions to nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(150)**	(143)
Expenditures on fixed asset removal and nuclear waste management *(Note 8)*	**(275)**	(218)
Reimbursement of expenditures on nuclear fixed asset removal and nuclear waste management *(Note 8)*	**70**	76
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans *(Note 11)*	**(363)**	(480)
Expenditures on restructuring	**(6)**	(16)
Distributions received from investments subject to significant influence	**52**	51
Net changes to other long-term assets and liabilities	**20**	(6)
Net changes to non-cash working capital balances *(Note 17)*	**68**	(100)
Cash flow provided by operating activities	**1,705**	1,465
Investing activities		
Purchase of available-for-sale securities	**(213)**	-
Investment in deposit note *(Note 6)*	**-**	(180)
Proceeds from deposit note *(Note 6)*	**110**	-
Net proceeds from sale of property, plant and equipment	**-**	3
Investment in property, plant and equipment and intangible assets *(Note 16)*	**(1,704)**	(1,376)
Cash flow used in investing activities	**(1,807)**	(1,553)
Financing activities		
Issuance of long-term debt *(Note 6)*	**334**	245
Repayment of long-term debt *(Note 6)*	**(273)**	(503)
Settlement of cash flow hedges	**-**	(9)
Distribution to non-controlling interest	**(14)**	(16)
Issuance of short-term notes *(Note 7)*	**3,108**	2,628
Repayment of short-term notes *(Note 7)*	**(3,331)**	(2,403)
Cash flow used in financing activities	**(176)**	(58)
Net decrease in cash and cash equivalents	**(278)**	(146)
Cash and cash equivalents, beginning of year	**464**	610
Cash and cash equivalents, end of year	**186**	464

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 *(millions of dollars)*	2016	2015
Assets		
Current assets		
Cash and cash equivalents	**186**	464
Available-for-sale securities *(Note 18)*	**212**	-
Receivables from related parties *(Note 18)*	**429**	545
Nuclear fixed asset removal and nuclear waste management funds *(Notes 8 and 16)*	**24**	15
Fuel inventory *(Note 16)*	**310**	344
Materials and supplies *(Note 16)*	**100**	96
Regulatory assets *(Note 5)*	**-**	628
Prepaid expenses	**200**	92
Other current assets *(Notes 4 and 6)*	**282**	206
	1,743	2,390
Property, plant and equipment *(Notes 4, 15, and 16)*	**29,319**	29,469
Less: accumulated depreciation	**9,317**	8,874
	20,002	20,595
Intangible assets *(Notes 4 and 16)*	**503**	476
Less: accumulated amortization	**404**	378
	99	98
Other assets		
Nuclear fixed asset removal and nuclear waste management funds *(Notes 8 and 16)*	**15,960**	15,121
Long-term materials and supplies *(Note 16)*	**345**	337
Regulatory assets *(Note 5)*	**5,855**	5,240
Investments subject to significant influence *(Note 19)*	**321**	336
Other long-term assets *(Note 6)*	**47**	133
	22,528	21,167
	44,372	44,250

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 *(millions of dollars)*	2016	2015
Liabilities		
Current liabilities		
Accounts payable and accrued charges *(Note 18)*	**1,164**	1,199
Short-term debt *(Note 7)*	**2**	225
Deferred revenue due within one year	**12**	12
Long-term debt due within one year *(Note 6)*	**1,103**	273
Income taxes payable	**123**	66
Regulatory liabilities *(Note 5)*	**-**	26
	2,404	1,801
Long-term debt *(Note 6 and 18)*	**4,417**	5,186
Other liabilities		
Fixed asset removal and nuclear waste management liabilities *(Notes 8 and 16)*	**19,484**	20,169
Pension liabilities *(Note 11)*	**3,012**	2,597
Other post-employment benefit liabilities *(Note 11)*	**2,897**	3,085
Long-term accounts payable and accrued charges	**213**	207
Deferred revenue	**298**	246
Deferred income taxes *(Note 9)*	**829**	880
Regulatory liabilities *(Note 5)*	**310**	34
	27,043	27,218
Equity		
Common shares *(Note 14)* [1]	**5,126**	5,126
Retained earnings	**5,534**	5,098
Accumulated other comprehensive loss *(Note 10)*	**(295)**	(319)
Equity attributable to the Shareholder	**10,365**	9,905
Equity attributable to non-controlling interest *(Note 21)*	**143**	140
Total equity	**10,508**	10,045
	44,372	44,250

[1] 256,300,010 common shares outstanding at a stated value of $5,126 million as at December 31, 2016 and 2015.

Commitments and Contingencies *(Notes 6, 9, 11, and 15)*

See accompanying notes to the consolidated financial statements

On behalf of the Board of Directors:

Bernard Lord
Board Chair

M. George Lewis
Director

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Common shares *(Note 14)*	**5,126**	5,126
Retained earnings		
Balance at beginning of year	**5,098**	4,696
Net income attributable to the Shareholder	**436**	402
Balance, end of year	**5,534**	5,098
Accumulated other comprehensive loss, net of income taxes *(Note 10)*		
Balance at beginning of year	**(319)**	(496)
Other comprehensive income	**24**	177
Balance, end of year	**(295)**	(319)
Equity attributable to the Shareholder	**10,365**	9,905
Equity attributable to non-controlling interest *(Note 21)*		
Balance at beginning of year	**140**	141
Distribution to non-controlling interest	**(14)**	(16)
Net income attributable to non-controlling interest	**17**	15
Balance, end of year	**143**	140
Total equity	**10,508**	10,045

See accompanying notes to the consolidated financial statements

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2016 and 2015

1. DESCRIPTION OF BUSINESS

Ontario Power Generation Inc. (OPG or the Company) was incorporated on December 1, 1998 pursuant to the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (the Province or the Shareholder). OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario.

2. BASIS OF PRESENTATION

These consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States (US) Securities and Exchange Commission for annual financial statements.

As required by *Ontario Regulation 395/11,* as amended, under the Financial Administration Act (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG has also received exemptive relief from the Ontario Securities Commission (OSC) from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant, or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

All dollar amounts are presented in Canadian dollars, except in tabular format where noted. Certain of the 2015 comparative amounts have been reclassified from financial statements previously presented to conform to the 2016 consolidated financial statement presentation.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Consolidation

The consolidated financial statements of the Company include the accounts of OPG and its majority-owned subsidiaries, and a variable interest entity (VIE) where OPG is the primary beneficiary. All significant intercompany balances and intercompany transactions have been eliminated on consolidation.

Where OPG does not control an investment, but has significant influence over operating and financing policies of the investee, the investment is accounted for under the equity method. OPG co-owns the Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS) with TransCanada Energy Ltd. and co-owns the Brighton Beach gas-fired combined cycle generating station (Brighton Beach) with ATCO Power Canada Ltd. OPG accounts for its 50 percent ownership interest in each of these jointly controlled entities using the equity method.

Variable Interest Entities

OPG performs ongoing analysis to assess whether it holds any VIEs. VIEs of which OPG is deemed to be the primary beneficiary are consolidated. The primary beneficiary of a VIE has both the power to direct the activities of the entity that most significantly impact its economic performance and the obligation to absorb losses of the entity that could potentially be significant to the Company. In circumstances where OPG is not deemed to be the primary beneficiary, the VIE is not recorded in OPG's consolidated financial statements.

In 2002, OPG and other Canadian nuclear waste producers established the Nuclear Waste Management Organization (NWMO) in accordance with the *Nuclear Fuel Waste Act* (NFWA). The primary long-term mandate of the NWMO is to implement an approach to address the long-term management of used nuclear fuel. In addition to the above mandate, the NWMO provides project management services for OPG's proposed Deep Geologic Repository (DGR) for the long-term management of low and intermediate level waste (L&ILW) and other nuclear lifecycle liability management services. OPG has the majority of voting rights at the NWMO Board of Directors' and members' level. The NFWA requires the nuclear fuel waste owners to establish and make payments into trust funds for the purpose of funding the implementation of the long-term nuclear used fuel management plan. OPG provides over 90 percent of NWMO's funding, primarily towards the design and implementation of Canada's Adaptive Phased Management plan for the long-term management of nuclear used fuel. As a result, OPG is expected to absorb a majority of the NWMO's expected losses through future funding in the event of any shortfall. Therefore, OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated.

As at December 31, 2016, PSS Generating Station Limited Partnership (PSS or the Partnership) was classified as a VIE because it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership.

Use of Management Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefit (OPEB) balances, asset retirement obligations (AROs), income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments and investments in segregated funds, depreciation and amortization expenses, valuation of the nuclear fixed assets and nuclear waste management funds, and inventories. Actual results may differ significantly from these estimates.

Cash and Cash Equivalents and Short-Term Investments

Cash and cash equivalents include cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments and classified as current assets. These securities are valued at the lower of cost and market.

Inventories

Inventories, consisting of fuel and materials and supplies, are measured at the lower of cost and net realizable value. Cost is determined as weighted average cost for fuel inventory and average cost for materials and supplies.

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to operations, maintenance and administration (OM&A) expenses when incurred. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis, except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis. As at December 31, 2016, the amortization periods of PP&E and intangible assets are as follows:

Nuclear generating stations and major components	15 to 74 years [1]
Thermal generating stations and major components	5 to 50 years
Hydroelectric generating stations and major components	10 to 100 years
Administration and service facilities	10 to 50 years
Computers, and transport and work equipment assets – declining balance	12% to 40% per year
Major application software	5 years
Service equipment	5 to 10 years

[1] As at December 31, 2016, the end of station life for depreciation purposes for the Darlington, Pickering, and Bruce A and B nuclear generating stations ranged between 2020 and 2061. Major components are depreciated over the lesser of the station life and the life of the components.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

The carrying value of investments accounted for under the equity method are reviewed annually for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the Ontario Energy Board (OEB).

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998,* the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB are classified as current if they are expected to be recovered from, or refunded to, customers within 12 months of the end of the reporting period, based on recovery or repayment periods authorized by the OEB. All other regulatory asset and liability balances are classified as non-current on the consolidated balance sheets.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in accumulated other comprehensive income (AOCI) in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans. The regulatory asset is reversed as underlying unamortized balances are amortized as components of the benefit cost.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures on its pension and OPEB plans. It is the Company's position that this decision by the OEB does not constitute a change in the basis of rate recovery for OPG's of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices or in an OEB-authorized deferral or variance account for future recovery as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account to record the difference between OPG's actual pension and OPEB costs for the regulated business

determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the above noted consultation process.

See Notes 5, 8, 9, and 11 to these consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Revenue Recognition

All of OPG's electricity generation is offered into the real-time energy spot market administered by the Independent Electricity System Operator (IESO). Revenue is recognized as electricity is generated and metered to the IESO.

Revenue Recognition – Regulated Generation

Energy revenue generated from OPG's regulated facilities is based on regulated prices determined by the OEB that currently include a base regulated price and rate riders for the recovery or repayment of approved variance and deferral account balances.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base is a regulatory construct that, for OPG, represents the average net level of investment in regulated fixed and intangible assets in-service and an allowance for working capital. The revenues from the regulated hydroelectric facilities are also subject to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The rate riders in effect during 2016 were established by the OEB in its October 2015 order based on OPG's application to recover balances in most of the authorized variance and deferral accounts as at December 31, 2014. The rate riders in effect during 2015 included those established by the OEB in 2014 in conjunction with the base regulated prices in effect since November 1, 2014 and those authorized by the OEB in October 2015 based on OPG's application to recover the December 31, 2014 balances. The OEB-authorized variance and deferral accounts are discussed in Note 5 to these consolidated financial statements.

Revenue Recognition – Non-regulated Generation and Other Revenue

The electricity generation from OPG's non-regulated assets receives the Ontario electricity spot market price, except where an energy supply agreement (ESA) with the IESO or another contractual agreement is in place. As at December 31, 2016, most of OPG's operating non-regulated assets are subject to an ESA. Revenue from the generating stations subject to an ESA is recognized in accordance with the terms of the agreement. Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO is substituted as the counterparty of the ESAs or other agreements that were previously executed with the OPA.

OPG also sells into, and purchases from, interconnected markets of other provinces and the northeast and midwest regions of the US. All contracts that are not designated as hedges are recorded in the consolidated balance sheets at market value, with gains or losses recorded in the consolidated statements of income. Gains and losses on energy trading contracts (including those to be physically settled) are recorded on a net basis in the consolidated statements of income. Accordingly, power purchases of $19 million were netted against revenue in 2016 (2015 – $75 million).

OPG derives non-energy revenue under the terms of a lease arrangement and associated agreements with Bruce Power L.P. (Bruce Power) related to the Bruce nuclear generating stations. This includes lease revenue and revenue from heavy water sales, detritiation services and waste management services. OPG's net revenues from the lease of the Bruce stations and related agreements, including a portion of heavy water sales, are credited to customers and have therefore reduced regulated prices for the generation from the nuclear facilities owned and operated by OPG. The minimum lease payments are recognized in revenue on a straight-line basis over the term of the lease.

In addition, non-energy revenue includes isotope sales, real estate rentals and other service revenues. Revenues from these activities are recognized as services are provided, or as products are delivered.

Fixed Asset Removal and Nuclear Waste Management Liabilities

OPG recognizes AROs for fixed asset removal and nuclear waste management, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The liabilities are initially recorded at their estimated fair value, which is based on a discounted value of the expected costs to be paid.

On an ongoing basis, the liabilities for nuclear fixed asset removal and nuclear waste management (Nuclear Liabilities) are increased by the present value of the incremental (variable) cost portion for the nuclear waste generated each year, with the corresponding amounts charged to operating expenses. Variable expenses relating to low and intermediate level nuclear waste are charged to OM&A expenses. Variable expenses relating to the management and storage of nuclear used fuel are charged to fuel expense. The liabilities may also be adjusted due to any changes in the estimated amount or timing of the underlying future cash flows, with any resulting changes in the related asset retirement costs capitalized as part of the carrying amount of the related fixed assets. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the originally estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of increases in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of decreases in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets. Upon settlement of the liabilities, a gain or loss would be recorded.

Accretion arises because the fixed asset removal and nuclear waste management liabilities are reported on a net present value basis. Accretion expense is the increase in the carrying amount of the liabilities due to the passage of time.

The asset retirement cost is capitalized by increasing the carrying value of the related fixed assets. The capitalized cost is depreciated over the remaining service life of the related fixed assets and is included in depreciation and amortization expenses.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG established a Used Fuel Segregated Fund and a Decommissioning Segregated Fund (together the Nuclear Segregated Funds). The Used Fuel Segregated Fund is intended to fund expenditures associated with the long-term management of radioactive used nuclear fuel bundles, while the Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the nuclear stations are shut down. OPG maintains the Nuclear Segregated Funds in third-party custodial and trust accounts that are segregated from the rest of OPG's assets.

OPG's investments in the Nuclear Segregated Funds and the corresponding amounts payable to/receivable from the Province are classified as held-for-trading. The Nuclear Segregated Funds are measured at fair value based on the bid prices of the underlying equity and fixed income securities, and, in the case of the alternative investment portfolio, using appropriate valuation techniques as outlined in Note 13 to these consolidated financial statements, with realized and unrealized gains and losses recognized in OPG's consolidated statements of income.

Derivatives

All derivatives, including embedded derivatives that must be separately accounted for, generally are classified as held-for-trading and recorded at fair value in the consolidated balance sheets. Transaction costs are expensed as incurred for financial instruments classified or designated as held-for-trading.

Derivatives qualify for hedge accounting if they meet stringent documentation requirements, and if the derivative instrument that is designated as a hedge is expected to effectively hedge the identified risk throughout the life of the hedged item. At the inception of a hedging relationship, OPG documents the relationship between the hedging instrument and the hedged item, its risk management objective, and its strategy for undertaking the hedge. A documented assessment is made, both at the inception of a hedge and on an ongoing basis, of whether or not the derivatives that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

All derivative contracts not designated as hedges are recorded on the consolidated balance sheets as derivative assets or liabilities at fair value with changes in the fair value recorded in the revenue of the Services, Trading, and Other Non-Generation segment. Refer to Note 12 for a discussion of OPG's risk exposures and the derivative instruments used to manage these risks.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model. OPG uses a fair value hierarchy, grouping assets and liabilities into three levels based on the relative objectivity of the inputs used to measure fair value, with Level 1 representing the most objective. Refer to Note 13 for a discussion of fair value measurements and the fair value hierarchy.

Investments in Equity Securities

Available-for-sale (AFS) securities are measured at fair value with unrealized gains and losses due to changes in fair value recognized in other comprehensive income (OCI). Realized gains and losses are included in net income when the shares are sold or awarded. Related transaction costs are expensed as incurred, and dividend income is included in net income in the period dividends are declared. Equity securities are initially measured at the transaction price.

Research and Development

Research and development costs are expensed as incurred. Research and development costs incurred to discharge long-term obligations, such as the Nuclear Liabilities, for which specific provisions have already been made, are charged to the related liability.

Leases

Leases are evaluated and classified as either operating or capital leases for financial reporting purposes. Capital leases, which transfer substantially all of the risks and benefits incidental to ownership of the leased item, are capitalized at the inception of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Capital leases are depreciated over the shorter of the estimated useful life of the asset and the lease term.

Leases where the lessor retains substantially all the risks and benefits incidental to ownership of the asset are classified as operating leases. Operating lease payments, other than contingent rentals, are recognized as an expense in the consolidated statements of income on a straight-line basis over the lease term. Where the amount of rent expense recognized is different from the actual operating lease payment, other than contingent rentals, the difference is deferred and included as assets or liabilities on the consolidated balance sheets.

Pension and Other Post-Employment Benefits

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post-retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective

benefit obligations is accumulated and amortized over future periods; for LTD benefits, the impact of these updates and differences is immediately recognized as OPEB costs in the period incurred.

The discount rates, which are representative of AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure, and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments, and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor), is amortized over the expected average remaining service life of the employees, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on the consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in OCI, net of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as components of pension and OPRB costs as described above.

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the amounts reclassified from AOCI into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the Ontario Electricity Financial Corporation (OEFC). These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or payable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized income tax benefits as income tax expense.

Changes in Accounting Policies and Estimates

Change in Nuclear Liabilities Estimate

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for Nuclear Liabilities as at December 31, 2016 was finalized as part of the required process to update the Reference Plan under the ONFA between OPG and the Province. The update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities, with a corresponding decrease to the asset retirement costs capitalized as part of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear decommissioning at least once every five years, in line with the required ONFA Reference Plan update process.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. These changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account established by the OEB pursuant to *Ontario Regulation 53/05*, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices. The estimated impact on 2017 expenses, before regulatory deferrals, includes a decrease to depreciation expense of approximately $8 million**,** a decrease to accretion expense of approximately $78 million in 2017, and a combined decrease in used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million**.** Under the current OEB-approved cost recovery methodologies, these changes are not expected to materially affect OPG's income in 2017, as they are expected to be largely offset by the OEB-approved variance and deferral accounts, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to *Ontario Regulation 53/05*. It records the revenue requirement impact

associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the amount due to the Province. This accounting adjustment represented the overfunded position of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 relative to the value of the corresponding life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province, because OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and because any excess funding in the Nuclear Segregated Funds upon termination of the ONFA accrues to the Province. Of the $88 million reduction in the Nuclear Segregated Funds assets, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

Pension and Other Post-Employment Benefits

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined under the heading, *Contractual and Commercial Commitments,* in Note 15 Commitments and Contingencies. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation, and assumptions as at December 31, 2016. As part of the valuation, the plan's demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The weighted average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

The deficit for the registered pension plan increased, for accounting purposes, from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million).

Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

OEB's Decision on OPG's December 2014 Motion

In January 2016, OEB issued its decision on OPG's December 2014 motion that requested the OEB to review and vary parts of its November 2014 decision, including the disallowed Niagara Tunnel project capital costs. In its January 2016 decision, the OEB reversed a portion of the November 2014 Niagara Tunnel capital cost disallowance and established a new variance account to record the revenue requirement impact of the reversed disallowance effective November 1, 2014. The November 2014 disallowance resulted in a write off of capital costs in the fourth quarter of 2014. To recognize the expected future recovery of the reversed portion of the disallowance and related revenue requirement impact to March 31, 2016, during the first quarter of 2016, OPG recorded an increase to property, plant and equipment and a corresponding gain of $22 million, and a regulatory asset of $3 million related to the balance in the variance account, in accordance with Accounting Standards Codification (ASC) Topic 980, *Regulated Operations*.

Recent Accounting Pronouncements

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact that the new standard will have on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the AFS classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of other comprehensive income. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One Limited (Hydro One) share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

Intra-Entity Transfers of Assets Other than Inventory

In October 2016, the FASB issued ASU No. 2016-16, *Income* Taxes, where entities will be required to recognize the income tax effects of certain intercompany transfers of assets as an income tax expense or benefit in the period the transaction occurs. This is different from current standards where entities are required to defer the income tax effects until that asset has been sold to a third party or otherwise recognized. OPG is required to adopt this ASU on January 1, 2018. The amendments in this ASU should be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. OPG expects to record a cumulative-effect adjustment to the 2018 opening retained earnings of a debit of $7 million.

Significant Accounting Standard Update Adopted

Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share

In May 2015, the FASB issued ASU No. 2015-07, *Fair Value Measurement (Topic 820) – Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent)*. Under the new guidance, investments measured at net asset value (NAV), which have been elected under the guidance as a practical expedient for fair value, are excluded from the fair value hierarchy. Removing investments measured using the practical expedient from the fair value hierarchy is intended to eliminate the diversity in practice that currently exists with respect to the categorization of these investments. The only criterion for categorizing investments in the fair value hierarchy is the observability of the inputs. OPG has adopted the updates to ASC Topic 820, *Fair Value Measurement* in 2016. The changes in disclosures required under this update are reflected in Notes 11 and 13.

4. PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND DEPRECIATION AND AMORTIZATION

Depreciation and amortization expenses, including amounts recognized in regulatory variance and deferral accounts authorized by the OEB, for the years ended December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Depreciation	**602**	617
Amortization of intangible assets	**27**	20
Amounts recognized in regulatory variance and deferral accounts	**26**	(1)
Amortization of regulatory assets and liabilities *(Note 5)*	**602**	464
	1,257	1,100

Property, plant and equipment as at December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Nuclear generating stations	**11,057**	11,999
Regulated hydroelectric generating stations	**9,430**	9,351
Contracted generation portfolio generating stations	**3,751**	3,713
Other property, plant and equipment	**1,598**	1,839
Construction in progress	**3,483**	2,567
	29,319	29,469
Less: accumulated depreciation		
Generating stations	**7,948**	7,359
Other property, plant and equipment	**1,369**	1,515
	9,317	8,874
	20,002	20,595

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. An active program to locate a buyer was initiated in October 2016. As such, in the fourth quarter of 2016, OPG reclassified the assets' net book value of approximately $93 million (December 31, 2015 – $96 million) out of property, plant and equipment and into Other current assets in the Services, Trading, and Other Non-Generation segment. Depreciation on the assets ceased in the fourth quarter of 2016. In December 2016, a purchase and sale agreement was executed and the disposition is expected to close during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be recognized in the second quarter of 2017 when the transaction is expected to be completed. Pursuant to the December 2015 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act 2014*, OPG is required to transfer a portion of the proceeds of disposition into the Province's Consolidated Revenue Fund.

Construction in progress as at December 31 consists of the following:

(millions of dollars)	**2016**	**2015**
Darlington Refurbishment	**2,563**	1,868
Peter Sutherland Sr. GS	**236**	95
Other	**684**	604
	3,483	2,567

Interest capitalized to construction and development in progress at an average rate of five percent during 2016 (2015 – five percent) was $141 million (2015 – $102 million).

Intangible assets as at December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Nuclear generating stations	**122**	118
Regulated hydroelectric generating stations	**7**	4
Contracted generation portfolio generating stations	**4**	5
Computer software and other intangible assets	**350**	321
Development in progress	**20**	28
	503	476
Less: accumulated amortization		
Generating stations	**120**	115
Computer software and other intangible assets	**284**	263
	404	378
	99	98

The estimated aggregate amortization expense for each of the five succeeding years for intangible assets in service as at December 31, 2016 is as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**
Amortization expense	24	21	20	8	2

5. REGULATORY ASSETS AND LIABILITIES

In December 2014, OPG filed an application with the OEB to recover approximately $1.8 billion in December 31, 2014 balances in most of its authorized regulatory variance and deferral accounts. The recovery of the amount sought was approved by the OEB in 2015.

In October 2015, the OEB issued an order implementing its 2015 decisions on OPG's application. The order authorized OPG to recover $933 million over the period from October 1, 2015 to December 31, 2016 through new rate riders for generation from all of OPG's regulated nuclear and regulated hydroelectric facilities during this period, as shown below. The remaining approved balances will be subject to recovery after 2016.

($/Megawatt hour)	**Nuclear**	**Hydroelectric**
2015/2016 rate riders	10.84	3.19
2015/2016 interim period rate riders [1]	2.17	0.64
Rate riders for the period from October 1, 2015 to December 31, 2016	13.01	3.83

[1] The new riders were made effective July 1, 2015 and implemented effective October 1, 2015 by the OEB. The interim period rate riders were authorized by the OEB to allow for the recovery of the new riders for the period from July 1, 2015 to September 30, 2015. The revenue for the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The income impact of the revenue accrual was largely offset by a corresponding increase in amortization expense related to regulatory assets and liabilities for deferral and variance accounts.

In 2016, OPG recorded amortization of the regulatory assets and liabilities for the deferral and variance account balances approved for disposition on a straight-line basis, based on recovery or repayment periods authorized by the OEB's October 2015 order. In 2015, OPG recorded such amortization on a straight-line basis based on balances and recovery or repayment periods authorized by the OEB's December 2014 and October 2015 orders.

Any shortfall or over-recovery of the approved balances due to differences between actual and forecast production are recorded in the authorized Nuclear Deferral and Variance Over/Under Recovery Variance Account and the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account to be collected from, or refunded to, customers in the future.

The OEB's October 2015 order also approved the continuation of previously authorized variance and deferral accounts, including those authorized pursuant to *Ontario Regulation 53/05*.

Where authorized by the OEB, OPG recorded interest on the unamortized balances in the applicable variance and deferral accounts at the OEB-prescribed rates of 1.10 percent per annum for the period from April 1, 2015 to December 31, 2016 and 1.47 percent per annum for the period from January 1, 2015 to March 31, 2015.

The regulatory assets and liabilities recorded as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Regulatory assets		
Variance and deferral accounts authorized by the OEB		
Pension and OPEB Cost Variance Account	**716**	865
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 11)*	**497**	315
Hydroelectric Surplus Baseload Generation Variance Account	**210**	114
Bruce Lease Net Revenues Variance Account	**95**	95
Nuclear Deferral and Variance Over/Under Recovery Variance Account	**74**	82
Other variance and deferral accounts	**33**	243
	1,625	1,714
Pension and OPEB regulatory asset *(Note 11)*	**3,392**	3,362
Deferred Income Taxes *(Note 9)*	**838**	792
Total regulatory assets	**5,855**	5,868
Less: current portion	**-**	628
Non-current regulatory assets	**5,855**	5,240
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Capacity Refurbishment Variance Account	**102**	-
Other variance and deferral accounts	**208**	60
Total regulatory liabilities	**310**	60
Less: current portion	**-**	26
Non-current regulatory liabilities	**310**	34

The changes in the regulatory assets and liabilities during 2016 and 2015 are as follows:

(millions of dollars)	**Pension and OPEB Cost Variance**	**Pension & OPEB Cash vs Accrual Differential Deferral**	**Hydro-electric Surplus Baseload Generation Variance**	**Bruce Lease Net Revenues Variance**	**Nuclear Deferral and Variance Over/Under Recovery Variance**	**Capacity Refurb-ishment Variance**	**Other Variance and Deferral (net)**	**Pension and OPEB Regula-tory Asset**	**Deferred Income Taxes**
Net regulatory assets January 1, 2015	939	36	67	315	56	190	320	4,363	861
Increase (decrease)	-	279	82	(149)	44	(68)	3	(1,001)	(69)
Interest	-	-	-	-	1	2	1	-	-
Amortization	(74)	-	(35)	(71)	(19)	(124)	(141)	-	-
Net regulatory assets December 31, 2015	865	315	114	95	82	-	183	3,362	792
Increase (decrease)	**-**	**182**	**126**	**143**	**29**	**(36)**	**(184)**	**30**	**46**
Interest	**-**	**-**	**2**	**-**	**1**	**-**	**-**	**-**	**-**
Amortization	**(149)**	**-**	**(32)**	**(143)**	**(38)**	**(66)**	**(174)**	**-**	**-**
Net regulatory assets December 31, 2016	**716**	**497**	**210**	**95**	**74**	**(102)**	**(175)**	**3,392**	**838**

Pension and OPEB Cost Variance Account

As authorized by the OEB, for the period from March 1, 2011 to October 30, 2014, the Pension and OPEB Cost Variance Account recorded the differences between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and related tax impacts, and corresponding forecast amounts reflected in the regulated prices then in effect. In its November 2014 decision, the OEB determined that the pension and OPEB amounts reflected in OPG's new regulated prices effective November 1, 2014 would be limited to the Company's estimated minimum contributions to its registered pension plan and a forecast of OPG's expenditures on the OPEB and supplementary pension plans. As such, the OEB ordered the Pension and OPEB Cost Variance Account to record only amortization beginning on November 1, 2014.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of 10/12 of the account balance as at December 31, 2012 over a 144-month period to December 31, 2024. Amounts recorded in the account in 2013 and 2014 were approved for recovery over a 72-month period to June 30, 2021 by the OEB's October 2015 order.

Pension & OPEB Cash Versus Accrual Differential Deferral Account

In its November 2014 decision and December 2014 order, the OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Effective November 1, 2014, this deferral account records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis under US GAAP and OPG's corresponding actual cash expenditures for these plans. The balance in the account as at December 31, 2016 represents the excess of costs calculated using the accrual basis over the cash basis for the period from November 1, 2014 to December 31, 2016. The Company has recognized the amount set aside in the deferral account as a regulatory asset.

The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of the generic OEB proceeding on the regulatory treatment and recovery of pension and OPEB costs. The OEB's consultation process to develop standard principles to guide its review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery, began in May 2015. OPG is participating in the consultation. In July 2016, the OEB held a public stakeholder forum as part of the consultation. In September 2016, OPG made a written submission of its position on the matter with the OEB. OEB's consultation process remains ongoing.

Hydroelectric Surplus Baseload Generation Variance Account

The Hydroelectric Surplus Baseload Generation Variance Account records the impact of foregone production at OPG's regulated hydroelectric facilities due to surplus baseload generation conditions. The variance account was authorized by the OEB effective March 1, 2011 for the regulated hydroelectric facilities prescribed for rate regulation prior to 2014, and effective November 1, 2014 for the applicable regulated hydroelectric facilities prescribed for rate regulation effective in 2014.

In its November 2014 decision and December 2014 order, the OEB approved the recovery of the account balance as at December 31, 2013 over a 12-month period beginning on January 1, 2015. The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 over an 18-month period from July 1, 2015 to December 31, 2016. OPG's May 2016 application to the OEB included a request to recover the balance in this account as at December 31, 2015 less amounts approved in the OEB's October 2015 order.

Bruce Lease Net Revenues Variance Account

In accordance with *Ontario Regulation 53/05*, the OEB is required to include the difference between OPG's revenues and costs associated with its ownership of the two nuclear stations on lease to Bruce Power in the determination of the regulated prices for production from OPG's regulated nuclear facilities. The OEB established a variance account

that captures differences between OPG's revenues and costs related to the Bruce nuclear generating stations and the corresponding forecasts included in approved nuclear regulated prices.

In 2013, the OEB ordered the portion of the balance in the Bruce Lease Net Revenues Variance Account related to the impact of the derivative liability embedded in the terms of the Bruce Lease in effect prior to December 2015 to be recovered on the basis of OPG's expected rent rebate payments to Bruce Power and associated income tax impacts. The OEB's October 2015 order reaffirmed this approach. In December 2015, as a result of amendments to the Bruce Lease, OPG reversed the derivative liability, with a corresponding reduction to the regulatory asset for this account. Amounts collected from customers for the derivative liability for periods after its reversal are subject to refund in the future and recognized as a regulatory liability as part of the variance account balance.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of the non-derivative portion of the account balance as at December 31, 2012 over a 48-month period ending December 31, 2016. The non-derivative portion of amounts recorded in the account in 2013 and 2014 was approved for recovery over an 18-month period from July 1, 2015 to December 31, 2016 by the OEB's October 2015 order. The balance in this account as at December 31, 2016 therefore reflects the cumulative variances in net revenues related to the non-derivative portion of the account between January 1, 2015 and December 2016, partially offset by the refund to ratepayers for the derivative cancellation in 2015.

Nuclear Deferral and Variance Over/Under Recovery Variance Account

The Nuclear Deferral and Variance Over/Under Recovery Variance Account records any shortfall or over-recovery of the approved variance and deferral account balances due to differences between actual and forecast nuclear production. The account also captures transfer of balances remaining in other variance and deferral accounts as they expire. The balance in the account will be collected from, or refunded to, customers following OPG's next application to the OEB.

The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 over an 18-month period from July 1, 2015 to December 31, 2016. OPG's May 2016 application to the OEB included a request to recover the balance in this account as at December 31, 2015 less amounts approved in the OEB's October 2015 order.

Capacity Refurbishment Variance Account

Pursuant to *Ontario Regulation 53/05*, the OEB has authorized the Capacity Refurbishment Variance Account (CRVA). The account captures variances from the forecasts reflected in the regulated prices for capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to one or more of the regulated facilities. The balance in the account as at December 31, 2016 includes variances related to the refurbishment of the Darlington nuclear generating station, life extension initiatives at the Pickering nuclear generation station, and other projects.

OPG determines amounts to be recovered from, or refunded to, customers with respect to variances in capital costs as the difference from forecast depreciation expense and cost of capital associated with the in-service capital reflected in the regulated prices and associated income tax effects. The cost of capital amount in the account is calculated using the weighted average cost of capital, including a return on equity, as approved by the OEB in determining the regulated prices. In accordance with US GAAP, in recognizing a regulatory asset for the CRVA, OPG limits the portion of cost of capital additions recognized as a regulatory asset to the amount calculated using the average rate of capitalized interest applied to construction and development in progress.

The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 less amounts approved in the OEB's December 2014 order over an 18-month period from July 1, 2015 to December 31, 2016. In setting new regulated prices effective November 1, 2014, the OEB approved the recovery of the December 31, 2013 nuclear capital and hydroelectric portions of the account balance, totaling $119 million, over a 12-month period beginning on January 1, 2015.

Other Variance Accounts

Regulatory assets

As at December 31, 2016 and 2015, regulatory assets for other variance and deferral accounts included amounts for Nuclear Liability Deferral Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Development Variance Account, and the Pickering Life Extension Depreciation Variance Account.

The Nuclear Liability Deferral Account is authorized in connection with changes to OPG's liabilities for nuclear used fuel management and nuclear decommissioning and L&ILW management associated with the nuclear facilities owned and operated by OPG, which are comprised of the Pickering and Darlington nuclear generating stations. The deferral account records the revenue requirement impact associated with the changes in these liabilities arising from an approved reference plan, in accordance with the terms of the ONFA.

The Hydroelectric Deferral and Variance Over/Under Recovery Variance Account records any shortfall or over-recovery of the approved variance and deferral account balances due to differences between actual and forecast hydroelectric production. The account also captures transfer of balances remaining in other variance and deferral accounts as they expire. The balance in the account will be collected from, or refunded to, customers following OPG's next application to the OEB.

The Nuclear Development Variance Account records variances between the actual non-capital costs incurred and firm financial commitments made in the course of planning and preparation for the development of proposed new nuclear generation facilities and the corresponding forecasts reflected in the regulated prices approved by the OEB.

The Pickering Life Extension Depreciation Variance Account balance was recorded wholly during the period from November 1, 2014 to December 31, 2014. This balance represents an offset to the customer credit for the reduction in depreciation expense for the Pickering nuclear generating station that was reflected both as a reduction to the base regulated prices effective November 1, 2014 and the nuclear rate rider in effect during 2014. The regulatory asset for this balance was fully amortized during the year ended December 31, 2016 based on the recovery periods authorized by the OEB.

As at December 31, 2016, regulatory assets for other variance and deferral accounts also included the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account. This account was established in the OEB's January 2016 decision in which it reversed a portion of the November 2014 Niagara Tunnel Capital cost disallowance. This account records the revenue requirement impact of the reversed disallowance effective November 1, 2014. To recognize the expected future recovery of the reversed portion of the disallowance, OPG recorded an increase to property, plant and equipment and a corresponding gain of $22 million during 2016 in accordance with ASC Topic 980, *Regulated Operations*. As at December 31, 2016, OPG also recorded a regulatory asset of $3 million related to the balance in the variance account.

As at December 31, 2015, regulatory assets for other variance and deferral accounts also included the Pension & OPEB Cash Payment Variance Account.

Regulatory liabilities

As at December 31, 2016 and 2015, regulatory liabilities for other variance and deferral accounts included amounts for the Hydroelectric Water Conditions Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account.

The Hydroelectric Water Conditions Variance Account captures the impact of differences in regulated hydroelectric electricity production due to differences between forecast water conditions underlying the production forecast approved by the OEB in setting regulated hydroelectric prices, and the actual water conditions.

The Ancillary Services Net Revenue Variance Account was authorized by the OEB to capture differences between actual nuclear and regulated hydroelectric ancillary services net revenue and the forecast amounts of such revenue approved by the OEB in setting regulated prices.

The Income and Other Taxes Variance Account includes deviations in income taxes for the regulated business, from those approved by the OEB in setting regulated prices, caused by changes in tax rates and rules, as well as reassessments.

The Hydroelectric Incentive Mechanism Variance Account records a credit to customers equal to 50 percent of OPG's hydroelectric incentive mechanism revenues above a specified threshold for the regulated hydroelectric facilities.

In its November 2014 decision and December 2014 order, the OEB approved the recovery or repayment of certain of the account balances of the other variance accounts as at December 31, 2013 over a 12-month period beginning on January 1, 2015. In its October 2015 order, the OEB approved the recovery or repayment of the majority of the account balances of the other variance and deferral accounts as at December 31, 2014, less amounts approved in the December 2014 order, over an 18-month period from July 1, 2015 to December 31, 2016.

As at December 31, 2016, regulatory liabilities for other variance and deferral accounts also included the Impact Resulting from Changes in Station-End-of-Life Deferral Account. In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of the changes to the nuclear fixed asset removal and nuclear waste management liabilities and depreciation expense arising from the changes in the estimated useful lives of the Company's nuclear stations, for accounting purposes, implemented effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station-End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG recognized a regulatory liability of $71 million related to the balance in the deferral account.

In addition, as at December 31, 2016, the regulatory liabilities also included the Pension & OPEB Cash Payment Variance Account. This account records, effective November 1, 2014, the difference between OPG's actual contributions to its registered pension plan and expenditures on its OPEB and supplementary pension plans for the regulated business, and the corresponding amounts reflected in the regulated prices.

Pension and OPEB Regulatory Asset

The Pension and OPEB Regulatory Asset represents unamortized amounts in respect of OPG's pension and OPEB plans that have been recognized in OCI and not yet reclassified into the amortization component of the benefit costs in respect of these plans. These amounts are expected to be recovered from customers through future regulated prices. The regulatory asset is reversed as underlying unamortized balances are amortized as components of benefit costs. Refer to Note 3 for a detailed discussion of the rate recovery methodology for pension and OPEB costs under the heading, *Rate Regulated Accounting*. The AOCI amounts related to pension and OPEB plans are presented in Note 11.

Deferred Income Taxes

OPG is required to record a regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities. In addition, OPG is required to recognize a deferred income tax liability or asset for the regulatory asset or liability for the amount of deferred income taxes expected to be included in future regulated prices and paid to or recovered from customers. Income taxes are discussed in Note 9.

6. LONG-TERM DEBT

Long-term debt consists of the following as at December 31: [1]

(millions of dollars)	**2016**	**2015**
Notes payable to the OEFC		
Senior Notes [2]		
4.91% due 2016	**-**	270
5.35% due 2017	**900**	900
5.27% due 2018	**395**	395
5.44% due 2019	**365**	365
4.56% due 2020	**660**	660
4.28% due 2021	**185**	185
3.30% due 2022	**150**	150
3.12% due 2023	**40**	40
3.04% due 2026	**50**	-
5.07% due 2041	**300**	300
4.36% due 2042	**200**	200
4.03% due 2046	**50**	-
UMH Energy Partnership [3]		
Senior Notes		
7.86% due to 2041	**184**	187
PSS Generating Station Limited Partnership [4]		
Senior Notes		
4.90% due to 2067	**245**	245
Lower Mattagami Energy Limited Partnership [5]		
Senior Notes		
2.35% due 2017	**200**	200
4.46% due 2021	**225**	225
3.53% due 2024	**200**	200
2.40% due 2026	**220**	-
5.26% due 2041	**250**	250
5.05% due 2043	**200**	200
4.26% due 2046	**275**	275
4.26% due 2052	**225**	225
Other	**15**	-
	5,534	5,472
Less: bond issuance fees	**(14)**	(13)
Less: due within one year	**(1,103)**	(273)
Long-term debt	**4,417**	5,186

[1] The interest rates disclosed reflect the effective interest rate of the debt.

[2] OEFC senior debt is entitled to receive, in full, amounts owing in respect of the senior debt and is pari passu to the Lower Mattagami Energy Limited Partnership senior notes.

[3] These notes are secured by the assets of the Upper Mattagami and Hound Chute project. Principal repayments of $3 million per year are made on a semi-annual basis until maturity in 2041, at which time the remaining principal balance of $116 million becomes due.

[4] These notes are secured by the assets of the Peter Sutherland Sr. GS project. The notes have an interest-only feature until 2025 and will be amortized with blended semi-annual principal and interest payments thereafter until maturity in 2067, at which time the remaining principal balance of $49 million becomes due.

[5] These notes are secured by the assets of the Lower Mattagami River project, including existing and new operating facilities, and are recourse to OPG until the recourse release date. These notes rank pari passu to the OEFC senior notes.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As at December 31, 2016, there were outstanding borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016,

OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

Interest paid in 2016 was $269 million (2015 – $269 million), of which $261 million (2015 – $261 million) relates to interest paid on long-term debt.

In the fourth quarter of 2015, PSS, a subsidiary of OPG, issued long-term debt totalling $245 million in support of the Peter Sutherland Sr. GS project. The majority of the debt proceeds, totalling $180 million, were invested in a structured deposit note with staggered maturity dates ranging from January 2016 to April 2017. As at December 31, 2016, $70 million was reported as Other current assets on the consolidated balance sheets, based on the terms of the deposit note. As at December 31, 2015, $110 million was reported as Other current assets and $70 million as Other long-term assets.

In October 2016, Lower Mattagami Energy Limited Partnership (LME) issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes is x.xx percent and x.xx percent, respectively. **[MONITOR]**

A summary of the contractual maturities of all long-term borrowings outstanding as at December 31, 2016, by year, is as follows:

(millions of dollars)	
2017	**1,103**
2018	**398**
2019	**368**
2020	**663**
2021	**413**
Thereafter	**2,589**
	5,534

The book value of the pledged assets as at December 31, 2016 was $3,510 million (2015 – $3,520 million).

7. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended both tranches to May 2021. As at December 31, 2016 and 2015, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, the LME maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for the LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program (2015 – $225 million). There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016 and 2015.

As at December 31, 2016, OPG maintained $25 million of short-term, uncommitted overdraft facilities and $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included

$349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016 and 2015, there were Letters of Credit outstanding under this agreement of $150 million which were issued in support of OPG's supplementary pension plan.

In October 2014, UMH Energy Partnership entered into an $8 million short-term, uncommitted overdraft facility and $16 million of irrevocable, standby Letters of Credit facilities in support of its operations. As at December 31, 2016, total Letters of Credit of $14 million had been issued under these facilities.

The following table summarizes the net interest expense for the years ended December 31:

(millions of dollars)	**2016**	**2015**
Interest on long-term debt	**290**	285
Interest on short-term debt	**8**	8
Interest income	**(7)**	(9)
Interest capitalized to property, plant and equipment and intangible assets	**(141)**	(102)
Interest related to regulatory assets and liabilities [1]	**(30)**	(2)
Net interest expense	**120**	180

[1] Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Bruce Lease Net Revenues Variance Account, the Capacity Refurbishment Variance Account, and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

8. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES AND FUNDS

The liabilities for fixed asset removal and nuclear waste management on a present value basis consist of the following as at December 31:

(millions of dollars)	**2016**	**2015**
Liability for nuclear used fuel management	**11,292**	12,793
Liability for nuclear decommissioning and L&ILW waste management	**7,811**	6,999
Liability for non-nuclear fixed asset removal	**381**	377
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169

The changes in the fixed asset removal and nuclear waste management liabilities for the years ended December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Liabilities, beginning of year	**20,169**	17,028
Increase in liabilities due to accretion [1]	**1,024**	906
(Decrease) increase in liabilities reflecting changes to the estimated useful lives of nuclear generating stations *(Note 3)*	**(1,567)**	2,330
Increase in liabilities due to nuclear used fuel and nuclear waste management expenses and other expenses [1]	**133**	123
Liabilities settled by expenditures on fixed asset removal and nuclear waste management	**(275)**	(218)
Liabilities, end of year	**19,484**	20,169

[1] Amounts shown exclude the impact of regulatory variance and deferral accounts.

OPG's fixed asset removal and nuclear waste management liabilities are comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating facilities, and other facilities. Costs will be incurred for activities such as preparation for safe storage, dismantling, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel and L&ILW material.

The determination of the accrual for fixed asset removal and nuclear waste management costs requires significant assumptions since these programs are long-term in nature. The most recent comprehensive update of the cost estimates for the nuclear decommissioning and nuclear waste management liabilities is contained in the approved 2017 ONFA Reference Plan, which covers the 2017-2021 period.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years. The estimates for the Nuclear Liabilities include cash flow estimates for decommissioning the nuclear stations for approximately 40 years after stations are shut down and to 2088 for placement of used fuel into the long-term disposal repository, followed by extended monitoring.

The significant assumptions underlying operational, technical, and economic factors used in the calculation of the accrued Nuclear Liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the nuclear waste programs including construction of waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, or the technology employed may result in significant changes to the value of the accrued liabilities. With programs of this duration and the evolving technology to handle the nuclear waste, there is a significant degree of uncertainty surrounding the measurement of the costs for these long-term programs. These costs may increase or decrease over time.

Liability for Nuclear Used Fuel Management Costs

The liability for nuclear used fuel management represents the cost of managing the highly radioactive used nuclear fuel bundles. The federal NFWA, proclaimed into force in 2002, required that Canada's nuclear fuel waste owners form a nuclear waste management organization, and that each waste owner establish a trust fund for used fuel management costs. This organization, the NWMO, is responsible for the design and implementation of Canada's plan for the long-term management of nuclear used fuel waste. To estimate its liability for nuclear used fuel management costs, OPG has adopted a conservative approach consistent with the Adaptive Phased Management concept approved by the Government of Canada, which assumes a deep geologic repository as part of the long-term management of nuclear used fuel, with an in-service date of 2043 at the earliest.

Liability for Nuclear Decommissioning and L&ILW Management Costs

The liability for nuclear decommissioning and L&ILW management represents the estimated costs of decommissioning the nuclear generating stations after the end of their service lives, as well as the cost of managing L&ILW generated by the stations. The significant assumptions used in estimating future nuclear fixed asset removal costs include a deferred dismantlement basis for decommissioning of the stations, whereby the reactors will remain in a safe state condition for a 30-year period prior to an approximate 10-year dismantlement period.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the accrued costs for the management of L&ILW include an L&ILW DGR. Agreement was previously reached with local municipalities for OPG to develop a deep geologic repository for the long-term management of L&ILW adjacent to OPG's Western Waste Management Facility. OPG has suspended design activities for the L&ILW DGR pending receipt of the site preparation and construction licence.

Liability for Non-Nuclear Fixed Asset Removal Costs

The liability for non-nuclear fixed asset removal primarily represents the estimated costs of decommissioning OPG's thermal generating stations at the end of their services lives. The liability is based on third-party cost estimates after an in-depth review of plant sites and an assessment of required clean-up and restoration activities, completed in 2011 for most of the thermal generating stations. For the purpose of measuring the liability, asset removal activities are estimated to take place over the next one to 15 years. As at December 31, 2016, the liability for non-nuclear fixed asset removal was $381 million (2015 – $377 million).

Ontario Nuclear Funds Agreement

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Segregated Funds based on the approved ONFA Reference Plan in effect.

OPG makes quarterly payments to the Used Fuel Segregated Fund over the life of its nuclear generating stations, as specified in the ONFA, including contributions to the NFWA Trust (the Trust). The Trust forms part of the Used Fuel Segregated Fund, and contributions to the Trust, as required by the NFWA, may be applied towards OPG's ONFA payment obligations. Required funding for 2016 under the ONFA was $150 million (2015 – $143 million). In 2016, OPG completed a comprehensive update of the estimate for its obligations for nuclear waste management and nuclear decommissioning, in line with the required reference plan update process under the ONFA. The results of the update were reflected in a new ONFA reference plan, for years 2017 to 2021, as well as an adjustment reducing the asset retirement obligation carried on OPG's consolidated balance sheet as at December 31, 2016. The 2017-2021 ONFA reference plan was approved by the Province in December 2016, with an effective date of January 1, 2017 (the 2017 ONFA Reference Plan). Based on the funded status of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund reflecting the revised, overall lower life cycle liability estimates per the 2017 ONFA Reference Plan, no contributions to the Nuclear Segregated Funds are required starting in 2017. Contributions may be required in the future should either or both of the funds be in an underfunded position when a new reference plan is prepared.

The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge the current nuclear decommissioning and waste management liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the Canadian Nuclear Safety Commission (CNSC) since 2003, on behalf of OPG. The Provincial Guarantee provides for any shortfall between the CNSC consolidated financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount of the Provincial Guarantee. The current value of the Provincial Guarantee amount of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016.

The investments in the Nuclear Segregated Funds include a diversified portfolio of equities and fixed income securities that are invested across geographic markets, as well as investments in infrastructure, real estate, and agriculture. The Nuclear Segregated Funds are invested to fund long-term liability requirements and, as such, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While short-term fluctuations in market value will occur, managing the long-term return of the Nuclear Segregated Funds remains the primary goal. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Decommissioning Segregated Fund

OPG bears the risk and liability for cost estimate changes and fund earnings in the Decommissioning Segregated Fund. As at December 31, 2016 and December 31, 2015, the Decommissioning Segregated Fund was in an overfunded position.

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund, which is the excess of the fair market value of the Decommissioning Segregated Fund assets over the estimated completion costs, as per the most recently approved ONFA Reference Plan. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the earnings recognized in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus, that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded. Based on the 2017 ONFA Reference Plan, the Used Fuel Segregated Fund was in an overfunded position as at December 31, 2016. As a result, the Decommissioning Segregated Fund balance was reduced by amounts due to the Province. When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets. The payable to the Province may be reduced in subsequent periods in the event that the Decommissioning Segregated Fund earns less than its target rate of return or in the event that a new ONFA Reference Plan is approved with a higher estimated decommissioning liability.

The Province's right to any excess funding in the Decommissioning Segregated Fund upon termination of the ONFA results in OPG capping its annual earnings generally at 3.25 percent plus the long-term Ontario Consumer Price Index (CPI) specified in the most recently approved ONFA Reference Plan, which is the rate of growth in the liability for the estimated completion cost, as long as the Decommissioning Segregated Fund is in an overfunded status of less than 120 percent.

Used Fuel Segregated Fund

OPG is responsible for the risk and liability of cost increases for used fuel waste management under the ONFA, subject to specified graduated liability thresholds, which limit OPG's total financial exposure for the first 2.23 million nuclear used fuel bundles at approximately $15 billion in present value dollars as at December 31, 2016. The graduated liability thresholds do not apply to incremental used fuel bundles beyond 2.23 million.

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined by ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return and the actual market return determined based on the fair value of the fund assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount OPG would pay to or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions for fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province, has the right at any time to access

the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. As at December 31, 2016, the Used Fuel Segregated Fund was overfunded in accordance with the 2017 ONFA Reference Plan. As such, the fund balances are reduced by amounts due to the Province.

Nuclear Segregated Funds

The nuclear fixed asset removal and nuclear waste management funds as at December 31 consist of the following:

	Fair Value	
(millions of dollars)	**2016**	**2015**
Decommissioning Segregated Fund	**8,317**	7,834
Due to Province – Decommissioning Segregated Fund	**(1,477)**	(1,285)
	6,840	6,549
Used Fuel Segregated Fund [1]	**11,082**	10,290
Due to Province – Used Fuel Segregated Fund	**(1,938)**	(1,703)
	9,144	8,587
Total Nuclear Segregated Funds	**15,984**	15,136
Less: current portion	**24**	15
Non-current Nuclear Segregated Funds	**15,960**	15,121

[1] The Ontario NFWA Trust represented $3,688 million as at December 31, 2016 (2015 – $3,409 million) of the Used Fuel Segregated Fund on a fair value basis.

The fair value of the securities invested in the Nuclear Segregated Funds as at December 31 is as follows:

	Fair Value	
(millions of dollars)	**2016**	**2015**
Cash and cash equivalents and short-term investments	**354**	343
Alternative investments	**1,989**	1,620
Pooled funds	**1,330**	1,311
Marketable equity securities	**9,503**	8,621
Fixed income securities	**6,181**	6,219
Net receivables/payables	**42**	10
	19,399	18,124
Due to Province	**(3,415)**	(2,988)
	15,984	15,136

The historical cost, gross unrealized aggregate appreciation and depreciation of investment, gross unrealized foreign exchange gains, and fair value of the Nuclear Segregated Funds as at December 31, 2016 and 2015 are summarized as follows:

(millions of dollars)	**Decommissioning Segregated Fund**	**2016 Used Fuel Segregated Fund**	**Total**
Historical cost	**6,896**	**9,385**	**16,281**
Gross unrealized gains (losses)			
Aggregate appreciation	**1,326**	**1,564**	**2,890**
Aggregate depreciation	**(165)**	**(222)**	**(387)**
Foreign exchange	**260**	**355**	**615**
	8,317	**11,082**	**19,399**
Due to Province	**(1,477)**	**(1,938)**	**(3,415)**
Total fair value	**6,840**	**9,144**	**15,984**
Less: current portion	**16**	**8**	**24**
Non-current fair value	**6,824**	**9,136**	**15,960**

(millions of dollars)	**Decommissioning Segregated Fund**	**2015 Used Fuel Segregated Fund**	**Total**
Historical cost	6,608	8,819	15,427
Gross unrealized gains (losses)			
Aggregate appreciation	1,098	1,283	2,381
Aggregate depreciation	(297)	(383)	(680)
Foreign exchange	425	571	996
	7,834	10,290	18,124
Due to Province	(1,285)	(1,703)	(2,988)
Fair value	6,549	8,587	15,136
Less: current portion	5	10	15
Non-current fair value	6,544	8,577	15,121

Net realized and unrealized gains or losses from investments for the years ended December 31, 2016 and 2015 are summarized as follows:

(millions of dollars)	2016 Decommissioning Segregated Fund	2016 Used Fuel Segregated Fund	2016 Total
Net realized gains			
Realized gains excluding foreign exchange	**84**	**180**	**264**
Realized foreign exchange gains	**30**	**41**	**71**
Net realized gains	**114**	**221**	**335**
Net unrealized gains			
Unrealized gains excluding foreign exchange	**360**	**442**	**802**
Unrealized foreign exchange losses	**(165)**	**(216)**	**(381)**
Net unrealized gains	**195**	**226**	**421**

(millions of dollars)	2015 Decommissioning Segregated Fund	2015 Used Fuel Segregated Fund	2015 Total
Net realized gains			
Realized gains	159	221	380
Realized foreign exchange gains	56	71	127
Net realized gains	215	292	507
Net unrealized gains			
Unrealized losses	(267)	(367)	(634)
Unrealized foreign exchange gains	335	439	774
Net unrealized gains	68	72	140

The change in the Nuclear Segregated Funds for the years ended December 31 is as follows:

(millions of dollars)	Fair Value 2016	2015
Decommissioning Segregated Fund, beginning of year	**6,549**	6,246
Increase in fund due to return on investments	**505**	507
Decrease in fund due to reimbursement of eligible expenditures	**(22)**	(19)
Increase in due to Province	**(192)**	(185)
Decommissioning Segregated Fund, end of year	**6,840**	6,549
Used Fuel Segregated Fund, beginning of year	**8,587**	8,133
Increase in fund due to contributions made	**150**	143
Increase in fund due to return on investments	**690**	642
Decrease in fund due to reimbursement of eligible expenditures	**(48)**	(57)
Increase in due to Province	**(235)**	(274)
Used Fuel Segregated Fund, end of year	**9,144**	8,587

The earnings from the Nuclear Segregated Funds during 2016 and 2015 were impacted by the Bruce Lease Net Revenues Variance Account authorized by the OEB. The earnings on the Nuclear Segregated Funds for the years ended December 31 are as follows:

(millions of dollars)	2016	2015
Decommissioning Segregated Fund	**313**	322
Used Fuel Segregated Fund	**455**	368
Bruce Lease Net Revenues Variance Account	**(22)**	14
Total earnings	**746**	704

9. INCOME TAXES

OPG follows the liability method of accounting for income taxes. The Company records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities.

A reconciliation between the statutory and the effective rate of income taxes is as follows:

(millions of dollars)	**2016**	**2015**
Income before income taxes	**621**	509
Combined Canadian federal and provincial statutory enacted income tax rates	**26.5%**	26.5%
Statutory income tax rates applied to accounting income	**165**	135
Increase (decrease) in income taxes resulting from:		
Impact of rate regulated accounting	**65**	29
Scientific Research and Experimental Development investment tax credits	**(42)**	(55)
Manufacturing and processing credit	**(9)**	(8)
Other	**(11)**	(9)
	3	(43)
Income tax expense	**168**	92
Effective rate of income taxes	**27.0%**	18.1%

Significant components of the income tax expense are presented in the table below:

(millions of dollars)	**2016**	**2015**
Current income tax expense:	**204**	59
Deferred income tax (recovery) expense:	**(36)**	33
Income tax expense	**168**	92

The income tax effects of temporary differences that give rise to deferred income tax assets and liabilities as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Deferred income tax assets:		
Fixed asset removal and nuclear waste management liabilities	**4,861**	5,032
Other liabilities and assets	**1,813**	1,699
	6,674	6,731
Deferred income tax liabilities:		
Property, plant and equipment and intangible assets	**(1,807)**	(2,119)
Nuclear fixed asset removal and nuclear waste management funds	**(3,996)**	(3,784)
Other assets and liabilities	**(1,700)**	(1,708)
	(7,503)	(7,611)
Net deferred income tax liabilities	**(829)**	(880)

During 2016, OPG recorded an increase in the deferred income tax liability for the income taxes that are expected to be recovered or refunded through regulated prices charged to customers of $46 million (2015 – a decrease of $69 million). Since these deferred income taxes are expected to be refunded through future regulated prices, OPG recorded a corresponding increase to the regulatory asset for deferred income taxes. As a result, the deferred income tax expense for 2016 and 2015 was not impacted.

The following table summarizes the deferred income tax liabilities recorded for the rate regulated operations that are expected to be recovered through future regulated prices:

(millions of dollars)	**2016**	**2015**
January 1:		
Deferred income tax liabilities on temporary differences related to regulated operations	**592**	644
Deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liability	**200**	217
	792	861
Changes during the year:		
Increase (decrease) in deferred income tax liabilities on temporary differences related to regulated operations	**35**	(52)
Increase (decrease) in deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liability	**11**	(17)
Balance as at December 31	**838**	792

The tax benefit associated with an income tax position is recognized only when it is more likely than not that such a position will be sustained upon examination by the taxing authorities based on the technical merits of the position. The current and deferred income tax benefit is equal to the largest amount, considering possible settlement outcomes, that is greater than 50 percent likely of being realized upon settlement with the taxing authorities.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(millions of dollars)	**2016**	**2015**
Unrecognized tax benefits, beginning of year	**72**	79
Additions based on tax positions related to the current year	**19**	16
Additions for tax positions of prior years	**2**	7
Reductions for tax positions of prior years	**(16)**	(14)
Other	**-**	(16)
Unrecognized tax benefits, end of year	**77**	72

As at December 31, 2016, OPG's unrecognized tax benefits were $77 million (2015 – $72 million), excluding interest and penalties, all of which, if recognized, would affect OPG's effective tax rate. Changes in unrecognized tax benefits over the next 12 months cannot be predicted with certainty.

OPG recognizes interest and penalties related to unrecognized tax benefits as income tax expense. As at December 31, 2016, OPG had recorded interest on unrecognized tax benefits of $8 million (2015 – $7 million). OPG considers its significant tax jurisdiction to be Canada. OPG remains subject to income tax examination for years after 2012.

OPG paid $98 million in income taxes (net of tax refunds) during 2016 (2015 – $47 million).

10. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of Accumulated Other Comprehensive Loss (AOCL), net of income taxes, during the years December 31, 2016 and 2015 are as follows:

	2016			
(millions of dollars)	**Unrealized Gains and Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities[1]**	**Total [1]**
AOCL, beginning of year	**(106)**	**(213)**	**-**	**(319)**
Actuarial loss on re-measurement of liabilities for pension and OPEB	**-**	**(6)**	**-**	**(6)**
Unrealized loss on available-for-sale securities	**-**	**-**	**(1)**	**(1)**
Amounts reclassified from AOCL	**19**	**12**	**-**	**31**
OCI for the year	**19**	**6**	**(1)**	**24**
AOCL, end of year	**(87)**	**(207)**	**(1)**	**(295)**

[1] All amounts are net of income taxes.

	2015		
(millions of dollars)	**Unrealized Gains and Losses on Cash Flow Hedges [1]**	**Pension and OPEB[1]**	**Total [1]**
AOCL, beginning of year	(117)	(379)	(496)
Net loss on cash flow hedges	(5)	-	(5)
Actuarial gain on re-measurement of liabilities for pension and OPEB	-	148	148
Amounts reclassified from AOCL	16	18	34
OCI for the year	11	166	177
AOCL, end of year	(106)	(213)	(319)

[1] All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the years ended December 31, 2016 and 2015 are as follows:

	Amount Reclassified from AOCL		
(millions of dollars)	**2016**	**2015**	**Statement of Income Line Item**
Amortization of losses from cash flow hedges			
Losses	**21**	18	Net interest expense and fuel expense
Income tax recovery	**(2)**	(2)	Income tax expense
	19	16	
Amortization of amounts related to pension and OPEB			
Actuarial losses and past service costs	**16**	25	See (1) below
Income tax recovery	**(4)**	(7)	Income tax expense
	12	18	
Total reclassifications for the year	**31**	34	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 11 for additional details).

11. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

Fund Assets

The OPG registered pension fund investment guidelines are stated in an approved Statement of Investment Policies and Procedures (SIPP). The SIPP is reviewed and approved by the Audit and Risk Committee of OPG's Board of Directors at least annually and includes a discussion of investment objectives and expectations, asset mix and rebalancing, and the basis for measuring the performance of the pension fund assets.

In accordance with the SIPP, investment allocation decisions are made with a view to achieve OPG's objective of meeting obligations of the plan as they come due. The pension fund assets are invested in four categories of asset classes. The first category is liability hedging assets which are intended to hedge the inflation and interest rate sensitivity of the plan liabilities. The second category is return enhancing assets which are intended to obtain higher investment returns compared to the returns expected for liability hedging assets. The third category is real assets which offer exposure to the combined characteristics of liability hedging and return enhancing assets. The fourth category is return diversifying strategies, which are intended to improve the overall return of the pension fund while mitigating the downside market risk.

To achieve the above objective, OPG has adopted the following target strategic asset allocation:

	Target
Asset Class	
Liability Hedging Assets	34%
Return Enhancing Assets	31%
Real Assets	20%
Return on Diversifying Assets	15%

The plan may enter into derivative securities, such as interest rate swaps and forward foreign exchange contracts, for risk management purposes, where such activity is consistent with the plan's investment objectives.

Significant Concentrations of Risk in Fund Assets

The assets of the pension fund are diversified to limit the impact of any individual investment. The pension fund is diversified across multiple asset classes. Fixed income securities are diversified among Canadian government bonds, government agency bonds, real return bonds, corporate bonds, and an interest rate overlay hedging program, which is disclosed under pooled funds. Equity securities are diversified across Canadian, US, and non-North American stocks. There are also real estate, infrastructure, and agriculture portfolios that represent approximately 12 percent of the total pension fund assets as at December 31, 2016. Investments in the above asset classes are further diversified across funds, investment managers, strategies, vintages, sectors and geographies, depending on the specific characteristics of each asset class.

Credit risk with respect to the pension fund's fixed income securities is managed by risk tolerance guidelines, which requires that fixed income securities comply with various investment constraints that ensure prudent diversification and prescribed minimum required credit rating quality. Credit risk, as it relates to the pension fund's derivatives, is managed through the use of International Swap and Derivatives Association documentation and counterparty management performed by the fund's investment managers.

Risk Management

Risk management oversight with respect to the pension fund includes, but is not limited to, the following activities:

- Periodic asset/liability management and strategic asset allocation studies
- Monitoring of funding levels and funding ratios
- Monitoring compliance with asset allocation guidelines and investment management agreements
- Monitoring asset class performance against asset class benchmarks
- Monitoring investment manager performance against benchmarks

- Monitoring of risk tolerance guidelines

Expected Rate of Return on Plan Assets

The expected rate of return on plan assets is based on the fund's asset allocation, as well as the return expectations considering long-term historical risks and returns associated with each asset class within the plan portfolio. The asset management decisions consider the economic liabilities of the plan.

Fair Value Measurements

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities. Refer to Note 13 for a detailed discussion of fair value measurements and the fair value hierarchy.

The following tables present pension plan assets measured at fair value in accordance with the fair value hierarchy:

	December 31, 2016			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	**690**	**-**	**-**	**690**
Fixed income				
Corporate debt securities	**-**	**407**	**-**	**407**
Government bonds	**-**	**3,483**	**-**	**3,483**
Equities				
Canadian	**1,451**	**291**	**-**	**1,742**
US	**1,495**	**-**	**-**	**1,495**
Non-North American	**1,643**	**-**	**-**	**1,643**
Pooled funds	**118**	**413**	**-**	**531**
Other	**(2)**	**-**	**-**	**(2)**
	5,395	**4,594**	**-**	**9,989**
Investments measured at NAV [1]				**3,865**
				13,854 [2]

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

[2] The table above excludes pension fund receivables and payables.

	December 31, 2015			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	374	-	-	374
Short-term investments	-	1	-	1
Fixed income				
Corporate debt securities	-	392	-	392
Government bonds	-	3,794	-	3,794
Equities				
Canadian	1,547	-	-	1,547
US	1,786	-	-	1,786
Non-North American	1,992	-	-	1,992
Pooled funds	37	147	-	184
Other	1	-	-	1
	5,737	4,334	-	10,071
Investments measured at NAV [1]				3,079
				13,150 [2]

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

[2] The table above excludes pension fund receivables and payables.

During the years ended December 31, 2016 and 2015, there were no transfers between Level 1 and Level 2.

Plan Costs and Liabilities

Details of OPG's pension and OPEB obligations, pension fund assets and costs are presented in the following tables:

	Registered and Supplementary Pension Plans		Other Post-Employment Benefits	
	2016	**2015**	**2016**	**2015**
Weighted Average Assumptions – Benefit Obligations at Year-End				
Rate used to discount future benefits	**3.90%**	4.10%	**3.94%**	4.13%
Salary schedule escalation rate - initial rate [1]	**1.80%**	1.60%	**1.80%**	1.60%
- thereafter	**2.50%**	2.50%	**2.50%**	2.50%
Rate of cost of living increase to pensions	**2.00%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**5.90%**	6.00%
Ultimate health care trend rate	**n/a**	n/a	**4.32%**	4.33%
Year ultimate health care trend rate reached	**n/a**	n/a	**2030**	2030
Rate of increase in disability benefits	**n/a**	n/a	**2.00%**	2.00%

[1] Per year to December 31, 2021.

	Registered and Supplementary Pension Plans		Other Post-Employment Benefits	
	2016	**2015**	**2016**	**2015**
Weighted Average Assumptions – Costs for the Year				
Expected return on plan assets, net of expenses	**6.00%**	6.25%	**n/a**	n/a
Rate used to discount future benefits	**4.10%**	4.00%	**4.13%**	4.03%
Salary schedule escalation rate - initial rate [1]	**1.60%**	2.00%	**1.60%**	2.00%
- thereafter	**2.50%**	2.50%	**2.50%**	2.50%
Rate of cost of living increase to pensions	**2.00%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**6.00%**	6.09%
Ultimate health care trend rate	**n/a**	n/a	**4.33%**	4.33%
Year ultimate health care trend rate reached	**n/a**	n/a	**2030**	2030
Rate of increase in disability benefits	**n/a**	n/a	**2.00%**	2.00%
Expected average remaining service life for employees (years)	**12**	12	**13**	13

[1] 1.60% per year to December 31, 2021; 2.00% per year to December 31, 2020.

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Components of Cost Recognized						
Current service costs	**277**	320	**7**	7	**67**	71
Interest on projected benefit obligation	**634**	630	**12**	13	**133**	127
Expected return on plan assets, net of expenses	**(734)**	(717)	**-**	-	**-**	-
Amortization of past service costs [1]	**-**	-	**-**	-	**1**	-
Amortization of net actuarial loss [1]	**192**	292	**4**	6	**19**	27
Recognition of LTD net actuarial (gain) loss	**-**	-	**-**	-	**(52)**	7
Costs recognized [2]	**369**	525	**23**	26	**168**	232

[1] The amortization of past service costs and net actuarial loss was recognized as an increase to OCI. This increase was partially offset by the impact of the Pension and OPEB Regulatory Asset discussed in Note 5.

[2] Excludes the impact of regulatory variance and deferral accounts discussed in Note 5.

Total benefit costs, including the impact of the Pension & OPEB Cash Payment Variance Account and the Pension & OPEB Cash Versus Accrual Differential Deferral Account, for the years ended December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Registered pension plans	**369**	525
Supplementary pension plans	**23**	26
Other post-employment benefits	**168**	232
Pension & OPEB Cash Payment Variance Account *(Note 5)*	**86**	(21)
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 5)*	**(182)**	(279)
Pension and other post-employment benefit costs	**464**	483

The pension and OPEB obligations and the pension fund assets measured as at December 31 are as follows:

	Registered Pension Plans		**Supplementary Pension Plans**		**Other Post-Employment Benefits**	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Change in Plan Assets						
Fair value of plan assets at beginning of year	**13,160**	12,407	**-**	-	**-**	-
Contributions by employer	**255**	362	**15**	24	**93**	94
Contributions by employees	**85**	72	**-**	-	**-**	-
Actual return on plan assets, net of expenses	**714**	1,151	**-**	-	**-**	-
Benefit payments	**(708)**	(832)	**(15)**	(24)	**(93)**	(94)
Fair value of plan assets at end of year	**13,506**	13,160	**-**	-	**-**	-
Change in Projected Benefit Obligations						
Projected benefit obligations at beginning of year	**15,475**	15,669	**299**	317	**3,188**	3,143
Employer current service costs	**277**	320	**7**	7	**67**	71
Contributions by employees	**85**	72	**-**	-	**-**	-
Interest on projected benefit obligation	**634**	630	**12**	13	**133**	127
Benefit payments	**(708)**	(832)	**(15)**	(24)	**(93)**	(94)
Past service costs	**-**	-	**-**	-	**-**	5
Net actuarial loss (gain)	**436**	(384)	**33**	(14)	**(303)**	(64)
Projected benefit obligations at end of year	**16,199**	15,475	**336**	299	**2,992**	3,188
Funded status – deficit at end of year	**(2,693)**	(2,315)	**(336)**	(299)	**(2,992)**	(3,188)

The following table provides the pension and OPEB liabilities and their classification on the consolidated balance sheets as at December 31:

	Registered Pension Plans		**Supplementary Pension Plans**		**Other Post-Employment Benefits**	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Current liabilities	**-**	-	**(17)**	(17)	**(95)**	(103)
Non-current liabilities	**(2,693)**	(2,315)	**(319)**	(282)	**(2,897)**	(3,085)
Total liabilities	**(2,693)**	(2,315)	**(336)**	(299)	**(2,992)**	(3,188)

The accumulated benefit obligations for the registered pension plans and supplementary pension plans as at December 31, 2016 are $14,909 million and $293 million, respectively (2015 – $14,327 million and $267 million, respectively). The accumulated benefit obligation differs from the projected benefit obligation in that the accumulated benefit obligation includes no assumption about future compensation levels.

The following table provides the components of OPG's OCI related to pension and OPEB plans and the offsetting Pension and OPEB Regulatory Asset as discussed in Note 5 for the years ended December 31, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Changes in plan assets and benefit obligations recognized in OCI						
Current year net actuarial loss (gain)	**456**	(818)	**33**	(14)	**(251)**	(71)
Current year past service costs	**-**	-	**-**	-	**-**	5
Amortization of net actuarial loss	**(192)**	(292)	**(4)**	(6)	**(19)**	(27)
Amortization of past service costs	**-**	-	**-**	-	**(1)**	-
Total decrease (increase) in OCI	**264**	(1,110)	**29**	(20)	**(271)**	(93)
Less: Increase (decrease) in Pension and OPEB Regulatory Asset*(Note 5)*	**253**	(916)	**27**	(15)	**(250)**	(70)
Net decrease (increase) in OCI (pre-tax)	**11**	(194)	**2**	(5)	**(21)**	(23)

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset that have not yet been recognized as components of benefit costs as at December 31, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Unamortized amounts recognized in AOCL						
Past service costs	**-**	-	**-**	-	**5**	6
Net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Total recognized in AOCL	**3,287**	3,023	**106**	77	**275**	546
Less: Pension and OPEB Regulatory Asset *(Note 5)*	**3,039**	2,786	**100**	73	**253**	503
Net recognized in AOCL (pre-tax)	**248**	237	**6**	4	**22**	43

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset as at December 31 (included in the table above) that are expected to be amortized as components of benefit costs and recognized as increases to OCI and reductions in the Pension and OPEB Regulatory Asset, in 2017, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post-Employment Benefits
Past service costs	**-**	**-**	**1**
Net actuarial loss	**183**	**6**	**-**
Total increase in AOCL	**183**	**6**	**1**
Less: Estimated decrease in Pension and OPEB Regulatory Asset	**170**	**6**	**1**
Net increase in AOCL (pre-tax)	**13**	**-**	**-**

Based on the most recently filed actuarial valuation, for funding purposes, of the OPG registered pension plan, as at January 1, 2016, there was an unfunded liability on a going-concern basis of $485 million and a deficiency on a hypothetical wind-up basis of $7,347 million. The funded status to be determined in the next filed funding valuation, which must have an effective date no later than January 1, 2019, could be significantly different. For 2017, OPG's required contribution to its registered pension plan is expected to be $248 million. The amount of OPG's additional,

voluntary contribution, if any, is revisited from time to time. OPG will continue to assess the requirements for contributions to the pension plan.

The supplementary pension plans are not funded, but are secured by Letters of Credit totalling $349 million as at December 31, 2016 (2015 – $345 million).

Estimated future benefit payments to participants in the pension and OPEB plans based on the assumptions used to measure the benefit obligations as at December 31, 2016 are as follows:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post-Employment Benefits
2017	687	18	95
2018	759	18	98
2019	750	18	101
2020	767	19	105
2021	795	19	108
2022 through 2026	4,218	102	613

A one percent increase or decrease in the health care trend rate would result in an increase in the current service and interest components of the 2016 OPEB costs of $45 million (2015 – $45 million) or a decrease in the service and interest components of the 2016 OPEB costs of $33 million (2015 – $33 million). A one percent increase or decrease in the health care trend rate would result in an increase in the projected OPEB obligation as at December 31, 2016 of $560 million (2015 – $584 million) or a decrease in the projected OPEB obligation as at December 31, 2016 of $426 million (2015 – $446 million).

12. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect the Company's assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the IESO-administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at December 31, 2016 was less than $1 million. OPG's fair value derivatives totalled a net liability of $24 million as at December 31, 2016 (2015 – $2 million).

The following table shows the amount related to derivatives recorded in AOCL and income for the years ended December 31:

(millions of dollars)	**2016**	**2015**
Cash flow hedges (recorded in AOCL)		
Losses in OCI	**-**	(7)
Reclassification of losses to net interest expense	**21**	20
Reclassification of gains to fuel expense	**-**	(2)
Commodity derivatives (recorded in income)		
Realized losses in revenue	**(12)**	(16)
Unrealized losses in revenue	**(3)**	(7)
Embedded derivative (recorded in income)		
Unrealized gains in revenue [1]	**-**	225

[1] Excludes the impact of the Bruce Lease Net Revenues Variance Account.

Existing net losses of $20 million deferred in AOCL as at December 31, 2016 are expected to be reclassified to net income within the next 12 months.

13. FAIR VALUE MEASUREMENTS

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial assets and liabilities into three levels, based on the inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The fair value of financial instruments traded in active markets is based on quoted market prices at the consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The Company is required to determine the fair value of all its financial instruments. The following is a summary of OPG's financial instruments as at December 31:

	Fair Value		Carrying Value [1]		
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**Balance Sheet Line Item**
Nuclear Segregated Funds (includes current portion)	**15,984**	15,136	**15,984**	15,136	Nuclear fixed asset removal and nuclear waste management funds
Investment in Hydro One shares	**212**	-	**212**	-	Available-for-sale securities
Payable related to cash flow hedges	**(48)**	(56)	**(48)**	(56)	Long-term accounts payable and accrued charges
Long-term debt (includes current portion)	**(6,033)**	(5,978)	**(5,520)**	(5,459)	Long-term debt
Other financial instruments	**(18)**	6	**(18)**	6	Various

[1] The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other current assets, short-term debt, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs.

The following tables present financial assets and financial liabilities measured at fair value in accordance with the fair value hierarchy as at December 31, 2016 and 2015:

	December 31, 2016			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**5,602**	**4,394**	**-**	**9,996**
Investments measured at NAV [1]				**1,086**
				11,082
Due to Province				**(1,938)**
Used Fuel Segregated Fund, net				**9,144**
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**4,171**	**3,243**	**-**	**7,414**
Investments measured at NAV [1]				**903**
				8,317
Due to Province				**(1,477)**
Decommissioning Segregated Fund, net				**6,840**
Investment in available-for-sale securities	**212**	**-**	**-**	**212**
Other financial assets	**6**	**2**	**9**	**17**
Liabilities				
Other financial liabilities	**(29)**	**(6)**	**-**	**(35)**

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

(millions of dollars)	December 31, 2015 Level 1	Level 2	Level 3	Total
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	5,114	4,293	-	9,407
Investments measured at NAV [1]				883
				10,290
Due to Province				(1,703)
Used Fuel Segregated Fund, net				8,587
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	3,870	3,227	-	7,097
Investments measured at NAV [1]				737
				7,834
Due to Province				(1,285)
Decommissioning Segregated Fund, net				6,549
Other financial assets	14	4	16	34
Liabilities				
Other financial liabilities	(18)	(8)	(2)	(28)

[1] Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

During the year ended December 31, 2016, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3:

(millions of dollars)	Other financial instruments
Opening balance, January 1, 2016	**14**
Unrealized losses included in revenue	**1**
Realized losses included in revenue	**(12)**
Purchases	**6**
Closing balance, December 31, 2016	**9**

Nuclear Segregated Funds

The fair value of the investments within the Nuclear Segregated Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Segregated Funds that are reported on the basis of NAV as at December 31, 2016:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Infrastructure	**1,205**	**648**	**n/a**	**n/a**
Real Estate	**713**	**406**	**n/a**	**n/a**
Agriculture	**71**	**128**	**n/a**	**n/a**
Pooled Funds				
Short-term Investments	**34**	**n/a**	**Daily**	**1 - 5 Days**
Fixed Income	**553**	**n/a**	**Daily**	**1 - 5 Days**
Equity	**743**	**n/a**	**Daily**	**1 - 5 Days**
Total	**3,319**	**1,182**		

The fair value of the pooled funds is classified as Level 2. Infrastructure, real estate and agriculture investments are measured using NAV as a practical expedient for determining their fair value.

Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

Real Estate

This class includes investments in institutional-grade real estate property. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests to another party, as stipulated in the partnership agreement. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using the NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements.

Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations, and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally

managed portfolios. The fair value of the investments in this class has been estimated using the NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

14. COMMON SHARES

As at December 31, 2016 and 2015, OPG had 256,300,010 common shares issued and outstanding at a stated value of $5,126 million. OPG is authorized to issue an unlimited number of common shares without nominal or par value. Any issue of new shares is subject to the consent of OPG's shareholder.

15. COMMITMENTS AND CONTINGENCIES

Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered by June 30, 2017, as required by the timetable.

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at December 31, 2016, the total amount of guarantees OPG provided to these entities was $83 million (2015 – $81 million). OPG may terminate some of these guarantees within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at December 31, 2016, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, were as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

Lease Commitments

The Company leases the Bruce A and Bruce B nuclear generating stations to Bruce Power. Under the lease, as amended in December 2015, Bruce Power has options to renew the lease up to the end of 2064. As per *Ontario Regulation 53/05* pursuant to the *Ontario Energy Board Act, 1998*, the difference between OPG's revenues, including lease revenues, and costs, including depreciation expense, associated with its ownership of the Bruce A and B nuclear generating stations is included in the determination of OPG's nuclear regulated prices established by the OEB. These revenues and costs are determined on the basis of the manner in which they are recognized in OPG's consolidated financial statements. As the assets on lease to Bruce Power are not prescribed facilities under *Ontario Regulation 53/05*, the net book value of the assets is not included in the regulated rate base. The net book value of property, plant and equipment on lease to Bruce Power as at December 31, 2016 was $2,986 million (2015 – $4,400 million).

Collective Bargaining Agreements

As at December 31, 2016, the Power Workers' Union (PWU) represented approximately 5,070 OPG regular employees or approximately 55 percent of OPG's regular workforce. The previous collective agreement between OPG and the PWU expired on March 31, 2015. In May 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on March 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each year of the agreement.

As at December 31, 2016, The Society of Energy Professionals (The Society) represented approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce. The governing collective agreement between OPG and The Society expired on December 31, 2015. In November 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on December 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each of the first two years of the agreement.

The changes to both collective agreements will provide existing employees with lump-sum payments for each of the first two years of the contract and eligibility to annually receive shares in Hydro One for up to 15 years starting in year three of the contract, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service.

16. BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel and low and intermediate level wastes, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Lease and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because the costs associated with the Nuclear Liabilities are included by the OEB in the determination of regulated prices for production from OPG's Pickering and Darlington nuclear generating stations, in accordance with the methodologies applied since the OEB's 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. OPG's share of the in-service generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of these activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the US market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and the Nanticoke generating stations' sites.

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The service fee included in OM&A expenses by segment in 2016 and 2015 was as follows:

(millions of dollars)	2016	2015
Regulated – Nuclear Generation	**34**	33
Regulated – Hydroelectric	**7**	6
Contracted Generation Portfolio	**4**	4
Reduction to Services, Trading, and Other Non-Generation	**45**	43

Segment Income (Loss) for the Year Ended December 31, 2016 *(millions of dollars)*	**Nuclear Generation**	**Regulated Nuclear Waste Manage-ment**	**Hydro-electric**	**Unregulated Contracted Generation Portfolio**	**Unregulated Services, Trading, and Other Non-Generation**	**Elimination**	**Total**
Revenue	**3,481**	**138**	**1,527**	**573**	**68**	**(134)**	**5,653**
Fuel expense	**315**	**-**	**353**	**58**	**1**	**-**	**727**
Gross margin	**3,166**	**138**	**1,174**	**515**	**67**	**(134)**	**4,926**
Operations, maintenance and administration	**2,210**	**146**	**325**	**178**	**22**	**(134)**	**2,747**
Depreciation and amortization	**925**	**-**	**225**	**75**	**32**	**-**	**1,257**
Accretion on fixed asset removal and nuclear waste management liabilities	**-**	**912**	**-**	**9**	**8**	**-**	**929**
Earnings on nuclear fixed asset removal and nuclear waste management funds	**-**	**(746)**	**-**	**-**	**-**	**-**	**(746)**
Income from investments subject to significant influence	**-**	**-**	**-**	**(37)**	**-**	**-**	**(37)**
Property taxes	**26**	**-**	**1**	**7**	**12**	**-**	**46**
Restructuring	**-**	**-**	**-**	**-**	**6**	**-**	**6**
Other losses (gains)	**1**	**-**	**(19)**	**1**	**-**	**-**	**(17)**
Income (loss) before interest and income taxes	**4**	**(174)**	**642**	**282**	**(13)**	**-**	**741**

Segment Income (Loss) for the Year Ended December 31, 2015 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydroelectric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	3,245	122	1,619	535	73	(118)	5,476
Fuel expense	301	-	345	39	2	-	687
Gross margin	2,944	122	1,274	496	71	(118)	4,789
Operations, maintenance and administration	2,196	132	340	185	48	(118)	2,783
Depreciation and amortization	717	-	282	72	29	-	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	-	880	-	8	7	-	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(704)	-	-	-	-	(704)
Income from investments subject to significant influence	-	-	-	(39)	-	-	(39)
Property taxes	26	-	1	7	11	-	45
Restructuring	-	-	-	-	6	-	6
Other losses	3	-	3	1	7	-	14
Income (loss) before interest and income taxes	2	(186)	648	262	(37)	-	689

Selected Consolidated Balance Sheet Information as at December 31, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydro-electric	Unregulated		Total
				Contracted Generation Portfolio	Services, Trading, and Other Non-Generation	
Segment property, plant and equipment in-service, net	**5,653**	**-**	**7,355**	**3,282**	**229**	**16,519**
Segment construction in progress	**2,988**	**-**	**166**	**301**	**28**	**3,483**
Segment property, plant and equipment, net	**8,641**	**-**	**7,521**	**3,583**	**257**	**20,002**
Segment intangible assets in-service, net	**7**	**-**	**2**	**4**	**66**	**79**
Segment development in progress	**3**	**-**	**-**	**1**	**16**	**20**
Segment intangible assets, net	**10**	**-**	**2**	**5**	**82**	**99**
Segment fuel inventory	**276**	**-**	**-**	**34**	**-**	**310**
Segment materials and supplies inventory, net:						
Current	**99**	**-**	**-**	**1**	**-**	**100**
Long-term	**340**	**-**	**1**	**4**	**-**	**345**
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	**-**	**15,984**	**-**	**-**	**-**	**15,984**
Fixed asset removal and nuclear waste management liabilities	**-**	**(19,103)**	**-**	**(160)**	**(221)**	**(19,484)**

Selected Consolidated Balance Sheet Information as at December 31, 2015 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Total
Segment property, plant and equipment in-service, net	6,972	-	7,413	3,319	324	18,028
Segment construction in progress	2,289	-	99	141	38	2,567
Segment property, plant and equipment, net	9,261	-	7,512	3,460	362	20,595
Segment intangible assets in-service, net	8	-	1	3	58	70
Segment development in progress	-	-	4	-	24	28
Segment intangible assets, net	8	-	5	3	82	98
Segment fuel inventory	304	-	-	40	-	344
Segment materials and supplies inventory, net:						
Current	95	-	-	1	-	96
Long-term	333	-	1	3	-	337
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	15,136	-	-	-	15,136
Fixed asset removal and nuclear waste management liabilities	-	(19,792)	-	(163)	(214)	(20,169)

Selected Consolidated Cash Flow Information *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Total
Year ended December 31, 2016						
Investment in property, plant and equipment, and intangible assets	**1,338**	**-**	**135**	**198**	**33**	**1,704**
Year ended December 31, 2015						
Investment in property, plant and equipment, and intangible assets	1,023	-	89	222	42	1,376

17. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	2016	2015
Receivables from related parties	**116**	(63)
Prepaid expenses	**(108)**	(35)
Other current assets [1]	**(32)**	(12)
Fuel inventory	**34**	(10)
Materials and supplies	**(4)**	(2)
Income taxes payable	**57**	42
Accounts payable and accrued charges	**5**	(20)
	68	(100)

[1] Includes other accounts receivable.

18. RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		2015	
(millions of dollars)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**15**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,070**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Hydro One Limited Shares

During 2015, OPG entered into renewed three-year collective bargaining agreements with the PWU and The Society. Changes to the respective collective agreements included increases to employee pension plan contributions and provisions for qualifying existing employees represented by the PWU and The Society to annually receive common shares of Hydro One for up to 15 years starting in the third year of the respective agreements. In April 2016, OPG acquired nine million common shares of Hydro One at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements. The shares acquired in this transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

OPG classified the Hydro One shares as AFS securities.

For the year ended December 31, 2016, unrealized losses recognized in accumulated AOCL related to the changes in the fair value of the Hydro One shares were $1 million, net of income taxes. The fair value of the shares was $212 million as at December 31, 2016. Refer to Notes 10 and 13 for the required disclosures related to the AFS securities.

19. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of PEC and Brighton Beach, which are accounted for using the equity method as described in Note 3. The details of the balance included in the consolidated balance sheets as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
PEC		
Current assets	**18**	14
Long-term assets	**256**	270
Current liabilities	**(8)**	(4)
Long-term liabilities	**(5)**	(5)
Brighton Beach		
Current assets	**5**	9
Long-term assets	**168**	177
Current liabilities	**(16)**	(15)
Long-term liabilities	**(7)**	(6)
Long-term debt	**(90)**	(104)
Investments subject to significant influence	**321**	336

20. RESEARCH AND DEVELOPMENT

For the year ended December 31, 2016, research and development expenses of $58 million (2015 – $91 million) were charged to operations.

21. NON-CONTROLLING INTEREST

Lower Mattagami Limited Partnership (LMLP) is an Ontario limited partnership between OPG and Amisk-oo-Skow Finance Corporation (AFC), a corporation wholly owned by the Moose Cree First Nation. The principal business of LMLP is the development, construction, ownership, operation and maintenance of hydroelectric generating facilities located on the Lower Mattagami River.

During 2014, all six new units constructed as part of the Lower Mattagami River project were declared in-service. Subsequent to the units' in-service dates, the AFC made contributions of $141 million to acquire their equity interest in LMLP, through the settlement of existing liabilities, including long-term debt. As of December 31, 2016, the AFC had a 25 percent interest in LMLP. OPG consolidates the results of LMLP in its consolidated financial statements and the non-controlling interest represents the AFC's equity interest in LMLP.

ONTARIO POWER GENERATION INC.

ANNUAL INFORMATION FORM

FOR THE YEAR ENDED DECEMBER 31, 2016

[DRAFT]

March 10, 2017

ANNUAL INFORMATION FORM
FOR THE YEAR ENDED DECEMBER 31, 2016

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PRESENTATION OF INFORMATION

References in this Annual Information Form (AIF) to the "Company", the "Corporation" or "OPG" are made to Ontario Power Generation Inc. Unless otherwise noted, the information contained in this AIF is at or for the year ended December 31, 2016. Amounts are expressed in Canadian dollars unless otherwise indicated. Financial information is presented in accordance with United States generally accepted accounting principles (US GAAP). This AIF is dated March 10, 2017.

ADDITIONAL INFORMATION

Additional information relating to the Company may be found on SEDAR at www.sedar.com. Additional financial information relating to the Company is provided in the Company's annual Management's Discussion and Analysis (MD&A) and audited consolidated financial statements as at and for the year ended December 31, 2016, which is available on SEDAR at www.sedar.com or on the Company's website at www.opg.com. ***The above information is made available in accordance with legal requirements of an AIF and is not, unless otherwise specifically stated, incorporated by reference into this AIF.***

Details regarding compensation paid to directors and executive officers of the Company during the financial year ended December 31, 2016 is included in OPG's Statement of Executive Compensation (Form 51-102F6), which is available on SEDAR at www.sedar.com and is incorporated by reference herein.

FORWARD-LOOKING INFORMATION

This AIF contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties. All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, OM&A expenditures, retention of critical talent, supplier and third party performance, and project expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this AIF are made only as of the date of this AIF. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

OPG faces various risks that could have a material adverse effect on its business, strategy, generating stations, reputation, financial condition, operating results, and generation development and other projects, as the context requires. There may be further risks and uncertainties that are not presently known, or that are not currently believed to be material, that may in the future adversely affect the Company's performance or financial condition. OPG may be exposed to a significant event that it is not fully insured or indemnified against or to a party that fails to meet its indemnification obligations. For further details on risks faced by OPG, see *Risk Factors*.

CORPORATE STRUCTURE

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was formed in April 1999 through the restructuring of Ontario Hydro's integrated electricity business. OPG was established under the *Business Corporations Act* (Ontario) (OBCA) and is wholly owned by the Province of Ontario (Province or Shareholder). OPG and the Province are parties to a Memorandum of Agreement (MOA) that sets out OPG's role and responsibilities. The current MOA was executed in July 2015, and reaffirmed for continuance by both the Ontario Minster of Energy and the OPG Board of Directors' Chair in the fourth quarter of 2016, as required by the MOA following a change in the Minister of Energy. For further details on the MOA, see *Interest of Management and Others in Material Transactions – Relationship with the Province and the OEFC*.

OPG's registered head office is located at 700 University Avenue, Toronto, Ontario, M5G 1X6, Canada.

OVERVIEW OF OPG

OPG is Ontario's largest clean energy generator. As at December 31, 2016, OPG operated two nuclear generating stations, three thermal generating stations, 65 hydroelectric generating stations, and one wind power turbine. The majority of OPG's generation is from its rate-regulated nuclear and rate-regulated hydroelectric stations. In addition, OPG and TransCanada Energy Ltd. co-own the 550 megawatt (MW) Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). Including its share of the co-owned facilities, OPG's total in-service generating capacity was 16,177 MW as at December 31, 2016, which represented approximately 45 percent of installed generation capacity in Ontario's electricity grid as reported by the Independent Electricity System Operator (IESO). OPG's in-service generating capacity as of December 31, 2016 excludes Unit 2 of the Darlington Nuclear GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment. OPG operates under an electricity generation licence issued by the OEB, which is valid until October 30, 2023. OPG expects the licence to be renewed in the future.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power L.P. (Bruce Power) and are not included in the generation and other operating statistics set out in this AIF.

All of OPG's owned and co-owned generating facilities are located in Ontario.

OPG's business operations are divided into the following business segments:

- ***Regulated – Nuclear Generation*** comprises the Pickering Nuclear GS and the Darlington Nuclear GS, which are subject to rate regulation, as well as the lease arrangement related to the Bruce nuclear generating stations;
- ***Regulated – Nuclear Waste Management*** reports the results of the Company's operations associated with the management of nuclear waste and the decommissioning of nuclear facilities;
- ***Regulated – Hydroelectric*** comprises the 54 OPG hydroelectric facilities subject to rate regulation;
- ***Contracted Generation Portfolio*** comprises the Company's generating operations that are under energy supply contracts; and
- ***Services, Trading and Other Non-Generation*** is a non-generation segment, which is not subject to rate regulation.

Pursuant to the *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05,* OPG receives OEB-authorized regulated prices for electricity generated from the Pickering and Darlington nuclear generating stations and the 54 hydroelectric facilities prescribed for rate regulation (collectively, prescribed facilities or regulated facilities). The OEB is an independent, quasi-judicial tribunal that regulates market participants in Ontario's natural gas and electricity industries, and reports to the Legislature of the

Province through the Ontario Ministry of Energy. OPG is Ontario's only electricity generator subject to rate regulation by the OEB.

Of OPG's 54 regulated hydroelectric facilities, 48 facilities were prescribed for rate regulation effective July 1, 2014 pursuant to a November 2013 amendment to *Ontario Regulation 53/05*. The remaining six regulated hydroelectric facilities and the Pickering and Darlington nuclear generating stations have been subject to rate regulation by the OEB since 2008.

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements (ESAs) with the IESO. The IESO is a non-profit corporate entity governed by an independent Board of Directors appointed by the Province and is responsible for operating the electricity market and directing the operation of the bulk electrical system in Ontario. Effective January 1, 2015, the Ontario Power Authority (OPA), an organization previously established by the Province with a mandate to contribute to the development of a reliable and sustainable electricity system in Ontario, merged with the IESO. The new entity continued under the name IESO. The IESO is the counterparty of ESAs and other agreements that were previously executed with the OPA.

ESAs are in effect for the capacity and production from OPG's three operating thermal generating stations – the oil/gas dual-fueled Lennox GS, the biomass powered Atikokan GS and the advanced biomass fueled unit at the Thunder Bay GS. The results of these stations are reported under the Contracted Generation Portfolio segment. The expiry dates of these ESAs range from January 2020 to July 2024. In addition, 50-year ESAs are in place for the hydroelectric facilities reported under the Contracted Generation Portfolio segment. The hydroelectric ESAs for the operating stations have expiry dates ranging from February 2059 to January 2064. The ESAs for the contracted generating stations result in a relatively stable stream of revenues from the Contracted Generation Segment.

OPG's revenue and electricity generation by business segment for the years ended December 31, 2016, 2015 and 2014 and OPG's in-service generating capacity as at December 31, 2016, 2015 and 2014 are summarized in the table below.

		Regulated – Nuclear Generation	Regulated – Nuclear Waste Management	Regulated – Hydroelectric	Contracted Generation Portfolio [1]	Services, Trading, and Other Non-Generation
2016	Revenue *(millions of dollars)* [2]	**3,481**	**138**	**1,527**	**573**	**68**
	Electricity Generation *(terawatt hours)*	**45.6**	**N/A**	**29.5**	**3.1**	**N/A**
	In-service Generating Capacity *(MW)* [3]	**5,728**	**N/A**	**6,421**	**4,028**	**N/A**
2015	Revenue *(millions of dollars)* [2]	3,245	122	1,619	535	73
	Electricity Generation *(terawatt hours)*	44.5	N/A	30.4	3.1	N/A
	In-service Generating Capacity *(MW)*	6,606	N/A	6,428	4,021	N/A
2014	Revenue *(millions of dollars)* [2]	3,015	121	1,417	329	197
	Electricity Generation *(terawatt hours)*	48.1	N/A	31.3	2.8	N/A
	In-service Generating Capacity *(MW)*	6,606	N/A	6,426	4,027	N/A

[1] The in-service generating capacity includes OPG's share of 275 MW for PEC and 280 MW for Brighton Beach, and the electricity generation includes OPG's share of its 50 percent ownership in these stations.
[2] Revenue for each segment is shown before inter-segment elimination.
[3] Regulated – Nuclear Generation segment excludes the generating capacity of 878 MW from Unit 2 of the Darlington GS, which has been undergoing refurbishment since mid-October 2016.

For the year ended December 31, 2016, OPG's electricity generation accounted for over 50 percent of the total energy generated on Ontario's electricity grid, as reported by the IESO.

OPG is subject to a number of provincial and federal legislation and regulations, including the decisions of administrative tribunals or other regulatory bodies, and to Canada's international obligations under certain international treaties. Collectively, these sources dictate many of the constraints within which OPG is permitted to operate its facilities and manage its business.

Strategic Imperatives

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder. The four strategic imperatives of OPG are described below.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce. Workplace safety and public safety are overriding priorities in all activities performed at OPG.

Project Excellence

OPG is pursuing a number of generation development and other projects in support of Ontario's electricity planning initiatives. OPG's major generation projects include the refurbishment of the Darlington GS, the construction of the Peter Sutherland Sr. hydroelectric GS, the refurbishment of the Sir Adam Beck Pump hydroelectric GS reservoir, the expansion of the Ranney Falls hydroelectric GS, and the construction of a solar facility at the Nanticoke GS site. OPG aims to be an industry leader in project management capability and performance.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth. Inherent in this priority are the following objectives:

- Increase revenue, reduce costs and achieve appropriate return;
- Ensure availability of cost effective funding for operational needs, generation development projects and long-term obligations; and
- Pursue opportunities to expand the existing core business and capitalize on new growth paths including emerging renewable energy opportunities.

Social Licence

As the largest, publicly-owned electricity generator in Ontario with geographically diverse operations, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations.

OPG has in place a Code of Business Conduct that establishes the standards, expectations, and accountabilities for ethical behaviour. All employees and all parties with whom the Company does business are expected to abide by OPG's Code of Business Conduct. A copy of the Code of Business Conduct can be found on SEDAR at www.sedar.com and is also available on the Company's website at www.opg.com.

Further details on OPG's strategic imperatives can be found in the corresponding sections of the Company's 2016 annual MD&A in the section, *Core Business, Strategy and Outlook.*

GENERAL DEVELOPMENT OF THE BUSINESS

The following is a summary of key developments in OPG's business since January 2014.

General Development

OPG's Regulated Prices and Other OEB-Related Developments

Energy revenue generated from the Company's regulated nuclear and regulated hydroelectric facilities is based on regulated prices determined by the OEB through public proceedings. To date, the regulated prices have included a volumetric base regulated price, and volumetric rate riders for the recovery or repayment of approved variance and deferral account balances. As the regulated operations account for the majority of the Company's electricity generation, the outcomes of OPG's applications to the OEB for regulated prices determine a large portion of the Company's revenues and can have a significant impact on the Company's financial performance.

The following are the OEB-authorized regulated prices for electricity generated from the Company's regulated facilities in effect during the years ended December 31:

	2016	2015		2014	
($/megawatt hour)		January 1 to June 30	July 1 to December 31	January 1 to October 31	November 1 to December 31
Regulated – Nuclear Generation					
Base regulated price	**59.29**	59.29	59.29	51.52	59.29
Rate riders	**10.84** [1]	1.33	12.17 [1]	4.18	4.18
	70.13	60.62	71.46	55.70	63.47
Regulated – Hydroelectric					
Hydroelectric generating stations prescribed for rate regulation prior to 2014					
Base regulated price	**40.20**	40.20	40.20	35.78	40.20
Rate riders	**3.19** [1]	6.04	9.23 [1]	2.02	2.02
	43.39	46.24	49.43	37.80	42.22
Hydroelectric generating stations prescribed for rate regulation effective in 2014					
Base regulated price	**41.93**	41.93	41.93	N/A	41.93
Rate rider	**3.19** [1]	-	3.19 [1]	N/A	-
	45.12	41.93	45.12	N/A	41.93

[1] The increase in the 2015 rate riders effective July 1, 2015 was implemented by the OEB on October 1, 2015. As such, the OEB authorized interim period rate riders for the period from October 1, 2015 to December 31, 2016 to allow for the recovery of the increase in the riders for the period from July 1, 2015 to September 30, 2015. The revenue from the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The nuclear interim period rate rider was $2.17 per megawatt hour (MWh) and the regulated hydroelectric interim period rate rider was $0.64/MWh. These interim period rate riders have not been included in the above table. All rate riders in effect during 2016 expired on December 31, 2016.

Base Regulated Prices

Base regulated prices in effect in 2014 through 2016 were established using a forecast cost-of-service methodology based on OEB-approved revenue requirements, taking into account OEB-approved forecasts of production and operating costs for the regulated facilities, and a return on rate base determined using OEB's prescribed rate of return and an OEB-approved deemed capital structure. Rate base for OPG represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital. In accordance with *Ontario Regulation 53/05*, OPG's nuclear regulated prices are reduced by the amount of OPG's revenues, net of costs, from leasing the Bruce nuclear generating stations to Bruce Power. As directed by the OEB, OPG's revenues and costs related to the Bruce nuclear generating stations are determined in accordance with US GAAP for the purposes of establishing OPG's nuclear regulated prices in accordance with *Ontario Regulation 53/05*. This includes OPG's costs related to its obligations for nuclear waste management and nuclear facilities decommissioning associated with the Bruce nuclear generating stations.

The base regulated prices effective November 1, 2014 were established by the OEB's November 2014 decision and December 2014 order on OPG's September 2013 rate application. This included regulated prices effective November 1, 2014 for the 48 hydroelectric facilities that were prescribed for rate regulation effective July 1, 2014. Prior to November 1, 2014, the generation revenue for these hydroelectric facilities was based on the Ontario electricity spot market price, including for the period from July 1, 2014 to November 1, 2014 as determined by the OEB. The base regulated prices effective November 1, 2014 are expected to remain in effect until superseded by a subsequent order of the OEB.

The regulated prices effective November 1, 2014 for the nuclear facilities and the hydroelectric facilities prescribed for rate regulation prior to 2014 were determined by the OEB based on approved 24-month revenue requirements for the 2014 to 2015 period totaling approximately $7.3 billion. This reflected a reduction of $833 million from the revenue requirements submitted by OPG. The regulated price for the 48 hydroelectric facilities prescribed for rate regulation beginning in 2014 was established based on an approved 18-month revenue requirement for the period from July 1, 2014 to December 31, 2015 of approximately $750 million, a reduction of $101 million from OPG's submission. The most significant adjustments made by the OEB to OPG's rate request included the following:

- Allowed pension and OPEB costs were limited to the forecast 2014 and 2015 cash expenditures for these plans, which were approximately $600 million lower, including related tax impacts, than the forecast accrual costs submitted by OPG. The difference between accrual costs and cash expenditures is being recorded in a deferral account authorized by the OEB. For further details, see *General Development of the Business – General Development – OPG's Regulated Prices and Other OEB-Related Developments – Pension and OPEB Cost Recovery Methodology.*
- A reduction in overall forecast compensation costs of $100 million in each of 2014 and 2015 across all of OPG's regulated facilities.
- An increase in the forecast nuclear production of 0.5 terawatt hours (TWh) annually used to set the nuclear regulated prices, which had the effect of reducing the approved nuclear regulated price.
- The rate base addition for the Niagara Tunnel project to construct a third tunnel to divert additional water to OPG's generating stations on the Niagara River was limited to $1,365 million, which resulted in a write-off of $77 million being charged to operations in 2014.
- A reduction in the 2014 income tax expense included in the regulated prices by the amount of the regulatory tax loss calculated for 2013, which reduced the 2014/2015 revenue requirement by approximately $70 million.

In December 2014, OPG filed a motion with the OEB asking it to review and vary the parts of its November 2014 decision related to the disallowance of the Niagara Tunnel project expenditures and the application of the 2013 regulatory tax loss against the 2014/2015 revenue requirement. In its January 2016 decision on the motion, the OEB reversed a portion of the Niagara Tunnel project disallowance and upheld the original tax loss decision. In the first quarter of 2016, OPG recorded a gain of $22 million to

recognize the expected future recovery from customers of the reversed portion of the Niagara Tunnel project disallowance.

In its November 2014 decision, the OEB adjusted the deemed capital structure applied to OPG's total regulated rate base to 45 percent equity and 55 percent debt, from 47 percent equity and 53 percent debt used previously. In making this adjustment, the OEB found that there had been an overall improvement in the risk profile of OPG's regulated operations, based on the increased proportionate share of rate base related to hydroelectric facilities. This reduced the 2014/2015 revenue requirements. In general, OPG's actual capital structure contains a significantly higher proportion of equity than has been reflected in the OEB-approved deemed capital structure, which has had the effect of reducing OPG's return on shareholder's equity.

The OEB-authorized effective date of November 1, 2014 for the base regulated prices was substantially later than the January 1, 2014 date requested by OPG. Consistent with the November 1, 2014 effective date, for the period from January 1, 2014 to October 31, 2014, OPG continued to record additions to the existing variance and deferral accounts pursuant to the OEB's previous decisions and orders, with reference to amounts embedded in the base regulated prices in effect prior to November 1, 2014.

The base regulated prices in effect prior to November 1, 2014 were established pursuant to the OEB's decision and order issued in March 2011 and April 2011, respectively. The prices had an effective date of March 1, 2011 and were based on approved 24-month revenue requirements totaling approximately $6.7 billion.

Variance and Deferral Accounts and Rate Riders

Variance and deferral accounts are typically established by the OEB to capture, for subsequent review and approval, differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or to record the impact of items not reflected in the approved regulated prices. Such accounts generally help to mitigate risks and uncertainties both to the regulated entity and its customers.

The OEB has authorized several variance and deferral accounts for OPG, including those required by *Ontario Regulation 53/05*. The authorized accounts include those related to the gross margin impact of variability in regulated hydroelectric electricity production due to differences between the forecast and actual water conditions and due to the effect of SBG conditions, changes in liabilities for nuclear waste management and nuclear decommissioning, changes in revenues and costs related to the lease and related agreements with Bruce Power for the Bruce nuclear generating stations, and variances in the revenue requirement impact of capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to the regulated facilities, including the Darlington Refurbishment project. The Darlington Refurbishment project is discussed under *General Development of the Business – Nuclear Business Development – Darlington Refurbishment*. There is currently no regulatory variance or deferral account related to the impact of generation performance of OPG's nuclear stations on revenue from base regulated prices.

Approved balances in the regulatory variance and deferral accounts authorized by OPG are recovered or refunded through volumetric rate riders. The additional revenue from the riders is largely offset by a corresponding increase in amortization expense related to the regulatory balances, which are typically recognized as assets (amounts recoverable from customers) or liabilities (amounts payable to customers) on the Company's balance sheet. Differences in amounts recovered or repaid through rate riders due to differences between actual and forecast production volumes are recorded in separate variance accounts for future disposition.

The rate riders in effect in 2015 and 2016 included those authorized by the OEB's October 2015 order on OPG's application in 2014 to recover or repay most of the December 31, 2014 variance and deferral account balances, discussed below. The 2015 rate riders also included those established by the OEB's December 2014 order on OPG's September 2013 rate application from January 1, 2015 to December 31,

2015. The December 2014 order allowed for recovery of $189 million recorded in certain variance and deferral accounts as at December 31, 2013, without adjustments.

The total balances approved for recovery by the OEB's October 2015 order were approximately $1.8 billion, of which approximately $1.5 billion was the subject of an OEB-approved partial settlement agreement reached by OPG and intervenors in June 2015. The remaining balances of $263 million were approved by the OEB's September 2015 decision, without adjustments. The rate riders authorized by the October 2015 order were in effect from July 1, 2015 to December 31, 2016 and allowed for recovery of $933 million of the total approved balances. The remaining approved balances will be subject to recovery after 2016, including through OPG's May 2016 application for new regulated prices, which is discussed under *General Development of the Business – General Development – OPG's Regulated Prices and Other OEB-Related Developments – OPG's 2016 Application for New Regulated Prices*.

The rate riders in effect during 2014 reflected the terms of a 2013 OEB-approved settlement agreement between OPG and intervenors, which provided for the recovery or repayment of most OEB-authorized variance and deferral account balances as at December 31, 2012. The settlement agreement provided for recovery of $633 million over the 2013/2014 period.

Amendments to Ontario Regulation 53/05

In November 2015, the Province amended *Ontario Regulation 53/05* to establish a deferral account, effective January 1, 2017, that will record, for future recovery, a portion of the annual OEB-approved revenue requirement for OPG's regulated nuclear facilities, with a view of making more stable year-over-year changes in OPG's nuclear regulated prices during the Darlington Refurbishment period. The amended regulation requires the OEB to determine the revenue requirements for OPG's nuclear facilities on a five-year basis for the 10-year period beginning on January 1, 2017. The portion of the approved revenue requirement deferred in the new account each year will also be determined by the OEB on a five-year basis during this 10-year period. The regulation stipulates that the deferral account will record interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually, and that the OEB shall authorize recovery of the balance in the account on a straight line basis over a period not to exceed 10 years following the end of the Darlington Refurbishment project. OPG expects to recognize the deferred amounts as income in the period to which the approved revenue requirements relate.

The regulation was also amended in November 2015 to require the OEB to accept the need for the Darlington Refurbishment project in light of Ontario's 2013 Long-Term Energy Plan (LTEP) and the related policy of the Province endorsing the need for nuclear refurbishment. The LTEP is discussed under *General Development of the Business – General Development – Ontario's Long-Term Energy Plan and New Nuclear Units*.

Pension and OPEB Cost Recovery Methodology

Using the methodology previously applied by the OEB in setting OPG's regulated prices, the revenue requirements submitted by OPG in its September 2013 rate application included a forecast of 2014 and 2015 pension and OPEB costs determined on an accrual basis in accordance with US GAAP. In its November 2014 decision and December 2014 order on the application, the OEB approved revenue requirements based on OPG's estimated minimum required contributions to its registered pension plan, and a forecast of OPG's expenditures on the OPEB and supplementary pension plans. In directing this reduction in the revenue requirement, the OEB agreed with OPG and certain other parties that a generic proceeding on the regulatory treatment and recovery of pension and OPEB costs would be beneficial. The OEB also indicated that a change in the recovery methodology for OPG's pension and OPEB amounts from the accrual basis, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of the generic proceeding.

Pending the generic proceeding, the OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Effective November 1, 2014, this deferral account records the difference

between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and the corresponding actual cash expenditures for these plans. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of a future generic OEB proceeding on the regulatory treatment and recovery of pension and OPEB costs. The balance in the account is recognized as a regulatory asset on OPG's balance sheet.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, the OEB held a public stakeholder forum as part of the consultation. In September 2016, OPG made a written submission of its position on the matter to the OEB. If the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory asset recorded for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. **[MONITOR]**

OPG's 2016 Application for New Regulated Prices

In May 2016, OPG filed a five-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. For the first time since OPG's prescribed assets became subject to rate regulation, the new prices are expected to be determined on an incentive ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. Rate-setting under incentive regulation is typically more formulaic and involves greater de-coupling of a regulated entity's allowed revenues or prices from its costs than under a cost-of-service rate-setting methodology.

For the hydroelectric facilities, OPG's May 2016 application proposes to escalate the existing base regulated prices, with some adjustments, for each of years 2017 to 2021, based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production.

The proposed nuclear revenue requirements reflect OPG's plans to pursue Pickering extended operations until 2024, discussed in *General Development of the Business – Nuclear Business Development – Pickering Extended Operations to 2024*, as well as the projected impact of the scheduled return to service of the first refurbished Darlington unit in the first quarter of 2020. OPG is also seeking an increase in the deemed capital structure applied to its total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 debt applied by the OEB in setting the existing regulated prices.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG's application incorporates a nuclear rate smoothing proposal. The proposal would result in OPG deferring a portion of the approved nuclear revenue requirements in a deferral account for future collection. In addition, OPG's application requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment in 2016 through rate riders in effect to December 31, 2016. The application also requests the continuation of all applicable existing variance and deferral accounts.

In December 2016, the OEB issued an order granting OPG's request to declare the existing base regulated prices interim, effective January 1, 2017. This preserves the OEB's ability to make new regulated prices effective as early as January 1, 2017, which would allow OPG to recover the difference between the approved new regulated prices and the existing prices for the period between the effective

date of the new regulated prices and their implementation date based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017, following a public proceeding. The public proceeding is in progress, with the oral hearing portion having commenced in February 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

Supreme Court of Canada's Decision on 2011 OEB Ruling

In September 2015, the Supreme Court of Canada (Supreme Court) issued its decision upholding the OEB's disallowance of $145 million of OPG's forecast nuclear compensation costs for the 2011 to 2012 period. The majority of these costs were based on previously negotiated collective bargaining agreements. This disallowance was part of the OEB's March 2011 decision on OPG's application for regulated prices effective March 1, 2011. The Supreme Court decision underscores that OPG must continue to establish the reasonableness of both committed and future costs as part of the rate-setting process.

Renewal of Collective Agreements and Acquisition of Hydro One Limited Shares

Most of OPG's regular employees are represented by one of two unions: the Power Workers' Union (PWU) and The Society of Energy Professionals (The Society). As at December 31, 2016, the PWU represented approximately 55 percent of OPG's regular workforce, while The Society represented approximately 34 percent of the regular workforce.

The previous collective agreement between OPG and the PWU expired on March 31, 2015. In May 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on March 31, 2018. The changes to the collective agreement included increases to employee pension plan contributions in each year of the agreement. The previous collective agreement between OPG and The Society expired on December 31, 2015. In November 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on December 31, 2018. Changes to the collective agreement included increases to employee pension plan contributions in each of the first two years of the agreement. The changes in pension plan contributions apply to current employees and future employees of both unions, and do not have an end date.

The changes to both collective agreements provided existing employees with lump sum payments for each of the first two years of the respective contract and eligibility to annually receive shares in Hydro One Limited (Hydro One) for up to 15 years starting in the third year of the contract, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service. The lump sum payments and future share awards are intended to compensate current eligible employees, over a defined period, for their increased pension plan contributions.

In April 2016, OPG acquired nine million common shares of Hydro One at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements. The shares acquired in this transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights at OPG facilities. These bargaining rights are established either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. All of these collective agreements currently have multi-year terms, expiring on April 30, 2020.

Ontario's Long-Term Energy Plan and New Nuclear Units

From October 2016 to December 2016, the Government of Ontario conducted a consultation process as part of the update to the LTEP, a document periodically published by the Ontario Ministry of Energy to outline the Province's long-term plans for the future development of Ontario's electricity system. OPG made a formal submission as part of the consultation as it relates to OPG's core generation business and growth opportunities. The Ontario Ministry of Energy has indicated that the development of the updated LTEP, scheduled to be published in 2017, will balance the principles of affordability, reliability, clean energy, community and Indigenous engagement, as well as conservation and demand management.

The last LTEP was released by the Government of Ontario in December 2013. Key elements of the 2013 LTEP that impacted OPG included the planned refurbishment of the four-unit Darlington GS, Bruce Power's planned refurbishment of the six un-refurbished units of the Bruce nuclear generating stations, and the Province's encouragement of OPG to explore new business lines and opportunities inside and outside Ontario. The 2013 LTEP indicated that by 2025, 20,000 MW of renewable energy would be online, representing about one half of Ontario's installed capacity, including 10,700 MW of wind, solar, and bioenergy capacity by 2021 and 9,300 MW of hydroelectric capacity by 2025.

The 2013 LTEP stated that while the Province would not proceed, at that time, with the construction of two new nuclear reactors at the Darlington site, the Ontario Ministry of Energy would work with OPG to maintain the site preparation licence granted by the Canadian Nuclear Safety Commission (CNSC) in relation to the potential construction of these reactors. As such, OPG has been undertaking activities required to support the CNSC Power Reactor Site Preparation Licence and the Darlington New Nuclear Project Environmental Assessment (EA). The Joint Review Panel's (JRP) Report on the EA concluded that the project was not likely to cause significant adverse environmental effects, given mitigation. In April 2016, the Supreme Court dismissed the application for leave to appeal filed by the parties that had challenged the Darlington New Nuclear Project EA through a judicial review, concluding the litigation on the matter. The CNSC site preparation licence expires in 2022.

Since the issuance of the 2013 LTEP, the Province has confirmed that it will proceed with OPG's refurbishment of the Darlington GS, approved OPG's plans to pursue the continued safe and reliable operation of two units at the Pickering GS to 2022 with the four remaining units continuing to operate until 2024, and announced an updated agreement between the IESO and Bruce Power that provides for the refurbishment of the six un-refurbished units of the Bruce nuclear generating stations. These developments are discussed further in *General Development of the Business – Nuclear Business Development*.

Shareholder Declarations and Resolutions to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. An active program to locate a buyer for these real estate assets was initiated in October 2016, and a purchase and sale agreement was executed in December 2016. The sale is expected to be completed during the second quarter of 2017.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. OPG is currently in the process of preparing the site for sale.

Pursuant to both Shareholder Declarations and Shareholder Resolutions, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer a portion of the proceeds from disposition of the above assets into the Province's Consolidated Revenue Fund. Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business.

For a complete list of Shareholder directives, see *Interest of Management and Others in Material Transactions – Relationship with the Province and the OEFC – Shareholder Directives*.

Business Transformation

OPG has completed a multi-year initiative with the objective of transforming itself into a more streamlined, agile and efficient organization. The business transformation initiative was intended to drive sustainable change across the Company, while ensuring that there is no adverse impact on the safety, reliability and environmental sustainability of OPG's operations. OPG's cumulative savings from reductions in regular headcount from ongoing operations, through the business transformation and other initiatives since the beginning of 2011, reached $1 billion in 2016.

The business transformation initiative involved aggressively pursuing cost control and efficiency improvements at the enterprise and business unit level, including realignment of work, streamlining of processes and leveraging workforce attrition. As part of the initiative, OPG implemented a centre-led organizational model intended to more efficiently utilize resources. In 2015, OPG successfully completed a large-scale initiative, the Enterprise System Consolidation Project, to streamline the company's software systems and improve business processes by implementing a common enterprise software platform.

Although business transformation has concluded as a discrete initiative, improving organizational performance and building on efficiency gains achieved to date remains a key priority for the Company. OPG continues to review its cost structure, identify cost improvement strategies and embed an outcomes-driven culture that reinforces low cost, efficiency, and organizational agility as part of business decision-making.

Nuclear Business Development

Darlington Refurbishment

Government's Endorsement and Transition to Execution Phase

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years, into the 2050s. In January 2016, the Government of Ontario's support for the Darlington Refurbishment project was affirmed through the Ontario Minister of Energy's announcement endorsing OPG's plan to refurbish the four Darlington units at a total project budget of $12.8 billion, including capitalized interest and escalation. The Province's announcement followed the approval of the project budget and schedule by OPG's Board of Directors in November 2015. The refurbishment of the last unit is scheduled to be completed by 2026. *Ontario Regulation 53/05* requires the OEB to ensure that OPG recovers capital and non-capital costs and firm financial commitments in respect of the Darlington Refurbishment project, if the OEB is satisfied that the costs were prudently incurred and that the firm financial commitments were prudently made.

The refurbishment project is a multi-phase program comprising several sub-projects. The major work streams include: de-fueling of reactors and refurbishment of the fuel handling equipment; removal and replacement of feeder tubes and fuel channel assemblies in each reactor (Retube and Feeder Replacement or RFR); inspections and repairs of turbine generator sets and replacement of associated control systems; mechanical cleaning, water lancing, and inspection and maintenance work on steam generators; and replacement or repairs of certain other station components referred to as balance of plant. The RFR is the largest sub-project and represents a majority of the critical path schedule.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, ahead of schedule, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support

the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project.

Preparation and execution activities on the major sub-projects and the planned deliveries of the major reactor components, including fuel channels and feeder tubes, are tracking in line with the project schedule. Detailed engineering design for the project has been substantially completed.

A number of pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, in support of the execution phase of the project have been completed, with the remaining projects continuing to track for completion in line with the refurbishment execution schedule.

Major pre-requisite and preparatory work completed since the beginning of 2014 includes the following:

- A training and reactor mock-up facility was completed in 2014, allowing for simulation and training for refurbishment execution tasks.
- In November 2015, the Refurbishment Project Office was completed. The facility acts as a secure entry point and provides supporting facilities for refurbishment personnel.
- The RFR Island Support Annex was completed in February 2016. The facility houses RFR field preparatory, contractor management, and project oversight activities.
- The specialized tooling for removal and replacement of feeder tubes and fuel channel assemblies in each reactor was delivered to OPG's reactor training and mock-up facility in the second quarter of 2016, as planned, and testing of the tooling has been completed.
- All 28 storage tanks have been installed in the Heavy Water Storage and Drum Handling Facility, which will provide storage and processing capability for the removal of heavy water from the units during refurbishment, as well as for continued station operations.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of the second unit, Unit 3, at the Darlington GS and is entering into associated commitments to procure major components that require long-lead times. These planning activities are being undertaken in accordance with the refurbishment project schedule.

All major contracts for the Darlington Refurbishment project that OPG expected to award were in place prior to proceeding with the first unit refurbishment. This included the RFR execution phase contract awarded in January 2016 and valued at approximately $2.75 billion for work to be executed on all four units. All of the major contracts contain suspension and termination provisions.

CNSC Regulatory Approvals

In December 2013, OPG submitted an application to the CNSC for the operating licence renewal for the Darlington GS. The CNSC granted the Darlington GS a 10-year operating licence in December 2015, which is the longest licence ever granted by the CNSC to a Canadian nuclear power plant. The new licence, which is effective from January 1, 2016 to November 30, 2025, spans most of the planned duration of the Darlington Refurbishment project.

In line with CNSC's regulatory requirements related to life extensions of nuclear power plants in effect at the time that OPG began to undertake the Darlington Refurbishment project, OPG completed a series of assessments, including an EA, an Integrated Safety Review, and a Global Assessment Report (GAR). The EA decision, issued by the CNSC and Fisheries and Oceans Canada in March 2013 following public hearings, confirmed that, taking into account identified mitigation measures, the project was not likely to cause significant adverse environmental effects. In April 2014, the CNSC accepted the GAR as meeting all regulatory requirements related to life extensions of nuclear power plants. In November 2014 and

April 2016, respectively, certain intervenors' request for a judicial review and subsequent appeal to the Federal Court of Appeal related to the EA decision were dismissed by the courts.

Actions identified as part of the above assessments to meet updated codes, standards and practices, and to ensure that the operation of the station continues to pose minimal risk to health, safety, security and the environment, were integrated into an Integrated Implementation Plan (IIP). As part of the Darlington operating licence renewal in December 2015, the CNSC approved the regulatory scope defined in the IIP. OPG has been undertaking activities in support of the IIP requirements, including the commissioning of two safety enhancements at the station, the Third Emergency Power Generator and the Containment Filtered Venting System, which were originally scheduled to be placed in-service in 2016. Remediation measures are in progress. These delays will not impact the overall Darlington Refurbishment project schedule, as neither of the two projects is on the critical path.

Pickering Extended Operations to 2024

In 2015, OPG completed the necessary work to demonstrate with sufficient confidence that the Pickering fuel channel life, a key life-limiting component of the station, will allow all six operating units of the station to operate to the end of 2020. OPG's early technical work at that time also showed that the Pickering GS can be operated safely beyond 2020. In January 2016, OPG announced its plan to pursue continued safe and reliable operation of the Pickering GS beyond 2020. OPG's objective is to maximize the operating life of the Pickering units. Under OPG's current plan, all six operating units at the station would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The Province announced its approval of OPG's plan to pursue continued operation of the Pickering GS beyond 2020 up to 2024 in January 2016. Extending operations at the Pickering GS will provide continued employment to approximately 3,000 regular employees at OPG and is expected to provide Ontario with a clean, reliable source of baseload electricity during the Darlington GS and initial Bruce nuclear unit refurbishments.

OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. OPG has started work on the Pickering licence renewal application, which is expected to be filed in mid-2017 for the CNSC's approval in 2018. A Periodic Safety Review and an IIP for the station will be submitted to the CNSC as part of the application.

As part of the plan to extend operations, OPG is continuing to undertake further technical work to confirm that the Pickering pressure tubes will achieve the additional life necessary to operate to 2024. OPG also is conducting component condition assessments to identify the work required to support the continued operation of the station.

Bruce Power Refurbishment and Bruce Lease Agreement

OPG leases the four-unit Bruce A (Units 1-4) and the four-unit Bruce B (Units 5-8) nuclear generating stations and associated lands and facilities to Bruce Power on a long-term basis. Bruce Units 1 and 2 were refurbished by Bruce Power under a refurbishment agreement with the IESO and returned to service in 2012. While Bruce Power is responsible for operating all of the leased units, under the terms of the lease agreement between Bruce Power and OPG (Bruce Lease) and as required by the CNSC, OPG is primarily responsible for the management of the nuclear used fuel and other nuclear waste associated with the Bruce nuclear generating facilities, as well as the decommissioning of the facilities at the Bruce site. Under the Bruce Lease and related agreements, OPG receives base rent and supplemental rent payments from Bruce Power, fees for nuclear waste management other than used fuel, and fees for certain other services. The output from the Bruce nuclear generating stations is not subject to rate regulation by the OEB.

In December 2015, the Province announced that the refurbishment agreement between the IESO and Bruce Power had been updated and that Bruce Power will proceed with the refurbishment of the six un-

refurbished units of the Bruce nuclear generating stations. In order to facilitate Bruce Power's refurbishment plans, the Bruce Lease and related agreements were amended in December 2015 to extend Bruce Power's future options to renew the lease up to the end of 2064. To achieve better alignment with OPG's costs, the agreements were also amended to revise, starting in 2016, the approach for calculating supplemental rent payments and fees for nuclear waste management other than used fuel, and to modify the fee structure for OPG's heavy water detritiation services starting in 2017. Beginning in 2016, supplemental rent payments wholly represent fees for nuclear used fuel management. Amendments were also made to enable certain adjustments to future base rent, supplemental rent and other fees for potential future changes in OPG's decommissioning and nuclear waste management cost estimates related to the Bruce facilities, and to remove a conditional supplemental rent rebate provision effective December 4, 2015. Certain of the above amendments were executed by OPG pursuant to a Shareholder Declaration and Shareholder Resolutions issued in November 2015. For a complete list of Shareholder directives, see *Interest of Management and Others in Material Transactions – Relationship with the Province and the OEFC – Shareholder Directives*.

Ontario Nuclear Funds Agreement Reference Plan Update

OPG is responsible for the management of radioactive used nuclear fuel and low and intermediated level radioactive waste (L&ILW) and the decommissioning of its nuclear stations and waste management facilities. Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG is required to set aside monies into two segregated funds, the Used Fuel Segregated Fund and the Decommissioning Segregated Fund (together, the Nuclear Segregated Funds) to fund the future life cycle costs of long-term nuclear used fuel and L&ILW management and nuclear facilities decommissioning. OPG's required contributions to the Nuclear Segregated Funds are determined based on periodically updated reference plans approved by the Province under the ONFA, at least once every five years. As part of the reference plan update process, OPG estimates the total liabilities for future nuclear waste management and nuclear decommissioning based on life cycle cost estimates and a set of assumptions, including remaining useful lives of the nuclear stations, proposed methods and timing of nuclear waste disposal, and economic indicators. In accordance with US GAAP, OPG carries a present value asset retirement obligation on the balance sheet related to its nuclear waste management and nuclear decommissioning obligations. In accordance with *Ontario Regulation 53/05*, the OEB is required to ensure that OPG recovers the revenue requirement impact of its nuclear waste management and nuclear decommissioning liabilities arising from the current approved ONFA reference plan.

In 2016, OPG completed a comprehensive update of the estimate for its obligations for nuclear waste management and nuclear facilities decommissioning, in line with the required ONFA reference plan update process. The results of the update were reflected in a new ONFA reference plan, for years 2017 to 2021, as well as an adjustment reducing the asset retirement obligation on OPG's balance sheet as at December 31, 2016. The 2017-2021 ONFA reference plan was approved by the Province in December 2016, with an effective date of January 1, 2017 (the 2017 ONFA Reference Plan). Based on the funded status of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund based on the revised, lower life cycle liability estimates per the 2017 ONFA Reference Plan, no overall contributions to the Nuclear Segregated Funds are currently required starting in 2017. Contributions may be required in the future should either or both of the funds be in an underfunded position when a new reference plan is prepared. Such may be the case as a result of future variability in asset performance due to volatility inherent in financial markets. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the underlying obligations in subsequent ONFA reference plans.

The overall reduction in OPG's nuclear waste management and nuclear decommissioning liabilities from the comprehensive update was mainly due to a decrease in cost estimates to reflect a proposed new, more cost effective container design and engineered barrier concept to house used nuclear fuel for disposal, as well as a later expected in-service date for Nuclear Waste Management Organization's (NWMO) planned deep geologic repository for the long-term permanent disposal of Canada's used nuclear fuel.

Canada's planned used fuel deep geologic repository. These decreases were partly offset by higher cost estimates related to station decommissioning, primarily due to a better definition of work required during the preparation for safe storage after station shutdown and a higher volume of waste projected to be generated during the decommissioning.

For further details on OPG's nuclear waste management and nuclear decommissioning obligations, the ONFA and proposed methods for long-term used fuel and L&ILW disposal, see Description of the Business – Regulated – Nuclear Waste Management Segment.

Hydroelectric Business Development

Lower Mattagami Generating Stations

The Lower Mattagami River project added one additional generating unit at each of OPG's existing Little Long, Harmon, and Kipling generating stations, and replaced the existing generating station at the Smoky Falls site with a new three-unit station. All six new generating units were placed in-service in 2014, ahead of the target completion date of June 2015. The cost of the project after the completion of closure activities was within the approved budget of $2.6 billion. The project increased the capacity of the four generating stations on the Lower Mattagami River by 438 MW. The stations are operating under a 50-year ESA with the IESO. The last tranche of the project financing was issued in October 2016.

Peter Sutherland Sr. Hydroelectric Generating Station

In March 2015, OPG's Board of Directors approved a project to construct the Peter Sutherland Sr. GS, a new 28 MW hydroelectric station on the New Post Creek near its outlet to the Abitibi River, with a budget of $300 million. The station is being constructed through PSS Generating Station LP, a partnership between OPG and Coral Rapids L.P., a wholly owned subsidiary of the Taykwa Tagamou Nation. Under the partnership agreement, Coral Rapids L.P. may acquire up to a 33 percent interest in the partnership. In May 2015, a 50-year hydroelectric ESA was executed by the IESO and the partnership for the development of the station and the supply of electricity and related products to the Ontario market. The ESA's 50-year term takes effect once the station achieves commercial operation. Construction work on the project commenced in the second quarter of 2015, and project financing was completed in October 2015. Commissioning of the generating station began in February 2017. The station is expected to be in service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. The project is tracking within the approved budget. **[MONITOR]**

Sir Adam Beck Pump Generating Station Reservoir Refurbishment

In August 2015, OPG's Board of Directors approved a project to refurbish the 300-hectare storage reservoir at the Sir Adam Beck Pump GS. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The refurbishment construction began in April 2016 and was completed in February 2017, ahead of the originally planned schedule date of April 2017 and below the approved budget of $58 million. The reservoir refurbishment work included the installation of a partial new reservoir liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life.

Ranney Falls Hydroelectric Generating Station

During 2016, OPG completed project design work for the construction of an additional 10 MW single-unit powerhouse on the existing Ranney Falls GS site. The new unit will replace an existing unit that reached its end of life in 2014. OPG plans to commence construction work in 2017, with an expected in-service date in the fourth quarter of 2019 and a budget of $77 million. **[MONITOR]**

Biomass Conversions at Atikokan and Thunder Bay Generating Stations

In April 2014, OPG ended coal-fired generation at the Thunder Bay GS, which marked the end of coal-fired generation in Ontario.

Following the cessation of coal-fired generation, OPG completed the conversion of the Atikokan GS to biomass in August 2014 and one unit at the Thunder Bay GS to advanced biomass in January 2015. The Atikokan GS is currently the largest generating station in North America fuelled by 100 percent biomass, a sustainable fuel recognized as beneficial to climate change mitigation, with an in-service capacity of 205 MW. The converted Thunder Bay unit has 153 MW of in-service capacity using advanced biomass fuel. Advanced biomass fuel is wood-based fuel that is thermally treated to allow it to be stored outdoors and withstand exposure to the weather, and contains significantly less nitrogen oxide and sulphur dioxide compared to coal emissions. Both conversion projects were completed ahead of schedule and within the approved cost estimates, and are operating under ESAs with the IESO.

Thermal and Solar Business Development

Nanticoke Solar Facility

In March 2016, Nanticoke Solar LP, then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of Six Nations of the Grand River Development Corporation, was selected through the first phase of IESO's Large Renewable Procurement (LRP) program to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands in Haldimand County, Ontario. The LRP program was a competitive bidding process for procuring large renewable energy projects in Ontario. In March 2016, Nanticoke Solar LP and the IESO executed a 20-year LRP contract, which formalized the terms and conditions for the development and operation of the new solar facility. In the first quarter of 2017 **[MONITOR]**, OPG purchased SECCLP's interests in Nanticoke Solar LP and is working to obtain approvals and permits required to enable the commencement of construction planned for the first half of 2018. The 20-year term of the LRP contract takes effect once the station achieves commercial operation, which is expected in the first quarter of 2019.

Decommissioning of Lambton and Nanticoke Coal-Fired Generating Stations

OPG ceased coal-fired generation at the Lambton and Nanticoke generating stations in September 2013 and December 2013, respectively. In November 2016 and July 2015, respectively, OPG announced that it would decommission the Lambton and Nanticoke generating stations as it could not commercially support continued preservation of these sites in light of the outlook for long-term electricity demand in the province that does not support the need for their future conversion. OPG is developing decommissioning plans for these two stations, which will ensure that they are closed safely, securely, and in an environmentally responsible manner.

DESCRIPTION OF THE BUSINESS

The Electricity Industry

The electricity industry is principally comprised of four components: generation, transmission, distribution, and marketing of energy and other services in wholesale and retail markets.

Generation is the production of electricity. Transmission is the transfer of electricity across high-voltage power lines from generating facilities to local areas. Distribution is the delivery of electricity within local areas to homes and businesses using relatively low-voltage power lines. Energy marketing relates to the purchase of large amounts of electricity or equivalent financial products, and the subsequent re-selling in smaller quantities to third parties in either the wholesale or retail markets.

Electricity has traditionally been generated in large, multi-unit, centralized facilities. These facilities are usually classified by: (i) the type of fuel used; (ii) capacity, typically expressed in MW; and (iii) dispatch mode (being whether or not the electricity generated by a particular facility is dispatched to meet peak, intermediate or baseload demand). The energy produced by a facility is generally expressed as its output over the time the facility operates, typically in terms of MWh. Increasingly, new supply from smaller scale, largely intermittent, renewable sources such as wind, solar, and bio-energy is being integrated into the power system, connected either directly to the transmission system or embedded in distribution networks. Distributed generation involves production of electricity closer to end users and away from large scale production facilities that require more transmission. Electricity systems typically require new capital expenditures and processes in order to accommodate intermittent generators.

Electricity is an essential commodity that cannot be stored without converting to other forms, a process that is more difficult in large volumes. Therefore, electricity supply must instantaneously match demand to maintain the stability and reliability of the electrical power system. This is accomplished by coordinating the supply of and demand for electricity, a responsibility typically assigned to regulated regional system operators. Electricity systems have evolved on a regional basis and are connected to neighbouring regional power grids. Such connections enhance system reliability and permit the economic purchase and sale of electricity between electricity markets.

Ontario's Electricity Industry

OPG's predecessor, Ontario Hydro, served as a vertically integrated electric utility in Ontario. Following the adoption of a restructuring plan for Ontario's electricity industry pursuant to the *Energy Competition Act, 1998,* five principal successors to Ontario Hydro's integrated electricity business began operating as separate entities on April 1, 1999:

- OPG, which purchased and assumed the electricity generation, wholesale energy, and ancillary services businesses of Ontario Hydro;
- Hydro One, which purchased and assumed the transmission, distribution, and retail energy services businesses of Ontario Hydro;
- the Independent Electricity Market Operator (later renamed the IESO), which was formed to act as both the independent electricity system operator and the market operator. The IESO is responsible for the dispatch of generation to meet demand, the control of the Ontario transmission grid, and the operation of energy and ancillary markets;
- the Electrical Safety Authority, which was established to carry out electrical equipment and electrical wiring safety and inspection functions; and
- the Ontario Electricity Financial Corporation (OEFC), which is the legal continuation of the former Ontario Hydro and is responsible for managing the debt and certain other obligations not transferred to other successor companies of Ontario Hydro.

OPG purchased and assumed all of the interest of Ontario Hydro in and to all officers, employees, assets, liabilities, rights and obligations of Ontario Hydro directly or indirectly relating in any manner to the applicable activities carried on by Ontario Hydro as of April 1, 1999, pursuant to the transfer orders made by Order-in-Council under the *Electricity Act, 1998*. The transfer orders provide that if they fail for any reason to fully and effectively in law transfer any such asset, right, liability or obligation or that if such transfer would constitute a breach of the terms of the asset, right, liability or obligation or of any applicable law, such assets, rights, liabilities or obligations are not transferred, but are held by the OEFC for the benefit of OPG.

Ontario's competitive electricity market was opened by the IESO in 2002. The market is used to manage the purchase and sale of wholesale electricity in the province.

Since the opening of the competitive market, Ontario's power supply mix has experienced significant change. A significant amount of new capacity has been added, while coal-fired generation, which at its peak accounted for approximately 6,500 MW of capacity, has been eliminated. New natural gas powered capacity of approximately 5,000 MW as of the end of 2016 has largely replaced the peaking capacity previously provided by coal-fired generation, while the return to service of Units 1 and 2 at the Bruce A GS in 2012 added approximately 1,500 MW of baseload nuclear generation. New wind and solar capacity of over 6,700 MW has also been added as of the end of 2016, toward the longer-term targets set out in Ontario's 2013 LTEP. In September 2016, the Government of Ontario suspended the planned second phase of the IESO's LRP procurement process for over 1,000 MW of additional renewable generation capacity that was about to begin. The updated LTEP, scheduled to be released in 2017, is expected to include revised plans and targets for renewable generation in Ontario.

While electricity supply in Ontario has increased, the province's electricity demand as reported by the IESO has fallen by approximately 9 percent over the last decade, largely due to changes in economic conditions and conservation measures, and also in part due to the addition of small scale solar generation embedded in the distribution system. Embedded generation reduces the demand supplied by grid-connected generation. Reducing electricity demand by encouraging conservation and demand management has been a key part of the Government of Ontario's plan to reduce greenhouse gas (GHG) emissions from the province's electricity sector. Shorter-term fluctuations in electricity demand are impacted by variations in seasonal weather conditions. Ontario's electricity demand as reported by the IESO was 137.0 TWh in 2016, which excludes electricity exports out of the province.

For further details on the LTEP, refer to *General Development of the Business – General Development – Ontario's Long-Term Energy Plan and New Nuclear Units.*

Ontario Electricity Market Activities

Real-time energy supply needs are met through the wholesale market administered by the IESO, with the market clearing price, the Hourly Ontario Energy Price, set by offers or bids into the market. OPG offers its generation into this real-time energy market, or spot market, to be dispatched by the IESO. The IESO receives hourly offers from electricity generators and importers to provide energy, along with bids to withdraw energy from a few flexible loads and exporters, and then schedules the lowest-cost offers and bids needed to meet demand every five minutes.

Virtually all generators in Ontario have bilateral contracts with the IESO that provide for payments that are different from the market price of electricity. In addition, the prices for all of OPG's nuclear and most of its hydroelectric stations are set by the OEB. The difference between the market price and the prices paid for regulated and contracted generation, as well the cost of conservation and demand management programs, are charged to Ontario electricity consumers through the Global Adjustment portion of the total price of electricity.

Maintaining power system reliability requires a continuous balance of supply and demand. Some generators are needed to produce a constant supply of energy to meet basic energy needs (baseload generation), while others are needed to adjust energy output to match changes in demand (peaking and intermediate generation). OPG's nuclear generating stations operate as baseload facilities, whereas the hydroelectric stations operate as baseload, intermediate or peaking stations, depending on their physical characteristics and hydrological conditions. OPG's thermal stations operate as peaking facilities.

SBG occurs when electricity production from the baseload facilities is greater than the market demand for electricity. Baseload generation supply surplus in Ontario is managed by the IESO, mainly through generation reductions at hydroelectric and certain nuclear stations and other grid-connected renewable resources. The prevalence of SBG conditions is impacted by weather conditions which affect electricity demand, wind and solar generation quantities, as well as water flows and therefore the availability of hydroelectric power. In 2016, OPG lost 4.7 TWh of hydroelectric generation due to SBG conditions. In each of 2015 and 2014, OPG lost 3.2 TWh of hydroelectric generation due to SBG conditions. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions,

which represents the majority of OPG's hydroelectric production forgone due to SBG conditions to date, has been offset by a regulatory variance account authorized by the OEB. During 2016, 2015 and 2014, generation losses at OPG's regulated hydroelectric stations due to SBG conditions were 4.3 TWh, 2.8 TWh and 1.9 TWh, respectively. OPG has not foregone any electricity production at its nuclear stations due to SBG conditions.

The OEB has authorized an additional pricing mechanism for OPG's regulated hydroelectric generation that provides a financial incentive to OPG to shift hydroelectric generation from lower market price periods to higher market price periods. This is intended to benefit customers through the displacement of generation from the relatively higher cost sources such as natural gas. The time-shifting is made possible by the ability to store water in reservoirs located at a number of OPG's hydroelectric facilities, including the Sir Adam Beck Pump GS.

The IESO also administers the operating reserve market and a market for ancillary services. The objective of the operating reserve market is to ensure that additional supplies of energy are available to maintain power system reliability following an unforeseen event. Ancillary services include regulation service, reactive support, black start capacity, and other services required to maintain the reliability of the Ontario electricity system. OPG participates in these markets. Revenues earned by OPG's regulated facilities from providing services into these markets are applied by the OEB to reduce regulated prices for electricity generated from these facilities.

OPG and other Ontario electricity market participants are required to comply with market rules issued by the IESO. As an owner and operator of generating stations, OPG is also subject to reliability standards as set out by the North American Electric Reliability Corporation (NERC), Northeast Power Coordinating Council (NPCC) and the IESO. NERC, NPCC and IESO are standards authorities with the ability to create or modify reliability standards. Such standards are binding on OPG pursuant to the OEB-issued electricity generating license and the IESO market rules. The IESO monitors compliance with and enforces the market rules and coordinates with system operators and reliability agencies in other jurisdictions to ensure energy adequacy and security across the interconnected bulk electricity market in North America.

Interconnected Markets

The interconnected markets are electricity markets in neighbouring provinces and states whose transmission systems are connected to the Ontario power grid, either directly or through other contiguous interconnected markets. Ontario's market is interconnected with the United States (U.S.) northeast, U.S. midwest, Manitoba, and Québec. Market intermediaries wishing to import or export electricity between Ontario and the interconnected markets are required to schedule these transactions through the Ontario spot market. OPG and its wholly owned subsidiary, OPG Energy Trading (OPGET), participate in the interconnected markets. For further details on OPGET, see *Description of the Business – Services, Trading and Other Non-Generation Segment.*

Interconnection transmission capabilities between Ontario and the interconnected markets are subject to limitations, which can be physical or weather dependent. Planned or forced outages to transmission lines and other equipment reduce transmission capacity. Wind and temperature conditions affect the transfer capability of all transmission lines on the electrical system. For example, higher ambient air temperature lowers capacity and higher wind speeds increase capacity. Overall power system parameters and conditions can also result in limitations on particular interties, being one or more transmission lines that connect Ontario to a neighbouring region. For example, high flow on one intertie may result in a reduction in the limit on another intertie.

Water Rights

OPG's management of available water resources directly affects the generation output, efficiency, and ultimately return on investment for the Company's hydroelectric assets. The watersheds on which OPG's hydroelectric generating facilities are located are shared by many users and are subject to various governance requirements, such as international, federal and provincial agreements, water power leases, and regulations. Accordingly, OPG must balance the economic, environmental, social and legal requirements associated with the watersheds when utilizing water to optimize electricity generation.

International Rivers

The six OPG hydroelectric generating stations subject to OEB rate regulation since 2008 are directly or indirectly supplied by two major international waterways, the Niagara River and the St. Lawrence River, and are subject to treaties with the U.S. relating to water use. These stations represent approximately 45 percent of OPG's total in-service hydroelectric capacity.

Through a series of agreements between the Government of Canada and the Province, and certain federal and provincial laws, OPG has been granted the right to exercise Canada's rights with respect to the construction, maintenance, and operation of generating facilities under the *Boundary Waters Treaty of 1909* and the *Niagara Diversion Treaty of 1950* between Canada and the U.S. Both of these treaties continue in perpetuity but are terminable by either party with 12 months prior written notice. Given the significance of these treaties, OPG does not expect either party to exercise their respective termination rights in the foreseeable future.

The *Boundary Waters Treaty of 1909* established the International Joint Commission with the mandate of regulating shared water uses and preventing and resolving disputes between U.S. and Canada. In December 2016, the International Joint Commission issued an order implementing a new plan to manage water levels and flows in Lake Ontario and the St. Lawrence River, effective January 7, 2017. The new plan, which replaced the existing plan in use since 1963, is intended to allow for more natural water levels, while minimizing impacts to other users, including hydroelectric power production. No significant changes in OPG's operations are expected as a result of the new plan.

The *Niagara Parks Act* (Ontario) gives the Niagara Parks Commission the authority to grant certain rights to use the waters of the Niagara River for purposes of power generation. By agreement with OPG, the Niagara Parks Commission has agreed not to grant any rights to third parties until after 2056.

Under an agreement between OPG and the St. Lawrence Seaway Management Corporation, a federal agency, the DeCew Falls generating stations use water that is transported along the Welland Canal from Lake Erie. The agreement has been renewed through June 30, 2038.

The Province has granted OPG the right to use water from the International Rapids section of the St. Lawrence River for power generation at the R.H. Saunders GS, subject to an agreement between the Government of Canada and the Province. The Government of Canada has the right, upon notice and after unsuccessful arbitration, to take over the operation of and title to the R.H. Saunders GS in the unlikely event of a breach of the agreement by the Province.

Interprovincial Rivers

Four of OPG's hydroelectric stations are located on the Ottawa River, which forms part of the Ontario-Québec border. These stations represent approximately 12 percent of OPG's total in-service hydroelectric capacity. Three of these stations are subject to 999-year leases with each of the Provinces of Ontario and Québec. The fourth station is subject to a water power lease with the Province of Ontario, which is renewable to 2031, subject to certain conditions. OPG's use of water from the Ottawa River basin is subject to guidelines established by the Ottawa River Regulation Planning Board, comprised of government and industry representatives.

Interior Rivers

Fifty-five of OPG's hydroelectric stations, representing approximately 43 percent of OPG's total in-service hydroelectric capacity, are located on 20 other Ontario river systems. OPG holds water power leases, Crown leases and licences with the Province on the river systems that supply 37 of these stations. These leases and licences have expiry dates, including renewal periods, ranging between 2023 and 2075. Certain of these leases provide that the leased property and any fixed improvements, including generating stations and dams, will revert to the Province on the expiry of the lease. OPG intends to work towards new leases and licenses for these stations. OPG's use of Ontario's interior watersheds is constrained by restrictions contained in certain of the water power leases and licences. Eight of the 55 stations are located on the Trent and Rideau Waterways and are operated pursuant to licences from the federal government. These licences expire in February 2020. The process to renew the licences is currently underway with Parks Canada. Ten of the 55 stations are not subject to leases or licences.

The current provincial regulatory framework requires the development of Operational Plans for new storage dams and generating stations in Ontario, except for those on international rivers, interprovincial rivers, or rivers under federal jurisdiction. These plans include any limitations on water flows and elevations, and historically have been a component of formal Water Management Plans (WMPs). WMPs were established under the *Lakes and Rivers Improvement Act* (Ontario) and *Water Management Planning Guidelines for Waterpower (2002)*, on a watershed basis, in consultation with the Ontario Ministry of Natural Resources and Forestry (MNRF), federal fisheries authorities, and stakeholders, such as recreational and commercial users, local communities, environmental groups, and Indigenous groups. In October 2016, the MNRF published a Technical Bulletin, *Maintaining Water Management Plans (2016),* eliminating the need for WMPs where they are not already in place, removing the expiry date from existing WMPs, and outlining the requirements for Operational Plans for new waterpower works going forward. Existing WMPs continue to be in effect. WMPs and Operational Plans may be amended as certain conditions change or new data becomes available. OPG operates in compliance with WMPs and Operational Plans.

The operations of certain OPG stations in northwestern Ontario can impact users in Manitoba and are subject to guidelines and directions provided by the Lake of the Woods Control Board, which is comprised of Ontario, Manitoba and federal government representatives.

Dams and Waterways

In Canada, dams fall under provincial jurisdiction, with the exception of dams situated in interprovincial and international boundary waters and canals, and those owned by the Government of Canada. The majority of OPG's dams fall within the jurisdiction of the Province, with approximately 20 dams falling within the jurisdiction of the Province of Québec and 13 dams associated with the Trent-Severn and Rideau Waterways falling under federal jurisdiction. The International Joint Commission has an oversight role for dams and associated works on international boundary waters, including the St. Lawrence River and the Niagara River.

The Province regulates dams under the *Lakes and Rivers Improvement Act* (Ontario) administered by the MNRF. The legislation requires MNRF approval for activities such as the construction, alteration, improvement, or repair of dams.

In August 2011, the MNRF published a revised set of Technical Guidelines for dams, following a period of public consultation. The Technical Guidelines represent the government standards for dam safety. OPG was an active participant in developing the Technical Guidelines through the MNRF's advisory panel. In general, OPG practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the Technical Guidelines.

Currently, there is no federal or provincial regulation with respect to public safety around dams that addresses dam public safety issues relating to changes in operating water levels, discharges from the hydroelectric or dam facilities, and other waterways-based hazards posed by such facilities. The

Navigation Protection Act (Canada) does, however, require OPG to obtain approvals for the installation of all in-water works, such as safety booms and buoys associated with the OPG Waterways Public Safety Program. For additional details on OPG's Dam Safety and Waterways Public Safety Programs, see *Description of the Business – Workplace Safety and Public Safety – Dam Safety and Waterways Public Safety*.

Generation Operations

Nuclear (Regulated – Nuclear Generation segment)

Overview of Generating Facilities

OPG owns and operates two nuclear generating stations, the results of which are reported in the Regulated – Nuclear Generation business segment. The Pickering GS, comprised of six operating units and two units in a permanent safe shutdown state, is located on the shore of Lake Ontario in Pickering, Ontario. As at December 31, 2016, the station's total in-service capacity was 3,094 MW. Four of the eight Pickering units originally went into service in the 1970s. A decision was made by Ontario Hydro in the late 1990s to place these four units in voluntary lay-up. In 2003 and 2005, respectively, two of the four laid-up units were returned to commercial operation, with the two remaining units placed in a permanent safe shutdown state. The other four operating units have been in service since between 1983 and 1986.

The Darlington GS, comprised of three operating units and one unit, Unit 2, undergoing refurbishment as of mid-October 2016, is located on the shore of Lake Ontario in the Municipality of Clarington, Ontario. As at December 31, 2016, the total in-service capacity of the three operating units was 2,634 MW. Unit 2 has a capacity of 878 MW. All four Darlington units have been in service since the early 1990s. Both the Pickering GS and the Darlington GS have been designed to operate at full power as baseload facilities.

The performance of OPG-operated nuclear generating stations during 2016, 2015 and 2014 was as follows:

Regulated – Nuclear Generation Performance (2014 to 2016)

Station	No. of In-Service Units	Unit Capability Factor [1] (%)		
		2016	2015	2014
Darlington	3[2]	**89.5**	76.9	92.1
Pickering	6	**75.2**	79.4	75.3
Total	9			

1 Unit capability factor is the amount of energy a generating unit is capable of producing as a percentage of its maximum output assuming no external constraints such as transmission limitations. The nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment.

2 Excluding Unit 2, which has been undergoing refurbishment since October 15, 2016.

The lower Unit Capability Factor at the Darlington GS in 2015 was primarily due to the four-unit vacuum building outage in 2015, which required the shutdown of all units. The higher Unit Capability Factor at the Pickering GS in 2015 was primarily due to the improvement in reliability of the station in 2015, associated with improved equipment reliability and human performance. In 2016, the Pickering GS experienced a higher number of unplanned outage days as a result of emergent discovery work during planned outages, which contributed to the lower Unit Capability Factor in 2016.

OPG's Bruce A and Bruce B nuclear generating stations have been leased on a long-term basis to Bruce Power. The stations are located in the Municipality of Kincardine, Ontario on the shore of Lake Huron.

For additional information on OPG's nuclear operations, see *Core Business and Strategy – Operational Excellence – Electricity Generation Production and Reliability – Nuclear Operations* in the Company's 2016 MD&A.

Nuclear Generation Technology

Nuclear generation harnesses the energy released during controlled nuclear fission reactions to produce steam that is used to drive turbines to generate electricity. Nuclear generation has two main advantages. It is a relatively low marginal-cost generation technology, and it produces virtually no GHG, sulphur dioxide, nitrogen oxide, or mercury emissions. The latter advantage has become more significant as governments implement climate change action plans and stricter air emission standards.

However, in contrast to other types of generating facilities, notwithstanding the lower fuel costs, nuclear generating stations incur nuclear waste management and decommissioning costs and greater operating and maintenance expenses. In addition, the construction of nuclear generating stations entails greater initial capital costs than other generation technologies. The higher initial costs reflect the complexity of the technical processes fundamental to nuclear electricity generation, and the additional design and safety precautions taken to protect the public from potential risks associated with nuclear operations.

All of OPG's nuclear generating stations use CANada Deuterium Uranium (CANDU) technology reactors. CANDU is a pressurized-heavy-water, natural-uranium power reactor, originally designed in the 1960s by a consortium of Canadian government agencies and private industry. CANDU reactors are unique in their use of natural-uranium fuel and deuterium oxide, or heavy water, as both a moderator to slow down the fission process and a coolant within the reactor. The refuelling system is also unique in that CANDU reactors can be refuelled at full power. This is due to the subdivision of the reactor core into hundreds of separate fuel channels, each holding a single string of natural uranium fuel bundles, allowing for greater fuel efficiency. In contrast, U.S. reactors, which use enriched uranium fuel, must be shut down during refuelling. All nuclear power reactors in Canada use CANDU technology. CANDU reactors are currently operating in Ontario, New Brunswick, Argentina, Romania, South Korea, India, Pakistan and China.

Nuclear Fuel Procurement

OPG's nuclear fuel supply chain involves the purchase of uranium concentrate, the purchase of services for the conversion of uranium concentrate to uranium dioxide, and the purchase of services for the manufacture of fuel bundles containing the uranium dioxide. OPG currently purchases each of these components separately and maintains ownership of the uranium throughout the supply chain. OPG maintains a portfolio of multi-year supply contracts for uranium concentrate with domestic and foreign suppliers located in uranium-producing regions and occasionally enters into the short-term spot market to acquire a portion of its uranium needs. OPG's nuclear fuel bundles are supplied by Canadian-based manufacturers.

Nuclear Regulation

The *Nuclear Safety and Control Act* (NSCA) establishes the mandate and authority of the CNSC to make regulations governing all aspects of the development and application of nuclear energy in Canada. The NSCA grants to the CNSC the power to act as a court of record, the right to make regulations, the power to require financial guarantees for nuclear waste management and nuclear facilities decommissioning as a condition of granting a licence, order-making powers, and the power to impose monetary penalties for licence infractions. The NSCA also grants the CNSC the power to require periodic re-certification of nuclear operators and to set requirements for various nuclear facility security measures. It also provides for regulatory authority over environmental matters, including a requirement that licence applicants make adequate provision for the protection of the environment. The NSCA grants the CNSC licensing authority for all nuclear activities in Canada, including the issuance of new licences to operators, the renewal of existing licences, and amendments to existing licences.

A fundamental principle in nuclear regulation is that the licensee bears the responsibility for safe operation, with the CNSC setting safety objectives in areas such as radiation protection and physical security for nuclear generating stations and the transport of radioactive materials. The CNSC verifies compliance with the licence and performs audits and inspections of the licensee's performance against the objectives. The CNSC also has issued guidance documents to assist licensees in complying with regulatory requirements. Requirements specified in these guidance documents have been incorporated into the design and operating documents for OPG's nuclear generating stations.

Since the operation and regulation of nuclear energy has transboundary impacts, Canada has become a signatory to various international conventions relating to nuclear energy and emergency responses and is bound by conventions that it has ratified. In addition, the CNSC has a bilateral information exchange and co-operation agreement with the U.S. Nuclear Regulatory Commission, which provides among other things, for the prompt, reciprocal notification of reactor safety problems that could affect both U.S. and Canadian nuclear generation facilities.

The CNSC publishes an annual report on the safety performance of Canada's nuclear power plants. The report assesses how well plant operators are meeting regulatory requirements and program expectations in the areas of operational performance, safety analysis, radiation protection, waste management and conventional health and safety. In its 2015 annual report, the CNSC gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". The Pickering GS received this rating for the first time, while the Darlington GS achieved the rating for the seventh year in a row.

All of OPG's nuclear power reactor operating licences and waste facility licences are current and up to date. In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF) located at the Bruce generating stations' site to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications will be presented to the CNSC at a public hearing in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018. The current licence for the Darlington Waste Management Facility expires on April 30, 2023. Further details on the operating licences for the Darlington GS are found under *General Development of the Business – Nuclear Business Development – Darlington Refurbishment* and for the Pickering GS under *General Development of the Business – Nuclear Business Development – Pickering Extended Operations to 2024.*

For details on Canada's nuclear liability regime and related insurance coverage, see *Description of the Business – Insurance*.

Fukushima Daiichi Response

In response to the 2011 Fukushima Daiichi incident in Japan, OPG has confirmed that its stations are safe and that systems and procedures are in place to withstand significant emergencies. In 2013, a systematic review and verification of defences against external hazards was completed at OPG-operated stations. The review showed that:

- the nuclear safety systems and multiple back-up power systems in place at the stations are effective; and
- the current design of the stations is strong and the stations are able to withstand extreme external events.

The review also provided recommendations for further opportunities to enhance the safety margin and to develop preparedness for unexpected events that go beyond the extreme events already considered in the design of the stations.

OPG's action plan in response to the Fukushima Daiichi event is well aligned with the CNSC's Fukushima Action Plan, issued in mid-2012. In 2013, OPG submitted its plans for the majority of the CNSC's Fukushima Action Plan items applicable to OPG-operated stations to the CNSC. In January 2015, the

CNSC recognized OPG's efforts in this area and confirmed that all of the Fukushima action items were closed. OPG's Fukushima Implementation Plan included a number of key safety enhancements for providing additional back-up capability to increase OPG's flexibility to respond to unexpected and highly unlikely external events that can impact either a single unit or multiple units at the same time. CNSC staff concluded that OPG had strengthened reactor defence and enhanced its emergency response at both the Darlington GS and the Pickering GS in response to the lessons learned from the Fukushima Daiichi incident.

Nuclear Generating Station Life

Service life predictions for OPG's nuclear stations are developed by assessing the impacts of a number of operating, technical, and regulatory considerations on both unit and station economics. A decision by OPG to remove a unit from service would be primarily an economic decision that becomes more likely as the number of components requiring replacement and the frequency and duration of inspections required to ensure a unit's fitness for service increases. The key life-limiting components at OPG's nuclear stations include fuel channels, feeder tubes, steam generators, and other reactor components. End-of-service life predictions are reviewed as new information on possible degradation mechanisms becomes available and as future generation expectations are revised.

In December 2015, OPG revised the accounting assumptions for the estimated useful lives of the nuclear generating stations it operates. Effective December 31, 2015:

- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015; and
- the average service life of the Pickering GS was extended by less than one year to reflect the technical confidence that all six operating units of the station will operate to the end of 2020.

The accounting end of life assumptions for the Pickering GS are expected to be reassessed when OPG's further technical work confirms that the longer fuel channel life necessary to extend Pickering operations will be achieved and that the units would be fit to operate beyond 2020, taking into account the requirement for the CNSC's approval. Further information can be found in the section, *Nuclear Business Development*, under the heading, *Pickering Extended Operations to 2024*.

Nuclear Facility Planning

OPG uses a structured approach to identify and prioritize projects to optimize returns from nuclear station reinvestment within the constraints imposed by technical and financial requirements, while ensuring that safety, environmental, and other regulatory programs are of the highest priority. Input from predictive maintenance programs, life cycle management plans, and system health monitoring is used to determine the activities necessary to sustain and improve nuclear unit performance.

A structured framework modeled on the best practices identified by the Electric Power Research Institute, the Institute for Nuclear Power Operations and the World Association of Nuclear Operators (WANO) is used to optimize the maintenance of the nuclear generating stations and assess the health of the facilities. The structured framework includes predictive maintenance programs, which combine technologies and human expertise to analyze equipment performance, maintenance and design data in order to make timely decisions about the scope and timing of inspections and maintenance for major or critical equipment. The predictive maintenance program for each station is prioritized on the basis of the importance of the equipment for reactor safety. Life cycle management plans are maintained for critical station components and are updated annually to incorporate operating experience and new information. The life cycle plans define the inspection and maintenance programs required to ensure that these components perform in accordance with their design basis. In addition, system engineers conduct performance monitoring of station systems according to system performance monitoring plans that are based on a comparison of performance indicators against established targets to improve system performance. System performance is assessed by collecting, trending and analyzing station data. This information is reported in system health reports which are updated, at a minimum, annually.

OPG's practices impacting the performance of the nuclear stations are audited regularly by WANO, with identified areas for improvement acted upon with priority. During 2016, OPG participated in two WANO peer evaluations to compare against standards of excellence through an in-depth, objective review by an international panel of industry experts. In May 2016, OPG hosted a WANO peer evaluation for the Darlington GS. The review maintained Darlington's excellent standing as one of the top performing nuclear plants in the world.

In September 2016, OPG hosted a team of experts from the International Atomic Energy Agency at the Pickering GS to conduct a standard Operational Safety Review Team mission. The team conducted an in-depth review of performance and adherence to international safety standards. A report on the mission is expected to be released in the second quarter of 2017.

Nuclear planned outages are necessary to execute inspection and maintenance work related to asset management and regulatory requirements for systems and equipment where access is not possible under normal operating conditions. Planned outages also give OPG an opportunity to perform system and equipment upgrades, project work, configuration changes, and other improvements and modifications. The nuclear generation plan, by reference to the station's life cycle management plans, establishes the number, frequency and duration of the outages for each year required to ensure the continued safe and reliable long-term operation of the plant and its compliance with CNSC regulatory requirements.

The outage cycle determines the number of planned outages at each station in a particular year. The Darlington GS is on a 36-month outage cycle, where each of the four units undergoes an outage every three years, resulting in one or two outages per year for the station. The Pickering GS is on a 24-month outage cycle, resulting in each of the six units having an outage every two years, and three outages per year for the station. In addition, on a periodic basis all units at each station are required to be shut down to allow for inspection and maintenance on the station vacuum building, containment systems and other safety systems. The CNSC currently requires these outages every 12 years at the Darlington GS and every 10 years at the Pickering GS. The most recent vacuum building outage took place at the Darlington GS in 2015 and at the Pickering GS in 2010.

Nuclear Ancillary Operations

OPG's nuclear generating units contain approximately 7,500 tonnes of deuterium oxide, or heavy water, not including heavy water contained at the leased Bruce stations. The heavy water is required to operate CANDU reactors. Ontario Hydro ceased the operation of its heavy water plants in 1997 and the plants were subsequently decommissioned. There are currently no heavy water plants in Canada. OPG believes that its existing inventory of heavy water will be sufficient to replenish supplies as a result of normal operating losses at its nuclear stations, including the refurbishment of the Darlington GS. OPG believes sufficient quantities of heavy water are also available for possible changes in operating conditions or for new nuclear generating facilities. OPG seeks opportunities to sell available surplus quantities of heavy water from its inventory.

Tritium is a radioactive substance produced as a by-product of operating CANDU reactors, through the use of heavy water in the reactor moderator and heat transport systems. OPG operates a specialized facility at its Darlington site, the Darlington Tritium Removal Facility (TRF), which removes tritium from the tritiated heavy water (detritiation) used at the nuclear generating stations, in order to control the occupational dose exposure to employees and limit the amount of tritium released to the environment. The extracted tritium is chemically immobilized, placed in special containers, and safely stored in a vault. The Darlington TRF is also expected to be used to detritiate heavy water during the eventual decommissioning of OPG's nuclear generating stations. Some tritium is sold to government-approved organizations for authorized commercial and health industry uses. OPG also provides detritiation services to Bruce Power. Opportunities for providing detritiation services to other third parties are limited because of storage and capacity restrictions at the Darlington TRF.

Cobalt-60 produced and sold by OPG is used mainly in the health industry to sterilize surgical and medical supplies. Cobalt-60 is produced in Units 6, 7, and 8 at the Pickering GS. Cobalt-60 can be produced in reactors which, like the CANDU reactors, use adjuster rods to regulate power. The production process involves replacing the stainless steel rod by a rod containing Cobalt-59, which is isotopically converted into Cobalt-60 after lengthy exposure to the atomic reaction in the reactor core. After two years, the rods are removed, cut, and packaged for sale as Cobalt-60, and new rods are inserted in the reactor to continue the production cycle.

OPG's revenues from the sale of the above isotopes and detritiation services, as well as a portion of the revenues from the sale of surplus heavy water are applied by the OEB to reduce regulated prices for electricity produced from OPG's nuclear facilities.

Hydroelectric (Regulated – Hydroelectric and Contracted Generation Portfolio Segments)

Overview of Generating Facilities

Hydroelectric generating stations use the energy of falling water to drive hydraulic turbines that generate electricity. OPG's hydroelectric stations provide one of the Company's competitive advantages – a reliable, relatively low-cost source of renewable energy free of air emissions. Electricity generation from OPG's hydroelectric facilities depends primarily upon the availability of water, which is affected largely by natural factors such as precipitation and evaporation. It is also impacted by the prevalence of SBG conditions.

OPG currently owns and operates 65 hydroelectric generating stations and 238 associated dams located on 24 rivers systems across Ontario. Effective January 1, 2014, the results of 54 of these stations that are rate regulated by the OEB are reported in the Regulated – Hydroelectric segment. The results of the remaining 11 stations are subject to long-term ESAs with the IESO and are included in the Contracted Generation Portfolio segment. The 54 regulated hydroelectric stations include the 48 stations prescribed for rate regulation beginning in 2014 and the six stations that have been rate regulated by the OEB since 2008.

As at December 31, 2016, OPG's regulated hydroelectric facilities had a total in-service capacity of 6,421 MW and the non-regulated hydroelectric facilities had a total in-service capacity of 1,014 MW. OPG's hydroelectric generating stations range in age from two to over 118 years and include the oldest assets in OPG's generation portfolio.

Hydroelectric ESAs with 50-year terms are in place for the following hydroelectric facilities:

- Lac Seul and Ear Falls generating stations, with an expiry date of February 2059;
- Healey Falls GS, with an expiry date of April 2060;
- Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations, with an expiry date of December 2060;
- Little Long, Harmon, Smoky Falls, and Kipling generating stations, with an expiry date of January 2064; and
- Peter Sutherland Sr. GS, which is being commissioned **[MONITOR]** and will be subject to a 50-year ESA upon achieving commercial operation.

OPG's hydroelectric facilities are operated and maintained by the following five regional operations groups:

- Niagara Operations – includes the three Sir Adam Beck stations located on the Niagara River and the two DeCew Falls facilities located on the Welland River. These facilities have been rate regulated by the OEB since 2008.
- Eastern Operations – includes the following ten regulated hydroelectric generating stations: the R.H. Saunders GS on the St. Lawrence River; the Otto Holden, Des Joachims, Chenaux, and Chats Falls generating stations on the Ottawa River; and the Mountain Chute, Barrett Chute,

Calabogie, Stewartville, and Arnprior generating stations on the Madawaska River. The R.H. Saunders GS has been regulated by the OEB since 2008.

- Central Operations – includes 25 regulated and one non-regulated hydroelectric generating station on the following ten river systems in central Ontario: Beaver River, Mississippi River, Muskoka River, Otonabee River, Rideau River, Severn River, South River, Sturgeon River, Trent River, and Wanapitei River.
- Northeast Operations – includes five regulated and eight non-regulated hydroelectric stations in northeastern Ontario. The regulated stations are the Chute and Lower Notch generating stations on the Montreal River; the Abitibi Canyon and Otter Rapids generating stations on the Abitibi River; and the Matabitchuan GS on the Matabitchuan River. The non-regulated stations are the Little Long, Harmon, Smoky Falls, and Kipling generating stations on the Lower Mattagami River; the Wawaitin, Sandy Falls, and Lower Sturgeon generating stations on the Upper Mattagami River; and the Hound Chute GS on the Montreal River.
- Northwest Operations – includes nine regulated and two non-regulated generating stations in northwestern Ontario. The regulated stations are the Pine Portage, Cameron Falls, and Alexander generating stations on the Nipigon River; the Silver Falls and Kakabeka Falls generating stations on the Kamanistikwia River; the Manitou Falls and Caribou Falls generating stations on the English River; the Aguasabon GS on the Aguasabon River; and the Whitedog Falls GS on the Winnipeg River. The non-regulated stations are the Lac Seul and Ear Falls generating stations on the English River.

These operations groups are also responsible for the operation and maintenance of OPG's thermal facilities discussed under the heading, *Description of the Business – Generation Operations – Thermal (Contracted Generation Portfolio Segment)*.

The performance of OPG's hydroelectric generating stations during 2016, 2015 and 2014 was as follows:

Hydroelectric Generation Performance (2014 to 2016)

	Regulated – Hydroelectric			**Contracted Generation Portfolio – Hydroelectric**			**Total Hydroelectric**		
	2016	**2015**	**2014**	**2016**	**2015**	**2014**	**2016**	**2015**	**2014**
Availability *(%)* [1]	**89.0**	91.2	91.4	**77.3**	88.6	90.2	**87.5**	90.9	91.7

[1] Availability refers to the measure of the reliability of a hydroelectric generating unit. It is represented by the percentage of time the generating unit is capable of providing service, whether or not it is actually generating electricity, compared to the total time for the respective period.

Lower availability of the Regulated – Hydroelectric facilities during 2016 was primarily due to the planned reservoir refurbishment project at the Sir Adam Beck Pump GS. Lower availability of the Contracted Generation Portfolio hydroelectric facilities in 2016 was primarily due to a higher number of planned outage days at the Kipling and Harmon generating stations on the Lower Mattagami River.

OPG's objectives for the hydroelectric operations include operating and maintaining the generating facilities in an efficient and cost-effective manner, while enhancing their reliability and availability. The Company continues to evaluate and implement plans to increase capacity, maintain and improve performance, and extend the operating life of its hydroelectric generating assets. These plans are accomplished through multi-year capital investment and other programs, including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers, and controls. Over the next three years, OPG plans to increase the total capacity of its hydroelectric generating fleet by approximately 135 MW, which includes the Peter Sutherland Sr. GS and the Ranney Falls GS projects. OPG is also planning to repair, rehabilitate, or replace a number of aging civil

structures. Where economic and practical, OPG pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations.

Hydroelectric Facility Planning

Major components of hydroelectric facilities typically include: generating equipment such as turbines, generators and transformers; civil works such as powerhouses, dams, headworks, spillways and water conveyance canals and tunnels; and facilities required to operate and maintain the stations such as control rooms and work centres. Although there is a link between the age of a facility and the capital investment required to maintain that facility, age does not establish an upper limit on the expected useful life of hydroelectric facilities and dams. Regular maintenance and the replacement of specific components typically allow stations to operate for very long periods, especially for facilities built after 1925.

OPG operates seven staffed control rooms across Ontario that provide remote control and monitoring for all of OPG's hydroelectric generating facilities. These control rooms are designed to minimize the number of staffed control rooms, reduce control system failures, and increase the amount of information available for production planning.

OPG uses a structured portfolio approach to identify and prioritize projects for its hydroelectric asset investment program. Engineering reviews and station condition assessments are performed to determine short-term and long-term expenditure requirements to sustain or improve the performance of each facility. These may be followed by the preparation of a facility life cycle plan, which is performed on an as-needed basis for marginal assets or assets potentially requiring significant expenditures relative to the value of the facility. This approach is designed to identify necessary capital, operating and maintenance expenditures for each facility and to direct resources towards those facilities that can best maintain or enhance their value.

OPG utilizes a preventive maintenance program that provides a consistent method of identifying, scheduling, and executing maintenance activities at the hydroelectric facilities. The maintenance program is based on the concept of streamlined reliability-centred maintenance, whereby the type and frequency of preventive maintenance applied to an individual component is determined based on the nature and consequences of failure, balancing cost and risk.

The cornerstone of OPG's project prioritization and preventive maintenance approaches for the hydroelectric assets is that safety, environmental, and other regulatory programs are of the highest priority.

Water Management

OPG's water management strategy for its hydroelectric facilities is to safely utilize available water for generation of electricity in conformance with legal, environmental, operational, and WMP and Operational Plan requirements. OPG uses hydrological and meteorological data to manage water levels, water flows and water storage, and strives to schedule water use for optimum utilization and to minimize controllable water spills due to SBG conditions.

Gross Revenue Charge and Water Rental Payments

Hydroelectric generating stations in Ontario are subject to taxes and charges as prescribed by *Ontario Regulation 124/02* under the *Electricity Act, 1998*. These taxes and charges, referred to as Gross Revenue Charge (GRC), are based on station gross revenue, which is determined as the product of annual station energy generation and the prescribed revenue rate of $40/MWh (Gross Revenue). All OPG hydroelectric generating stations are subject to GRC Property Tax, which is determined by applying graduated tax rates, ranging from 2.5 percent to 26.5 percent through four tiers of production, to a station's annual Gross Revenue. GRC Property Tax payments are made to the OEFC. Hydroelectric generating stations that are subject to water power lease agreements with the MNRF are also subject to

GRC Water Rental charges in addition to GRC Property Tax payments. The GRC Water Rental charge is determined as 9.5 percent of a station's annual Gross Revenue. GRC Water Rental payments are made to the Ontario Ministry of Finance.

Annual land rental fees are paid to the MNRF as prescribed by Crown leases and licences of occupation which authorize OPG's tenure (including flooding rights), typically at storage dam sites.

The eight OPG hydroelectric generating stations located on the Trent River and Rideau Canal are subject to rental charges prescribed by licences with Parks Canada. These licences authorize OPG to occupy the lands, maintain and operate the powerhouses and dams, and utilize water that is surplus to navigation needs for the generation of electricity.

Water conveyance charges are paid to the St. Lawrence Seaway Management Corporation as prescribed by a lease agreement providing for the withdrawal of water surplus to navigation needs from the Welland Canal for utilization at the DeCew Falls generating stations. The water conveyance charges apply to the transport of water from Lake Erie through the Welland Canal to OPG's intakes at Allanburg.

Water rental payments are made to the Government of Québec, as prescribed by an agreement dated January 2, 1943 and a rate amending agreement effective January 2, 1993. These agreements pertain to the sharing of the water powers of the Ottawa River and were ratified by the Governments of Ontario and Québec. Water rental charges payable to the Province of Québec are based on one-half of the energy produced at the three regulated OPG hydroelectric generating stations located on the Ottawa River. The GRC payments made to the Province of Ontario with respect to these three sites are also based on one-half of the energy produced at the stations.

Under the aforementioned 1943 agreement, OPG also provides compensation to Hydro Québec for the generating value at OPG's stations on the Ottawa River attributed to the water diverted into the Ottawa River through the Dozois Reservoir in Québec. OPG shares in operation and maintenance costs pertaining to the dam enabling the Dozois diversion.

The GRC and water rental payments for the regulated hydroelectric stations are recovered by OPG through OEB-approved regulated prices applicable to these stations.

For further details on water rights, see *Description of the Business – Water Rights*.

Thermal (Contracted Generation Portfolio Segment)

Overview of Generating Facilities

Thermal generating stations use heat energy to drive steam turbines that generate electricity. OPG's wholly-owned operating thermal facilities are comprised of biomass-fuelled generating units at each of Atikokan GS and Thunder Bay GS, and the dual-fuelled generating Lennox GS, which is capable of burning either oil or natural gas. Effective January 1, 2014, the results of these facilities are reported in the Contracted – Generation Portfolio business segment.

The combined in-service capacity of the three operating thermal facilities was 2,458 MW as at December 31, 2016. The Lennox GS is located in Greater Napanee, Ontario and accounts for approximately 2,100 MW of the in-service capacity. The Atikokan GS is located in Atikokan, Ontario and has a total in-service capacity of 205 MW. The Thunder Bay GS is located in Thunder Bay, Ontario and its advanced biomass fueled unit has an in-service capacity of 153 MW.

Capacity and production from the Lennox GS are subject to an ESA with the IESO for the period from January 2013 to September 2022. The capacity and production from the Atikokan GS are subject to a ten-year ESA expiring in July 2024. For the Thunder Bay GS advanced biomass fueled unit, capacity and production are subject to a five-year ESA expiring in January 2020.

OPG's three thermal generating stations operate as peaking facilities, depending on electricity demand. This provides Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements and has enabled the system to accommodate the expansion of Ontario's renewable generation portfolio. The continued operation of these stations is expected to provide Ontario with capacity and peaking generation during the initial years of the refurbishment of the Darlington and Bruce nuclear facilities.

The three thermal generating stations are operated and maintained as part of regional operations groups used to operate and maintain the Company's hydroelectric facilities. The Lennox GS is operated under Eastern Operations, and the Atikokan and Thunder Bay generating stations are part of Northwest Operations.

Thermal stations that are no longer available to generate electricity are included in the Services, Trading and Other Non-Generation business segment once they are removed from service. This includes the Lambton GS and Nanticoke GS sites, which ceased coal-fired generation in 2013.

Contracted Generation Portfolio – Thermal Performance (2014 to 2016)

	2016	2015	2014
Equivalent Forced Outage Rate (%) [1]	**1.6**	11.2	8.9

[1] Equivalent Forced Outage Rate is an index of the reliability of a generating unit at OPG's thermal stations. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

The change in thermal EFOR in the three-year period was primarily due to an outage in 2015 to perform repair work at the Lennox GS.

Thermal Fuel Procurement

Due to the relatively low capacity factor of the Lennox GS, natural gas is purchased on the spot market, other than a small volume of fixed term natural gas required for non-generation operational services. Oil for the Lennox GS is contracted for and purchased on an as needed basis. Fuel switching at the station is based on market and fuel economics. Annual procurement of biomass fuel quantities for Atikokan GS and Thunder Bay GS is pre-determined by the corresponding ESAs. Agreements are in place with suppliers for the purchase of all biomass fuel pellets needed to provide fuel for the Atikokan GS for the duration of its ESA, and for most of the advanced biomass fuel pellets needed to provide fuel for the duration of the ESA for the Thunder Bay GS.

Thermal Facility Planning

OPG's facility planning approach is designed to identify necessary capital and operating and maintenance expenditures for each thermal facility. This planning approach aims to sustain facility availability for the remaining service life through station reinvestment within constraints imposed by technical, financial, safety, and system requirements, as well as regulatory and contractual limits. Periodic engineering reviews of major systems are conducted to identify performance issues, provide reinvestment recommendations where appropriate, and ensure that regulatory, safety and operating standards continue to meet expectations. OPG undertakes projects at thermal stations that are expected to achieve an appropriate return within the service life of the stations.

Thermal Station Decommissioning

OPG has recognized, and carries on its balance sheet, a liability to cover future expenditures to decommission and dismantle each of its thermal stations at the end of their service lives. This provision is not funded and is estimated on the basis of station closure. Costs previously incurred by OPG to

preserve Lambton and Nanticoke generating stations for potential conversion to natural gas in the future were not charged to the provision.

Portlands Energy Centre Partnership

OPG has a 49.95 percent partnership interest in Portlands Energy Centre L.P., a limited partnership formed with TransCanada Energy Ltd. (49.95 percent) and the general partner of the partnership, Portlands Energy Centre Inc. (0.1 percent). The shareholders of Portlands Energy Centre Inc. are OPG (50 percent) and TransCanada Energy Ltd. (50 percent). PEC is a 550 MW combined cycle generation natural gas turbine electricity generating facility located on the former R. L. Hearn GS site in the port area of downtown Toronto, Ontario. The station was declared in-service in a combined cycle mode in April 2009. PEC operates under an Accelerated Clean Energy Supply contract with the IESO and trades electricity in the Ontario electricity market.

The Contracted Generation Portfolio segment includes OPG's share of equity income from its 50 percent ownership interest in the station. OPG's share of the in-service generating capacity and generation volume from its interest in the station are included in the operating statistics for the segment.

Brighton Beach Power Partnership

OPG has a 49.95 percent partnership interest in Brighton Beach Power L.P., a limited partnership formed with ATCO Power Canada Ltd. (49.95 percent) and the general partner of the partnership, Brighton Beach Power Ltd. (0.1 percent). The shareholders of Brighton Beach Power Ltd. are OPG (50 percent) and ATCO Power Canada Ltd. (50 percent). Brighton Beach is a 580 MW combined cycle gas turbine electricity generating facility located on the former J.C. Keith GS site in Windsor, Ontario. The station began commercial operation in July 2004. Brighton Beach operates under a tolling arrangement with Shell Energy North America (Canada) Inc. (Shell Energy), pursuant to which Shell Energy owns and trades the electricity produced by the facility in return for the supply of gas and the fees payable under the tolling agreement. Shell Energy's financial obligations are guaranteed by Shell Energy North America (US) L.P. (Shell L.P.), and Shell L.P.'s obligations are in turn guaranteed by Shell Oil Company.

The Contracted Generation Portfolio segment includes OPG's share of equity income from its 50 percent ownership interest in the station. OPG's share of the in-service generating capacity and generation volume from its interest in the station are included in the operating statistics for the segment.

Regulated – Nuclear Waste Management Segment

Overview

OPG is responsible for the ongoing management of radioactive wastes generated by its nuclear operations. In addition, OPG has the obligation for decommissioning its nuclear generating stations and nuclear waste facilities after the end of their useful lives and for managing radioactive wastes that arise in connection with the decommissioning. The handling and disposal of radioactive waste in Canada is subject to federal legislation.

The radioactive wastes generated by OPG's nuclear operations include the following:

- Used nuclear fuel bundles;
- Intermediate-level waste – material that has come in close contact with the reactors, but is less radioactive than used fuel, such as ion exchange resins and reactor equipment and components; and
- Low-level waste – material used in connection with station operation that is not highly radioactive, such as tools and protective clothing.

The Company's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the following:

- management of used nuclear fuel and L&ILW;
- decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power and other nuclear facilities;
- management of the Nuclear Segregated Funds established under the ONFA to fund OPG's obligation for nuclear facilities decommissioning and the long-term management of nuclear waste; and
- Other related activities including the inspection and maintenance of the waste storage facilities.

The nuclear accretion expense, which is the increase in the carrying amount of the liabilities for nuclear fixed asset removal and nuclear waste management liabilities reported on the balance sheet due to the passage of time, and the earnings from the Nuclear Segregated Funds are reported under this segment. The Regulated – Nuclear Waste Management segment is considered rate regulated because OPG's costs associated with nuclear waste management and nuclear facilities decommissioning have been included by the OEB in the determination of regulated prices for production from OPG's Pickering and Darlington nuclear generating stations, in accordance with the methodologies established by the OEB's 2008 decision on OPG's first application for regulated prices.

Federal Government Policy

In accordance with the requirements of the *Nuclear Fuel Waste Act* (Canada) (NFWA), in 2002, OPG and the other owners of nuclear fuel waste in Canada established a separately incorporated NWMO, with a mandate to manage and coordinate the full range of activities relating to the long-term management of nuclear fuel waste in Canada. This includes the design and implementation of Canada's plan for the long-term management of used nuclear fuel. In 2007, the federal government approved NWMO's submitted option, the Adaptive Phased Management (APM) plan, as the long-term solution for Canada's nuclear fuel waste. The APM plan contemplates the eventual long-term permanent disposal of radioactive nuclear fuel waste in a deep geologic repository (DGR) after a collaborative process of communication and engagement with Canadians aimed at selecting a suitable geological site with an informed and willing host community. The NWMO is in the process of undertaking a multi-year site selection process for the used fuel DGR.

The NFWA also requires the nuclear fuel waste owners in Canada to establish and make payments into trust funds for the purpose of funding the implementation of the long-term management plan for used fuel. Accordingly, OPG has established the Ontario NFWA Trust, which forms part of the Nuclear Segregated Funds under the ONFA. For additional details, see *Description of the Business – Regulated – Nuclear Waste Management Segment – Funding Mechanisms.*

Current Practices

Used Nuclear Fuel

Bundles of used nuclear fuel from OPG's reactors and leased reactors at the Bruce site are temporarily stored at the nuclear generating stations in water-filled pools, known as wet bays, for a cooling-off period of at least ten years, during which time their radioactivity is substantially reduced. Each nuclear generating station has sufficient capacity to store used nuclear fuel in wet bays for approximately 15 to 20 years of operation.

After bundles of used nuclear fuel have been stored for the cooling-off period, prior to the in-service of the planned used fuel DGR, the bundles are transferred from the wet bays to above-ground dry storage containers at the corresponding nuclear station site. Currently, there is used nuclear fuel in dry storage at the Pickering, Darlington and Bruce sites.

OPG's planning assumption for the long-term management of used nuclear fuel is consistent with the NWMO's APM concept. The NWMO has indicated that it currently expects an in-service date of 2043 at the earliest for the used fuel DGR.

Low and Intermediate Level Waste

OPG's L&ILW is stored at the radioactive waste management facility at WWMF located on the Bruce site. This facility, which continues to be owned and operated by OPG following the lease of the Bruce generating stations, operates under a separate licence issued by the CNSC. OPG's planning assumption for the long-term management of L&ILW is the placement of this nuclear waste in a separate L&ILW DGR.

For additional details, see *Description of the Business – Regulated – Nuclear Waste Management Segment – Deep Geologic Repository for Low and Intermediate Level Waste.*

Station Decommissioning

OPG's planning assumption for the decommissioning of its nuclear generating stations is a deferred dismantlement strategy. Under this strategy, each station will be de-watered and de-fueled immediately after it has ceased operations and prepared for safe storage and monitoring. Thereafter, OPG intends to monitor the station for approximately 30 years while in safe storage, after which time the station will be dismantled and the site restored over a period of approximately ten years. This strategy has been communicated to the CNSC through regular updates of OPG's preliminary decommissioning plans and liability estimates for the nuclear generating stations. OPG's operating licences have been issued based on, amongst other things, CNSC's understanding of this strategy.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations and their eventual decommissioning. Agreement has been reached with local municipalities for OPG to develop the L&ILW DGR on lands adjacent to the WWMF in Kincardine, Ontario.

Under the NSCA, OPG requires licences from the CNSC for activities to be undertaken with respect to the L&ILW DGR project. Before the CNSC can make licensing decisions for the proposal, an EA must be conducted in compliance with the requirements of the *Canadian Environmental Assessment Act*. As part of the EA process for the L&ILW DGR, Environmental Impact Statement, Preliminary Safety Report, and Technical Support Documents were submitted to the CNSC in 2011. The purpose of these submissions was to obtain EA approval and a site preparation and construction licence from the JRP for the project. The responsibility of the JRP, which was appointed by the Canadian Environmental Assessment Agency (CEAA) and the CNSC in 2012, was to examine the environmental effects of the proposed DGR to meet the requirements of the *Canadian Environmental Assessment Act.* In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In August 2015, OPG responded to the CEAA's list of potential environmental conditions relating to the JRP report. In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and the impact on environmental effects if Canada's planned used fuel deep geologic repository being developed by the NWMO were located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following a review by the CEAA and a period of public comment, an EA Decision Statement by the Minister is expected by the third quarter of 2017. Based on the information submitted to the Minister, the L&ILW DGR at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

In 2013, OPG suspended design activities on the project, pending receipt of a site preparation and construction licence. If the decision on the EA is positive, the licensing process will resume. Upon receipt of the site preparation and construction licence, OPG will complete detailed design and development of a project schedule and a budget. In parallel, OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The approval of OPG's Board of Directors must also be obtained in order to proceed with construction. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

Funding Mechanisms

On April 1, 1999, Ontario Hydro's obligation for nuclear facilities decommissioning and nuclear waste management was transferred to OPG. The responsibility for funding the liabilities for nuclear decommissioning and the long-term nuclear waste management between the Province and OPG is described in the ONFA. The key provisions of the ONFA are: (i) for OPG to establish two segregated funds, the Used Fuel Segregated Fund to fund future costs of long-term nuclear used fuel waste management and the Decommissioning Segregated Fund to fund the future life cycle costs of nuclear decommissioning, long-term L&ILW management, and certain costs for used fuel storage incurred after the nuclear stations are shut down; (ii) for the OEFC to be responsible for funding approximately $2.4 billion present value as at April 1, 1999 that had been an accumulated liability of Ontario Hydro, which the OEFC has since then fully funded; (iii) for the Province to limit OPG's financial exposure in relation to the cost of used fuel management for the first 2.23 million bundles of used fuel; and (iv) for the Province to provide financial guarantees to the CNSC for OPG's nuclear decommissioning and nuclear waste management obligations, if required by the CNSC.

The Used Fuel Segregated Fund and the Decommissioning Segregated Fund are administered by a third party custodian and held in accounts segregated from OPG's other assets. OPG has granted a security interest in both funds to the Province. As a result, these funds are not available to satisfy the claims of OPG's creditors.

OPG's required contributions to the Used Fuel Segregated Fund and the Decommissioning Segregated Fund are determined based on reference plans and associated life cycle cost estimates periodically approved by the Province under the ONFA. These reference plans are prepared by OPG with the assistance of external consultants and based on external practices and international benchmarks. Under the ONFA reference plans, OPG estimates the total present value of its future nuclear facilities decommissioning and nuclear waste management costs based on cost estimates and a set of major planning assumptions, including remaining useful lives of the nuclear stations, proposed methods and timing of nuclear waste disposal, and economic indicators. Given the long-term duration of these life cycle programs, the multiple assumptions involved and the evolving technology to handle nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the underlying costs, which may increase or decrease over time.

The limits to OPG's financial exposure under the ONFA with respect to the life cycle cost of long-term storage and disposal of the first 2.23 million bundles of used fuel are as follows (all amounts are expressed in January 1, 1999 present value dollars): (i) OPG will bear all costs up to $4.6 billion; (ii) OPG and the Province will share, on an equal basis, costs incurred between $4.6 billion and $6.6 billion; (iii) OPG will be responsible for 10 percent of the costs incurred between $6.6 and $10 billion, and the Province will be responsible for the remaining 90 percent; (iv) the Province will be wholly responsible for any costs above $10 billion. As a result, OPG's liability for these used fuel costs under the ONFA is capped at $5.9 billion in January 1, 1999 present value dollars, which is equivalent to approximately $15 billion in December 31, 2016 present value dollars. OPG is responsible for all incremental costs relating to the management of used fuel bundles in excess of 2.23 million. As at December 31, 2016, approximately 2.5 million bundles of used fuel waste had been produced. The 2.23 million fuel bundles threshold was established as of April 1999 and represents the estimated total life cycle bundles based on the existing useful lives of the nuclear stations at that time.

Under the ONFA, the Province guarantees OPG's annual return earned in the Used Fuel Segregated Fund at 3.25 percent plus the rate of change in the Ontario Consumer Price Index, as defined in the ONFA, for funding related to the first 2.23 million used fuel bundles. Therefore, upon approval of a new ONFA reference plan, the Province is obligated to make an additional contribution to the Used Fuel Segregated Fund if the fund earned a rate of return that is less than the guaranteed rate of return. If the return on the assets in the fund attributable to the first 2.23 million used fuel bundles exceeds the Province's guaranteed rate of return, the Province is entitled to the excess, which it can withdraw, partly or in full, upon approval of a new ONFA reference plan. OPG is subject to financial risk associated with the portion of the fund attributable to the used fuel bundles in excess of the 2.23 million threshold. OPG is also responsible for the risks associated with cost increases and investment returns in the Decommissioning Segregated Fund.

The investments in the Nuclear Segregated Funds include a diversified portfolio of equities and fixed income securities that are invested across geographic markets, as well as investments in real assets including infrastructure, real estate and agriculture. As the Nuclear Segregated Funds are invested to fund long-term liability requirements, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While the Nuclear Segregated Funds are manage to achieve, in the long term, the target return rate based on the discount rate specified in the ONFA, the rates of return earned in a given period may be subject to various external factors including financial market conditions and changes in the Ontario Consumer Price Index, which can be volatile in the short-term and cause fluctuations in the Company's financial results. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Contributions to the Nuclear Segregated Funds

OPG's contribution requirements under the ONFA are recalculated each time there is an approved new or amended reference plan and under certain other events. Reference plans are required to be prepared at least every five years and more frequently if required, or if there is an underlying change in the assumptions of the reference plan that both OPG and the Province agree are significant enough to trigger a recalculation of the contribution levels during the five-year period.

The ONFA Reference Plan in effect, during the 2012-2016 period was approved by the Province effective January 1, 2012 (2012 ONFA Reference Plan). Pursuant to the 2012 ONFA Reference Plan, OPG had been making contributions to the Used Fuel Segregated Fund. No contributions were required to the Decommissioning Segregated Fund pursuant to the 2012 ONFA Reference Plan. Based on the funded status of the Used Fuel Fund and the Decommissioning Segregated Fund reflecting the revised lower life cycle liability estimates per the 2017 ONFA Reference Plan, no overall contributions to the Nuclear Segregated Funds are currently required starting in 2017. Future contributions to the funds may be required should either or both of the funds be in an underfunded position when a new reference plan is prepared. Such may be the case as a result of future variability in asset performance due to volatility inherent in financial markets. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the underlying obligations in subsequent ONFA reference plans.

OPG is required to make annual contributions to the Ontario NFWA Trust based on a funding formula approved by the federal Minister of Natural Resources for OPG and the other nuclear fuel waste owners in Canada. The trust forms part of the Used Fuel Segregated Fund. Any OPG contributions to the Used Fuel Segregated Fund as well as any portion of the Used Fuel Segregated Fund currently not in the trust can be applied to satisfy the trust's annual contribution requirements. The funds in the Ontario NFWA Trust will be used for the purposes of long-term management of nuclear used fuel waste. OPG and the Province are beneficiaries of the trust.

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund and the Used Fuel Segregated Fund, which is the excess of the fair market value of the fund assets over the as associated liabilities per the most recently approved ONFA Reference Plan. If there is a surplus in the Decommissioning Segregated Fund such that the liabilities, as defined by the

most recently approved ONFA Reference Plan, are at least 120 percent funded, OPG may direct, at the time a new or amended reference plan is approved, up to 50 percent of the surplus over 120 percent to be treated as a contribution to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount.

Under the ONFA, if there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province shall have the right at any time to access the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus above the 100 percent funded threshold.

Changes to OPG's contributions to the Nuclear Segregated Funds depend on any changes to the ONFA reference plans and associated cost estimates, as well as changes in asset values of the funds and any changes in the tax treatment of fund earnings. OPG's required contributions could increase, for example, if cost estimates increased, if the operating lives of the nuclear stations were revised, if fund assets earned less than the target rate of return, if the income earned in the funds became subject to tax, or if the NWMO were unable to receive the same sales tax treatment that OPG would be entitled to receive if the NWMO had not been established.

OPG has the responsibility for managing the storage of used nuclear fuel and L&ILW generated by the Bruce generating stations and for the eventual decommissioning of these stations. Funding of these obligations on the part of OPG is recovered from Bruce Power through annual rent payments and volume based fees per the Bruce Lease and related agreements. Further details on the 2015 amendments to these agreements are found in *General Development of the Business – Nuclear Business Development – Bruce Power Refurbishment and Bruce Lease Agreement*.

Provincial Guarantee

In accordance with the NSCA, the CNSC requires OPG to have sufficient funds available to discharge the current nuclear waste management and nuclear decommissioning liabilities. As required by the terms of the ONFA, the Province provides a guarantee to the CNSC, on behalf of OPG, for any shortfall between the CNSC financial guarantee requirement and the value of the Nuclear Segregated Funds. The CNSC process requires the CNSC financial guarantee requirement to be updated once every five years and for OPG to provide an annual report to the CNSC on the assumptions, asset values, and resulting financial guarantee requirements. The CNSC financial guarantee requirement calculations differ slightly from the life cycle ONFA liabilities calculations, as is the CNSC calculations are based on a shutdown scenario at the end of each calendar year that does not take into account waste expected to be generated in the future. In December 2012, the CNSC accepted OPG's proposed 2013-2017 CNSC financial guarantee requirement resulting in a Provincial Guarantee amount of $1,551 million for the 2013-2017 period. OPG is currently updating the CNSC financial guarantee requirement for the 2018-2022 period and expects to file it with the CNSC in the first half of 2017. **[MONITOR]** OPG pays the Province an annual guarantee fee equal to 0.5 percent of the amount of the Provincial Guarantee.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-regulated, non-hedging activities. As part of trading activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, transactions related to financial risk management energy-related products, and sales of other energy-related products.

In addition, the segment includes the results of OPGET, which engages in U.S.-based wholesale energy trading activities in the U.S. northeast. The activities of OPGET include trading electricity in the U.S. using over-the-counter energy-related derivatives. OPGET retains a Federal Energy Regulatory Commission Licence.

The segment also includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and Nanticoke generating stations sites.

Indigenous Relations

The Aboriginal and treaty rights of Indigenous communities are recognized and affirmed in the *Constitution Act, 1982*. OPG's corporate governance includes an Indigenous Relations policy to help build and develop mutually beneficial working relationships with Indigenous communities proximate to the Company's present and future operations. The policy focuses on building respectful relationships with Indigenous communities, businesses and organizations through partnership, collaboration, and support for procurement, employment and educational opportunities. The Company seeks to establish and maintain relationships with Indigenous communities based on a foundation of respect for their languages, customs, and political, social and cultural organizations.

OPG may be subject to claims by Indigenous communities or other Indigenous groups and individuals. These claims may stem from generation development activities, historic operations of Ontario Hydro that may have impacted Aboriginal and treaty rights, or the absence of legal permits, rights-of-way, or easements. Legal precedents created by court rulings may impact negotiations and resolution of past grievances. To date, OPG has resolved 23 past grievance claims, achieving final settlement agreements.

In line with the company's Indigenous Relations policy, OPG is pursuing prospective generation-related developments and other joint projects with Indigenous communities. OPG currently has four generation development partnerships with Indigenous communities. OPG's first such partnership was established in early 2009 as part of the Obishikokaang Waasiganikewigamig/Lac Seul GS project. The signing of the "*Amisk-oo-Skow*" Agreement with the Moose Cree First Nation (MCFN) in early 2010 marked the second such partnership. In 2011, the Lower Mattagami Limited Partnership agreement was amended and restated to include the MCFN and their wholly owned Amisk-oo-Skow Finance Corporation as limited partners and to enable the MCFN to acquire up to 25 percent limited partnership interest in the Lower Mattagami River project. During 2014, the MCFN acquired a 25 percent interest in the assets through its investment in the Lower Mattagami Limited Partnership as incremental units of the project were placed in-service.

In November 2008, OPG and Coral Rapids Power L.P., a wholly owned subsidiary of Taykwa Tagamou Nation, negotiated a suite of agreements regarding what is now known as the Peter Sutherland Sr. GS development project, including a partnership agreement. Under the partnership agreement, Coral Rapids Power L.P. is pursuing an equity interest in the partnership.

Following selection by the IESO in March 2016, OPG and a subsidiary of the Six Nations of Grand River Development Corporation have partnered, through the Nanticoke Solar LP, to develop a new 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands.

Other joint projects with Indigenous partners include two shoreline remediation projects completed in 2016. The Whitesand First Nation, working closely with OPG, completed a project to remediate nearly two kilometers of shoreline, while the Long Lake #58 First Nation undertook the management of a five-year shoreline remediation project. OPG also has been engaging proactively with Indigenous communities regarding the Company's nuclear operations, including both regularly scheduled meetings and an outreach effort in connection with OPG's proposed L&ILW DGR and the re-licensing of the PWMF and the WWMF.

In November 2016, OPG was recognized for its ongoing commitment to engaging local Indigenous communities with the Canadian Electricity Association's (CEA) 2016 Sustainable Electricity award for Leadership in External Collaboration and Partnerships.

Workplace Safety and Public Safety

Workplace Health and Safety

In the area of workplace safety, OPG is committed to achieving excellent safety performance through continuous improvement and a strong safety culture, with the ultimate goal of zero injuries. Overall, OPG's workplace safety performance has been one of the best amongst its comparator Canadian electrical utilities. In 2016, OPG received the CEA President's Gold Award recognizing three consecutive years, 2013 to 2015, of sustained top quartile safety performance within the comparator group.

Workplace safety performance is measured using two primary indicators at OPG, All Injury Rate (AIR) and Accident Severity Rate (ASR). OPG's AIR and ASR results for employee workplace safety were as follows for the year ended December 31:

	2016	**2015**	**2014**
AIR *(injuries per 200,000 hours worked)*	**0.56**	0.39	0.36
ASR *(days lost per 200,000 hours)*	**2.59**	0.50	1.31

In 2016, OPG's AIR and ASR safety performance was worse than in 2015. OPG's analysis of the underlying events indicated that major contributors to the injuries and near misses included inadequate situational awareness and attention to detail, and suboptimal risk-based decisions, rather than missing or inadequate standards or programs. OPG is implementing a number of initiatives to target the injury trends based on the analysis of the safety events, with a focus on the use of human performance tools including increased field supervisory oversight, situational awareness, communication, and procedural use and adherence.

In 2016, OPG launched an organization-wide "iCare Enough to Act" initiative aimed at renewing employees' commitment to their own and each other's safety and well-being. Plans to further strengthen safety as a foundational element of the Company's values-based culture are being developed through leadership forums and other engagement activities.

Contractors are required to conduct work safely at OPG sites. In support of this requirement, OPG utilizes an independent contractor pre-qualification process, provides on-site safety support for many of OPG's major projects, and works with contract partners to improve their health and safety programs to meet OPG's requirements. To further strengthen contractors' safety performance, in 2016, OPG updated its contractor's safety requirements and related governance, and implemented additional oversight and field monitoring to ensure ongoing compliance. In the past eight years, OPG has consistently shown a better than average Construction Contractor AIR as compared to the Health and Safety Association Contractor AIR, a metric of construction contractor safety performance across Ontario

Since 2014, OPG has been operating under a single integrated health and safety management system and set of operational risk control procedures across the Company, providing consistent performance expectations for all employees. The control procedures are designed to ensure continued enterprise-wide monitoring of health and safety performance and to support continuous learning and improvement in these areas. Oversight and reporting by corporate and site safety functions is in place to provide senior management with regular information on the effectiveness of the safety management efforts, compliance with legal and corporate requirements, and safety performance trends. OPG's incident management system requires that all incidents, including near misses, be reported and investigated and that corrective action plans be developed and completed in order to prevent reoccurrences.

In 2014, OPG launched a Total Health initiative that aims to embed a health culture that supports employees and their families in their efforts to achieve an optimal level of health and functioning, through health education, health promotion, disease and injury prevention, and crisis intervention. In 2016, the Company launched the Mental Health First Aid training course for employees, an accredited training

program facilitated by the Mental Health Commission of Canada. The training aims to increase awareness and empathy for mental illness, reduce stigma, support affected employees, and improve return to work outcomes.

Nuclear Radiation Safety

OPG manages a radiation protection program designed to minimize detrimental health effects to employees and members of the public. OPG follows developments in the field of radiation protection as documented by the International Commission on Radiological Protection (ICRP), the United Nations Scientific Committee on the Effects of Atomic Radiation, and the U.S. National Council on Radiation Protection and Measurements. Widely recognized as the main source of expert advice regarding protection from the harmful effects of ionizing radiation, the ICRP periodically issues recommendations concerning principles of radiation protection. These recommendations are usually adopted by most countries without significant modification and are incorporated into the applicable laws. The Canadian Radiation Protection Regulations are based on the recommendations of the ICRP, and OPG's nuclear facilities conform to these regulations. The CNSC is the federal agency that regulates radiation protection in Canada.

Radiation exposures to station personnel and the public are limited by station design and adherence to approved operating procedures. Over the years, OPG has been a leader in applying the principles of keeping radiation doses as low as reasonably achievable. OPG's internal operating limits for occupational exposure are set well below the regulatory limits to ensure that the regulatory limits are not exceeded. OPG's operating targets for radiological emissions are set at even more restrictive levels and typically represent small fractions of the regulatory limits.

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for those individuals who live or work near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), an international unit of radiation dose measurement. For 2015, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.5 μSv and 1.2 μSv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000 μSv. While the public doses from OPG's nuclear operations for the 2016 operating year will not be finalized until the second quarter of 2017, they are not expected to differ significantly from the 2015 levels.

As a condition of receiving operating licences for its nuclear facilities, OPG has developed comprehensive emergency plans that detail the Company's planned response to reactor accidents, as well as accidents involving the transportation of radioactive materials. These plans dictate how OPG will work with municipal, regional, provincial, and federal agencies to safeguard station personnel and members of the public in the unlikely event of a radiation emergency at one of OPG's facilities. Station staff are required to regularly participate in emergency exercises to maintain and continuously improve response capability for such events.

Dam Safety and Waterways Public Safety

OPG manages dam safety and other risks associated with the production of hydroelectric power through OPG's Safe Operations Policy and Dam Safety Program. The Safe Operations Policy directs that dams be designed, constructed, operated, and maintained in a manner that meets all regulatory requirements, or, in the absence of regulations, the safety guidelines published by the Canadian Dam Association or other industry best practices. OPG is one of the first dam owners in Canada to have developed and implemented a dam safety program and is considered an industry leader in many aspects of the program.

In addition to effectively managing the safety of dams against catastrophic failure, OPG has developed a number of technical standards and procedures concerning public safety around dams, and materials to educate the public and raise awareness of the hazards associated with the operation of the hydroelectric facilities. This includes the implementation of control measures in the form of signage, safety booms,

buoys, fencing and audible alerts at the appropriate facilities. These measures are actively managed to maintain their effectiveness. OPG also strives to entrench a "Stay Clear – Stay Safe" message as part of its public education program, through strategically placed advertisements and engagement of other agencies, such as the MNRF, Ontario Provincial Police, Life Saving Society, Ontario Waterpower Association, and other stakeholders.

Since 2007, OPG has engaged an independent advisory panel consisting of internationally recognized experts to conduct an annual review of its Dam Safety Program. The Chair of the independent panel establishes areas of in-depth review and presents the observations to the OPG's Board of Directors. The panel has consistently found that the risks associated with the dams owned and operated by OPG are being managed in alignment with industry best practices and guidelines.

For additional details on the regulatory regime related to dams and waterways, see *Description of the Business – Water Rights.*

Environment

Overview

OPG is committed to meeting all legal requirements and any environmental commitments that it makes, with the objective of exceeding the legal requirements where it makes business sense. OPG's Environmental Policy specifically commits the Company to:

- Establish an environmental management system (EMS) and maintain registration for this system to the ISO 14001 Environmental Management System standard;
- Work to prevent or mitigate adverse effects on the environment with a long-term objective of continual improvement; and
- Manage sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern.

The policy is implemented through OPG's EMS. Within the EMS, OPG sets environmental goals and maintains planning, operational control, and monitoring programs to manage its negative and positive impacts on the environment. The most significant environmental aspects of OPG's operations include: chemical emissions to water, spills, fish impingement and entrainment, thermal effluent emissions, displacement of fossil fuels, enhancement and disruption of wildlife habitat, tritium and carbon-14 emissions, radioactive waste generation, and water flow and level changes. The policy is reviewed annually as part of the EMS to ensure that it remains appropriate to the nature, scale and environmental impacts of OPG's activities.

Details of OPG's environmental performance and initiatives to fulfill the Environmental Policy can be found in OPG's annual *Sustainability Report*, which is available on the Company's website at www.opg.com. ***Unless otherwise specifically stated, none of the information contained on, or connected to the Company's website nor any of the contents of the Sustainability Report are incorporated by reference herein.***

OPG communicates its environmental performance to external and internal stakeholders through a range of engagement methods such as reports and correspondence to regulators, meetings, newsletters, open houses, consultations, news releases, advertising campaigns, social media, and participation in community events.

Environmental Compliance

OPG must comply with a large number of environmental requirements contained in statutes, regulations, by-laws, licences, permits and approvals. Failure to comply with applicable environmental laws may result in enforcement action, including the potential for orders or charges. OPG reports any incidents of

non-compliance to the appropriate federal, provincial or municipal authorities as required, with corrective action plans developed and implemented accordingly.

Changes in environmental regulatory requirements may result in existing operations being in a state of non-compliance, a potential inability to comply, and potential costs and liabilities for OPG. To ensure compliance, such circumstances may require OPG to install control technologies, develop new processes, allowances or offsets, or place constraints on electricity production.

Protection of Fish

Electricity generating facilities located on waterways can impact fish in a number of ways. At nuclear and thermal stations, the intake of water for equipment cooling purposes can result in fish being impinged on station equipment and fish larvae and eggs being entrained in the water as it passes through the station. The warmer water returned to the water body also has the potential to impact aquatic organisms and habitat near the station. At hydroelectric stations, the flow of water through the station turbines can result in fish impingement and entrainment, while physical barriers such as dams can prevent the migration of fish.

OPG utilizes measures such as fish ladders, trap and transport programs, stocking programs, barriers and deterring structures, water flow alterations, habitat protection and creation, and station effluent temperature limits to manage and mitigate impacts to fish. Potential regulatory changes being monitored and managed as risks by the Company include electricity production constraints and water flow management requirements to protect fish and fish habitat, and expanded fish passage requirements.

Biodiversity and Habitat Stewardship

The generation of electricity can have an impact on biodiversity, either directly through habitat loss and fragmentation or indirectly through emissions to the environment. OPG is committed to managing its sites in a manner that strives to maintain significant natural areas and associated species of concern. OPG also works with its community partners to support regional ecosystems and biodiversity through science-based habitat stewardship. OPG's regional biodiversity program is strategically focused on funding and promoting efforts which contribute to the protection and restoration of a natural system of habitat cores and corridors across Ontario.

Climate Change Mitigation and Air Quality

OPG's operational and growth strategies support reductions in GHG emissions and improved air quality. After safely ending coal-fired generation in the province, OPG has become Ontario's largest clean energy provider, producing and selling electricity that is over 99 percent free of GHG and smog-causing emissions. The elimination of coal-fired electricity production at OPG's generating stations resulted in coal being reduced from one-quarter of Ontario's energy supply mix in 2003 to zero in 2014.

OPG monitors and reports GHG emissions from its facilities in accordance with the regulatory requirements set out by Environment and Climate Change Canada and the Ontario Ministry of the Environment and Climate Change. In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating GHG emissions in Ontario and includes a cap and trade program, with the first compliance from January 1, 2017 to December 31, 2020. The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. The program requirements are expected to result in increased fuel costs for some OPG-owned and co-owned generating facilities. Fuel costs for these stations are generally recovered from the electricity market. With OPG's low GHG emitting fleet, this is not expected to have a material adverse financial impact on the Company. OPG has established the necessary processes to comply with the cap and trade program requirements.

OPG is monitoring actions being taken by the Government of Ontario and the Government of Canada to reduce GHG emission levels and transition to a low-carbon economy. In support of efforts to mitigate climate change, the Company continues to evaluate and implement plans to increase the generation capacity of its hydroelectric generating fleet, where economic, and invest in other low-carbon technologies.

Radiological Emissions

Very low levels of radioactivity are released to air and water as a result of operating the reactors at OPG's nuclear generating stations. OPG maintains an effluent monitoring and control program to ensure radiological emissions are kept well below the release limits specified in the station operating licences. OPG also has environmental monitoring programs in the vicinity of the nuclear stations to ensure operations have no adverse impacts on human health and the environment. These programs are designed to assess impacts, demonstrate compliance with regulatory limits, validate the effectiveness of containment and effluent controls, and verify predictions made by environmental risk assessments. Results from the monitoring programs have confirmed OPG's radiological emissions are a small fraction of the regulatory release limits.

In June 2016 and August 2016, the CNSC released sampling results from its independent environmental monitoring program, which confirmed that the public and the environment around OPG's nuclear generating stations continued to be safe.

For further details, see *Workplace Safety and Public Safety – Nuclear Radiation Safety.*

People and Culture

Workforce Resourcing Strategies

Electricity generation involves complex technologies that require highly skilled and trained workers, and a well trained and engaged workforce is fundamental to the achievement of OPG's strategic imperatives. The Company is focused on improving the capability of its workforce through leadership development, knowledge management, diversity and inclusion programs, and hiring in key areas. Ability to secure the right talent mix in order to effectively meet the Company's immediate and longer term business needs on a timely basis is supported through workforce planning, resourcing and on-boarding strategies, both to acquire external talent into the organization and to develop existing employees. The goal of resourcing strategies and workforce planning is to ensure that the Company's workforce is diverse and has the right skill set and capability for the safe and effective operation of the generating facilities and successful delivery of major projects, including the refurbishment of the Darlington GS. These strategies are being designed to take into account anticipated staffing requirements to the end of planned commercial operations of the Pickering GS, through to the end of the planned period to de-fuel, de-water and place the station in a safe state condition.

As part of the strategy to develop and engage employees and to build leadership talent, the Company has an active succession planning program with a focus on accelerating development. OPG also has a talent management monitoring process to proactively assess staffing risks, challenges and opportunities. In 2015, OPG implemented a company-wide high potential leadership development program. This 18-month cross-functional, competitive-entry program is designed to identify and develop candidates for future leadership positions while they are still relatively early in their career.

Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification. In addition to maintaining its internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners, and educational institutions to meet the required level of qualification.

Effective January 1, 2017, OPG implemented a new Executive Compensation Program that is compliant with *Ontario Regulation 304/16: Executive Compensation Framework*, introduced in September 2016.

The regulation sets out how all employers designated under the *Broader Public Sector Executive Compensation Act, 2014*, including OPG, must establish and post compensation programs for executives. OPG's new Executive Compensation Program is designed to provide compensation that is at the 50th percentile of the market and focused on at-risk, performance based pay. The program will better enable OPG to attract, align and retain the executive talent critical to delivering Shareholder and customer value, while ensuring continued safe and reliable operations. For further information on the Executive Compensation Framework, refer to *Corporate Governance – Compensation.*

Employees

OPG's average number of full-time employees and average number of seasonal, casual construction and non-regular staff (Other Staff) in 2016 were as follows:

Business Segment	Full-time Employees	Other Staff
Regulated – Nuclear Generation [1]	7,250	1,120
Regulated – Hydroelectric	1,150	45
Contracted Generation Portfolio	540	50
Services, Trading, and Other Non-Generation	130	5
Total	**9,070**	**1,220**

[1] Including employees associated with the Regulated – Nuclear Waste Management segment.

The majority of OPG's employees are represented by the PWU and The Society. The PWU includes most workers below the level of first line manager – from clerical staff to technicians and trades staff and station operators. The Society includes supervisors, professional engineers, scientists, and other professionals.

Bargaining rights with the 19 craft unions that perform construction work at OPG's generating facilities in addition to the regular workforce are established either through the EPSCA or directly with OPG. EPSCA is a voluntary association of owners and contractors who perform work in the electrical power systems sector. The primary purpose of EPSCA is negotiating and administering collective agreements on behalf of employers performing work on what is now OPG property. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. OPG currently has 17 agreements through EPSCA and two direct trade agreements. The two direct trade agreements are with the Canadian Union of Skilled Workers and the Brick and Allied Craft Union.

Insurance

The principal types of discretionary insurance carried by OPG include directors' and officers' liability, excess commercial general liability, all risks property, boiler and machinery breakdown, including statutory boiler and pressure vessel inspections, and business interruption. In addition to providing coverage for OPG's non-nuclear facilities, this insurance applies to the conventional operations at OPG's nuclear generating stations. OPG also maintains nuclear property insurance, including nuclear boiler and machinery breakdown, for damage to the nuclear portions of its generating stations, and for perils propagating from the nuclear to the conventional side of its assets. This coverage complements the conventional property insurance program.

OPG also purchases or requires contractors to purchase discretionary insurance for construction projects. For the Darlington Refurbishment project, the insurance coverage for the pre-requisite construction works was placed in 2013 and for refurbishment execution in 2016. The owner-controlled insurance program for the refurbishment consists of wrap-up liability, course of construction and marine transit insurance.

OPG purchases certain insurance coverage as required by statute, namely owned and leased motor vehicle liability and nuclear energy liability insurance. The federal *Nuclear Liability and Compensation Act* (NLCA) that came into effect on January 1, 2017, and its predecessor legislation, the *Nuclear Liability Act* (NLA), impose absolute liability on a licensed operator of a nuclear generating station for any damage to

property of, or injury to, the public arising from a nuclear incident, other than damage resulting from sabotage or acts of war. As such, the legislation protects all other persons from liability, including suppliers of nuclear fuel and components used in nuclear reactors.

The NLCA requires all operators of nuclear generating stations in Canada to maintain specified amounts of nuclear liability insurance purchased from a federal government approved insurer or other equivalent forms of financial security approved by the federal government. Under the NLCA, OPG is required to maintain an initial $650 million per incident of nuclear energy liability insurance for each of its nuclear installations as defined by the NLCA effective in 2017, for which there is no deductible amount, with successive annual increases to $750 million, $850 million, and $1 billion over the 2018-2020 period. The Pickering GS site and the Darlington GS site are considered to be two separate nuclear installations under the NLCA. OPG is also required to maintain $13 million per incident of nuclear energy liability insurance for the WWMF. OPG is not responsible for purchasing nuclear liability insurance for the Bruce nuclear generating stations. Previously, the NLA required OPG to maintain $75 million per incident of nuclear energy liability insurance for each of the Pickering GS site and the Darlington GS site and $6 million for the WWMF, purchased from a federal government approved insurer. OPG continues to maintain nuclear liability insurance or other forms of financial security that have been approved by the federal government equal to the required liability limits.

Under Part I of the NLCA, an operator is liable for all damages resulting from a nuclear incident. If, in the opinion of the Governor in Council, OPG's liability could exceed the specified insured amount in respect of a nuclear incident, or it would be in the public interest to do so, the Governor in Council shall proclaim Part II of the NLCA as applicable in respect of a nuclear incident. Under Part II of the NLCA, OPG's liability would be effectively limited to the amount of required abovementioned insurance, and the Governor in Council may authorize additional funds to be paid by the federal government as may be specified in an order.

RISK FACTORS

OPG faces a wide range of significant risks which could have a material adverse effect on the Company's business and achievement of strategic imperatives. There may be further risks and uncertainties that are not presently known, or that are not currently believed to be material, that may in the future adversely affect the Company's performance or financial condition.

The risks faced by OPG include those associated with:

- Significant inherent uncertainties regarding the outcomes of OEB rate and other proceedings for OPG's regulated operations, including the Company's May 2016 application for new regulated prices for the 2017-2021 period, the ability to recover Darlington Refurbishment costs and the OEB's sector-wide review of pension and OPEB cost recovery mechanisms;
- The ability to deliver the Darlington Refurbishment project objectives on time and on budget. The failure to carry out the refurbishment of the first unit as planned may result in a decision not to refurbish the remaining Darlington units;
- The planned extension of commercial operations of the Pickering GS to 2024;
- Availability or alignment of skilled human resources;
- Maintaining safe and reliable operations of aging generating assets and the exposure to variable output from existing generating stations;
- The cost, schedule, and technical aspects of major development projects;
- Additional nuclear regulatory and licencing requirements and changes in technical codes, regulations or laws;
- Non-performance by strategic suppliers or an inability to diversify the supplier base;
- Managing information technology (IT), including the risks of failure to meet IT requirements and effectively deal with cyber security threats;
- Uncertainty inherent in cost estimates for nuclear waste management and decommissioning obligations;

- Uncertainty associated with nuclear waste management operations, including proposed waste disposal facilities such as the L&ILW DGR;
- Potential non-compliance with applicable environmental laws;
- The impact of changes in various market factors, such as equity prices, interest rates, inflation, and commodity prices, on the market value of investments held by OPG's Nuclear Segregated Funds and registered pension plan;
- Changes in the opinion of various stakeholders regarding OPG's public profile, including the impact thereon of OPG's inability to achieve operational excellence and project excellence safely and reliably and to maintain financial strength;
- The quality of OPG's relationships with Indigenous communities, including exposure to potential claims by, and the outcome of negotiations with, these communities;
- Changes in post-employment benefit obligations;
- Employee and contractor occupational safety risks and hazards;
- Inability to file consolidated financial statements beyond 2018 based on US GAAP upon expiry of the current exemptive relief from the Ontario Securities Commission; further details regarding the exemptive relief can be found in the Company's 2016 annual MD&A under the heading, *Exemptive Relief for Reporting under US GAAP* in the section *Critical Accounting Policies and Estimates;*
- The obligation of OPG's shareholder, the Province of Ontario, to respond to a broad range of matters in its role as the Government of Ontario competing with OPG's commitment to maximize the return on the shareholder's investment in the Company. This includes, but is not limited to, the Province's response to mitigate the impact of rising electricity prices on consumers.
- Deterioration in counterparty credit and non-performance by suppliers and contractors;
- Electricity market conditions including new participants in the market, competitive actions of market participants, electricity demand, economic growth, SBG conditions, changes in the regulatory environment, and wholesale prices in interconnected markets;
- Increases in operating costs and other business impacts arising from federal and provincial legislation and regulation, including potential changes therein;
- Volatility in electricity trading activities;
- Impact of a successful challenge by tax authorities of a tax position taken by OPG that is not recoverable from customers;
- Movements in the U.S. dollar and other foreign currencies relative to the Canadian dollar;
- Ability to cost effectively meet liquidity requirements including funding for business development initiatives;
- Delays or cancellations of development projects in the initial stages of development;
- Changes in the market price of fuels used to produce electricity;
- Contracted generation assets, which may not meet performance targets as specified in the ESAs or other long-term contracts. Additionally, upon expiry, subsequent ESAs may not be available;
- Uncertainty in U.S. government policy that may impact OPG's operations; and
- Business continuity events, including disruptions due to extreme weather, natural disasters, technology and human factors.

The above list of risk factors is not exhaustive. For a detailed discussion of risks that could materially adversely affect OPG, including its business, strategy, generating stations, reputation, financial condition, operating results and projects, see the Company's 2016 annual MD&A under the section *Risk Management*, which risk factors are incorporated by reference herein.

DIVIDENDS

In 1999, OPG's Board of Directors established a policy to pay a dividend of 35 percent of net income after taxes. The declaration and payment of dividends remains at the sole discretion of OPG's Board of Directors and is dependent on the results of OPG's operations, the Company's financial condition and cash requirements, securities legislation requirements, and other factors considered relevant by the Board of Directors in exercising its discretion and judgment on an ongoing basis. OPG did not declare or pay any dividends for the years 2014 to 2016.

There are no restrictions in the articles of the Company that could prevent the Company from paying dividends. However, the declaration and payment of dividends are subject to financial tests set forth in the OBCA.

DESCRIPTION OF CAPITAL STRUCTURE

The authorized share capital of OPG consists of an unlimited number of common shares (the voting shares of the Company). As at December 31, 2016, OPG had 256,300,010 common shares issued and outstanding, all of which are owned directly by the Province at a stated value of $5,126 million. OPG is authorized to issue an unlimited number of common shares without nominal or par value. Holders of common shares are entitled to one vote per share at meetings of the shareholders of the Company and to receive dividends if, as, and when declared by the Board of Directors of the Company. Holders of common shares would participate, pro rata to their holding of common shares, in any distribution of the assets of the Company upon its liquidation, dissolution, or winding up. Any issue of new shares is subject to the consent of all of OPG's shareholders.

All of the Company's voting securities are held by the Province. Accordingly, the Company is controlled by the Province.

CREDIT RATINGS

DBRS Limited (DBRS) and S&P Global Ratings (S&P) provide credit ratings for commercial entities. A credit rating generally provides investors with an independent measure of credit quality of an issue of securities. Credit rating categories for long-term debt instruments range from highest credit quality (generally 'AAA') to default in payment (generally 'D').

In April 2016, DBRS re-affirmed the long-term credit rating on OPG's debt at 'A (low)', and the commercial paper rating at 'R-1 (low)', each with a stable outlook. In July 2016, S&P re-affirmed OPG's long-term credit rating at BBB+ with a stable outlook. On July 7, 2015, S&P lowered OPG's long-term corporate credit rating from 'A-' to 'BBB+' with a stable outlook. S&P's rating action followed its July 6, 2015 downgrade to the Province's rating from 'AA-' to 'A+'. The link between the Province and OPG through ownership and financial support may impact OPG's credit rating. S&P's commercial rating for OPG is 'A-1 (low)'.

Long-term debt instruments that are rated in the 'A' category by DBRS are considered to be of good credit quality. The capacity for the payment of financial obligations by the obligor of such instruments is considered to be substantial, but of lesser credit quality than higher-rated entities. Entities in the 'A' category may be vulnerable to future events, but qualifying negative factors are considered manageable. The addition of a "high" or "low" modifier indicates relative standing within the rating category.

A 'BBB' rating category by S&P for long-term debt instruments means that the obligor has adequate capacity to meet its financial commitments, but is considered more subject to adverse economic conditions than higher-rated entities. The addition of a plus '+' or minus '-' designation after a rating indicates the relative standing within a particular rating category.

DBRS's commercial paper credit rating scale ranges from 'R-1(high)' to 'D', which represents the highest to lowest quality of such securities rated. The rating of 'R-1(low)' is the third highest and is considered to be of good credit quality. S&P's Canadian commercial paper rating scale ranges from 'A-1 (high)' to 'D', which represents the highest to lowest quality of such securities rated. The rating of 'A-1 (low)' is the third highest and is considered to be satisfactory.

There can be no assurance that a credit rating will remain in effect for any given period of time or that a credit rating will not be lowered, withdrawn or revised by either or both rating agencies if, in their judgment, circumstances so warrant. The rating of any securities is not a recommendation to buy, sell or hold such securities, and such ratings do not comment as to market price or suitability for a particular investor.

During the past two years, OPG has made payments to DBRS and S&P's credit rating agencies for their credit rating services and for other services. OPG reasonably expects such payments will continue in the future for the services acquired.

MARKET FOR SECURITIES

None of the Company's securities are listed and posted for trading or quoted on any exchange or quotation system.

CORPORATE GOVERNANCE

National Instrument 58-101 *Disclosure of Corporate Governance Practices* (NI 58-101), has been implemented by Canadian securities regulatory authorities to provide greater transparency for the marketplace regarding issuers' corporate governance practices. OPG's corporate governance practices align with NI 58-101 and National Policy 58-201 *Corporate Governance Guidelines.* In addition, OPG has reviewed its governance practices against the principles discussed in the 2013 Report on Building High Performance Boards issued by the Canadian Coalition for Good Governance and concluded that OPG compares favourably to those principles that apply to OPG.

Information with respect to OPG's Board of Directors is as follows:

Board of Directors

OPG's Board of Directors (Board) is made up of 14 individuals with the following capabilities:

- managing large businesses;
- managing and operating nuclear stations;
- managing capital intensive companies;
- overseeing regulatory, government and public relations;
- human resources management;
- financial, legal and corporate governance expertise;
- knowledge of Indigenous communities; and
- stakeholder management.

The Board exercises its independent supervision over management as follows: the majority of members of the Board are independent of the Company; meetings of the Board are held at least five times a year; a formal Charter for the Board and for each Board Committee has been adopted and the charters are reviewed annually; the Board and each Board committee is chaired by an independent Director; and a portion of each Board and Board committee meeting is reserved for independent Directors to meet without management present.

OPG has a written position description for the Chief Executive Officer (CEO). This position is accountable to the Board for: ensuring a culture of integrity and ethical conduct; increasing Shareholder value; defining and executing a corporate strategy, including a sustainable business model that will service the long-term power generation needs of the province; and providing a standard of leadership that will achieve operational excellence with respect to matters of safety, stakeholder relationships, financial performance, asset reliability, and health, environmental and regulatory compliance. In addition, the Board delineates the President and CEO role and responsibilities through the By-laws, the Board Charter, the Board policies, and the corporate and CEO annual goals and objectives. The Board sets and monitors performance against annual corporate and CEO targets and objectives.

Director Independence

On an annual basis, the Compensation, Leadership and Governance Committee of the Board reviews the disclosures made by Directors in the annual Director Questionnaire and reviews each disclosed affiliation's relationship with OPG in order to determine whether the Director is (or remains) independent. The Compensation, Leadership and Governance Committee reports on its review to the Board.

Based on the meaning of Independence in Section 1.4 of National Instrument 52-110 *Audit Committees* (NI 52-110) and a review of the applicable factual circumstances against this standard, the Compensation, Leadership and Governance Committee has determined that all Directors listed are independent, except for Jeffrey Lyash, who is considered to have a material relationship with OPG by virtue of his position as President and CEO of OPG.

The Board has a Board of Directors Conflict of Interest Policy and Procedure that governs the disclosure and mitigation of Director conflicts or potential conflicts of interest and has adopted an annual process of written disclosure by Directors in order to:

(i) identify potential conflicts of interest for the purposes of complying with the Board of Directors Conflict of Interest Policy and the OBCA;
(ii) validate the Directors' independence and financial literacy for the purposes of complying with securities regulations related to boards of directors and audit committees; and
(iii) satisfy other disclosures and regulatory filings.

To further minimize potential conflicts of interest, the Board has a policy on interlocking directorships. This policy states that no more than two OPG Directors may sit on a board of directors of another reporting issuer at the same time. Directors must confirm that they are in compliance with OPG's policy on interlocking directorships when disclosing to the Board Chair appointments to other boards of directors.

Strategic Planning

OPG's Board holds an annual strategy session and devotes a significant portion of each regular Board meeting to discussion of strategic matters. Management is responsible for developing the strategy and presenting it to the Board for discussion.

In 2016, the Board received reports on key strategic issues, risks, competitive developments, and corporate opportunities facing the Company. Management ensures that the key strategic elements are incorporated into OPG's annual budget and business plan, which are reviewed and approved by the Board. The Board also periodically receives briefings from external advisors on broad energy industry developments and/or special strategic matters.

Overseeing the Management of Risk

The Board oversees OPG's approach of identifying, reporting and mitigating the risks that could significantly impact the Company's capacity to achieve its long-term strategic objectives, as well as specific business plan objectives. To fulfill its risk oversight responsibilities, the Board has established a Corporate Risk Management Policy and an Audit and Risk Committee, comprised of independent Directors. The committee's mandate includes oversight of the Enterprise Risk Management (ERM) framework that management uses to manage the Company's risk profile. The ERM framework assists the Board in understanding how risks may affect the Company and how they are being addressed by management. The Audit and Risk Committee receives quarterly reports from OPG's Chief Risk and Audit Executive (CRAE) on enterprise-wide risks.

Through the Compensation, Leadership and Governance Committee, the Board also monitors the risks associated with the executive compensation program, to preclude the Company's decision-makers from taking excessive risk in order to achieve incentives under the compensation plans. The CRAE and Senior Vice President, People, Culture & Communications jointly review the executive compensation

framework on an annual basis to identify any potential for unintended risk-taking. The CRAE and Senior Vice President, People, Culture & Communications provide an annual joint report to the Compensation, Leadership and Governance Committee on the results of their review. **[MONITOR]**

Directors

The following tables set forth the name, age, municipality of residence, position with the Company and principal occupation of each of the Directors of the Company as of March 10, 2017. Each Director holds office until he or she resigns or a successor is elected or appointed. For a discussion of the Board Committee structure, refer to the heading, *Committees of the Board of Directors*.

Bernard Lord
Age: 51
Moncton, New Brunswick, Canada

Bernard Lord was appointed Board Chair for Ontario Power Generation on April 1, 2014. Mr. Lord is the CEO of Médavie, a not-for-profit Canadian medical care insurance company headquartered in Moncton, New Brunswick.

Mr. Lord earned a bachelor's degree with a major in economics as well as a bachelor's degree in common law from l'Université de Moncton. He has also received honorary doctorate degrees from University of New Brunswick, l'Université de Moncton and Saint Thomas University. He was admitted to the New Brunswick Law Society in 1993 and was appointed as Queen's Counsel in 2011.

He was the CEO of the Canadian Wireless and Telecommunications Association from October 2008 until August 2016. He also served on several other Boards.

In 1999, Mr. Lord became one of Canada's youngest Premiers at the age of 33. His majority government was re-elected in 2003 and he served as Premier of New Brunswick until October 2006. He was elected four times as a Member of the New Brunswick Legislative Assembly.

Mr. Lord's government introduced several new initiatives to support the development of natural resources while also protecting the environment, including a new energy policy that lead to the restructuring of NB Power and the refurbishment of the Point Lepreau nuclear generating station.

During Mr. Lord's terms as Premier, New Brunswick saw the lowest unemployment rate in 30 years and tax cuts each year, combined with balanced budgets and debt reduction. His government made record investments in health care and education while strengthening local democracy and modernizing the Official Languages Act.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since November 2013)	8 of 8	100%
The Board Chair is not a member of any standing Committee. The Board Chair attends all Committee meetings.	18 of 18	100%

Principal Occupation: CEO of Médavie

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Jeffrey Lyash
Age: 55
Toronto, Ontario, Canada

Jeff Lyash is the President and CEO of OPG. Mr. Lyash was formerly the president of CB&I Power, a position he held from 2013 to 2015, where he was responsible for a full range of engineering, procurement and construction of multi-billion dollar electrical generation projects in both domestic and international markets. He also provided operating plant services for nuclear, coal, gas, oil and renewable generation.

Prior to joining CB&I in 2013, Mr. Lyash served as Executive Vice President of Energy Supply for Duke Energy from 2008 to 2012. He led engineering, maintenance and operations of the company's 42,000-megawatt generation fleet, fuel procurement, power trading, major projects and construction, environmental programs, and health and safety programs.

Before the merger of Progress Energy and Duke Energy, Mr. Lyash served as Executive Vice President of Energy Supply for Progress Energy. In this role, he oversaw Progress Energy's diverse 22,000-megawatt fleet of generating resources including nuclear, coal, oil, natural gas and hydroelectric stations. In addition, he was responsible for generating fleet fuel procurement and power trading operations.

Mr. Lyash began his career in the utility industry in 1981, joining Progress Energy in 1993. Before assuming the role of Executive Vice President of Energy Supply, he served as Executive Vice President of Corporate Development, President and Chief Executive Officer of Progress Energy Florida, Senior Vice President of Energy Delivery Florida, and Vice President of Transmission. He also held a wide range of management and executive roles in Progress Energy's nuclear program, including Operations Manager, Engineering Manager, Plant Manager, and Director of Site Operations.

Before joining Progress Energy, Mr. Lyash worked for the U.S. Nuclear Regulatory Commission (NRC) in a number of senior technical and management positions throughout the northeast United States and in Washington, D.C, receiving the NRC Meritorious Service Award in 1987.

Mr. Lyash earned a Bachelor's Degree in Mechanical Engineering from Drexel University, and was honored with the Drexel University Distinguished Alumnus Award in 2009. He has held a Senior Reactor Operator License from the NRC, and is a graduate of the U.S. Office of Personnel Management Executive Training Program and the Duke Fuqua School of Business Advanced Management Program.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since August 2015)	8 of 8	100%
The President and CEO attends all Committee meetings, excluding independent Director in-camera meetings/sessions.	18 of 18	100%

Principal Occupation: President & Chief Executive Officer, Ontario Power Generation Inc.

Board Memberships for other Reporting Issuers: None

Independence from OPG: Not Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Nicole Boivin
Age: 58
Toronto, Ontario, Canada

Nicole Boivin is a business executive and director with more than 30 years experience in financial services, public and not for profit enterprises. She brings deep expertise and experience in human resources, branding and communications.

Ms. Boivin is a national board member of Pathways to Education and serves on the human resource committee and is a former provincial appointee to the board of the Harbourfront Centre in Toronto where she was part of the executive committee and chaired the development committee.

Ms. Boivin obtained her ICD.D designation from the ICD-Rotman, Directors Education Program. In her 14 year career at Manulife, Ms. Boivin had progressive leadership roles in human resources, branding, marketing and communications and was a trusted advisor to the senior executives and board of directors of Manulife.

Ms. Boivin was the Chief Branding and Communications officer for Manulife until 2014 and before that, the head of Human Resources for the Canadian Division from 2007 to 2011. Of note, she led the creation of the global co-branding strategy following Manulife's acquisition of John Hancock in the U.S. Following the financial crisis, she also built and led the global branding and communications function focused on managing reputational risk and rebuilding overall brand presence. As a human resource executive, Ms. Boivin developed and delivered the successful first series of the Global Executive Development Program which has become a core function at Manulife.

Ms. Boivin has deep experience in talent management including succession planning, leadership development, and aligning executive compensation with performance. She also has specific expertise in global brand strategy, corporate social responsibility, reputational management, and issue and crisis management and communications.

Prior to joining Manulife, Ms. Boivin held many roles spanning the public and not for profit sector. In the early 1990's she was the executive director of the Sudbury United Way, followed by her role as the Assistant to the President at Laurentian University and prior to joining Manulife, she was a director at BCE Media/Bell Canada.

Ms. Boivin holds an MBA from Laurentian University and is fluently bilingual in French and English.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since April 2014)	8 of 8	100%
Compensation, Leadership and Governance Committee (since February 2016)	4 of 4	100%
Darlington Refurbishment Committee (since February 2016)	4 of 4	100%

Principal Occupation: Corporate Director

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

William Coley
Age: 73
Charlotte, North Carolina, U.S.A.

Bill Coley served as Chief Executive of British Energy from 2005 to 2009 when he retired following the successful combination of British Energy and EDF Energy. He was President of Duke Power from 1997 until his retirement in February 2003, holding various officer level positions in engineering, operations and senior management during his 37-year career with the company.

Mr. Coley is a director of Peabody Energy and E.R. Jahna Industries. He also served on the WANO Fukushima Commission.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since January 2013)	7 of 8	88%
Compensation, Leadership and Governance Committee (since February 2016)	4 of 4	100%
Generation Oversight Committee (since February 2016)	4 of 4	100%
Darlington Refurbishment Committee (since May 2015)	4 of 4	100%

Principal Occupation: Retired Chief Executive of British Energy

Board Memberships for other Reporting Issuers: Peabody Energy (NYSE)

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Elisabeth (Lisa) DeMarco
Age: 49
Toronto, Ontario Canada

Lisa DeMarco is a senior partner at DeMarco Allan LLP with over two decades of experience in law, regulation, policy, and advocacy relating to energy and climate change. Ms. DeMarco was previously a partner at Macleod Dixon LLP from 2002 to 2012, partner at Norton Rose Canada LLP from 2012 to 2013 and partner at Norton Rose Fulbright LLP from 2013 to 2014. She represents several governments and leading energy clients in a wide variety of natural gas, electricity and energy storage matters before various regulatory agencies, including the OEB and the National Energy Board. She has been an adjunct professor at Osgoode Hall Law School and lectures regularly.

Ms. DeMarco also assists leading Canadian energy companies on domestic and overseas power project development, renewable power projects, alternative fuel projects, cleantech development and finance, energy storage, carbon capture and storage, corporate social responsibility, environmental disclosure, clean energy finance, and sustainable business strategy.

She is ranked by Chambers Global as one of the world's leading climate change lawyers and regularly attends and advises on related United Nations negotiations. She is ranked and repeatedly recommended by LEXpert, Expert Guide, International Who's Who, and Chambers Canada as a leading energy (oil and gas) and environment lawyer. Ms. DeMarco has worked for multilateral development banks and energy companies on deals and projects in India, Brazil, Sri Lanka, Thailand, Argentina, Chile, Ireland, Africa, Mexico, China, Russia, California, Alberta, Ontario, and Québec. She plays an ongoing and active role in the development and drafting of energy and greenhouse gas emissions policy, regulation, and law throughout Canada, and in various countries around the world. She was appointed to the Premier of Ontario's now completed Climate Change Advisory Panel and continues to serve as an appointed member of Ontario's Clean Energy Task Force.

Ms. DeMarco is a member of the board of directors of the Ontario Energy Association and a member of the Toronto Atmospheric Fund Investment Committee. She is a graduate of the University of Western Ontario (BSc Hon. – 1990), the University of Toronto (MSc. – 1992), Osgoode Hall Law School, York University (LLB – 1995) and the Vermont Law School (MSEL, summa cum laude – 1995).

2016 Board/Committee Membership:	**2016 Attendance**	
Board (since April 2014)	8 of 8	100%
Audit and Risk Committee (since February 2016)	5 of 6	83%
Generation Oversight Committee (since February 2016)	4 of 4	100%

Principal Occupation: Lawyer, DeMarco Allan LLP

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Jean Paul (JP) Gladu
Age: 43
Toronto, Ontario, Canada

JP Gladu is currently the President and CEO of the Canadian Council for Aboriginal Business (CCAB) based in Toronto. Anishinaabe from Thunder Bay, Mr. Gladu is a member of Bingwi Neyaashi Anishinaabek located on the eastern shores of Lake Nipigon. Mr. Gladu has over two decades of experience in the natural resource sector including work with Aboriginal communities and organizations, environmental non-government organizations, industry and governments from across Canada including involvement in business development for the Bingwi Neyaashi Anishinaabek Nation from 2009 to 2012. He has produced a number of publications related to Aboriginal issues including: forest certification, Native values collection, biofuel opportunities, First Nation community land use plans, criteria and indicators for sustainable forestry, and cedar product development.

Mr. Gladu holds a Forest Technician Diploma from the Sault College of Applied Arts and Technology, a Bachelor of Science degree in forestry from Northern Arizona University, and an Executive Masters of Business Administration from Queens University in Kingston. In 2014, he was a recipient of the Community Service Award – Transformation Awards from Diversity Magazine. Mr. Gladu was nominated for the 2013 Premier's Award for Outstanding Ontario College Graduates, was recognized as one of five Northern Leaders in 2012 by Northern Ontario Business and was elected Class President of the 2012 Queens Executive Masters of Business Administration.

Mr. Gladu serves on the Colleges and Institutes Canada (previously the Association of Canadian Community Colleges), the Northern Policy Institute, and the Canadian Foundation for Economic Education boards of directors, is an advisory member to the Canadian Association of Petroleum Producers Renewable Clean Energy Committee, and is a committee member of the Provincial Forest Policy Committee. In the past, he has served as a director of the Centre for Research and Innovation in the Bio-Economy, a director of the Papasay Management Corporation, and a board member of the Canadian Bioenergy Association.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since November 2015)	8 of 8	100%
Compensation, Leadership and Governance Committee (since February 2016)	4 of 4	100%
Generation Oversight Committee (since February 2016)	4 of 4	100%

Principal Occupation: President and CEO, Canadian Council for Aboriginal Business
Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Brendan Hawley
Age: 64
Ottawa, Ontario, Canada

Brendan Hawley is the Principal of a national public affairs consultancy that has advised industry, corporate and government clients over the past 30 years. Covering a range of industries from energy and power, to cultural industries, Mr. Hawley has advised on issues relating to the public impact/perception of industry structure, products, and economic impact as well as government legislation and regulation.

An Ottawa native and honours graduate in history and journalism from St. Patrick's College and Carleton University in Ottawa, Mr. Hawley worked for a decade in the federal government, and then in the private sector prior to establishing his firm in 2000. He held senior positions in communications, marketing, and public affairs at several major public and private sector organizations, including the Canadian Council of Professional Engineers, Export Development Corporation, and the Canadian Petroleum Products Institute.

Mr. Hawley has extensive experience in helping clients identify organizational goals in tandem with operational business plans. He also has significant experience in managing education strategies and programs on matters of Canadian energy. He initiated an Energy Summer School for federal Members of Parliament to facilitate a greater understanding of the economics of energy, and as part of a broader mandate dealing with federal and provincial issues related to energy pricing, facilities, and products. He also authored a popular guide to conducting advocacy at the federal level.

Mr. Hawley has an ICD.D designation from the Institute of Corporate Directors.

Mr. Hawley is affiliated with a number of business and philanthropic organizations but has recently focused more time on Ottawa's Canadian Museum of Nature, Museum of Science and Technology, and the Canadian Museum of History.

2016 Board/Committee Membership:	**2016 Attendance**	
Board (since April 2014)	8 of 8	100%
Audit and Risk Committee (since February 2016)	6 of 6	100%
Darlington Refurbishment Committee (since February 2016)	4 of 4	100%

Principal Occupation: Management Consultant, Brendan Hawley & Associates

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

John Herron
Age: 63
Punta Gorda, Florida, U.S.A.

John Herron retired from Entergy in April 2013 where he was the President, CEO and Chief Nuclear Officer of Entergy Nuclear, with responsibility for Entergy's nuclear plants located in New York, Massachusetts, Vermont, Michigan, Louisiana, Mississippi and Arkansas as well as the company's management service to the Cooper Nuclear Station for the state of Nebraska.

He previously served as Entergy's Senior Vice President for Nuclear Operations handling the operational side of fleet management. Mr. Herron joined Entergy in February 2001 as Vice President, Operations at the Waterford 3 Nuclear Station in Killona, Louisiana. He then moved to New York as the Senior Vice President of the Indian Point Energy Center in February 2002.

Mr. Herron began his career in nuclear operations in 1979 at Vermont Yankee Nuclear Power Corporation. His positions there included technical services superintendent, operations manager, technical programs manager, shift supervisor, and supervisory control room operator. In 1994, he moved to Brownville, Nebraska to become plant manager at Nebraska Public Power District's Cooper Nuclear Station.

Mr. Herron then joined the Tennessee Valley Authority as plant manager at Sequoyah Nuclear Plant in Soddy-Daisy, Tennessee, from October 1996 through July 1999. From July 1999 to February 2001, Mr. Herron served as site Vice President at TVA's Browns Ferry Nuclear Plant.

Prior to his career in utilities, Mr. Herron served in the U.S. Navy from 1972 to 1978. He was attached to the USS Tullibee and the S1C NPTU Windsor, where he was an instructor at the Nuclear Submarine Prototype School.

Mr. Herron holds a bachelor's degree in Business Management from Franklin Pierce College in Rindge, New Hampshire. He also attended the Advanced Management Program at the Harvard Business School in May 2005.

Mr. Herron currently serves on the board of directors for Duke Energy. He also served on the board of directors for the Institute of Nuclear Power Operations and on the Nuclear Strategic Issues Advisory Committee of the Nuclear Energy Institute. In the aftermath of Japan's 2011 earthquake, he was named to the WANO Post-Fukushima Commission and the U.S. nuclear industry's Fukushima response steering committee.

2016 Board/Committee Membership:	**2016 Attendance**	
Board (since November 2013)	7 of 8	88%
Generation Oversight Committee* (since February 2016)	4 of 4	100%
Darlington Refurbishment Committee (since May 2015)	4 of 4	100%

Principal Occupation: Retired President, Chief Executive Officer and Chief Nuclear Officer, Entergy Nuclear

Board Memberships for other Reporting Issuers: Duke Energy (NYSE)

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

* Chair of Committee

Ira Kagan
Age: 54
Toronto, Ontario, Canada

Ira T. Kagan is a founding partner of Kagan Shastri LLP (Lawyers). He received a B.Sc. degree from the University of Toronto in 1985 and a Juris Doctor from the University of Toronto in 1988. He was called to the Ontario Bar in 1990 and since then has focused on municipal and land use planning law on behalf of both the private sector (including many of the leading developers in the Greater Toronto Area) and the public sector (including conservation authorities, local and regional municipalities).

Mr. Kagan regularly appears before the Ontario Municipal Board and many municipal councils and committees throughout the Greater Toronto Area. His practice includes all aspects of land use planning, including development applications, negotiations and mediations, appeals (both at the Ontario Municipal Board and the courts) and strategic decisions throughout. He is a regular presenter at industry and continuing legal education seminars, and has been involved in many of the leading land use planning cases in the Greater Toronto Area.

In 2005-2006, Kagan Shastri LLP was named the top municipal law firm in the Greater Toronto Area by Nova Res Urbis and since then has consistently ranked in one of the top spots.

2016 Board/Committee Membership:	**2016 Attendance**	
Board (since April 2014)	8 of 8	100%
Audit and Risk Committee (since February 2016)	6 of 6	100%
Generation Oversight Committee (since February 2016)	3 of 4	75%

Principal Occupation: Lawyer, Kagan Shastri LLP

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

M. George Lewis
Age: 56
Toronto, Ontario, Canada

From February 2007 until November 2015, George Lewis was a member of RBC's Group Executive, one of eight executives responsible for setting the overall strategic direction for Royal Bank of Canada, Canada's largest bank. In that capacity, he served as Group Head of RBC Wealth Management from 2007 and RBC Insurance from 2012. As Group Head, Wealth Management, Mr. Lewis led the RBC businesses that serve the wealth management needs of affluent clients globally, and units that provide asset management and trust products. He was also Chairman of RBC Global Asset Management Inc.

From July 2000 to May 2008, Mr. Lewis was Chief Executive Officer of RBC Global Asset Management, which under his leadership became Canada's largest single mutual-fund family (RBC Funds) and one of Canada's largest asset management firms. He previously served as Head of Wealth Management for the Canadian Personal and Business segment and, from 2003 to 2006, was Head of all banking and investment products for RBC's Canadian Business.

From 1998 to 2000, Mr. Lewis was Managing Director, Head of Institutional Equity with RBC Capital Markets, responsible for global institutional-equity sales, trading and research. He was previously a top-rated equity analyst and Director of Research. He began his career with RBC in 1986, in the investment banking division of RBC Capital Markets.

Mr. Lewis has extensive experience in the investment industry, has a Masters of Business Administration degree with distinction from Harvard University and a Bachelor of Commerce degree with high distinction from Trinity College at the University of Toronto. He is also a Chartered Financial Analyst and an FCA/FCPA and has been certified by the Institute of Corporate Directors.

Mr. Lewis serves on the board of directors of Enbridge Income Fund Holdings Inc., the Canadian Film Centre and the Anglican Diocese of Toronto Foundation. He is a current member and past chair of the Bishop's Company of the Anglican Diocese of Toronto, as well as a patron and member of the Cabinet of the United Way of Toronto and York Region. Mr. Lewis also serves as the Honorary Colonel Commandant of the Royal Canadian Chaplain Service of the Canadian Armed Forces.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since February 2005)	8 of 8	100%
Audit and Risk Committee* (since February 2016)	6 of 6	100%
Compensation, Leadership and Governance Committee (since February 2016)	4 of 4	100%

Principal Occupation: Corporate Director

Board Memberships for other Reporting Issuers: Enbridge Income Fund Holdings Inc. (TSX)

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

* Chair of Committee

Margaret (Peggy) Mulligan
Age: 58
Mississauga, Ontario, Canada

Peggy Mulligan was the Executive Vice President and Chief Financial Officer, Valeant Pharmaceuticals International, Inc. until December 2010. Prior to this, she was a Principal at Priiva Consulting, and before that she served as Executive Vice President and Chief Financial Officer of Linamar Corporation. Prior to Linamar, Mrs. Mulligan was with the Bank of Nova Scotia for eleven years as Executive Vice President, Systems and Operations and Senior Vice President, Audit and Chief Inspector. Before joining Scotiabank, she was an Audit Partner with PricewaterhouseCoopers in Toronto. She holds a B. Math (Honours) from the University of Waterloo and was named a Fellow of the Institute of Chartered Professional Accountants of Ontario in 2003.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since December 2005)	7 of 8	88%
Compensation and Leadership and Governance Committee* (since February 2016)	4 of 4	100%
Darlington Refurbishment Committee (since May 2015)	4 of 4	100%

Principal Occupation: Corporate Director
Board Memberships for other Reporting Issuers: ClearStream Energy Services Inc. (TSX) (*previously Tuckamore Capital*)

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

* Chair of Committee

Yezdi Pavri
Age: 67
North York, Ontario, Canada

Yezdi Pavri retired as Vice Chairman of Deloitte Canada in June 2012 after a career of more than 30 years. Prior to being named Vice Chairman, Mr. Pavri was a member of the firm's national Management Committee for over ten years and was the Managing Partner of the Toronto practice since June 2004. He founded Deloitte's national Enterprise Risk Services practice in 1990 and led it for 15 years. He was a founding member of the global firm's India Steering Committee and co-chaired the firm's first Diversity and Inclusion Committee.

Mr. Pavri holds a Bachelor's degree in Aeronautical Engineering from the Indian Institute of Technology in Bombay and a Master's degree in Thermal Power Engineering from Imperial College in London. He is a Fellow of the Chartered Professional Accountants of Ontario.

Mr. Pavri currently serves on the boards of ICICI Bank of Canada, Enterra Holdings Limited (the global parent of Golder Associates) and MD Financial Services, and is a past member of the board of directors of Hydro One. Mr. Pavri is also the immediate past chairman of the board of trustees of United Way Toronto.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since September 2015)	8 of 8	100%
Audit and Risk Committee (February 2016)	6 of 6	100%
Compensation, Leadership and Governance Committee (since February 2016)	4 of 4	100%

Principal Occupation: Corporate Director
Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Gerry Phillips
Age: 76
Ajax, Ontario, Canada

Gerry Phillips was the Member of Provincial Parliament in the Legislative Assembly of Ontario for the east Toronto riding of Scarborough-Agincourt from 1987 to 2011. He served in six cabinet portfolios, including twice as Ontario Minister of Energy, where he was OPG's Shareholder from 2007 to 2008 and again on an interim basis from November 2009 to January 2010, as well as, Minister responsible for Securities Regulation in Ontario. He was also the Chair of the Management Board of Cabinet from 2008 to 2011 and the Chair of the Select Committee on the TMX Transaction in 2011.

Before entering public life, Mr. Phillips graduated from the University of Western Ontario's School of Business and worked in the marketing department of Procter and Gamble. In 1970, he joined the consulting firm of Canadian Marketing Associates and became President in 1977. He later founded two successful spin-off companies – the Sales Development Group in 1979 and the Retail Resource Group in 1982. By 1987, he was Chair of all three companies, with a combined workforce of approximately 300.

Mr. Phillips has an Honours B.A. from the Western School of Business.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since January 2013)	8 of 8	100%
Audit and Risk Committee (since February 2016)	6 of 6	100%
Darlington Refurbishment Committee (since May 2015)	4 of 4	100%

Principal Occupation: Retired

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

Jim Reinsch
Age: 73
Frederick, Maryland, U.S.A.

Jim Reinsch retired from the Bechtel Group where he was Senior Vice President and Partner, and past President of Bechtel Nuclear. In this role, he was responsible for the global profit/loss, customer relations, operations, project management, marketing and business development of Bechtel's three nuclear business segments: nuclear operating plant services, steam generator replacement, and operations of Bechtel's global nuclear activities. During his 40 years with Bechtel, he also presided over Bechtel Canada, and managed large regions in the United States and Asia. He served as the President of the American Nuclear Society, and was a member of the Nuclear Energy Institute as well as a member of their Executive Committee. Mr. Reinsch is also a member of several international nuclear energy organizations, including the WANO and the World Nuclear Association.

Mr. Reinsch holds a Bachelor of Science degree from the University of Maryland.

Mr. Reinsch currently serves on the board of directors for Frederick Memorial Hospital and the Hood College Board of Trustees, and is a past board member of Duke Energy and the Smithsonian National Portrait Gallery. Additionally, he serves on the Emirate Nuclear Energy Corporation's committee on nuclear power which reports to the board of directors, and is a member of the international advisory board of Terrestrial Power.

2016 Board/Committee Membership:	**2016 Attendance:**	
Board (since August 2015)	8 of 8	100%
Generation Oversight Committee (since February 2016)	4 of 4	100%
Darlington Refurbishment Committee* (since August 2015)	4 of 4	100%

Principal Occupation: Corporate Director
Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None

*Chair of Committee

Margaret (Peggy) Gilmour served as a Director from October 2015 to July 2016 and was a member of the Audit and Risk Committee and the Generation Oversight Committee.

Orientation and Continuing Education

The Compensation, Leadership and Governance Committee is responsible for reviewing and recommending appropriate orientation programs for new Directors. New directors are provided relevant documentation relating to OPG's governance practices and policies and to its business. Directors attend plant tours of OPG generating facilities, where they also receive comprehensive introductory briefings from OPG senior executives on OPG's operations and business activities.

The Board supports and sponsors the continuing education of OPG Directors, both in the business of OPG and in their duties as Directors. This includes plant tours of OPG's major facilities, site visits to projects with OPG's Indigenous business partners, and special presentations by internal and external experts on topical business-related issues or on specific aspects of OPG's operations. In 2016, such topics included pension plans, project management, and anti-bribery and corruption. Directors are also provided with articles and publications on current topics of interest. Board members have full access to all Board and Board committee materials and records. OPG has developed a Director Governance Handbook, which provides Directors with information necessary to fulfill their roles, including director duties and obligations under the OBCA, and relevant corporate policies and procedures. OPG also sponsors Director attendance at the Institute of Corporate Directors' Director Education Program, or equivalent, and sponsors attendance at the Goizueta Director program for members of Board committees responsible for oversight of nuclear operations.

Ethical Business Conduct

The Board has adopted a policy for ethical business behaviour and a Code of Business Conduct. The mandate of the Audit and Risk Committee requires that it receive regular reports throughout the year on the Code of Business Conduct in order to satisfy itself that appropriate code of conduct and compliance programs are in place and are being enforced, and remedial action is being taken. The Audit and Risk Committee receives quarterly reports from management on the Code of Business Conduct (including reports on substantiated cases of fraud) and the disposition of cases including disciplinary action, as well as an annual report on the Code of Business Conduct and a report on the annual review of the Board policy. The Audit and Risk Committee has procedures for the receipt, retention and treatment of complaints received pertaining to accounting, internal controls or auditing matters, and for the confidential anonymous submission by employees concerning such matters.

Nomination of Directors

The Compensation, Leadership and Governance Committee, which is comprised of six independent Directors within the meaning of NI 52-110, is responsible for conducting an annual review of the OPG Board's principles and systems of governance, and oversight of annual Board, Board committee and Director evaluations. The Compensation, Leadership and Governance Committee recommends candidates to the Shareholder. Nominations of Directors by the Shareholder may also be considered by the Compensation, Leadership and Governance Committee. When considering a potential candidate, the committee considers the qualities, experience, and skills that the Board, as a whole, should have in light of the business opportunities and risks facing OPG. The attributes the Compensation, Leadership and Governance Committee considers in a candidate include integrity, business judgment and experience, diversity, professional expertise, independence from management, financial literacy, and communication skills, as well as sufficient time available to fulfill his or her obligations as a Board member. The Board's policy on diversity is to interview a diverse candidate for every vacancy on the Board. OPG defines diversity to include: women, aboriginal peoples, people with disabilities, and visible minorities. These four enumerated groups mirror the four enumerated groups in the definition of "designated groups" in the federal *Employment Equity Act*.

From time to time, the Compensation, Leadership and Governance Committee may engage outside advisors to assist in identifying potential candidates.

Director Tenure/Board Renewal

The OPG Board Charter guideline for board tenure is 10 to 15 years. When considering board renewal, the Compensation, Leadership and Governance Committee regularly reviews the OPG Board skills profile. The Board maintains an "evergreen list" of potential Board candidates. From time to time, the committee makes recommendations to add skills to the Board that reflect OPG's business opportunities and risks.

Diversity in Leadership

Board of Directors

As noted under the heading, *Nomination of Directors*, the Compensation, Leadership and Governance Committee interviews a diverse candidate for every vacancy on the Board, where diversity is defined as: women, aboriginal peoples, people with disabilities, and visible minorities. The Board has signed on to the Catalyst Accord, set a target for "diverse" representation on the Board of 50 percent and adopted a target of 25% women on the Board by 2017. In 2016, four members were added to the Board, three of whom meet the diversity definition. As of the date of this AIF, five of the 14 members of the Board, 36 percent, meet the diversity definition. Representation of women on the Board is 21 percent (three Directors) as of the date of this AIF.

Senior Management

OPG strives to create a workforce that reflects diverse populations of the communities in which it operates. As of December 31, 2016, women filled 17 percent of Corporate Officer roles and 24 percent of senior management (senior managers and above) positions. In total, there were two women in Corporate Officer roles and 136 women in senior management positions. OPG tracks and monitors diversity succession planning metrics and strives to have a diverse candidates list for senior management positions. A target of 25 percent for representation of women in senior management roles has been established.

Compensation

Executive Compensation Framework

In September 2016, the Government of Ontario introduced *Regulation 304/16: Executive Compensation Framework*. The regulation sets out how all employers, including OPG, designated under the *Broader Public Sector Executive Compensation Act, 2014* must establish and post compensation programs for executives. The regulation requires all designated employers to have a written Executive Compensation Program that describes the compensation they may provide to executives. The program must include the compensation philosophy, salary and performance-related pay caps, comparative analysis details, and a description of other elements of compensation. The regulation also requires that designated employers post their program on their website and provide a reasonable opportunity for members of the public to provide comments. OPG met the requirements of *Ontario Regulation 304/16* and posted its new Executive Compensation Framework on the Company's website for public comment on November 30, 2016. OPG reviewed the comments received through the public consultation process and determined that they do not alter its Executive Compensation Program, which became effective on January 1, 2017. OPG's Executive Compensation Program applies to employees at the Vice President level and higher. A copy of OPG's Executive Compensation Program is available on the Company's website at www.opg.com.

Director Compensation

The OPG Director compensation structure was established in 2005. The Compensation, Leadership and Governance Committee is responsible for monitoring and reviewing the level and nature of compensation of OPG Directors. Pursuant to the recommendations of the 2007 Report of the Agency Review Panel, OPG benchmarks the Board's compensation against the 50th percentile of compensation levels for a combined private and public sector comparator group. The last review occurred in May 2012 when the Governance and Nominating Committee of the Board benchmarked OPG's Director compensation against comparable public and private companies and concluded that OPG Director compensation was at the 38th percentile of comparator companies. However, the committee recommended that no change be made to the annual board retainer of Directors at that time in view of legislative constraints on compensation of OPG's management.

As at March 10, 2017, OPG's Director compensation framework provides each Director who is not an employee of OPG with an annual retainer of $25,000. Directors also receive a $3,000 retainer for each Board committee of which they are a member. Directors serve on at least two committees. Directors receive an additional retainer for serving as committee chairs. The retainer for the chair of the Audit and Risk Committee is $8,000. The chairs of the other three committees receive retainers of $5,000.

In addition to the above, Directors are compensated for each regular and/or special meeting that they attend and receive a fee of $2,000 or $1,000, as determined by the Board Chair or respective committee chair.

In order to retain national and international expertise, non-resident Directors are compensated in U.S. dollars and Directors who travel over certain distances receive a travel fee to cover travel time related to Board and Board committee meetings they attend.

Since 2004, the Chair of the Board, in his role as non-executive Chair, receives an all-inclusive annual fee of $150,000 and is reimbursed for out-of-pocket expenses including travel and other expenses.

CEO Compensation

Among its other responsibilities, the Compensation, Leadership and Governance Committee oversees, on behalf of the Board, the setting of the CEO's annual goals and objectives and the annual review of CEO performance, and makes recommendations to the Board with respect to CEO compensation. The Committee may seek input from an independent advisor with regard to monitoring and benchmarking compensation trends.

In August 2015, when the current CEO was appointed, the CEO compensation terms were established based on the benchmarks recommended in the 2007 Report of the Agency Review Panel on Phase 1 of its Review of Ontario's Provincially Owned Electricity Agencies. The CEO's base pay and incentives compensation are compliant with *Ontario Regulation 304/16*. Other elements of the CEO's compensation will be compliant within the three-year period provided in the regulation to bring all elements of compensation into compliance. **[MONITOR]**

For details regarding compensation paid to Directors and executive officers during the financial year ended December 31, 2016, see OPG's Statement of Executive Compensation (Form 51-102F6), which is available on SEDAR at www.sedar.com and incorporated by reference herein.

Committees of the Board of Directors

Effective February 11, 2016, the OPG Board restructured and streamlined its standing committees from six to four, and appointed Directors to each committee. The following are the current standing Board committees as at March 10, 2017:

Audit and Risk Committee

This committee is responsible for the integrity, quality, and transparency of OPG's financial information, the adequacy of the financial reporting process, the systems of internal controls, and related principles, policies and procedures established by management. The Committee is responsible for the oversight of the Company's regulatory filings, financial statements, MD&A and press releases prior to their disclosures to the public, including approval of quarterly financial statements and recommending approval of the annual financial statements and various other annual disclosures to the Board. The committee is also responsible for the appointment, compensation, and oversight of the external auditor.

The committee also provides oversight of OPG's corporate financing strategies including:

- policies related to financial exposure management;
- processes for identifying major financial risks;
- performance of the OPG Pension Fund, the Used Fuel Segregated Fund and the Decommissioning Segregated Fund;
- review and approval of the audited financial statements of the OPG Pension Fund, the Used Fuel Segregated Fund and the Decommissioning Segregated Fund; and
- review and approval of the statements of investment policies and procedures for the OPG Pension Fund, the Used Fuel Segregated Fund, and the Decommissioning Segregated Fund.

The Audit and Risk Committee also oversees risk and associated risk management activities, including the review of management's assessment of significant risks to achieving OPG's business plan objectives. The committee is also responsible for ensuring that an effective Code of Business Conduct is in place at OPG and monitors compliance with this code.

As of the date of this AIF, the Audit and Risk Committee consists of George Lewis (Chair), Elisabeth (Lisa) DeMarco, Brendan Hawley, Ira Kagan, Yezdi Pavri, and Gerry Phillips.

For further details regarding the Audit and Risk Committee, see *Audit and Risk Committee Information*.

Compensation, Leadership and Governance Committee

This committee provides oversight of OPG's human resources and compensation policies and practices, including CEO objectives and compensation, disclosure on compensation and human resources matters, leadership talent review, succession planning, and collective bargaining negotiations. The committee also provides oversight of the design of OPG's benefit and pension plans.

The Compensation, Leadership and Governance Committee oversees the Board's governance program and practices to ensure that they are consistent with high standards of corporate governance, including annually reviewing and assessing the Board's system of corporate governance with a view to maintaining these high standards. The committee is also responsible for overseeing OPG's reputation management plan, and for identifying and recommending to the Board candidates for nomination to the Shareholder. Finally, the committee oversees OPG's processes for Board, Board committee, and Director assessments, as well as Director compensation and new Director orientation.

As of the date of this AIF, the Compensation, Leadership and Governance Committee consists of Margaret (Peggy) Mulligan (Chair), Nicole Boivin, Bill Coley, JP Gladu, George Lewis and Yezdi Pavri.

Darlington Refurbishment Committee

The Darlington Refurbishment Committee is responsible for the oversight of the execution of the Darlington Refurbishment project, including retaining external independent oversight advisors. The committee was also responsible for making a recommendation to the Board with respect to a final budget and schedule for the Darlington Refurbishment project, which subsequently was approved by the Board of Directors in November 2015. The committee monitors and reports on the progress of the refurbishment

project against the approved budget and schedule. The committee will make a recommendation to the Board with respect to the refurbishment of subsequent Darlington units, and other recommendations for approvals related to the refurbishment project as may be required from time to time.

As of the date of this AIF, the Darlington Refurbishment Committee consists of Jim Reinsch (Chair), Nicole Boivin, Bill Coley, Brendan Hawley, John Herron, Margaret (Peggy) Mulligan and Gerry Phillips.

Generation Oversight Committee

This committee is responsible for the oversight of safe, secure and efficient operations of OPG's generating facilities. Additionally, the committee is responsible for the development, risk management, financing, and execution of the Company's major generation projects including those related to nuclear waste management, other than the Darlington Refurbishment project. The committee is also responsible for the oversight of OPG's environment and dam safety management systems and OPG's Indigenous relations. The committee reviews reports of internal and external advisors/assessors in respect of OPG's generation operations and management's response to the findings from such assessments. The committee provides oversight to ensure that OPG's generating facilities are in compliance with nuclear safety, industrial and occupational health and safety, and environmental laws and regulations.

As of the date of this AIF, the Generation Oversight Committee consists of John Herron (Chair), Bill Coley, Elisabeth (Lisa) DeMarco, JP Gladu, Ira Kagan and Jim Reinsch.

Assessments

The Compensation, Leadership and Governance Committee is responsible for the annual process for evaluating the performance of the Board, its committees and individual Directors. The Board and committee evaluations are based upon the completion of confidential questionnaires regarding assessment of performance and compliance with the Board and Committee Charters. The individual Director evaluations are based on self-assessment questionnaires, which are submitted in confidence to the Board Chair and the Chair of the Compensation, Leadership and Governance Committee. In addition, the process includes a follow-up one-on-one meeting between each Director and the Board Chair. The Compensation, Leadership and Governance Committee reports the results of the evaluations and makes recommendations to the Board for enhancing the Board's governance and effectiveness.

Further Information on OPG Governance

OPG provides additional information on the Company's governance on its website (www.opg.com) including:

- Memorandum of Agreement with the Shareholder
- Shareholder Directives
- List of Corporate Officers
- Board and Committee Charters
- Board and Committee Chair Position Descriptions
- Board of Directors Conflict of Interest Policy
- Indigenous Relations Policy
- Code of Business Conduct
- Disclosure Policy
- Environmental Policy
- Employee Health and Safety Policy
- Nuclear Safety Policy
- Safe Operations Policy
- Cyber Security Policy

Unless otherwise specifically stated, none of the information contained on, or connected to the Company's website nor any of the contents of the aforementioned additional information on OPG's governance are incorporated by reference herein.

EXECUTIVE OFFICERS

The following table sets forth the name, municipality of residence, position with the Company, and the date of commencement for each of the executive officers of the Company as of March 10, 2017: **[MONITOR]**

Name and Municipality of Residence	**Current Position Held**	**Executive Officer Since**
Bernard Lord *Moncton, New Brunswick*	Board Chair	April 2014
Jeff Lyash *Toronto, Ontario*	President and Chief Executive Officer	August 2015
Carlo Crozzoli *Toronto, Ontario*	Senior Vice President, Corporate Business Development and Strategy	December 2011
Chris Ginther *Newmarket, Ontario*	Senior Vice President, Legal, Ethics and Compliance **[UPDATE]**	July 2012
Ken Hartwick *Milton, Ontario*	Senior Vice President, Finance, Strategy & Risk and Chief Financial Officer	March 2016
Glenn Jager *Clarington, Ontario*	President, OPG Nuclear and Chief Nuclear Officer	November 2013
David Kaposi *Toronto, Ontario*	Vice President, Chief Investment Officer	November 2013
Barb Keenan *Toronto, Ontario*	Senior Vice President, People Culture & Communications **[UPDATE]**	March 2010
Catriona King *Richmond Hill, Ontario*	Vice President, Corporate Secretary	February 2005
John Lee *Toronto, Ontario*	Vice President, Treasurer	July 2011
Mike Martelli *Etobicoke, Ontario*	President, Renewable Generation and Power Marketing	July 2013
Dietmar Reiner *Clarington, Ontario*	Senior Vice President, Nuclear Projects	June 2014
Jennifer Rowe **[MONITOR]** *Toronto, Ontario*	Senior Vice President, Corporate Affairs	February 2017

All of the executive officers of the Company have been engaged for more than five years in their current principal occupations, except as set out below:

- Mr. Crozzoli was Vice President, Hydroelectric Development at OPG from March 2008 to December 2011, Senior Vice President, Corporate Business Development and Chief Risk Officer at OPG from December 2011 to November 2015, Acting Senior Vice President, Finance, Strategy & Risk and Chief Financial Officer at OPG from November 2015 to March 2016 and Senior Vice-President, Corporate Business Development and Chief Risk Officer at OPG from March 2016 to August 2016.
- Mr. Ginther was Senior Vice President, Law and General Counsel and Chief Ethics Officer at OPG from July 2012 to January 2016 and Senior Vice President, Legal, Ethics and Compliance at OPG from January 2016 to February 2017. **[UPDATE]**
- Mr. Hartwick was President and CEO at Just Energy Corp. from February 2008 to April 2014, Interim President and CEO at Atlantic Power Corporation from September 2014 to January 2015 and Chief Financial Officer at Wellspring Financial Corporation from February 2015 to March 2016.
- Mr. Jager was Senior Vice President, Pickering Nuclear Generating Station at OPG from January 2010 to November 2013 and Chief Nuclear Officer at OPG from November 2014 to March 2015.
- Mr. Kaposi was Global Head of Alternatives for Mercer (Canada) Inc. from November 2007 to June 2012 and Partner, Investor Relations at Bastion Infrastructure Group Inc. from July 2012 to September 2013.
- Ms. Keenan was Senior Vice President, People and Culture at OPG from March 2012 to January 2016 and Senior Vice President, People, Culture and Communications from January 2016 to February 2017. **[UPDATE]**
- Ms. King was Vice President, Corporate Secretary at OPG from June 2005 to May 2012.
- Mr. Lee was Assistant Treasurer at OPG from April 2009 to July 2011.
- Mr. Martelli was Plant Manager for the Niagara Plant Group at OPG from June 2010 to July 2013 and Senior Vice President, Hydro-Thermal Operations at OPG from July 2013 to January 2016.
- Mr. Reiner was Senior Vice President, Nuclear Refurbishment at OPG from March 2010 to April 2014.
- Ms. Rowe was Senior Vice President and Chief Marketing Officer at Meridan Credit Union from xx, xxxx to xx, xxxx **[UPDATE]** and Senior Managing Director – Marketing and Communications and VP Corporate Affairs at Manulife from xx, xxxx to xx, xxxx. **[UPDATE]**

INDEBTEDNESS OF DIRECTORS AND EXECUTIVE OFFICERS

As of the date of this AIF, no director or executive officer of the Company or any of its subsidiaries had any outstanding indebtedness to the Company or any of its subsidiaries except routine indebtedness or had any indebtedness that was the subject of a guarantee, support agreement, letter of credit or other similar arrangement or understanding provided by the Company or any of its subsidiaries.

CEASE TRADE ORDERS, BANKRUPTCIES, PENALTIES OR SANCTIONS

To the knowledge of OPG, no director or executive officer is, at the date of the AIF, or was within 10 years before the date of the AIF, a director, chief executive officer, or chief financial officer of any company, that (a) was subject to an order that was issued while the director or executive officer was acting in the capacity as director, chief executive officer, or chief financial officer, or (b) was subject to an order that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer, or chief financial officer.

To the knowledge of OPG, no director or executive officer of OPG, or a shareholder holding a sufficient number of securities of OPG to affect materially the control of OPG (a) is, as at the date of the AIF, or has been within the 10 years before the date of the AIF, a director or executive officer of any company (including OPG) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or

insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or (b) has, within the 10 years before the date of the AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager, or trustee appointed to hold the assets of the director, executive officer, or shareholder, except for:

- Bernard Lord was a director of AEA Technology from the fall of 2010 until the fall of 2012 when it became insolvent.
- William Coley is a director of Peabody Energy Corporation which declared voluntary Chapter 11 bankruptcy protection in April 2016 for most of its U.S. entities and currently is restructuring.

AUDIT AND RISK COMMITTEE INFORMATION

NI 52-110 has been implemented by Canadian securities regulatory authorities to encourage reporting issuers to establish and maintain strong, effective, and independent audit committees, to enhance the quality of financial disclosure, and to foster increased investor confidence in Canada's capital markets. The Audit and Risk Committee's Charter is attached to this AIF as Appendix A. Information on OPG's Audit and Risk Committee is as follows:

Composition of the Audit and Risk Committee

As at March 10, 2017, the members of the Audit and Risk Committee were George Lewis (Chair), Elisabeth (Lisa) DeMarco, Brendan Hawley, Ira Kagan, Yezdi Pavri and Gerry Phillips. All members are independent within the meaning of NI 52-110 and have experience in business and financial matters. Each member has an understanding of internal controls and procedures for financial reporting. As part of OPG's Continuing Education Program for Directors, Audit and Risk Committee members are provided with access to both internal and external educational resources, including seminars and courses, in order to maintain or enhance their financial literacy.

Activities of the Audit and Risk Committee

The Chartered Professional Accountants of Canada (CPA Canada) and the Canadian Public Accountability Board have recommended that audit committees perform a comprehensive review of the external audit firm at least once every five years. CPA Canada issued guidelines in early 2014 to assist audit committees in implementing these recommendations. The Audit and Finance Committee of the Board conducted its first comprehensive review of the Company's external auditor, Ernst & Young LLP (E&Y) in 2014, for the period from 2009 to 2013, using the guidelines and format recommended by CPA Canada. E&Y has been OPG's external auditor since the Company's inception in 1999. E&Y provides audit and audit related services to OPG, including the audit of OPG's annual consolidated financial statements, reviews of OPG's quarterly financial statements, and audits of the financial statements of OPG's consolidated subsidiaries and other financial information.

In conducting the 2016 review of E&Y's performance, the Audit and Risk Committee considered input from management, E&Y, and OPG's internal audit function. The Committee performed this review taking into consideration the information submitted by these parties, as well as their individual experience. The results of the 2016 annual review were discussed at the Audit and Risk Committee meeting in August 2016. As part of the review, the Committee considered factors such as the auditor's independence, engagement team quality including the Committee's involvement in the selection of E&Y's lead engagement partner, and communication effectiveness between E&Y and the Company. Upon completion of the review, the Committee was satisfied with the performance of E&Y, concluded that their reappointment was in the best interests of OPG, and in November 2016, recommended that the Board reappoint E&Y as the Company's auditor for the 2017 fiscal year. The Board reappointed E&Y as the Company's auditor for the 2017 fiscal year in November 2016.

External Auditor Service Fees

The following fees were billed by Ernst & Young LLP:

(thousands of dollars)	**2016**	**2015**
Audit fees	**2,034**	1,963
Audit-related fees	**543**	623
All other fees [1]	**17**	17

[1] Comprised of fees related to the subscription of an online accounting research tool and training.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Relationship with the Province and the OEFC

Relationship with the Shareholder

As a corporation created under and governed by the OBCA, OPG's management is supervised by its Board of Directors, which is obligated by law to act in the best interests of the Company. The Company's sole Shareholder, the Province, owns all of the Company's issued and outstanding common shares and thereby has the power to determine the composition of the Company's Board of Directors.

As one of several wholly-owned government business enterprises of the Province, OPG has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

Memorandum of Agreement

On August 17, 2005, OPG entered into the MOA with the Shareholder regarding OPG's role and responsibility as a power producer in Ontario. In July 2015, the MOA was revised. The MOA serves as the basis of agreement between OPG and the Shareholder regarding OPG's mandate, governance, performance, reporting and communications, and establishes the accountabilities between OPG and the Province. OPG's strategic imperatives are based on the Company's mandate as set out in the MOA. The MOA was reaffirmed for continuance by both the Ontario Minister of Energy and the OPG Board of Directors' Chair in the fourth quarter of 2016, as required by the MOA following a change in the Minister of Energy.

A copy of the MOA can be found on the Company's website at www.opg.com. ***Unless otherwise specifically stated, none of the information contained on, or connected to the Company's website nor any of the contents of the MOA are incorporated by reference herein.***

Shareholder Directives

The Shareholder may at times direct OPG to undertake special initiatives. A Shareholder directive is issued when the Shareholder finds it necessary to assume decision-making power and authority over certain aspects of the business operations of the Corporation. Under a Shareholder directive, the Shareholder assumes all the rights, powers, duties and liabilities of the Directors to manage or supervise the management of the business and the Directors are relieved of their duties and liabilities. Shareholder directives are communicated as written pursuant to section 108 of the OBCA. Copies of each Shareholder directive can be found on the Company's website at www.opg.com. ***Unless otherwise specifically stated, none of the information contained on, or connected to the Company's website nor any of the contents of the Shareholder directives are incorporated by reference herein.*** The Shareholder directives issued by the Shareholder to date are listed below in reverse chronological order:

- Sale of the Corporation's Lakeview site (June 9, 2016);

- Sale of the Corporation's Head Office (December 14, 2015);
- Bruce Power L.P. Lease Agreement and Used Fuel Agreement (November 30, 2015) – For further details, see *General Development of Business – Nuclear Business Development – Bruce Power Refurbishment and Bruce Lease Agreement*;
- Bruce Power L.P. Amended and Restated Heavy Water and Associated Services Agreement (November 30, 2015) – For further details, see *General Development of Business – Nuclear Business Development – Bruce Power Refurbishment and Bruce Lease Agreement*;
- Conversion of One Unit of Thunder Bay Generating Station to Advanced Biomass (May 1, 2014);
- Thunder Bay Generating Station Conversion (December 16, 2013);
- Early Closure of Ontario Power Generation's Lambton and Nanticoke Coal-Fired Generation Stations (March 7, 2013);
- First Nation Directive (April 1, 2011) – OPG was directed to pay a part of the Shareholder's portion of the settlement liability with a First Nation on its behalf;
- Atikokan Generating Station Conversion (March 8, 2011);
- Addressing Carbon Dioxide Emissions from the Use of Coal at Coal-Fired Generating Stations (May 20, 2010);
- Request for Indicative Prices for the Supply of Wood Pellet Fuel Declaration (Atikokan) (March 18, 2010);
- Request for Expressions of Interest for Supply and Transportation of Solid Biomass Fuel Declaration (January 13, 2009) ;
- Addressing Carbon Dioxide Emissions from the Use of Coal at Coal-Fired Generating Stations (May 15, 2008);
- Thunder Bay Gas Conversion Cancellation (July 12, 2006);
- Nuclear Directive (June 16, 2006) – OPG was directed to begin feasibility studies on refurbishing existing nuclear units, an environmental assessment on refurbishing Pickering B units, and federal approvals processes (including environmental assessment) for new nuclear units;
- Lower Mattagami River Agreement (May 23, 2006);
- Bruce Power Lease Agreement (October 14, 2005); and
- Thunder Bay Gas Conversion Declaration (October 6, 2005).

Ontario Nuclear Funds Agreement

The ONFA between OPG and the Province sets out the responsibility for funding the liabilities for the decommissioning of OPG's nuclear facilities and the long-term management of OPG's used nuclear fuel and other nuclear waste. Pursuant to the ONFA, the Company has established a Used Fuel Segregated Fund and a Decommissioning Segregated Fund to fund the future costs of these activities. For additional details, see *Description of the Business – Regulated – Nuclear Waste Management Segment – Funding Mechanisms*.

OPG Debt Held by the OEFC

OPG's long-term debt has been financed predominantly by the OEFC. As at December 31, 2016, the OEFC held approximately $3.3 billion of OPG's long-term debt with maturities ranging from one month to 30 years. For additional details, see Note 6 to the Company's audited annual financial statements as at and for the year ended December 31, 2016.

Payments-In-Lieu of Corporate Income Taxes and Property Taxes

OPG and its wholly-owned subsidiaries are exempt from tax under the *Income Tax Act* (Canada) and *Taxation Act, 2007* (Ontario). However, under the *Electricity Act, 1998*, OPG is required to make proxy tax payments to the OEFC. These payments are calculated in accordance with the *Income Tax Act*

(Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations.

OPG is subject to income tax audits by the Ontario Ministry of Finance. As of the date of this AIF, income tax audits up to and including the 2012 taxation year have been completed.

The *Electricity Act, 1998* also provides that OPG and certain of its subsidiaries are required to make payments in lieu of property tax to the OEFC on their non-hydroelectric generating station buildings and structures. These payments generally equal the difference between property taxes that would be otherwise payable if these assets were privately owned, and the amount payable to municipalities in respect of these assets as determined under the *Assessment Act, 1990* (Ontario). As with other hydroelectric generators in Ontario, OPG's hydroelectric generation operations are not subject to payments in lieu of property taxes because they are subject to the GRC regime. For additional details on the GRC regime, see *Description of the Business – Generation Operations – Hydroelectric (Regulated – Hydroelectric and Contracted Generation Portfolio segments) – Gross Revenue Charge and Water Payments*.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

Legal Proceedings

OPG is potentially the subject of various legal proceedings and claims that arise in the ordinary course of business. The outcome of these proceedings and claims is uncertain. Based on information available as of the date of this AIF, management believes that none of the proceedings and claims, individually and in the aggregate, are expected to have a material impact on OPG.

British Energy Claim

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered by June 30, 2017, as required by the timetable.

Regulatory Actions

OPG is not aware of any penalties or sanctions imposed by a court or securities regulatory authority or other regulatory body against the Company, nor has the Company entered into any settlement agreements before a court or with a securities regulatory authority.

MATERIAL CONTRACTS

Except for contracts entered into in the ordinary course of business (unless otherwise required by applicable securities requirements to be disclosed), there were no material contracts entered into by the Company or its subsidiaries during the most recently completed financial year, or before the most recently completed financial year that are still in effect.

INTERESTS OF EXPERTS

The external auditor of the Company is Ernst & Young LLP, Chartered Professional Accountants, 222 Bay Street, P.O. Box 251, Toronto, Ontario M5K 1J7. Ernst & Young LLP has been the Company's auditors since OPG was formed in 1999, and is independent in accordance with the Rules of Professional Conduct of the Chartered Professional Accountants of Ontario.

GLOSSARY

ancillary service	a service necessary to maintain the reliability of the IESO-controlled grid.
availability	when used in reference to a generating unit, is a measure of mechanical reliability represented by the percentage of time a generating unit is capable of providing service, whether or not it is actually in-service, relative to the total time for the period.
baseload facilities	Baseload facilities for Ontario are made up of nuclear, run-of-the-river hydroelectric and variable generation facilities such as wind and solar. For OPG, baseload facilities include nuclear and run-of-the-river hydroelectric facilities.
bilateral contract	a contract for the purchase and sale of notional electricity usually entered into directly between a generator and an end-user, or between a generator or end-user and a market intermediary.
biomass	plant material from agricultural and forest sources that can be used to produce energy, including beneficiated biomass, which includes torrefied, carbonized, and steam exploded biomass.
CANDU	an acronym for CANada Deuterium Uranium, a family of nuclear fission reactors developed in Canada which use pressurized heavy water coolant or deuterium oxide as a moderating agent and natural uranium (uranium dioxide) as fuel.
capacity factor	the ratio (usually specified as a percentage) of the amount of energy that a generating asset actually generated over a period of time divided by the amount of energy that the generating asset would have produced over the same period of time if it had operated continuously at full capacity.
decommissioning	actions taken in the interest of health, safety, security and protection of the environment to retire a facility permanently from service and render it to a predetermined end-state condition.
detritiation	the removal of tritium from heavy water.
deuterium oxide	see heavy water.
equivalent forced outage rate	the hours of unit failure given as a percentage of the total hours of the availability of that unit.
government business enterprises	Government organizations that are separate legal entities with the power to contract in their own name, have the financial and operating authority to carry on a business, are principally focused on the selling of goods and services to individuals and non-government organizations, and are able to maintain their operations and meet their obligations through revenues generated outside the government reporting entity.
heavy water (deuterium oxide)	water containing significantly more than the natural proportion of heavy hydrogen (deuterium) atoms to ordinary hydrogen atoms, used as a moderator in CANDU reactors.
in-service capacity	the portion of installed capacity (the highest level of output which a generating unit is designed to maintain indefinitely without damage to the unit) that has not been removed from service.

interconnection	a transmission line which carries power across the service area boundary of geographically adjacent jurisdictions.
International Joint Commission	An international organization created by the Boundary Waters Treaty, signed by Canada and the United States in 1909.
kWh	a kilowatt hour, the commercial unit of electric energy (the amount of electricity consumed by ten 100 watt light bulbs burning for one hour).
load	the quantity of electricity consumption measured as either the energy consumed over a given period of time or the rate of energy consumption at a given time by a particular customer or group of customers.
MW	a megawatt, equal to 1,000,000 watts or 1,000 kilowatts.
MWh	a megawatt hour, equal to 1,000 kWh.
OEFC	The Ontario Electricity Financial Corporation is the legal continuation of the former Ontario Hydro. The OEFC is responsible for managing the debt and certain other obligations not transferred to other successor companies of Ontario Hydro.
ONFA	The Ontario Nuclear Funds Agreement, between OPG and the Province, sets out the responsibility for funding the liabilities for the decommissioning of OPG's nuclear stations and the long-term management of OPG's used nuclear fuel and other nuclear waste.
Ontario NFWA Trust	a trust established by OPG pursuant to the Nuclear Fuel Waste Act for the purpose of funding the implementation of its long-term nuclear fuel waste management plan.
operating reserve	the capacity that can be called upon on short notice by the IESO to replace scheduled energy supply that is unavailable as a result of an unexpected outage or to augment scheduled energy as a result of unexpected demand or other contingencies.
proxy tax	pursuant to the *Electricity Act, 1998*, an amount payable to the OEFC in each taxation year in lieu of taxes under the *Income Tax Act* (Canada) and *Taxation Act, 2007* (Ontario).
reactive support	the control and maintenance of prescribed voltages on the IESO-controlled grid.
refurbishment	the work needed to extend the life of a reactor unit by replacing the major life-limiting components (such as pressure tubes, steam generators, etc.).
Shareholder	the sole shareholder of OPG, the Province of Ontario.
surplus baseload generation	a condition that occurs when electricity generation from baseload facilities is greater than the electricity market demand.
tonne	1,000 kilograms or 2,204.6 pounds.
tritium	a radioactive substance that is created within CANDU reactors as a result of heavy water in the reactor moderator and heat transport systems.

TWh	a terawatt hour, equal to 1,000,000 MWh.
unit	an electrical generator, together with its driving turbine and auxiliary equipment.
watt	a scientific unit of electric power representing the rate of work of one joule per second.

APPENDIX A

ONTARIO POWER GENERATION INC.

AUDIT AND RISK COMMITTEE CHARTER

Audit and Risk Committee Charter

Purpose

The function and purpose of the Audit and Risk Committee is to assist the Board of Directors in their responsibility for oversight of matters relating to:

- The integrity of OPG's financial statements and reporting
- The integrity and adequacy of internal controls and standards of Codes of Conduct and ethics
- The performance of OPG's internal audit function
- The performance and independence of OPG's external auditors
- Business and financial planning
- The performance of OPG's pension, nuclear decommissioning, and used fuel investment funds
- OPG's Enterprise Risk Management
- Assessment of committee performance and board policies.

Management is responsible for the preparation, presentation and integrity of OPG's interim and annual financial statements and related disclosure documents. Management is responsible for maintaining appropriate accounting and financial reporting principles and policies and systems of internal and disclosure controls and procedures to comply with accounting standards and applicable laws and regulations which provide reasonable assurance that the assets of the Company are safeguarded and transactions are authorized, executed, recorded and properly reported.

Management is also responsible for the identification, assessment, monitoring, and management of the risks to achieving OPG's strategic and business plan objectives and the development and implementation of policies and procedures to respond to such risks.

The Committee's role is to provide oversight that ensures the Company's assets are protected and safeguarded within reasonable business limits and report such to the Board.

Committee Responsibilities and Duties

The Committee shall perform the duties set out in this Charter and shall perform such other duties as may be necessary or appropriate under applicable law or securities rules, or as may be delegated to the Committee by the Board from time to time.

1. *The integrity of OPG's financial statements and reporting*

   The Committee reviews and makes recommendations to the Board with respect to:

   a) appointment or replacement of the Chief Financial Officer.
   b) OPG's annual financial statements and external audit report, including financial statements, Management's Discussion and Analysis (MD&A), related footnotes and any documentation required by the Securities Act to be prepared and filed by OPG or that OPG otherwise files with securities regulators.
   c) OPG's Annual Information Form, if required, prior to filing with securities regulators.

   The Committee reviews and approves:

   d) OPG's quarterly financial statements and interim financial information and disclosures in the MD&A and earnings press release, prior to filing.

   In carrying out its responsibilities for oversight of the integrity of OPG's financial statements and reporting the Committee will include in its review:

e) Adequacy of procedures in place for the review of OPG's public disclosure of financial information extracted or derived from OPG's financial statements.
f) significant accounting principles and reporting issues and impact on the financial statements, including complex or unusual transactions, highly judgmental areas, major issues regarding or changes to OPG's selection/application of accounting principles, financial presentations, the effect of regulatory and accounting initiatives, as well as off-balance sheet arrangements on OPG's financial statements.
g) analysis prepared by Management and/or the external auditor detailing financial reporting issues and judgments made in connection with the preparation of financial information, including analysis of the effects of alternative generally accepted accounting principles methods.
h) whether any other matters related to conduct have come to the Committee's attention that causes it to believe that the financial statements contain an untrue statement of material fact or omit to state a necessary material fact.

2. *Integrity and adequacy of Internal Controls and standards of Codes of Conduct and ethics*

In carrying out its responsibilities for the integrity and adequacy of internal controls, including compliance with legal and regulatory requirements and standards of codes of conduct and ethics, the Committee reviews:

a) legal, tax, or regulatory matters that may have a material impact on OPG's operations and the financial statements, including, but not limited to, violations of securities law or breaches of fiduciary duty.
b) the scope of review of internal control over financial reporting, significant findings, recommendations and Management's responses for implementation of actions to correct weaknesses in internal controls.
c) disclosures made by the Chief Executive Officer and Chief Financial Officer during the certification process regarding significant deficiencies in the design or operation of internal controls or any fraud that involves Management or other employees who have a significant role in OPG's internal controls.
d) procedures for the receipt, recording and treatment of complaints received by OPG regarding accounting, internal accounting controls, or auditing matters, and procedures for the confidential and anonymous submission by OPG employees of concerns regarding accounting or auditing matters.
e) expenses of the Board Chair, Board of Directors, President/CEO and the President/CEO's direct reports on an annual basis, and of any other senior officers and employees the Committee considers appropriate.
f) reports from the Chief Ethics Officer on independent reviews and investigations of fraud allegations, matters that may involve fraud and/or Codes of Conduct violations and compliance.

3. *Performance of OPG's internal audit function*

The Committee reviews and makes recommendations to the Board with respect to:

a) Appointment or replacement of the Chief Risk and Audit Executive.

The Committee reviews and approves:

b) The annual internal audit plan and all major changes to the plan, including the organizational structure, budget and the adequacy of resources.
c) the charter of the internal audit function annually.

In carrying out its responsibilities for the performance of OPG's internal audit function the Committee reviews:

d) results of Internal audit reports, including: significant findings, the adequacy of the control processes, Management's response and the timetable for implementation of Management actions to correct weaknesses, any difficulties encountered in the course of their work (such as restrictions on the scope of their work or access to information).
e) Internal Audit's confirmation of organizational independence and disclosure of any conflict of interest.
f) Internal Audit performance relative to the annual internal audit plan.

4. *Performance and Independence of External Auditor*

The Committee reviews and makes recommendations to the Board with respect to:

a) the external auditor to be annually appointed on behalf of the Shareholder, and related compensation, including results of a cyclical performance review, and a comprehensive review of the external audit firm at least once every five years.

The Committee reviews and approves:

b) pre-approval of additional audit services and fees to be provided by the external auditors if such services are required further to the annual compensation approved by the Board. The Committee may delegate such pre-approval authority to the Committee Chair up to a limit of $250,000. Any decisions of the Committee Chair to whom pre-approval authority is delegated must be presented to the full Audit and Risk Committee at its next scheduled meeting.

In carrying out its responsibilities for the performance and independence of OPG's external audit function the Committee reviews:

c) the work and report of the external auditor engaged for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for OPG, including the resolution of disagreements between Management and the external auditor regarding financial reporting.
d) the independence and qualifications of the external auditor.
e) the annual report by the external auditor describing the auditing firm's internal quality control procedures, any material issues raised by the most recent internal quality-control review or peer review of the auditing firm or by any inquiry or investigation by governmental or professional authorities within the preceding five years respecting one or more independent audits carried out by the external auditor and any steps taken to deal with any such issues and all relationships between the external auditors and OPG.
f) scope and approach of the annual audit plan with the external auditors.
g) quality and acceptability of OPG's accounting principles including all critical accounting policies and practices used, any alternative treatments that have been discussed with Management as well as any other material communications with Management.
h) external auditor's process for identifying and responding to key audit and internal control risks.
i) rotation of the lead audit partner and other audit partners every seven years, and consider regular rotation of the audit firm.
j) all related-party transactions.
k) OPG's hiring policies regarding partners, employees and former partners and employees of the present and former external auditor of OPG.

5. *Business and Financial Planning*

The Committee reviews and makes recommendations to the Board on:

a) OPG's business plan, including overall financing plan in support of the Company's capital expenditures and medium – long term forecast.

b) OPG's rate applications to the Ontario Energy Board, including proposed payment amounts and any agreement arising from a Settlement Conference with intervenors.
c) corporate financing vehicles, credit facilities, including any plans to access capital debt markets and other related financing activities. The Board may delegate to an officer of the company authority to enter into such financing activities in such a manner as the Board shall determine at the time of such delegation. Any decisions of the officer to whom authority is delegated must be presented to the full Audit and Risk Committee at its next scheduled meeting.

6. *Pension, Nuclear Decommissioning and Used Fuel Investment Funds*

The Committee reviews and makes recommendations to the Board on:

a) the appointment or replacement of the Chief Investment Officer.
b) The appointment of the auditor for the OPG Pension Fund and the Used Fuel Segregated Fund and Decommissioning Segregated Fund.
c) The broad objectives, governance frameworks and risk posture for the OPG Pension Fund and the Used Fuel Segregated Fund and Decommissioning Segregated Fund and annual status report on these Funds.
d) The tri-ennial valuation of the Pension Fund and annual valuation of the Supplementary Employee Retirement Pension Plans. (*The Committee provides advice to the Compensation, Leadership and Governance Committee on the affordability of proposed pension benefit changes.)*

The Committee reviews and approves:

e) the appointment of the members of OPG's Pension Committee. In addition, the Committee may, at any time, remove or replace any member of the Pension Committee or fill a vacancy on the Pension Committee. The Pension Committee Chair may temporarily appoint a senior management employee to fill a vacancy on the Pension Committee until the next regularly scheduled Audit and Risk Committee meeting.
f) the annual audited financial statements for the OPG Pension Fund, the Used Fuel Segregated Fund and the Decommissioning Segregated Fund.
g) the investment policies and procedures, including the design of modifications, for the OPG Pension Fund, as required by the *Ontario Pension Benefits Act* and its regulations, and for the Decommissioning Segregated Funds, as required by the Ontario Nuclear Funds Agreement.
h) the appointment of the Pension Plan actuary.

In carrying out its responsibilities for the oversight of financial planning and investment funds the Committee reviews:

i) reports on a quarterly, annual or by exception basis, on compliance with and appropriateness of the asset mix policy; total fund and asset class returns relative to benchmarks; material compliance with breaches of policies or procedures; and work conducted by the plan actuary.
j) periodic reports on the calculation of OPG's nuclear waste liability.

7. *OPG's Enterprise Risk Management*

The Committee reviews and makes recommendations to the Board on:

a) the appointment or replacement of the Chief Risk and Audit Executive.
b) the Company's enterprise risk policy, framework, overall risk appetite and targets.

In carrying out its responsibilities for oversight of OPG's Enterprise Risk Management the Committee reviews:

c) the processes employed by Management for identifying and assessing the Company's principal risks.
d) periodic reports on Management's assessment of the principal risks to achieving the Company's strategic and business plan objectives, and the strategies for monitoring, managing and responding to those risks.
e) periodic reports on significant emerging and evolving risks and relevant external events that could potentially impact OPG's risk profile.
f) compliance metrics related to OPG's commercial operations trading, treasury, and fuels management.
g) regular reports on OPG's cyber security position and programs.
h) periodic reports on OPG's Insurance Program.

8. *Assessment of committee performance and board policies*

In carrying out its responsibilities for assessment of committee performance and board policies the Committee shall:

a) Review and assess Committee performance, including a review of the adequacy of and its compliance with this Charter, in accordance with the evaluation process approved by the Board and taking into account all legislative and regulatory requirements applicable to the Committee as well as any best practice guidelines recommended by regulators with whom OPG has a reporting relationship.
b) Provide oversight of the implementation of the following Board of Directors' policies, as well as the development of any new policies deemed necessary by the Committee, and reviewing these policies annually to ensure their continuing adequacy:

    i. Delegation and Exercise of Authority Policy
    ii. Disclosure Policy
    iii. Code of Business Conduct and Supplier Code of Conduct, including anti-bribery and corruption
    iv. Enterprise Risk Management Policy
    v. Cyber Security Policy

<u>Organization</u>

Members

The Audit and Risk Committee shall consist of three or more Directors as determined by the Board of Directors. All members of the Committee shall be independent as defined by the Ontario Securities Commission, and not "affiliated" with OPG.

The Board shall appoint the members of the Committee and the Chair of the Committee annually. The Board may appoint a member to fill a vacancy which occurs in the Committee between annual elections of Directors. Any member of the Committee may be removed or replaced at any time by the Board.

If a member of the Committee becomes "affiliated" with OPG, the member may continue as a member of the Committee with the approval of the Board Chair, in consultation with the Corporate Secretary.

As a "venture issuer", OPG is exempt from the statutory requirements of National Instrument 52-110 requiring members of Audit Committees be independent and financially literate. However, OPG considers such independence and financial literacy to be "best practice" and therefore each of the members of the Audit and Risk Committee shall satisfy the applicable independence and financial literacy requirements of the laws and regulations governing Audit Committees.

The Board of Directors shall confirm that each member of the Audit and Risk Committee is financially literate; as such qualification is interpreted by the Board of Directors in its business judgment, and in compliance with National Instrument 52-110 and its Companion Policy.

Meetings

The Committee shall meet as frequently as it determines but not less than quarterly. During quarterly meetings, the Committee will hold separate in camera sessions with the external auditors, the Chief Risk and Audit Executive and Management to discuss any matters that the Committee believes should be discussed and to provide a forum for any relevant issues to be raised.

Notice of the time and place of each meeting of the Committee must be given to each member of the Committee not less than 48 hours before the time of the meeting.

A quorum of the Committee shall be a majority of its members, but not less than two. The powers of the Committee may be exercised at a meeting at which a quorum of the Committee is present in person or by telephone or other electronic means, or by a resolution signed by all members entitled to vote on that resolution at a meeting of the Committee. Each member is entitled to one vote in Committee proceedings.

The Chair shall preside at all meetings of the Committee at which he or she is present (or if not able to be present designate another member of the Committee to chair the meeting) and shall develop the agenda for each Committee meeting. The agenda for each meeting of the committee shall be delivered to each member of the Committee at least 48 hours prior to any meeting of the Committee, together with such other materials as the chair determines necessary.

Minutes shall be kept of all meetings of the Committee and shall be maintained by OPG's Corporate Secretary. The procedure at meetings is to be determined by the Committee unless otherwise determined by the by-laws of OPG, by a resolution of the Board or by this Charter.

The Committee may meet in camera (without management present) at any time during the meeting consistent with the Board guideline on the conduct of in camera sessions and the keeping of minutes from in camera sessions.

The Committee may invite any Director, officer or employee of OPG or OPG's counsel or any other person to attend meetings of the Committee to assist in the discussion and examination of the matters under consideration by the Committee.

Reports

The Committee will report its activities and actions to the Board of Directors with recommendations, as the Committee deems appropriate.

The Committee will provide for inclusion in OPG's financial information or regulatory filings any report from the Audit and Risk Committee required by applicable laws and regulations and stating among other things whether the Committee has:

(i) Reviewed and discussed the audited financial statements with Management.
(ii) Discussed pertinent matters with the internal and external auditors.
(iii) Received disclosures from the external auditors regarding the auditors' independence and discussed with the auditors their independence.
(iv) Recommended to the Board of Directors that the audited financial statements be included in OPG's Annual Report.

<u>Authority</u>

The Audit and Risk Committee shall have the authority to:

a) conduct or authorize investigations into any matters within the Committee's scope of responsibilities.
b) set and pay the compensation for any advisors employed by the Committee.
c) to communicate directly with the internal and external auditors.

While the Audit and Risk Committee has the responsibilities and powers set forth in this Charter, it is not the duty of the Audit and Risk Committee to plan or conduct audits or risk assessments, or to determine that OPG's financial statements and disclosures are complete and accurate and are in accordance with generally accepted accounting principles and applicable rules and regulations. These are the responsibility of Management and, as appropriate, the external auditor.

Delegation of Authority

The Committee may not delegate its oversight responsibilities. The Committee may delegate to a sub-committee, the Chief Executive Officer or any employee of OPG the authority to exercise any right, power or responsibility that the Committee may have on such terms and conditions and within such limits as the Committee deems appropriate provided that the sub-committee, Chief Executive Officer or employee subsequently advises the Committee of any right, power or responsibility so exercised.

Access to Management and Outside Advisors

The Audit and Risk Committee shall have unrestricted access to members of Management and relevant information.

The Audit and Risk Committee has the authority to retain legal counsel, accountants or other advisors to assist it in the conduct of any investigation, as it determines necessary to carry out its duties.

From:	Ronald Kwan
To:	Gadi Mayman; Nancy Kennedy (MOHLTC); Scott Nelms (ENERGY)
Subject:	RE: Draft Global Adjustment disclosure for OPG
Date:	Friday, March 03, 2017 2:06:06 AM

Hi Gadi,

The OPG wording is consistent with the news release language. Perhaps not ideal, given the CabSub wording, as you note. We had suggested edits to the draft news release and backgrounder.

Ron

From: Gadi Mayman
Sent: March-02-17 8:34 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>; Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
Subject: Re: Draft Global Adjustment disclosure for OPG

Is it 25% on average, as is written in the first paragraph, or is it 25% for the typical consumer?

From: Ronald Kwan
Sent: Thursday, March 2, 2017 7:49 PM
To: Gadi Mayman; Nancy Kennedy (MOHLTC); Scott Nelms (ENERGY)
Subject: FW: Draft Global Adjustment disclosure for OPG

Hi Gadi, Nancy, Scott,

Did you see the proposed disclosure below?

Ron

From: Ronald Kwan
Sent: March-02-17 7:48 PM
To: John Kim <John.Kim@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: Draft Global Adjustment disclosure for OPG

Hi,

A few suggested edits below.

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From: John Kim
Sent: March-02-17 2:01 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: FW: Draft Global Adjustment disclosure for OPG

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Thanks,

John.

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: Thursday, March 02, 2017 1:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: Draft Global Adjustment disclosure for OPG

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Regards,

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Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy (Acting)| Ontario Power Generation
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From: John Kim
To: "HO Philip -FIN & C CTRL"
Cc: CHENG Alec -FIN & C CTRL; Ronald Kwan
Subject: RE: Draft Global Adjustment disclosure for OPG
Date: Thursday, March 02, 2017 7:54:34 PM

Hi Philip,

Suggestions below:

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Sent: March-02-17 1:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: Draft Global Adjustment disclosure for OPG

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From:	Ronald Kwan
To:	John Kim
Cc:	Gavin He
Subject:	RE: Draft Global Adjustment disclosure for OPG
Date:	Thursday, March 02, 2017 7:53:12 PM

Thanks John.

Ron

From: John Kim
Sent: March-02-17 7:53 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: Draft Global Adjustment disclosure for OPG

Thanks Ron. Looks good to me.

I will send it back.

John.

From: Ronald Kwan
Sent: March-02-17 7:48 PM
To: John Kim <John.Kim@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: Draft Global Adjustment disclosure for OPG

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From: John Kim
Sent: March-02-17 2:01 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: FW: Draft Global Adjustment disclosure for OPG

Hi Ron,

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John.

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: Thursday, March 02, 2017 1:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
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From:	John Kim
To:	Ronald Kwan
Cc:	Gavin He
Subject:	RE: Draft Global Adjustment disclosure for OPG
Date:	Thursday, March 02, 2017 7:52:38 PM

Thanks Ron. Looks good to me.

I will send it back.

John.

From: Ronald Kwan
Sent: March-02-17 7:48 PM
To: John Kim <John.Kim@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
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To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
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From: Ronald Kwan
To: John Kim
Cc: Gavin He
Subject: RE: Draft Global Adjustment disclosure for OPG
Date: Thursday, March 02, 2017 7:48:25 PM

Hi,

A few suggested edits below.

Ron

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From: John Kim
Sent: March-02-17 2:01 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: FW: Draft Global Adjustment disclosure for OPG

Hi Ron,

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To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
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From:	Gadi Mayman
To:	Ronald Kwan; Nancy Kennedy (MOHLTC); Scott Nelms (ENERGY)
Subject:	RE: Draft Global Adjustment disclosure for OPG
Date:	Friday, March 03, 2017 9:42:52 AM

OK, thanks. I'm used to comms overriding policy approvals.

From: Ronald Kwan
Sent: Friday, March 03, 2017 2:06 AM
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>; Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
Subject: RE: Draft Global Adjustment disclosure for OPG

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To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>; Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
Subject: Re: Draft Global Adjustment disclosure for OPG

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To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
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From: HO Philip -FIN & C CTRL
To: John Kim
Cc: Ronald Kwan
Subject: RE: EXTERNAL - RE: OPG Q4 2016 submission to Province
Date: Tuesday, March 07, 2017 5:28:10 PM
Attachments: Q4 2016 MDA_DRAFT_PROVINCE MAILING_comment-v2(Sent)_OPG responses.docx

---

Hi John,

Please find responses to your comments. Thank you.

Regards,

Philip

From: DYKXHOORN Sandra -CORPRELCOMM
Sent: Thursday, March 02, 2017 9:47 AM
To: John Kim
Cc: Ronald Kwan; CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
Subject: Re: EXTERNAL – RE: OPG Q4 2016 submission to Province

Thanks!

Sent from my BlackBerry 10 smartphone on the Bell network.

From: John Kim
Sent: Thursday, March 2, 2017 9:46 AM
To: DYKXHOORN Sandra -CORPRELCOMM
Cc: Ronald Kwan; CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
Subject: EXTERNAL – RE: OPG Q4 2016 submission to Province

*** Exercise caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Hi Sandra,

See attached.

Thanks,

John.

From: Ronald Kwan
Sent: Tuesday, February 28, 2017 8:35 PM
To: DYKXHOORN Sandra -CORPRELCOMM <sandra.dykxhoorn@opg.com>
Cc: John Kim <John.Kim@ofina.on.ca>; CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; HO Philip -FIN & C CTRL <philip.ho@opg.com>
Subject: Re: OPG Q4 2016 submission to Province

Hi Sandra,

We haven't forgotten. It's been busy. We'll try to get you something tomorrow.

Thanks for you patience.
Ron

On Feb 28, 2017, at 7:01 PM, DYKXHOORN Sandra -CORPRELCOMM <sandra.dykxhoorn@opg.com> wrote:

> Hi John & Ronald,
>
> Checking in.
>
> Thanks!
>
> S.

From: DYKXHOORN Sandra -CORPRELCOMM
Sent: Wednesday, February 15, 2017 9:15 AM
To: 'John.Kim@ofina.on.ca'; 'ronald.kwan@ofina.on.ca'; 'Talwar, Shruti (ENERGY)'; 'Chander, Sunita (ENERGY)'
Cc: CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
Subject: OPG Q4 2016 submission to Province

Good morning,

Please find attached OPG's draft Q4 2016 News Release, Management's Discussion and Analysis (MD&A), Annual Information Form (AIF) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Monday, February 27th**.

These documents will be filed with the Ontario Securities Commission on **Friday, March 10th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Sandra Dykxhoorn (copy to Alec Cheng – alec.cheng@opg.com and Philip Ho – philip.ho@opg.com).

To assist the review process, the following are the key items in the Q4 2016 MD&A:

Highlights Recent Developments	MD&A p.11-16
Darlington Refurbishment	MD&A p.11-12; 24-25
Peter Sutherland Sr. GS project	MD&A p.25
Outlook – OEB application on OPG's results, impact of ONFA update on Nuclear Segregated Funds earnings, and the expected income and cash flow trends for 2017	MD&A p.30-31

<< File: OPG News Release YE 2016_DRAFT_PROVINCE MAILING.docx >> << File: Q4 2016 MDA_DRAFT_PROVINCE MAILING.docx >> << File: Q4 2016 FS DRAFT_PROVINCE MAILING.docx.docx >> << File: 2016 AIF DRAFT_PROVINCE MAILING.docx >>

Sandra Dykxhoorn | Acting Director, Provincial Relations | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | p: (416) 592-2887 | c: (416) 571-4366 | sandra.dykxhoorn@opg.com

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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

DECEMBER 31, 2016

[DRAFT]

2016 YEAR-END REPORT

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ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the audited consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the year ended December 31, 2016. OPG's consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. The Ontario Securities Commission (OSC) approved an exemption that allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the heading, *Exemptive Relief for Reporting under US GAAP,* in the section *Critical Accounting Policies and Estimates.* This MD&A is dated March 10, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act (Ontario)* (OBCA) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at December 31, 2016, OPG's electricity generation portfolio had an in-service capacity of 16,177 megawatts (MW). OPG operates two nuclear generating stations, 65 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report.

All of OPG's owned and co-owned generating facilities are located in Ontario.

OPG's Reporting Structure

The composition of OPG's reportable business segments is as follows:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

OPG receives regulated prices for electricity generated from most of its hydroelectric facilities and all of the nuclear facilities that it operates (collectively, prescribed facilities or regulated facilities). This includes the following facilities:

- the six hydroelectric generating stations prescribed for rate regulation prior to 2014, as follows:
    - Sir Adam Beck 1, 2 and Pump hydroelectric generating stations
    - DeCew Falls 1 and 2 hydroelectric generating stations
    - R.H. Saunders hydroelectric GS
- the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014
- Pickering Nuclear GS (Pickering GS)
- Darlington Nuclear GS (Darlington GS).

The operating results related to these regulated facilities are described under the Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, and Regulated – Hydroelectric segments. For the remainder of OPG's operating generating facilities, the operating results are described under the Contracted Generation Portfolio segment. A description of all OPG's segments is provided under the section, *Business Segments*.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of December 31 was as follows:

(MW)	**2016**	**2015**
Regulated – Nuclear Generation [1]	**5,728**	6,606
Regulated – Hydroelectric	**6,421**	6,428
Contracted Generation Portfolio [2]	**4,028**	4,021
Total	**16,177**	17,055

[1] The in-service generating capacity as of December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

The total in-service capacity as at December 31, 2016 decreased by 878 MW compared to 2015. The decrease was primarily due to the commencement of the refurbishment of the first Darlington GS unit, Unit 2, which was taken offline in mid-October 2016. In addition, during 2016, the capacity of the regulated hydroelectric units at the Abitibi Canyon GS and the Sir Adam Beck 1 GS was reduced to reflect unit limit capability. This decrease in in-service capacity was partially offset by an increase in capacity of the Contracted Generation Portfolio segment, reflecting the completion of an upgrade and rehabilitation of Unit 2 of the Harmon hydroelectric GS during 2016.

REVENUE MECHANISMS FOR REGULATED AND NON-REGULATED GENERATION

Regulated Generation

The OEB sets the prices for electricity generated from OPG's regulated nuclear and regulated hydroelectric facilities. The following are the OEB-authorized regulated prices for electricity generated from these facilities:

	2016	**2015**	
($/MWh)		**January 1 to June 30**	**July 1 to December 31**
Regulated – Nuclear Generation			
Base regulated price	**59.29**	59.29	59.29
Rate riders	**10.84** [1]	1.33	12.17 [1]
	70.13	60.62	71.46
Regulated – Hydroelectric			
Hydroelectric generating stations prescribed for rate regulation prior to 2014			
Base regulated price	**40.20**	40.20	40.20
Rate riders	**3.19** [1]	6.04	9.23 [1]
	43.39	46.24	49.43
Hydroelectric generating stations prescribed for rate regulation effective in 2014			
Base regulated price	**41.93**	41.93	41.93
Rate rider	**3.19** [1]	-	3.19 [1]
	45.12	41.93	45.12

[1] The increase in the 2015 rate riders effective July 1, 2015 was implemented by the OEB effective October 1, 2015. As such, the OEB authorized interim period rate riders for the period from October 1, 2015 to December 31, 2016 to allow for the recovery of the increase in the riders for the period from July 1, 2015 to September 30, 2015. The revenue from the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The nuclear interim period rate rider was $2.17 per megawatt hour (MWh) and the regulated hydroelectric interim period rate rider was $0.64/MWh. These interim period rate riders have not been included in the above table. All rate riders in effect during 2016 expired on December 31, 2016.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements for the 2014 to 2015 period, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base for OPG represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital.

In accordance with *Ontario Regulation 53/05* under the *Ontario Energy Board Act, 1998*, OPG's nuclear regulated prices are reduced by the amount of OPG's revenues, net of costs, from leasing the Bruce nuclear generating stations to Bruce Power. As directed by the OEB, OPG's revenues and costs related to the Bruce nuclear generating stations are determined in accordance with US GAAP for the purposes of establishing OPG's nuclear regulated prices and are subject to the Bruce Lease Net Revenues Variance Account in accordance with *Ontario Regulation 53/05*. This includes OPG's costs related to its obligations for nuclear waste management and nuclear facilities decommissioning associated with the Bruce nuclear generating stations and the corresponding portion of earnings on the nuclear fixed asset removal and nuclear waste management segregated funds (Nuclear Segregated Funds) established pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province.

Rate riders for OPG are established to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts. Variance and deferral accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The rate riders in effect during 2015 included those established by the OEB's December 2014 order for the period from January 1, 2015 to December 31, 2015, as well as those authorized by the OEB's October 2015 order on OPG's 2014 application to recover the December 31, 2014 variance and deferral account balances, for the period from July 1, 2015 December 31, 2016. The rate riders in effect during 2016 were those authorized by the October 2015 order.

Non-Regulated Generation

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements (ESAs) with the Independent Electricity System Operator (IESO). Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO was substituted as the counterparty of ESAs and other agreements that were previously executed with the OPA.

During 2016, ESAs were in effect for the following thermal generating facilities:

- Lennox GS: Capacity provided by, and production from, the station are subject to an ESA for the period from January 1, 2013 to September 30, 2022
- Atikokan GS: Capacity provided by, and production from, the station are subject to a 10-year ESA expiring in July 2024
- Thunder Bay GS: Capacity provided by, and production from, the station are subject to a 5-year ESA expiring in January 2020.

In addition, long-term hydroelectric ESAs are in place for the following facilities, with expiry dates for currently operating stations ranging from 2059 to 2064:

- Lac Seul and Ear Falls generating stations
- Healey Falls GS
- Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations
- Little Long, Harmon, Smoky Falls, and Kipling generating stations (collectively the Lower Mattagami River generating stations)

- Peter Sutherland Sr. GS which is being commissioned. **[MONITOR]** Payments under this ESA will commence when the station achieves commercial operation. Further details on the Peter Sutherland Sr. GS project are found under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's operating results for 2016 and 2015.

(millions of dollars – except where noted)	**2016**	**2015**
Revenue	**5,653**	5,476
Fuel expense	**727**	687
Gross margin	**4,926**	4,789
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (income) loss, interest, and income taxes	**724**	703
Other (income) loss	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense	**120**	180
Income before income taxes	**621**	509
Income tax expense	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest [1]	**17**	15
Electricity production (TWh) [2]	**78.2**	78.0
Cash flow		
Cash flow provided by operating activities	**1,705**	1,465

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $436 million for 2016, an increase of $34 million compared to 2015. Income before interest and income taxes was $741 million for 2016, an increase of $52 million compared to 2015.

The following summarizes the significant factors which contributed to the variance:

Significant factors that increased income before interest and income taxes:

- Higher generation of 1.1 terawatt hours (TWh) from the Regulated – Nuclear generation segment, resulting in an increase in revenue of $65 million from the nuclear base regulated price. The year-over-year increase

in revenue from the higher nuclear rate riders in effect during the first half of 2016, compared to the same period in 2015, was primarily offset by an increase in the amortization expense related to regulatory balances.

- Higher earnings on the Nuclear Segregated Funds of $42 million, primarily due to a higher rate of return on the portion of the Used Fuel Segregated Fund that is subject to a consumer price index (CPI) adjusted rate of return guarantee by the Province pursuant to the ONFA. This increase in Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the updated ONFA reference plan, approved by the Province in December 2016
- Increase in earnings from the Services, Trading, and Other Non-Generation segment of $24 million, primarily due to lower operations, maintenance and administration (OM&A) expenses
- A gain of $22 million recorded during the first quarter of 2016, reflecting the OEB's January 2016 decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices
- Increase in earnings of $20 million from the Contracted Generation Portfolio segment, mainly as a result of an increase in the gross margin due to higher revenues from the Lower Mattagami River generating stations, the Lennox GS and the Atikokan GS.

Significant factors that reduced income before interest and income taxes:

- Higher financing expense of $32 million, which represents an increase in the present value of the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities). The financing expense, known as accretion expense, is added to the Nuclear Liabilities balance over time
- A decrease in nuclear non-electricity revenue of $21 million, primarily due to a decrease in nuclear detritiation services revenue and lower isotope sales
- Higher OM&A expenses, fuel expense and depreciation expense for the Regulated – Nuclear Generation segment. The increase in OM&A expenses of $14 million reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium costs and higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million, primarily due to new assets in service in 2016. The increase in amortization expense related to regulatory balances was largely offset by the increase in nuclear revenue related to rate riders
- Lower earnings before other gains from the Regulated – Hydroelectric segment of $28 million, primarily due to lower hydroelectric incentive mechanism revenue and the income impact of OEB-approved variance accounts.

Net interest expense decreased by $60 million in 2016, compared to 2015, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project and a higher amount of interest costs deferred in regulatory variance and deferral accounts.

Income tax expense increased by $76 million in 2016, compared to 2015, primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. Significant factors which contributed to the higher income during 2016, compared to 2015, are discussed above. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	**2016**	**2015**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**4**	2
Regulated – Hydroelectric	**642**	648
Contracted Generation Portfolio	**282**	262
Total electricity generation business segments	**928**	912
Regulated – Nuclear Waste Management	**(174)**	(186)
Services, Trading, and Other Non-Generation	**(13)**	(37)
	741	689

Electricity Generation

Electricity generation for 2016 and 2015 was as follows:

(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**45.6**	44.5
Regulated – Hydroelectric	**29.5**	30.4
Contracted Generation Portfolio [1]	**3.1**	3.1
Total OPG electricity generation	**78.2**	78.0
Total electricity generation by other generators in Ontario [2]	**72.7**	76.1

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The higher electricity generation from the Regulated – Nuclear Generation segment in 2016 was primarily a result of a lower number of non-refurbishment outage days at the Darlington GS due to the planned Vacuum Building Outage (VBO) in 2015 and a decrease in unplanned outages at the station in 2016. The VBO is a unique outage to inspect and maintain specific safety and other systems common to all four units of the station. The 2015 VBO required the shutdown of the four units for 47 days. Vacuum building outages are currently required every 12 years at the Darlington GS. The year-over-year increase in electricity generation was partially offset by a decrease in generation from the Pickering GS, primarily due to an increase in the number of unplanned outage days, and the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment beginning on October 15, 2016.

Lower electricity generation from the Regulated – Hydroelectric generating segment was primarily due to a higher volume of water spilled as a result of higher SBG conditions during 2016.

Electricity generation from the Contracted Generation Portfolio segment was 3.1 TWh for each of 2016 and 2015. Electricity generation in 2016 reflected higher production from the Lennox and Atikokan generating stations, primarily due to increased market demand. The increase was offset by a higher volume of water spilled at the contracted hydroelectric stations as a result of higher SBG conditions during 2016, and transmission system constraints in northeastern Ontario in 2016. **[CONFIRM]**

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Ontario's electricity demand as reported by the IESO was 137.0 TWh in each of 2016 and 2015, which excludes electricity exports out of the province.

Baseload generation supply surplus in Ontario was more prevalent in 2016 than in 2015, mainly due to higher water flows in the province during 2016 and limitations on the export of surplus power out of the province, primarily due to transmission constraints in the state of New York. Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric and nuclear stations and other grid-connected renewable resources. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. During 2016 and 2015, OPG lost 4.7 TWh and 3.2 TWh of hydroelectric generation due to SBG conditions, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions in 2016 and 2015 was offset by a regulatory variance account authorized by the OEB. OPG did not forego any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The regulated prices authorized by the OEB for electricity generated from OPG's nuclear and regulated hydroelectric generating stations are discussed in the section *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment during 2016 was 6.9 cents per kilowatt hour (¢/kWh), compared to 6.5 ¢/kWh during 2015. The average sales price in 2016 reflected the higher OEB-authorized nuclear rate rider of $10.84/MWh for recovery of variance and deferral account balances in effect during the year. The average sales price for the Regulated – Hydroelectric segment was 4.4 ¢/kWh, compared to 4.7 ¢/kWh during 2015. The decrease was primarily due to a lower rate rider in effect during 2016 related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years.

As such, the year-over-year changes in revenue from rate riders were largely offset by changes in amortization expense related to regulatory balances.

Cash Flow from Operations

Cash flow provided by operating activities for 2016 was $1,705 million, compared to $1,465 million for 2015. The increase in cash flow provided by operating activities for 2016, compared to 2015, was primarily due to higher generation revenue receipts reflecting higher nuclear rate riders and higher nuclear generation in 2016. The increase in cash flow was also due to lower pension plan contributions in 2016 reflecting an updated actuarial valuation of the OPG registered pension plan. The increase in cash flow was partially offset by higher OM&A expenditures during 2016, compared to 2015, and the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to the period from January 1, 2015 to December 4, 2015. The rebate was made pursuant to a provision under the lease agreement for the Bruce nuclear generating stations. This provision was eliminated effective December 4, 2015 as part of the 2015 amendments to the lease agreement.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. The FFO Adjusted Interest Coverage was 5.1 times for 2016, compared to 5.0 times for 2015. The modest increase in the FFO Adjusted Interest Coverage in 2016 reflected an increase in FFO before interest for 2016, compared to 2015, as a result of the year-over-year increase in cash flow provided by operating activities.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for 2016 was 4.2 percent, compared to 4.0 percent for 2015. ROE Excluding AOCI increased for 2016, compared to 2015, primarily due to higher net income attributable to the Shareholder. OPG's ROE Excluding AOCI reflects regulated prices established by the OEB in 2014. These prices were lower than requested by OPG based on submitted forecast cost and production levels, which has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

ROE Excluding AOCI also reflects the relatively higher equity component in the Company's capital structure, compared to the deemed capital structure used by the OEB in determining OPG's regulated prices. The OEB establishes the allowed return on OPG's investment in regulated assets, which represent the majority of the Company's operations, using the OEB's generic prescribed rate of return and an OPG-specific deemed capital structure. In setting the regulated prices in 2014, the OEB applied a deemed capital structure of 45 percent equity and 55 percent debt. OPG's actual capital structure (excluding AOCI) contains approximately 65 percent equity. The higher equity component in OPG's actual capital structure, compared to the deemed capital structure applied by the OEB, results in a reduced actual ROE Excluding AOCI. In its application for new regulated prices filed with the OEB in May 2016, OPG is seeking an increase in the deemed capital structure to 49 percent equity and 51 percent debt. For further discussion on OPG's application, refer to the heading *Recent Developments* in the section *Highlights*.

Enterprise Total Generating Cost per MWh

The Enterprise Total Generating Cost (TGC) per MWh was $48.10 for the year ended December 31, 2016, compared to $50.46 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses, excluding the impact of regulatory variance and deferral accounts, and higher electricity generation as adjusted for foregone generation due to SBG conditions during 2016.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $62.30 for the year ended December 31, 2016, compared to $66.20 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses excluding the impact of regulatory variance and deferral accounts, and higher electricity generation during 2016.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $25.57 for the year ended December 31, 2016, which was comparable to $25.26 for the same period in 2015.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow from operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in

January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The unit is scheduled to be returned to service in the first quarter of 2020. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

In April 2016, the Federal Court of Appeal unanimously dismissed the request by certain intervenors for a judicial review of the 2013 Environmental Assessment (EA) decision for the Darlington Refurbishment project by the Canadian Nuclear Safety Commission (CNSC) and Fisheries and Oceans Canada. The EA decision had confirmed that, taking into account identified mitigation measures, the project was not likely to cause significant adverse environmental effects. In dismissing the appeal, the Federal Court of Appeal determined that there were no gaps in the EA, that there was nothing unreasonable about the discretionary determinations made by the responsible authorities, and that the intervenors' arguments were not borne out by the evidence. OPG was also awarded its costs of the appeal, as the successful party.

The Darlington Refurbishment project is discussed further under the heading, *Project Excellence* in the *Core Business, Strategy and Outlook* section.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. For the first time since OPG's prescribed assets became subject to rate regulation, the new prices are expected to be determined on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. Rate-setting under incentive regulation is typically more formulaic and involves greater de-coupling of a regulated entity's allowed revenues or prices from its costs than under a cost-of-service rate-setting methodology.

For the hydroelectric facilities, OPG's May 2016 application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021 based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production.

The proposed nuclear revenue requirements reflect OPG's plans to pursue Pickering extended operations until 2024, as well as the projected impact of the scheduled return to service of the first refurbished Darlington unit in the first quarter of 2020. OPG is also seeking an increase in the deemed capital structure applied to its total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt applied by the OEB in setting the existing regulated prices.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG's application incorporates a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved nuclear revenue requirements in a deferral account for future collection, with a view of making more stable year-over-year changes in OPG's nuclear regulated prices for the period from January 1, 2017 to the end of the Darlington Refurbishment project. The regulation stipulates that the deferral account will record interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually, and that the OEB shall authorize recovery of the balance in the account on a straight line basis over a period not to exceed 10 years following the end of the Darlington Refurbishment project. OPG expects to recognize the deferred amounts as income in the period to which the approved revenue requirements relate.

OPG's application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the

Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment in 2016 through rate riders in effect to December 31, 2016. The application also requests the continuation of all applicable existing variance and deferral accounts. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed in the section *Critical Accounting Policies and Estimates,* under the heading, *Rate Regulated Accounting.*

In December 2016, the OEB issued an order granting OPG's request to declare the existing base regulated prices interim, effective January 1, 2017. This preserves the OEB's ability to make new regulated prices effective as early as January 1, 2017, which would allow OPG to recover the difference between the approved new regulated prices and the existing prices for the period between the effective date of the new regulated prices and their implementation date based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017, following a public proceeding. The public proceeding is in progress, with the oral hearing portion having commenced in February 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

In February 2017, the OEB approved a settlement agreement reached by OPG and intervenors on certain limited elements of OPG's application (Settlement Agreement). Among other elements, the Settlement Agreement accepts a number of year-end 2015 variance and deferral account balances totaling $419 million, allows for continuation of all applicable existing variance and deferral accounts, and confirms methodologies for calculating amounts to be recorded in most of the continuing accounts once new regulated prices take effect, as proposed by OPG. The balances of, and methodologies for recording future amounts in the Nuclear Liability Deferral Account, the Bruce Lease Net Revenues Variance Account and the Capacity Refurbishment Variance Account are excluded from the Settlement Agreement. The agreement also results in approval of OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017-2021 period. The Settlement Agreement does not impact OPG's 2016 financial results. **[MONITOR]**

OEB's Decision on OPG's December 2014 Motion

In January 2016, the OEB issued its decision on OPG's December 2014 motion asking the OEB to review and vary the parts of its November 2014 decision related to the disallowance of the Niagara Tunnel project expenditures, and the application of the 2013 regulatory tax loss to reduce the 2014/2015 revenue requirement. In its decision, the OEB reversed a portion of the original disallowance of the Niagara Tunnel project expenditures, and upheld the original tax loss decision. In the first quarter of 2016, OPG recorded a gain of $22 million to recognize the expected future recovery from customers of the portion of the disallowance reversed by the OEB's motion decision.

The original disallowance of the Niagara Tunnel project expenditures resulted in a write-off of $77 million that was charged to operations in 2014. The original tax loss decision resulted in a reduction of the 2014/2015 revenue requirement by approximately $70 million. As OPG's financial results have previously reflected the effect of the OEB's original tax loss decision, the motion decision on the tax loss did not impact OPG's 2016 financial results.

Ontario Nuclear Funds Agreement Reference Plan Update

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for nuclear waste management and nuclear facilities decommissioning as at December 31, 2016 was finalized as part of the required process to update the reference plan under the ONFA. As at December 31, 2016, the update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities with a corresponding decrease to the asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear facilities decommissioning at least once every five years, in line with the required ONFA reference plan update process.

The updated estimate of the obligations was reflected in a new ONFA reference plan, for years 2017 to 2021, which was approved by the Province in December 2016, effective January 1, 2017 (the 2017 ONFA Reference Plan). Based on the lower life cycle liability estimates per the 2017 ONFA Reference Plan, starting in 2017, OPG is not currently required to make overall contributions to the Used Fuel Segregated Fund or the Decommissioning Segregated Fund established under the ONFA. Prior to 2017, OPG made contributions to the Used Fuel Segregated Fund every year, including a one-time special payment in earlier years, as required by the ONFA. These contributions reflected ONFA requirements to fund the majority of the underlying used fuel liability by the end of the estimated useful lives of the nuclear stations in effect at OPG's inception in 1999, resulting in significantly higher contributions to the Used Fuel Segregated Fund in the earlier years of OPG's existence. OPG has not been required to make contributions to the Decommissioning Segregated Fund, which was fully funded at its inception and at the time of every subsequent approved ONFA reference plan. Contributions to either or both funds may be required in the future should the funds be in an underfunded position when a new reference plan is prepared. Such may be the case as a result of variability in asset performance due to volatility inherent in financial markets and Ontario CPI changes. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the underlying obligations in subsequent ONFA reference plans.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of the new regulated prices. In accordance with *Ontario Regulation 53/05*, the OEB is required to ensure that OPG recovers the revenue requirement impact of its nuclear waste management and nuclear decommissioning liabilities arising from the current approved ONFA reference plan. For further discussion on the accounting for Nuclear Liabilities, refer to the section, *Critical Accounting Policies* under the heading, *Asset Retirement Obligation*.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the amount due to the Province. This accounting adjustment represented the overfunded position of Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 relative to the value of the corresponding present value life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province as OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and as any excess funding in the Nuclear Segregated Funds upon termination of the ONFA accrues to the Province. Of the $88 million reduction in Nuclear Segregated Funds earnings, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

For further discussion of the accounting for the Nuclear Segregated Funds, refer to the section, *Critical Accounting Policies* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*. For further discussion of OPG's risks with respect to nuclear waste management and nuclear decommissioning obligations and Nuclear Segregated Funds, refer to the section, *Risk Management* under the headings, *Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds* and *Financial Markets*.

Shareholder Declaration and Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that required the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. The assets are reported under the Services, Trading and Other Non-Generation segment. An active program to locate a buyer for these real estate assets was initiated in October 2016, and a purchase and sale agreement was executed in December 2016. The sale is expected to be completed during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be

recognized upon completion of the transaction. Pursuant to the December 2015 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer ~~a portion of the~~ proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario, an asset reported under the Services, Trading and Other Non-Generation segment. OPG is currently in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer ~~a portion of the~~ proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund.

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Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business.

Contract Award for Nanticoke Solar Facility

In March 2016, Nanticoke Solar LP, then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation, was selected through the first phase of the IESO's Large Renewable Procurement (LRP) program to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands in Haldimand County, Ontario. The LRP program was a competitive bidding process for procuring large renewable energy projects in Ontario. In March 2016, Nanticoke Solar LP and the IESO executed a 20-year LRP contract, which formalized the terms and conditions for the development and operation of the new solar facility. In the first quarter of 2017 **[MONITOR]**, OPG purchased SECCLP's interests in Nanticoke Solar LP and is working to obtain approvals and permits required to enable the commencement of construction planned for the first half of 2018.

The 20-year term of the LRP contract takes effect once the station achieves commercial operation, which is expected in the first quarter of 2019. For further discussion, refer to the section, *Core Business, Strategy and Outlook* under the heading, *Project Excellence*.

Decommissioning of the Lambton GS

In November 2016, the Company announced the decommissioning of the Lambton GS, which ceased coal-fired generation in 2013, as it was determined that continuing to preserve the station beyond 2016 for future conversion was no longer economically feasible. OPG is currently developing a decommissioning plan for the Lambton GS, which will ensure that the station is closed safely, securely, and in an environmentally responsible manner.

Canadian Nuclear Safety Commission Safety Rating for the Pickering GS and the Darlington GS

The CNSC publishes an annual report on the safety performance of Canada's nuclear power plants. The report assesses how well plant operators are meeting regulatory requirements and program expectations in the areas of operational performance, safety analysis, radiation protection, waste management and conventional health and safety. In its 2015 annual report, the CNSC gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". The Pickering GS received this rating for the first time, while the Darlington GS achieved the rating for the seventh year in a row.

Acquisition of Hydro One Limited Shares

In April 2016, OPG acquired nine million common shares of Hydro One Limited (Hydro One) at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. OPG paid the same price as other investors in the offering. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union (PWU) and The Society of Energy Professional (The Society) renewed in 2015. Changes to these agreements included increases to employee pension plan contributions and provisions for existing employees represented by the

PWU and The Society with eligibility to annually receive common shares of Hydro One for up to 15 years starting in the third year of the respective agreements, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service. The shares acquired in the April 2016 transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

CORE BUSINESS, STRATEGY AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

OPG's four key strategic imperatives are as follows:

- Operational Excellence
- Project Excellence
- Financial Strength
- Social Licence.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Workplace Safety and Public Safety

Workplace safety and public safety are fundamental core values at OPG. OPG is committed to operating all of its facilities in a safe, secure, and reliable manner that minimizes risks to a reasonably achievable level. Safety is an overriding priority in all activities performed at OPG's generating and other facilities, and all employees and contractors are expected to conduct themselves in manner that ensures workplace safety and public safety in line with the Company's safety culture.

In the area of workplace safety, OPG is committed to achieving excellent safety performance through continuous improvement and a strong safety culture, with the ultimate goal of zero injuries. OPG utilizes an integrated health and safety management system and set of operational risk control procedures to ensure continued monitoring of health and safety performance and to support continuous learning and improvement in this area. Overall, OPG's workplace safety performance has been one of the best amongst its comparator Canadian electrical utilities. In 2016, OPG received the Canadian Electricity Association (CEA) President's Gold Award recognizing three consecutive years, 2013 to 2015, of sustained top quartile safety performance within the comparator group.

Workplace safety performance is measured using two primary indicators at OPG, All Injury Rate (AIR) and Accident Severity Rate (ASR). OPG's AIR and ASR results for employee workplace safety were as follows for the year ended December 31:

	2016	2015
AIR *(injuries per 200,000 hours worked)*	**0.56**	0.39
ASR *(days lost per 200,000 hours)*	**2.59**	0.50

In 2016, OPG's AIR and ASR safety performance was worse than in 2015. OPG's analysis of the underlying events indicated that major contributors to the injuries and near misses included inadequate situational awareness and

attention to detail, and suboptimal risk-based decisions, rather than missing or inadequate standards or programs. OPG is implementing a number of initiatives to target the injury trends based on the analysis of the safety events, with a focus on the use of human performance tools including increased field supervisory oversight, situational awareness, communication, and procedural use and adherence.

In 2016, OPG launched an organization-wide "iCare Enough to Act" initiative aimed at renewing employees' commitment to their own and each other's safety and well-being. Plans to further strengthen safety as a foundational element of the Company's values-based culture are being developed through leadership forums and other engagement activities.

Contractors are required to conduct work safely at OPG sites. In support of this requirement, OPG utilizes an independent contractor pre-qualification process, provides on-site safety support for many of OPG's major projects, and works with contract partners to improve their health and safety programs to meet OPG's requirements. To further strengthen contractors' safety performance, in 2016, OPG updated its contractor's safety requirements and related governance, and implemented additional oversight and field monitoring to ensure ongoing compliance. In the past eight years, OPG has consistently shown a better than average Construction Contractor AIR as compared to the Health and Safety Association Contractor AIR, a metric of construction contractor safety performance across Ontario.

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for those individuals who live or work near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), which is an international unit of radiation dose measurement. For 2015, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.5 μSv and 1.2 μSv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000 μSv. While the public doses from OPG's nuclear operations for the 2016 operating year will not be finalized until the second quarter of 2017, they are not expected to differ significantly from the 2015 levels.

In June 2016 and August 2016, the CNSC released sampling results from its independent environmental monitoring program, which confirmed that the public and the environment around OPG's nuclear generating stations continued to be safe. Also in 2016, the CNSC published its 2015 annual report on the safety performance of Canada's nuclear power plants, which gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". For further details, refer to the CNSC safety rating discussion under the heading, *Recent Developments* in the *Highlights* section.

OPG remains committed to high standards of public safety on waterways around hydroelectric dams and generating stations. A Dam Safety Review Panel comprised of internationally recognized experts has previously concluded that OPG's dam and public safety program is comparable with international best practices in a number of areas related to maintaining safe dam operations. OPG continues to develop a new risk-informed approach on behalf of the Ontario Ministry of Natural Resources and Forestry (MNRF) to prioritize and manage risks identified through dam safety assessments. In 2016, OPG continued its water safety campaign with a series of public service announcements illustrating the danger of water near hydroelectric dams and hydroelectric generating stations.

Electricity Generation Production and Reliability

Key strategic initiatives in support of operational excellence, specific to each of OPG's core generating operations, are discussed below. Generation and reliability performance for 2016 is discussed by operating segment in the section, *Discussion of Operating Results by Business Segment*.

Nuclear Operations

OPG is pursuing a number of strategic initiatives aimed at the continued safe and reliable operation of the Pickering GS and targeting top performance at the Darlington GS.

OPG's nuclear operations are regularly benchmarked against top performing nuclear facilities around the world. This allows OPG to identify, develop and implement initiatives to further improve performance. During 2016, OPG participated in two World Association of Nuclear Operators (WANO) peer evaluations to compare its stations against standards of excellence through an in-depth, objective review by an international panel of industry experts. In May 2016, OPG hosted a WANO peer evaluation for the Darlington GS. The review maintained Darlington's excellent standing as one of the top performing nuclear plants in the world. In September 2016, OPG hosted a team of experts from the International Atomic Energy Agency at the Pickering GS to conduct a standard Operational Safety Review Team mission. The team conducted an in-depth review of performance and adherence to international safety standards. A report on the mission is expected to be released in the second quarter of 2017.

In January 2016, OPG announced its plan to pursue continued safe and reliable operation of the Pickering GS beyond 2020. OPG's objective is to maximize the operating life of the Pickering units. Under OPG's current plan, all six operating units at the station would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The Province announced its approval of OPG's plan to pursue continued operation of the Pickering GS beyond 2020 up to 2024 in January 2016. Extending operations at the Pickering GS will provide continued employment to approximately 3,000 regular employees at OPG, and will help reduce approximately 17 million tonnes of carbon dioxide emissions, which is the equivalent to removing 3.4 million cars from Ontario's roads.

As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will achieve the additional life necessary to operate to 2024. OPG is also conducting component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently established as the end of 2020, are expected to be reassessed when OPG's further technical work confirms the longer fuel channel life and the units' fitness to operate beyond 2020, taking into account the requirement for the CNSC's approval, discussed below.

OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. OPG has started work on the Pickering licence renewal application, which is expected to be filed in mid-2017 for the CNSC's approval in 2018. The requested licence renewal spans the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. A Periodic Safety Review and an Integrated Implementation Plan (IIP) for the station will be submitted to the CNSC as part of the application.

OPG strives to operate and maintain its nuclear facilities to optimize equipment, performance, availability and electricity generation, while improving the reliability and predictability of the fleet. Improved equipment reliability generally results in fewer generation interruptions. OPG continues to make investments in the performance of the Pickering GS, with a focus on improving plant reliability and maximizing the value of the asset through implementing equipment modifications and fuel handling reliability improvements, reducing equipment maintenance backlogs, and completing critical and high priority work.

Nuclear inspection and testing programs are largely driven by maintenance and regulatory requirements, and are designed to ensure that equipment is performing safely and reliably. Execution of this and other outage work continues to be a high priority. As part of its commitment to operational excellence, OPG continues to focus on improving the planning, execution, monitoring, and reporting of outage work.

Work continues to ensure the integration of life cycle management and refurbishment programs at the Darlington GS. This includes developing staffing strategies to support both ongoing station operations and the refurbishment project, planning and incorporating pre-requisite work for the refurbishment into the station's work schedule, and identifying life cycle and aging management work to sustain safe and reliable station operations for the next three decades.

OPG's longer-term efforts are aimed at positioning the Darlington GS for industry leading operating and cost performance.

Delivering solutions that provide the best combination of safety, cost and effectiveness, as well as establishing challenging financial targets based on comprehensive benchmarking continues to be a vital part of OPG's strategy to improve performance of the nuclear business unit. Financial and staffing targets continue to be reviewed and adjusted where necessary to reduce operating costs, while ensuring safety is not compromised.

In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications will be presented to the CNSC at a public hearing in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018.

Hydroelectric Operations

The objectives of OPG's hydroelectric operations include operating and maintaining the generating facilities in an efficient and cost-effective manner, while enhancing their reliability and availability. OPG continues to evaluate and implement plans to increase capacity, maintain and improve performance, and extend the operating life of its hydroelectric generating assets.

OPG's plans for its existing hydroelectric generating stations are accomplished through multi-year capital investment and other programs, including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers, and controls. The aim of OPG's runner replacement and upgrade program is to increase hydroelectric station capacity by leveraging efficiency enhancements in runner design. Where economical and practical, OPG pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations. Over the next three years, OPG plans to increase the total capacity of its hydroelectric generating fleet by approximately 135 MW, which, in addition to the runner replacement and upgrade program, includes the Peter Sutherland Sr. GS project and the Ranney Falls GS projects. Both of these projects are discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Project Excellence*. OPG is also planning to repair, rehabilitate, or replace a number of aging civil hydroelectric structures.

As part of its commitment to operational excellence, OPG continues to make investments in its existing hydroelectric generating fleet. During 2016, OPG continued to execute a number of projects, including:

- Completion of major equipment overhauls and rehabilitation work on Unit 5 of the Sir Adam Beck Pump GS, and Unit 2 of the Whitedog Falls GS
- Completion of a runner upgrade, headgate replacement and rehabilitation of Unit 2 of the Harmon GS
- Completion of headgate replacement at Units 1 and 2 of the Kipling GS
- Completion of concrete rehabilitation of the main dam at Chats Falls GS
- Continued work on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 5 of the DeCew Falls 1 GS, Unit 1 of the Harmon GS, and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.

OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS. **[MONITOR]**

Thermal Operations

OPG's thermal operations consist of biomass-fuelled generating units at each of Atikokan GS and Thunder Bay GS, and the oil/gas dual-fuelled Lennox GS.

These stations, which operate as peaking facilities, provide Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements and enable the system to accommodate the expansion of Ontario's renewable generation portfolio. The continued operation of these stations during the initial years of the refurbishment of the Darlington GS and Bruce nuclear facilities is expected to provide Ontario with over 2,000 MW of peaking generation.

During the third quarter of 2016, the Atikokan and Thunder Bay generating stations provided renewable generation when called upon to meet system requirements while utility maintenance was being conducted on a local transformer station. As a result of utility maintenance, the Atikokan GS operated continuously from late July 2016 to early September 2016, while the Thunder Bay GS operated as needed. To meet the increased demand for biomass fuels at Atikokan GS, OPG coordinated the acceleration of biomass fuel deliveries with suppliers while continuing to operate the plant safely.

As part of OPG's ongoing strategy to reduce costs and increase efficiency, the operations of the Company's hydroelectric and thermal assets have been combined into one organization. OPG continues to evaluate opportunities to consolidate departments within the stations and across regions.

Thermal stations that are no longer available to generate electricity are included in the Services, Trading and Other Non-Generation segment once they are removed from service. This includes the Lambton GS and Nanticoke GS sites, which ceased coal-fired generation in 2013. In 2015, OPG announced the decommissioning of the Nanticoke GS, as it could not commercially support continued preservation costs.

In November 2016, OPG announced the decommissioning of the Lambton GS, as further discussed in the section, *Highlights* under the heading, *Recent Developments*. OPG is currently developing decommissioning plans for the Lambton and Nanticoke generating stations, which will ensure that they are closed safely, securely and in an environmentally responsible manner. The decommissioning plan for the Nanticoke GS will accommodate the construction and operation of the Nanticoke solar facility. The costs of decommissioning the stations will be charged to a previously established decommissioning provision. OPG expects to review the decommissioning provision estimates for these sites in 2017.

Environmental Performance

OPG's Environmental Policy states that "OPG shall meet all legal requirements and any environmental commitments that it makes, with the objective of exceeding these legal requirements where it makes business sense". This policy commits OPG to:

- establish and maintain an environmental management system (EMS)
- work to prevent or mitigate adverse effects on the environment with a long-term objective of continual improvement
- manage sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern.

In 2016, OPG maintained the ISO 14001 registration of its company-wide EMS. Within the EMS, OPG has planning, operational control, and monitoring programs to manage the Company's positive and negative impacts on the environment. Significant environmental aspects of OPG's operations include: spills, chemical and thermal emissions to water, water flow and level changes, radioactive emissions, low and intermediate level radioactive waste (L&ILW), wildlife habitat, displacement of fossil fuels, and fish impingement and entrainment. Further details regarding OPG's environmental risks can be found in the section, *Risk Management* under the heading, *Environmental Risk*.

Environmental performance targets are set as part of the annual business planning process. OPG met or outperformed its 2016 targets for spills, environmental infractions, and carbon-14 emissions to air. An increase in the volume of waste generated from work activities at the Darlington GS and preparation for the Darlington Refurbishment project led to a higher than expected volume of L&ILW produced in 2016. Performance for tritium

emissions to air and water during 2016 remained less than one percent of the regulatory limit. There were no significant environmental events during 2016.

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. The program requirements are expected to result in increased fuel costs for some OPG-owned and co-owned generating facilities. Fuel costs for these stations are generally recovered from the electricity market. With OPG's low GHG emitting fleet, the program is not expected to have a material adverse financial impact on the Company. OPG has established the necessary processes to comply with the cap and trade program requirements.

OPG is monitoring actions being taken by the Government of Ontario and the Government of Canada to reduce GHG emission levels and transition to a low-carbon economy. In support of efforts to mitigate climate change, the Company continues to evaluate and implement plans to increase the generation capacity of its hydroelectric generating fleet, where economic, and invest in other low-carbon technologies.

OPG communicates its environmental performance internally to employees and to external stakeholders, including the Ontario Ministry of the Environment and Climate Change, Environment and Climate Change Canada, the CNSC, and local communities. Details of OPG's environmental performance and initiatives to fulfill the Company's Environmental Policy can be found in OPG's 2015 Sustainability Report, available on the Company's website at www.opg.com.

Improving Efficiency and Reducing Costs

As part of its commitment to operational excellence, OPG remains focused on reducing costs by pursuing efficiency and productivity improvements across operating business units and support functions, while ensuring that there is no adverse impact on the safety, reliability and environmental sustainability of the Company's operations. This includes streamlining of processes, simplifying governance, upgrading information technology, optimizing service delivery models, and, where appropriate, leveraging attrition to achieve human resource targets aligned with business requirements. Initiatives to improve cost performance and organizational capability are being implemented at the enterprise and business unit level.

To drive efficiency and performance improvement, the Company continues to leverage a more scalable, centre-led organizational model. In 2016, the reduction in OPG's regular headcount from ongoing operations, since the beginning of 2011, reached over 2,800. Improving organizational performance and building on these efficiency gains remains a key priority for the Company. OPG continues to review its cost structure, identify cost improvement strategies and embed an outcomes-driven culture that reinforces low cost, efficiency, and organizational agility as part of business decision-making. In order to enhance the overall focus on productivity, in 2016 OPG adopted Enterprise TGC per MWh as a measure of OPG's overall organizational cost performance and Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets, in addition to the existing Nuclear TGC per MWh measure. Further details regarding these measures are included in the sections, *Highlights, Key Operating and Financial Performance Indicators* and *Supplemental Non-GAAP Measures*.

People and Culture

A well trained and engaged workforce is fundamental to the achievement of OPG's strategic imperatives. To succeed in a demanding business environment, OPG is focused on building a diverse, healthy, engaged workforce and fostering a culture of collaboration, accountability and innovation. OPG also continues to communicate and

implement the values and behaviours expected from its employees in order to maintain a strong focus on safety, performance excellence, continuous improvement, and corporate citizenship.

The Company continues to focus on improving the capability of its workforce through leadership development, knowledge management, diversity and inclusion programs, and hiring in key areas. Ability to secure the right talent mix in order to effectively meet the Company's immediate and longer term business needs on a timely basis is supported through workforce planning, resourcing and on-boarding strategies, both to acquire external talent into the organization and to develop existing employees. The goal of workforce planning and resourcing strategies is to ensure that the Company's workforce is diverse and has the right skill set and capability for the safe and effective operation of the generating facilities and successful delivery of major projects, including the refurbishment of the Darlington GS. These strategies are being designed to take into account anticipated staffing requirements to the end of planned commercial operations of the Pickering GS, through to the end of the planned period to de-fuel, de-water and place the station in a safe state condition.

As part of the strategy to develop and engage employees and to build leadership talent, the Company has an active succession planning program with a focus on accelerating development. OPG also has a talent management monitoring process to proactively assess staffing risks, challenges and opportunities. Since 2015, OPG offers a company-wide high-potential leadership development program to qualified internal candidates. This 18-month cross-functional, competitive-entry program is designed to identify and develop candidates for future leadership positions while they are still relatively early in their career.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification. In addition to maintaining its internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners and educational institutions to meet the required level of qualification. Training delivery models are evaluated for effectiveness and efficiency.

Effective January 1, 2017, OPG implemented a new Executive Compensation Program that is compliant with *Ontario Regulation 304/16: Executive Compensation Framework*, introduced in September 2016. The regulation sets out how all employers designated under the *Broader Public Sector Executive Compensation Act, 2014*, including OPG, must establish and post compensation programs for executives. The program must include the compensation philosophy, salary and performance-related pay caps, comparative analysis details, and a description of other elements of compensation. OPG's new Executive Compensation Program, which applies to employees at the Vice President level and higher, is designed to provide compensation that is at the 50th percentile of the market and focused on at-risk, performance based pay. The program will better enable OPG to attract, align and retain the executive talent critical to delivering Shareholder and customer value, while ensuring continued safe and reliable operations.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. OPG also continues to plan and execute maintenance and capital improvement projects related to its existing assets. OPG strives for excellence in the planning and delivery of all projects across the Company.

OPG's vision for project excellence is to be an industry leader in project management capability and performance. As part of its commitment to project excellence, OPG continues to enhance and streamline its approach to project planning and execution, with the goal of delivering all projects safely, on time, on budget, and with high quality. Achieving project excellence at OPG involves, among other things, putting in place a common, scalable project delivery model across all business units, establishing qualified project management teams, optimizing contracting strategies, engaging qualified and experienced vendors, and effectively monitoring and controlling performance. The status updates for OPG's major projects as of December 31, 2016 are outlined below.

Project	Capital	Approved	Expected	Current status

(millions of dollars)	expenditures Year-to-date	Life-to-date	budget	in-service date	
Darlington Refurbishment	1,019	3,185	12,800 [1]	First unit - 2020 Last unit - 2026	The refurbishment of Unit 2 commenced in October 2016, as planned. De-fueling of Unit 2, the first critical path activity, was completed in January 2017, ahead of schedule. The project is tracking on budget. See update below.
Peter Sutherland Sr. Hydroelectric GS	141	236	300	2017	Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, ahead of the originally planned schedule. **[MONITOR]** See update below.
Sir Adam Beck Pump GS Reservoir Refurbishment	39	46	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget. See update below.
Ranney Falls Hydroelectric GS	2	3	77 **[MONITOR]**	2019	Project design work was completed in 2016 and construction is expected to commence in 2017. See update below. **[MONITOR]**
Nanticoke Solar Facility	1	1			Project definition work is in progress and construction is planned to commence in the first half of 2018. See update below.
Deep Geologic Repository for L&ILW	9 [2]	195 [2]			OPG has completed the additional studies required by the Canadian Environmental Assessment Agency (CEAA) and the federal Minister of Environment and Climate Change and submitted this information in December 2016. See update below.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the Darlington GS by approximately 30 years. The Darlington Refurbishment project is a multi-phase program comprising the following five major sub-projects:

- **Retube and Feeder Replacement (RFR)**, which includes the removal and replacement of fuel channel assemblies and feeder tubes in each reactor

- **Turbines and Generators**, which consists of inspections and repairs of turbine generator sets and the replacement of analog control systems with digital control systems
- **De-fuelling and Fuel Handling**, which involves the de-fuelling of the reactors and the refurbishment of the fuel handling equipment
- **Steam Generators**, which includes mechanical cleaning, water lancing, and inspection and maintenance work on the generators
- **Balance of Plant**, which consists of work on smaller projects to replace or repair certain other station components.

In January 2016, the Government of Ontario's support for the Darlington Refurbishment project was affirmed through the Ontario Minister of Energy's announcement endorsing OPG's plan to refurbish the four Darlington units at a total project budget of $12.8 billion, including capitalized interest and escalation. The Province's announcement followed the approval of the project budget and schedule by OPG's Board of Directors in November 2015. The refurbishment of the last unit is scheduled to be completed by 2026. OPG's current operating licence for the Darlington GS spans most of the planned duration of the Darlington Refurbishment project, expiring in November 2025.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. *Ontario Regulation 53/05* requires the OEB to accept the need for the Darlington Refurbishment project in light of Ontario's 2013 Long-Term Energy Plan (LTEP) and the related policy of the Province endorsing the need for nuclear refurbishment. It also requires the OEB to ensure that OPG recovers capital and non-capital costs and firm financial commitments in respect of the Darlington Refurbishment project, if the OEB is satisfied that the costs were prudently incurred and that the firm financial commitments were prudently made.

A number of pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, in support of the execution phase of the project have been completed, with the remaining projects continuing to track for completion in line with the refurbishment execution schedule.

All major contracts for the Darlington Refurbishment project that OPG expected to award were in place prior to proceeding with the Unit 2 refurbishment. This included the RFR execution phase contract awarded in January 2016 and valued at approximately $2.75 billion for work to be executed on all four units. All of the major contracts contain suspension and termination provisions.

Other key activities related to the project in 2016 included the following:

- Fabrication of the major reactor components including fuel channels and feeder tubes is in progress, with the first set of feeder tubes delivered in the fourth quarter of 2016. The remaining components have planned deliveries tracking in line with the project schedule.
- The specialized tooling for removal and replacement of feeder tubes and fuel channel assemblies in each reactor was delivered to OPG's reactor training and mock-up facility in the second quarter of 2016, as planned, and testing of the tooling has been completed.

- All 28 storage tanks have been installed in the Heavy Water Storage and Drum Handling Facility, which will provide storage and processing capability for the removal of heavy water from the units during refurbishment, as well as for continued station operations.
- The RFR Island Support Annex was completed in February 2016. The facility houses RFR field preparatory, contractor management, and project oversight activities.

In addition to the de-fuelling of the Unit 2 reactor completed in January 2017, milestones for the Darlington Refurbishment project in 2017 include:

- Completion of reactor vault preparation activities to support RFR work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Third Emergency Power Generator and Containment Filtered Venting System safety enhancement projects, which were originally scheduled to be placed in-service in 2016. Remediation measures are in progress and OPG expects both projects to be placed in-service during the first quarter of 2017. These delays will not impact the overall Darlington Refurbishment project schedule, as neither of the two projects is on the critical path.
- Completion of the Re-tube Waste Processing Building and the Heavy Water Storage and Drum Handling Facility.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of the second unit, Unit 3, at the Darlington GS and is entering into associated commitments to procure major components that require long-lead times. As of December 31, 2016, $31 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Peter Sutherland Sr. Hydroelectric GS

The project to construct the 28 MW Peter Sutherland Sr. hydroelectric GS is in the process of testing and commissioning the turbine and generator units, as well as operator training and document turnover. Work also continues on demobilization efforts, as well as site reclamation. Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. **[MONITOR]** The project is tracking within the approved budget of $300 million.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The construction work on the project included installation of a partial new liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

During 2016, OPG completed project design work for the construction of an additional 10 MW single-unit powerhouse on the existing Ranney Falls GS site. The new unit will replace an existing unit that reached its end of life in 2014. Capital expenditures for project definition work completed as of December 31, 2016 were $3 million. OPG plans to commence construction work in 2017, with an expected in-service date in the fourth quarter of 2019 and a budget of $77 million. **[MONITOR]**

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS and adjacent lands is planned to commence in the first half of 2018. It is expected to be completed in early 2019. Capital expenditures for project definition work completed as of December 31, 2016 were $1 million.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In August 2015, OPG responded to the CEAA's list of potential environmental conditions relating to the JRP report. In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and the impact on environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization (NWMO) were located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following a review by the CEAA and a period of public comment, an EA Decision Statement by the Minister is expected by the third quarter of 2017. Based on the information submitted to the Minister, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

In 2013, OPG suspended design activities on the project pending receipt of a site preparation and construction licence. If the decision on the EA is positive, the licensing process will resume. Upon receipt of the site preparation and construction licence, OPG will complete detailed design and development of a project schedule and a budget. In parallel, OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The approval of OPG's Board of Directors must also be obtained in order to proceed with construction. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

New Nuclear Units

The 2013 LTEP also indicated that the Ontario Ministry of Energy would work with OPG to maintain the site preparation licence granted by the CNSC in relation to the potential construction of these reactors. As such, OPG has been undertaking activities required to support the CNSC Power Reactor Site Preparation Licence and the

Darlington New Nuclear Project EA. The JRP Report on the EA had concluded that the project was not likely to cause significant adverse environmental effects, given mitigation. In April 2016, the Supreme Court of Canada dismissed the application for leave to appeal filed by the parties that had challenged the Darlington New Nuclear Project EA through a judicial review, concluding the litigation on the matter. The CNSC site preparation licence expires in 2022.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth. Inherent in this priority are three objectives:

- Increase revenue, reduce costs and achieve appropriate return
- Ensure availability of cost effective funding for operational needs, generation development projects and long-term obligations
- Pursue opportunities to expand the existing core business and capitalize on new growth paths.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In line with its commercial mandate, OPG is focused on increasing revenue and achieving an appropriate rate of return on the Shareholder's investment, while taking into account the impact on Ontario electricity customers.

In order to achieve the above objectives with respect to the regulated operations, OPG is focused on clearly demonstrating in its rate applications to the OEB that the costs required to operate and invest in the assets are reasonable and being prudently incurred, and should be fully recovered, and that the Shareholder's investment in these assets should earn an appropriate rate of return. OPG's existing base regulated prices, which came into effect in November 2014, were lower than requested by OPG based on its forecast costs. This has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

To improve the financial strength of the regulated operations going forward, OPG has been focused on providing appropriate, transparent evidence in support of its OEB rate requests, aligning organizational resources to support an effective rate application process, and continuing to identify opportunities for further efficiencies in the Company's cost structure. To date, OPG's focus on cost reduction and efficiency improvement initiatives has resulted in significant changes across the Company. This includes over $1 billion in cumulative savings realized across the Company since the beginning of 2011 from reductions in ongoing operations regular headcount through Business Transformation and other initiatives. OPG's cost and productivity improvement efforts are discussed further under the heading, *Operational Excellence*.

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. The OEB's decision on the application, including the effective date of the approved new regulated prices, is expected in the second half of 2017. Consistent with *Ontario Regulation 53/05*, OPG incorporated a nuclear rate smoothing proposal into its application, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impact on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the deemed capital structure applied to the regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent

debt. If approved, this would improve OPG's return on Shareholder's investment. Further details on OPG's rate application can be found under the heading, *Recent Developments* in the *Highlights* section.

For generation development projects that do not form a part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements prior to proceeding with the project. In line with this strategy, most of OPG's non-regulated operating facilities and assets under construction are subject to ESAs with the IESO. Based on these agreements, OPG expects its non-regulated generation operations, reported under the Contracted Generation Portfolio segment, to continue to provide a generally stable level of earnings and cash flow going forward.

OPG's capital structure currently reflects lower levels of debt than the deemed capital structure reflected in the Company's existing or proposed regulated prices. OPG is evaluating strategies to enhance Shareholder returns by optimizing the Company's capital structure through better alignment with the deemed capital structure, taking into account the overall financial strength of the Company and the potential impact on the Company's investment grade credit rating.

Ensure Availability of Cost Effective Funding

OPG actively monitors its funding requirements and forecasts availability of funds to ensure that it can meet the Company's operational needs, project commitments and long-term obligations. OPG utilizes multiple sources of funds, including funds from operations, commercial paper, securitization of assets, letters of credit, credit facilities, long-term corporate debt, and private placement project financing. The Company's financing strategy leverages the strength of its balance sheet to obtain cost effective long-term corporate debt. OPG also accesses the capital markets for private placement project financing, secured by the assets of the project, where the characteristics of the project support such financing. Maintaining an investment grade credit rating is critical to OPG's ability to access cost effective financing.

In April 2016, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2016, S&P Global Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

OPG intends to continue to access the capital markets, where appropriate, to obtain cost effective financing for future generation development projects. The Company also continues to evaluate arrangements that would appropriately support its financing needs and capital expenditure programs. OPG's liquidity and capital resources are discussed under the section, *Liquidity and Capital Resources.*

Pursue Business Growth Opportunities

OPG pursues commercially-based business growth opportunities through investments in its core generation portfolio, as well as emerging renewable energy project opportunities. OPG's growth strategy considers the Company's financial position and anticipated future changes in the generating fleet, including the eventual end of Pickering commercial operations. The growth strategy is also informed by industry, technological, environmental, social, and economic external factors. Growth opportunities are evaluated using financial and risk-based analyses as well as strategic considerations.

OPG's core business growth strategy focuses on the renewal and expansion of the Company's generation portfolio of nuclear, hydroelectric and thermal generating assets in Ontario, including the redevelopment and expansion of existing sites and potential new developments. The strategy leverages OPG's operating and project development expertise as well as the Company's existing diverse physical asset base. OPG considers acquisition opportunities as they arise, taking into account operating synergies, strategic benefits, financial returns and risk profile. OPG's current major generation development projects and asset life extension initiatives are discussed under the headings, *Operational Excellence* and *Project Excellence* in the *Core Business and Strategy* section.

OPG seeks to continue to expand beyond its core generation business through investments in innovation and emergent low-carbon technologies, including selective solar generation, energy storage, micro-grid, electric vehicle infrastructure and other development. OPG is also considering longer-term growth paths that include broader electricity sector opportunities, within and outside Ontario. Growth opportunities may be pursued in partnership with other commercial entities where appropriate synergies exist and are aligned with OPG's business objectives.

In March 2016, Nanticoke Solar LP was selected, through the first phase of the IESO's LRP program, to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. The partnership and the IESO executed a 20-year LRP contract in March 2016, which formalized the terms and conditions for the development and operation of the new solar facility. In September 2016, the Government of Ontario suspended the second phase of the LRP program, which does not impact the project.

From October 2016 to December 2016, the Government of Ontario conducted a consultation process to update its LTEP. OPG made a formal submission as part of the consultation as it relates to OPG's core generation business and growth opportunities. The Ontario Ministry of Energy has indicated that the development of the updated LTEP, scheduled to be published in 2017, will balance the principles of affordability, reliability, clean energy, community and Indigenous engagement, as well as conservation and demand management. OPG's business growth opportunities may be affected by the results of the 2017 LTEP.

Social Licence

As the largest, publicly-owned electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations. OPG's commitment to safety is discussed under the heading, *Workplace and Public Safety* in the *Core Business and Strategy* section.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish relationships with Indigenous communities based on a foundation of respect for their languages, customs, and political, social and cultural organizations. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, and other joint projects. Recent examples of partnerships include the Peter Sutherland Sr. GS in partnership with the Taykwa Tagamou Nation, the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River, and two recently completed shoreline remediation projects. The Whitesand First Nation, working closely with OPG, completed a project to remediate nearly two kilometers of shoreline in 2016, while the Long Lake #58 First Nation undertook the management of a five-year shoreline remediation project. OPG also has been engaging proactively with Indigenous communities regarding the Company's nuclear operations, including both regularly scheduled meetings and an outreach effort in connection with OPG's proposed L&ILW DGR and the re-licensing of the PWMF and the WWMF. In November 2016, OPG was recognized for its ongoing commitment to engaging local Indigenous communities with the CEA's 2016 Sustainable Electricity award for Leadership in External Collaboration and Partnerships.

OPG is committed to being an open, transparent, and accountable company. With operations across Ontario, OPG works to maintain public trust with stakeholders by engaging site communities, sharing information, and being transparent about performance. In addition, OPG's operations are subject to extensive regulatory oversight, with public participation, by the CNSC, the OEB, and other bodies.

As part of its commitment to environmental sustainability, OPG works with community partners to support regional ecosystems and biodiversity. In 2016, OPG continued efforts to protect and restore habitat, promote biodiversity education and awareness, and help the recovery of species at risk. In addition, OPG helps contributes to the well-being of its host communities through the Company's Corporate Citizenship Program (CCP), which supports

charitable and non-profit grassroots initiatives in the areas of environment, education, and community, which includes support for including Indigenous initiatives. In 2016, OPG's CCP provided support to over 850 initiatives, of which 87 were Indigenous.

Further details regarding OPG's commitment to sustainable development, including information regarding the Company's environmental, social and economic performance and initiatives, are provided in OPG's 2015 Sustainability Report available on the Company's website at www.opg.com.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of revenue requirement and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's application for new base regulated prices submitted to the OEB in May 2016 is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its May 2016 application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

Until the OEB's decision on OPG's application is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In large part, this is due to the expected year-over-year reduction in nuclear electricity generation resulting from the full year effect of the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined based on a production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision's issuance could have a significant impact on OPG's financial results during 2017. The application for new regulated prices is further discussed in the *Highlights* section under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. Combined with the expiry of rate riders in effect during 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment, as expected, OPG anticipates this to result in lower cash flow from operations and lower Adjusted FFO Interest Coverage ratio in 2017, compared to 2016. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements. In addition, the expected reduction in nuclear generation as a result of the planned outages at Darlington GS is expected to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Other factors that may impact the Enterprise TGC include potential hydroelectric generation losses due to surplus baseload generation conditions and planned capital expenditures.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, variance accounts include those related to the revenue impact of variability in water flows and SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Pursuant to the Settlement Agreement, these and all other applicable existing variance and deferral accounts have been approved to continue once new regulated prices take effect. Considering the impacts of these accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. **[MONITOR]**

OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to ESAs with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major development projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI, which, in the short term, can be volatile and cause fluctuations in the Company's income. This volatility has been partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account. OPG is exposed to rate of return risk for the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodologies for the Nuclear Liabilities.

As OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle liabilities per the most recently approved ONFA reference plan, the volatility of earnings on the Nuclear Segregated Funds reflected in net income is reduced when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at December 31, 2016, the Decommissioning Segregated Fund was overfunded by 21 percent, and the Used Fuel Segregated Fund was marginally overfunded by less than one percent, relative to the liabilities per the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future, which would increase earnings volatility. The 2017 ONFA Reference Plan is discussed in the *Highlights* section, under the heading *Recent Developments.* The accounting for the Nuclear Segregated Funds is discussed in the section *Critical Accounting Policies*, under the heading *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

KEY OPERATING AND FINANCIAL PERFORMANCE INDICATORS

OPG evaluates the performance of its generating stations using a number of key indicators. Key operating performance indicators aligned with corporate strategic imperatives are measures of production reliability, cost effectiveness, environmental performance, and safety performance. Certain of the measures used vary depending on the generating technology. The key financial performance indicators evaluate the Company's financial performance at the enterprise level.

In 2016, OPG adopted Enterprise TGC per MWh as an enterprise-wide measure of operational cost effectiveness. Concurrently, OPG adopted Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets and no longer reports Hydroelectric OM&A expense per MWh. The new performance measures, together with Nuclear TGC per MWh, provide the Company with a single, consistent method of evaluating cost effectiveness across the organization.

Enterprise TGC, Nuclear TGC, Hydroelectric TGC, ROE Excluding AOCI, and the FFO Adjusted Interest Coverage ratio discussed below are not measurements in accordance with US GAAP. They should not be considered as alternative measures to net income or any other measure of performance under US GAAP. However, OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the

Company's strategic imperatives and related objectives. The definition and calculation of Enterprise TGC per MWh, Nuclear TGC per MWh, Hydroelectric TGC per MWh, ROE Excluding AOCI and FFO Adjusted Interest Coverage are found in the section, *Supplementary Non-GAAP Financial Measures*.

Enterprise Total Generating Cost per MWh

Enterprise TGC per MWh is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Nuclear Total Generating Cost per MWh

Nuclear TGC per MWh is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts and expenses ancillary to OPG's nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Hydroelectric Total Generating Cost per MWh

Hydroelectric TGC per MWh is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Nuclear Unit Capability Factor

OPG's nuclear stations are baseload facilities and are not designed for fluctuating production levels to meet peaking demand. The nuclear Unit Capability Factor is a key measure of nuclear station performance. It measures the amount of energy that the unit(s) generated over a period of time, adjusted for externally imposed constraints such as transmission or demand limitations, as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. Capability factors are primarily affected by planned and unplanned outages. By industry definition, capability factors exclude production losses beyond plant management's control, such as grid-related unavailability. The nuclear Unit Capability Factor also excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS is excluded from the measure effective October 15, 2016, when the unit was taken offline as part of the Darlington Refurbishment project.

Hydroelectric Availability

OPG's hydroelectric stations operate as baseload, intermediate, or peaking stations. Hydroelectric Availability is a measure of the reliability of a hydroelectric generating unit. It represents the percentage of time the generating unit is capable of providing service, whether or not it is actually generating electricity, compared to the total time for the respective period.

Thermal Equivalent Forced Outage Rate

Equivalent Forced Outage Rate (EFOR) is an index of the reliability of a generating unit at OPG's thermal stations. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its objective to deliver value to the Shareholder. ROE Excluding AOCI is defined as net income attributable to the Shareholder for the period divided by average equity attributable to the Shareholder excluding AOCI for that period, and is measured over a period of 12 months.

Funds from Operations Adjusted Interest Coverage

The FFO Adjusted Interest Coverage ratio is an indicator of OPG's ability to meet interest obligations from operating cash flow and is consistent with the Company's objective of ensuring availability of cost effective funding. The FFO Adjusted Interest Coverage ratio is defined as FFO before interest divided by adjusted interest expense, and is measured over a period of 12 months.

Other Key Indicators

In addition to production reliability, cost effectiveness, and financial performance indicators, OPG has identified certain environmental and safety performance measures. These measures are discussed under the section, *Core Business, Strategy and Outlook*.

BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary

services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power and other facilities, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to the passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel L&ILW, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Power lease arrangement and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because OPG's costs associated with the Nuclear Liabilities have been included by the OEB in the determination of regulated prices for production from the Pickering and Darlington nuclear generating stations, in accordance with the methodologies applied since the OEB's 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. Brighton Beach operates under an energy conversion agreement between Brighton Beach and Shell Energy North America (Canada) Inc, and the PEC station is operated under the terms of an Accelerated Clean Energy Supply contract with the IESO. OPG's share of the in-service

generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of trading activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the United States (US) market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets, with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and Nanticoke generating stations' sites.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**3,481**	3,245
Fuel expense	**315**	301
Gross margin	**3,166**	2,944
Operations, maintenance and administration	**2,210**	2,196
Depreciation and amortization	**925**	717
Property taxes	**26**	26
Income before other loss, interest, and income taxes	**5**	5
Other loss	**1**	3
Income before interest and income taxes	**4**	2

Income before interest and income taxes from the segment increased to $4 million in 2016, compared to $2 million in 2015. The improvement in earnings of $2 million was primarily due to higher electricity generation in 2016, compared to 2015, which increased revenue from the nuclear base regulated price. The increase in revenue was largely offset by higher OM&A expenses, higher fuel expense, and higher depreciation and amortization expense, excluding amortization expense related to regulatory balances, in 2016, compared to 2015.

Higher nuclear production of 1.1 TWh in 2016, compared to 2015, was primarily due to the planned four-unit VBO in 2015 and a decrease in the number of unplanned outages at the Darlington GS in 2016. This was partially offset by the impact of the increased number of unplanned outage days at the Pickering GS in 2016, and the removal from service of Unit 2 of the Darlington GS in October 2016 as part of the Darlington Refurbishment project.

The increase in OM&A expenses of $14 million in 2016 reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium prices and

higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million primarily due to new assets in service in 2016.

A decrease in non-electricity generation revenue in 2016, compared to 2015, also partially offset the increase in segment earnings. The lower non-electricity generation revenue was mainly attributable to lower detritiation services revenue and lower isotope sales in 2016 and an insurance recovery recognized in 2015.

A higher OEB-authorized rate rider of $10.84/MWh effective from July 1, 2015 to the end of 2016 contributed to the increase in segment revenue in 2016, compared to 2015. In the first half of 2015, OPG received a rate rider of $1.33/MWh. As the rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this increase in revenue was largely offset by an increase in amortization expense related to the regulatory balances.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2016 and 2015 were as follows:

	2016	2015
Unit Capability Factor *(%)* [1]		
Darlington GS	**89.5**	76.9
Pickering GS	**75.2**	79.4

[1] The nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS increased in 2016, compared to 2015, primarily due to the four-unit VBO completed during 2015. In addition, a lower number of unplanned outage days at the Darlington GS during 2016, compared to 2015, also contributed to the improvement in the Unit Capability Factor.

The decrease in the Unit Capability Factor at the Pickering GS in 2016, compared to 2015, was primarily due to a higher number of unplanned outage days at the station in 2016, as a result of emergent discovery work during planned outages.

The definition of the nuclear Unit Capability Factor is found under the heading, *Key Operating and Financial Performance Indicators.*

Regulated – Nuclear Waste Management Segment

	2016	2015
Revenue	**138**	122
Operations, maintenance and administration	**146**	132
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**912**	880
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Loss before interest and income taxes	**(174)**	(186)

Earnings from the segment improved by $12 million in 2016 compared to 2015. The improvement was primarily due to higher earnings from the Nuclear Segregated Funds, partially offset by an increase in accretion expense on the Nuclear Liabilities.

The improvement in Nuclear Segregated Funds earnings was primarily due to an increase in the Used Fuel Segregated Fund earnings due to higher CPI-adjusted rate of return guaranteed by the Province for funding related to the initial 2.23 million used fuel bundles. Pursuant to the ONFA, the guaranteed annual rate of return for that portion of the Used Fuel Segregated Fund is set at 3.25 percent plus the change in the Ontario CPI. This increase in

Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the 2017 ONFA Reference Plan. The 2017 ONFA Reference Plan was approved by the Province in December 2016, and is discussed in the section, *Highlights* under the heading, *Recent Developments*. The accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section. The Nuclear Segregated Funds earnings are reported net of the impact of the Bruce Lease Net Revenue Variance Account.

The higher accretion expense on the Nuclear Liabilities during 2016, compared to 2015, reflected an upward adjustment in the liabilities recognized in December 2015 related to the revised accounting assumptions for the estimated useful lives of OPG's nuclear generating stations. The increased accretion expense was partially offset by the impact of the Bruce Lease Net Revenues Variance Account. The changes in the assumed estimated useful lives of the nuclear stations and the related adjustment to Nuclear Liabilities are discussed further in the section, *Balance Sheet Highlights* under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account*.

Regulated – Hydroelectric Segment

(millions of dollars)	**2016**	**2015**
Revenue [1]	**1,527**	1,619
Fuel expense	**353**	345
Gross margin	**1,174**	1,274
Operations, maintenance and administration	**325**	340
Depreciation and amortization	**225**	282
Property tax	**1**	1
Income before other (income) loss, interest and income taxes	**623**	651
Other (income) loss	**(19)**	3
Income before interest and income taxes	**642**	648

[1] During 2016 and 2015, the Regulated – Hydroelectric segment revenue included incentive payments of $14 million and $26 million, respectively, related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $6 million in 2016, compared to 2015, was primarily due to lower hydroelectric incentive mechanism payments and the income impact of OEB-approved variance accounts. The lower payments under the hydroelectric incentive mechanism were primarily due to the reservoir refurbishment outage at the Sir Adam Beck Pump GS during 2016. The decrease in segment income was partially offset by a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to OPG's December 2014 motion. The decrease in segment income also was partially offset by a year-over-year decrease in OM&A expenses, primarily due to higher costs incurred in 2015 for shoreline remediation work.

The decrease in segment revenues due to the lower OEB-authorized rate rider in 2016, compared to 2015, was largely offset by a corresponding decrease in amortization expense related to the regulatory balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	2016	**2015**
Hydroelectric Availability *(%)*	**89.0**	91.2

The Hydroelectric Availability decreased during 2016, compared to 2015, primarily due to the planned reservoir refurbishment project at the Sir Adam Beck Pump GS. The project was completed in February 2017.

The definition of Hydroelectric Availability is found under the heading, *Key Operating and Financial Performance Indicators*.

Contracted Generation Portfolio Segment

(millions of dollars)	2016	2015
Revenue	**573**	535
Fuel expense	**58**	39
Gross margin	**515**	496
Operations, maintenance and administration	**178**	185
Depreciation and amortization	**75**	72
Accretion on fixed asset removal liabilities	**9**	8
Property taxes	**7**	7
Income from investments subject to significant influence	**(37)**	(39)
Income before other loss, interest, and income taxes	**283**	263
Other loss	**1**	1
Income before interest and income taxes	**282**	262

Income before interest and income taxes increased by $20 million during 2016, compared to 2015. The increase primarily resulted from the higher gross margin, due to increased revenues from the Lower Mattagami River generating stations, the Lennox GS, and the Atikokan GS. Higher revenue from the Lennox GS was primarily due to increased market demand. The increase in revenue from the Atikokan GS reflected the support provided to the electricity system in northwestern Ontario as a result of an outage at a local transformer station from late July 2016 to early September 2016. The year-over-year increase in segment revenue was also due to a provision made in 2015 related to an IESO audit.

The Hydroelectric Availability and the Thermal EFOR for the Contracted Generation Portfolio segment were as follows:

	2016	2015
Hydroelectric Availability *(%)*	**77.3**	88.6
Thermal EFOR *(%)*	**1.6**	11.2

Lower Hydroelectric Availability during 2016, compared to 2015, was primarily due to a higher number of planned outage days at the Kipling and Harmon generating stations on the Lower Mattagami River. During 2016, headgate replacements were made at certain units of the Kipling GS and Harmon GS. In addition, a runner upgrade and rehabilitation work was completed at Unit 2 of the Harmon GS. The lower thermal EFOR in 2016, compared to 2015, was primarily due to an outage in 2015 to perform repair work at the Lennox GS.

The definitions of Hydroelectric Availability and Thermal EFOR are found under the heading, *Key Operating and Financial Performance Indicators*.

Services, Trading, and Other Non-Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**68**	73
Fuel expense	**1**	2
Gross margin	**67**	71
Operations, maintenance and administration	**22**	48
Depreciation and amortization	**32**	29
Accretion on fixed asset removal liabilities	**8**	7
Property taxes	**12**	11
Restructuring	**6**	6
Loss before other loss, interest, and income taxes	**(13)**	(30)
Other loss	**-**	7
Loss before interest and income taxes	**(13)**	(37)

Segment earnings improved by $24 million in 2016 compared to 2015. The losses incurred by the segment in 2015 and 2016 largely reflect the costs associated with the Nanticoke and Lambton generating stations prior to OPG's decisions, in 2015 and November 2016, respectively, to proceed with the stations' decommissioning. These losses are partially offset by OPG's trading activities.

The improvement in earnings in 2016 primarily reflected higher OM&A expenses in 2015, including those incurred related to the Nanticoke GS prior to OPG's decision to proceed with the station's decommissioning, and a provision made in 2015 related to an IESO audit. The year-over-year decrease in OM&A expenses also reflected reduced work programs at the Lambton GS during 2016 due to lower staffing levels used to preserve the station. The preservation activities were discontinued after the announcement to decommission the station. Expenditures incurred in connection with decommissioning activities for the Nanticoke and Lambton generating stations are charged against a previously established decommissioning provision.

During each of 2016 and 2015, OPG recorded a charge against earnings to adjust the scrap value estimates for the Lambton GS. In 2016, this adjustment was offset by dividend income earned from OPG's investment in Hydro One shares, which contributed to the year-over-year improvement in earnings.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies; to undertake major projects; to fund long-term obligations such as contributions to the pension fund; to make payments under the OPEB plans; to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds; and to service and repay long-term debt.

Changes in cash and cash equivalents for 2016 and 2015 are as follows:

(millions of dollars)	**2016**	**2015**
Cash and cash equivalents, beginning of period	**464**	610
Cash flow provided by operating activities	**1,705**	1,465
Cash flow used in investing activities	**(1,807)**	(1,553)
Cash flow used in financing activities	**(176)**	(58)
Net decrease	**(278)**	(146)
Cash and cash equivalents, end of period	**186**	464

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details under the heading, *Overview of Results* in the section, *Highlights*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities in 2016 was $1,807 million, compared to $1,553 million in 2015. The increase was primarily due to higher expenditures on the Darlington Refurbishment project as it transitioned to execution phase, and the acquisition of nine million common shares of Hydro One in April 2016. The increase in cash flow used in investing activities in 2016, compared to 2015, was partially offset by the investment of proceeds from a long-term debt issuance in support of the Peter Sutherland Sr. GS project into a structured deposit note in 2015, and the subsequent receipt of proceeds from this investment on staggered maturity dates throughout 2016. The final maturity date of the deposit note is in April 2017. The acquisition of the Hydro One shares is discussed under the heading *Recent Developments* in the *Highlights* section, as well as in Note 3 of the Company's 2016 audited consolidated financial statements.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, sustaining capital investments across the generating fleet, and hydroelectric development projects including the expansion of the Ranney Falls GS and the completion of Peter Sutherland Sr. GS.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended the expiry date of both tranches from May 2020 to May 2021. As at December 31, 2016, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this

agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plan.

As at December 31, 2016, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As of December 31, 2016, there were outstanding borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

As at December 31, 2016, OPG's long-term debt outstanding was $5,534 million, including $1,103 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes is x.xx percent and x.xx percent, respectively. **[MONITOR]**

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, were as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Other Commitments

Collective Agreements

As of December 31, 2016, OPG had approximately 9,270 regular employees. Most of OPG's regular employees are represented by two unions:

- **The PWU** – This union represents approximately 5,070 OPG employees or approximately 55 percent of OPG's regular workforce as at December 31, 2016. Union membership includes operators, technicians, skilled trades, clerical, and security personnel. The current collective agreement between OPG and the PWU has a three-year term, expiring on March 31, 2018.
- **The Society** – This union represents approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce as at December 31, 2016. Union membership includes supervisors, professional engineers, scientists, and other professionals. The current collective agreement between OPG and The Society has a three-year term, expiring on December 31, 2018.

In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights at OPG facilities. These bargaining rights are established either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. All of these collective agreements currently have multi-year terms, expiring on April 30, 2020.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's audited consolidated financial position using selected balance sheet data as at December 31:

(millions of dollars)	**2016**	**2015**
Property, plant and equipment – net	**20,002**	20,595
The decrease was primarily due to a reduction in asset retirement costs of approximately $1,570 million in 2016 as a result of a reduction in the estimates for the Nuclear Liabilities to reflect the 2017 ONFA Reference Plan cost estimates. The decrease was partially offset by capital expenditures on the Darlington Refurbishment and other projects, net of depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**15,984**	15,136
The increase was primarily due to earnings on the Nuclear Segregated Funds and contributions to the Used Fuel Segregated Fund, partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded to the lower underlying obligations reflected in the updated ONFA reference plan and reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Available-for-sale securities	**212**	-
The balance as at December 31, 2016 represents the fair value of the nine million Hydro One shares acquired in April 2016, as discussed under the heading *Recent Developments* in the *Highlights* Section.		
Regulatory assets and liabilities – net *(current and non-current portions)*	**5,545**	5,808
The decrease was primarily due to the amortization of regulatory balances recovered through rate riders in effect during 2016 and an increase in regulatory liabilities resulting from a change in the estimated useful lives of OPG's nuclear stations at the end of 2015, as discussed under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account* below. This was partially offset by amounts deferred in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and other variance and deferral accounts during the year.		
Short-term debt	**2**	225
The decrease was due to the maturity of external commercial paper outstanding under LME's commercial paper program.		
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169
The decrease was primarily due to a reduction of approximately $1,570 million in the estimates for the Nuclear Liabilities at the end of 2016 to reflect the 2017 ONFA Reference Plan cost estimates, partially offset by accretion expense during the year.		
Pension liabilities	**3,012**	2,597
The increase was primarily due to the re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as discussed in the section, *Changes In Accounting Policies* under the heading, *Pension and Other Post-Employment Benefits.*		

Impact of Changes in Station End-of-Life Dates Deferral Account

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense arising from the changes in the estimated useful lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG has recognized a regulatory liability of $71 million related to the balance in the deferral account. Together with the Bruce Lease Net Revenues Variance Account discussed below, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account offset the decrease in depreciation expense in 2016, compared to 2015, as a result of the changes in estimated useful lives of OPG's nuclear stations effective December 31, 2015.

The changes to the estimated useful lives of OPG's nuclear generating station effective December 31, 2015, for accounting purposes, were as follows:

- the average service lives of the Bruce A GS and Bruce B GS were extended from 2048 to 2052 and from 2019 to 2061, respectively, to reflect the estimated end-of-life dates reflected in the updated refurbishment agreement between the IESO and Bruce Power, which was announced in December 2015
- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015
- the average service life of the Pickering GS was extended by less than one year.

To reflect the above changes, OPG recognized a total increase of $2,330 million in the Nuclear Liabilities and a corresponding increase in the related asset retirement costs, effective December 31, 2015. These increases were primarily due to the changes in the estimated useful life of the Bruce B GS. The nuclear asset retirement obligations (ARO) associated with the Pickering GS and Darlington GS was impacted by the changes to the Bruce nuclear generating stations' useful lives because the costs of the fleet-wide waste management programs are shared by all of OPG's nuclear stations based on used nuclear fuel and waste volumes. Consistent with the changes in the end-of-life dates for the Bruce nuclear generating stations and the December 2015 amendments to the Bruce Lease in connection with the Province's endorsement of Bruce Power's refurbishment plans, the term of the Bruce Lease for accounting purposes also was extended, in line with the refurbishment plans for these stations.

The impact of the above changes on OPG's revenues and costs related to the Bruce nuclear generating stations effective January 1, 2016 is recorded in the Bruce Lease Net Revenues Variance Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's consolidated financial statements or are recorded in the Company's consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

Guarantees

As part of normal business, OPG and certain of its subsidiaries and joint ventures enter into various agreements to provide financial or performance assurance to third parties. Such agreements include guarantees, standby Letters of Credit and surety bonds. For more details on OPG's guarantees, refer to Note 15 of OPG's audited consolidated financial statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies, including the impact of major recent accounting pronouncements, are outlined in Note 3 of the audited consolidated financial statements. Certain of these policies are recognized as critical accounting policies by virtue of the subjective and complex judgments and estimates required around matters that are inherently uncertain and could result in materially different amounts being reported under different conditions or assumptions. The critical accounting policies and estimates that affect OPG's US GAAP consolidated financial statements are highlighted below.

Exemptive Relief for Reporting under US GAAP

As required by *Ontario Regulation 395/11,* as amended, under the FAA, OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG has also received exemptive relief from the OSC from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board (IASB) for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

As a result of OPG's 2011 decision to adopt US GAAP, as required by the FAA regulation, OPG's earlier plan to convert to IFRS, effective January 1, 2012, was discontinued. OPG had substantively completed its IFRS conversion project, which included separate diagnostic, development, and implementation phases, when it suspended the project. If a future transition to IFRS for the purposes of OPG's consolidated financial statements is required, conversion work can be effectively restarted with sufficient lead time to evaluate and conclude on changes that occurred subsequent to the decision to suspend the project. OPG continues to monitor the IASB's current standard-setting project related to entities with rate-regulated activities and is evaluating alternatives with respect to the Company's future financial reporting.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the OEB.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998*, the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the

future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05.* The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures for its pension and OPEB plans. It is the Company's position that this decision by the OEB did not constitute a change in the basis of OPG's rate recovery of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices, or in an OEB-authorized deferral or variance account for future recovery, as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account to record the difference between OPG's actual pension and OPEB costs for the regulated business determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million, which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the above noted consultation process.

See Notes 3, 5, 8, 9, and 11 of OPG's 2016 audited consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or payable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its rate regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and in respect of investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

The Company has recognized net deferred income tax liabilities of $829 million as at December 31, 2016 (2015 – $880 million).

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset, based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

The accounting estimates related to end-of-life assumptions for PP&E and intangible assets require significant management judgment, including consideration of various operating, technological, and other factors. OPG reviews the estimated useful lives for its PP&E and intangible assets on a regular basis.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

Various assumptions and accounting estimates are required to determine whether an impairment loss should be recognized and, if so, the value of such loss. This includes factors such as short-term and long-term forecasts of prices for electricity generation under applicable revenue mechanisms, the demand for and supply of electricity, inflation, fuel prices, capital and operating expenditures, and estimated useful service lives of the assets.

The carrying value of investments accounted for under the equity method are reviewed for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Segregated Funds based on approved ONFA reference plans. Costs for L&ILW management and used fuel storage incurred during station operation are not funded by the Nuclear Segregated Funds. They are funded through the Company's operating cash flow or other sources of liquidity.

Decommissioning Segregated Fund

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the earnings it recognizes in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded.

The amount due to the Province in respect of the Decommissioning Segregated Fund could be reduced in subsequent periods in the event that the fund earns less than is target rate of return, a new ONFA reference plan is approved with a higher underlying liability, or the amount of the underfunding in the Used Fuel Segregated Fund increases.

When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets.

Used Fuel Segregated Fund

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined in the ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return on the Used Fuel Segregated Fund and the actual market return determined based on the fair value of the fund's assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount OPG would pay to, or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions attributed to the used fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province has the right at any time to access the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. Accordingly, when the Used Fuel Segregated Fund is overfunded, OPG limits the earnings it recognizes int he consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the underlying liability based on the most recently approved ONFA reference plan. In accordance with the ONFA, OPG does not have a right to direct any amounts from the Used Fuel Segregated Fund to the Decommissioning Segregated Fund.

Provincial Guarantee

In accordance with the *Nuclear Safety and Control Act* (Canada), the CNSC requires OPG to have sufficient funds available to discharge the current nuclear waste management and nuclear decommissioning liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the CNSC, on behalf of OPG, for any shortfall between the CNSC financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee equal to 0.5 percent of the amount of the Provincial Guarantee. The

current value of the Provincial Guarantee of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016. The CNSC process requires the CNSC financial guarantee requirement to be updated once every five years. OPG is currently updating the CNSC financial quarantee requirement for the 2018-2022 period and expects to file it with the CNSC in the first half of 2017. **[MONITOR]**

Pension and Other Post-Employment Benefits

The determination of OPG's pension and OPEB costs and obligations is based on accounting policies and assumptions, as discussed below.

Accounting Policy

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor) for each plan is amortized over the expected average remaining service life of the employees covered by the plan, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on its consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation, on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net

of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as amortization components of pension and OPRB costs as described above.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Accounting Assumptions

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost, and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses.

The discount rates, which are representative of the AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. In 2016 and prior years, benefit costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. A lower discount rate increases the benefit obligations and increases benefit costs. The weighted-average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

Starting in 2017, OPG expects to change the method used to estimate the current service and interest cost components of pension and OPEB costs. OPG expects to adopt a full yield curve approach in the estimation of these components of pension and OPEB cost by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Making this change will improve the correlation between projected benefit cash flows and the corresponding yield curve spot rates, and provide a more precise measurement of service and interest costs. This change does not affect the measurement of the total benefit obligations, as the change in the current service and interest components of the costs from the previous method will be offset by a corresponding change in the actuarial (gain) loss recorded in AOCI. OPG will account for this change as a change in estimate, prospectively starting in 2017. With an upward sloping yield curve and the pattern of OPG's estimated future benefit cash flows, the adoption of the full yield curve approach is expected to materially lower OPG's current service and interest cost components, reducing the overall pension and OPEB costs in the initial years following adoption.

The expected rate of return on plan assets is determined based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined under the heading, *Contractual and Commercial Commitments,* in the section *Liquidity and Capital Resources*. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation and assumptions as at December 31, 2016. As part of the valuation, the plans' demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The deficit for the registered pension plan, for accounting purposes, increased from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

Asset Retirement Obligation

OPG recognized ARO for fixed asset removal and nuclear waste management liabilities, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The ARO is comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating plant facilities and other facilities. Costs are expected to be incurred for activities such as preparation for safe storage and safe storage of nuclear stations, dismantlement, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel bundles and L&ILW material. The liabilities associated with the decommissioning of the nuclear generating stations and the long-term management of used nuclear fuel comprise the most significant amounts of the total obligation.

The nuclear decommissioning liability includes the estimated costs of closing the nuclear stations after the end of their service lives, which includes preparation and placement of the stations into a safe state condition followed by an assumed 30-year safe store period prior to station dismantlement and site restoration. Activities associated with the placement of stations into a safe state condition include de-fueling and de-watering of the nuclear reactors. Under the terms of the lease agreement with Bruce Power and as required by the CNSC, OPG is responsible for the nuclear waste management and nuclear decommissioning obligations associated with the Bruce nuclear generating stations. Pursuant to the lease agreement, Bruce Power must return the two Bruce stations to OPG together, in a de-fueled and de-watered state. These de-watering and de-fueling costs are not part of OPG's ARO.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the obligation for these costs include an L&ILW DGR facility to be constructed and operated by OPG, as discussed under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section. To estimate the liability for nuclear used fuel management, OPG has adopted an approach consistent with the Adaptive Phased Management concept approved by the Government of

Canada, which assumes a deep geologic repository or the long-term management of Canada's nuclear used fuel waste. The NWMO is responsible for the design and implementation of Canada's plan for the long-term management of used nuclear fuel.

The following costs are recognized as a liability on OPG's consolidated balance sheets:

- the present value of the costs of decommissioning the nuclear and thermal production facilities and other facilities after the end of their useful lives
- the present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed lives of the stations
- the present value of the variable cost portion of nuclear waste management programs taking into account waste volumes generated to date.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs including construction of assumed waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, decommissioning strategy, and the technology employed may result in significant changes to the value of the accrued liabilities. With programs of such long-term duration and the evolving technology to handle nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the costs for these programs. These costs may increase or decrease over time.

The estimates for the Nuclear Liabilities are reviewed on an ongoing basis as part of the overall nuclear waste management program. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically, at least once every five years, in line with the required ONFA reference plan update process. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of a net increase in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of a net decrease in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets.

The most recent comprehensive update of the baseline cost estimates for the Nuclear Liabilities is contained in the approved 2017 ONFA Reference Plan, and was completed in the fourth quarter of 2016. The update resulted in a decrease of approximately $1,570 million in the Nuclear Liabilities as at December 31, 2016, which was determined using a discount rate of 4.95 percent. The overall reduction in OPG's nuclear waste management and nuclear decommissioning obligations was due mainly to a decrease in cost estimates to reflect a proposed new, more cost effective container design and engineered barrier concept to house used nuclear fuel for disposal, updated cost escalation rates for all programs, and a later expected in-service date for the NWMO's planned deep geologic repository for the long-term permanent disposal of Canada's used nuclear fuel. These decreases were partly offset by higher cost estimates related to decommissioning activities, primarily due to an improved definition of work required during the preparation for safe storage after station shutdown and a higher volume of waste expected to be generated during decommissioning. Cost escalation rates used to estimate future undiscounted cash flows reflected in the December 31, 2016 adjustment to the Nuclear Liabilities ranged from 2.0 percent to 3.4 percent.

The December 31, 2016 adjustment to the Nuclear Liabilities and associated asset retirement costs did not impact OPG's income for 2016. The estimated impact of this adjustment on 2017 expenses, before the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account, includes a decrease to depreciation expense of approximately $8 million, a decrease to accretion expense of approximately $78 million, and a combined decrease in used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as they are expected to be largely offset by

Commented [AJ2]: Was the discount rate not 5.15%

OPG's nuclear liabilities is based on discount rate as prescribed by US GAAP and not ONFA.

Please refer to the Summary of Significant Accounting Policies - Fixed Asset Removal and Nuclear Waste Management Liabilities in the FS for details on the derivation of the accounting discount rate. Excerpt below:

Upward revisions in the Nuclear Liabilities represent the present value of increases in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of decreases in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability.

the OEB approved variance and deferral accounts, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to Ontario Regulation 53/05. It records the revenue requirement impact associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years.

The liability for nuclear fixed asset removal and nuclear waste management on a present value basis as at December 31, 2016 was $19,103 million (2015 – $19,792 million). As at December 31, 2016, the undiscounted cash flows of expenditures for OPG's Nuclear Liabilities in 2016 dollars are as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Expenditures for nuclear fixed asset removal and nuclear waste management [1]	354	360	386	429	465	39,296	41,290

[1] The majority of the expenditures are expected to be reimbursed by the Nuclear Segregated Funds established by the ONFA. Any contributions required under the ONFA are not included in these undiscounted cash flows. Accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The liability for non-nuclear fixed asset removal was $381 million as at December 31, 2016 (2015 – $377 million). This liability primarily represents the present value of estimated costs of decommissioning OPG's thermal generating stations at the end of their service lives. The liability reflects third party cost estimates based on an in-depth review of plant sites and an assessment of required clean-up and restoration activities. For the purpose of measuring the liability, asset removal activities are assumed to take place approximately over the next one to 15 years. The amount of undiscounted estimated future cash flows associated with the thermal liabilities is approximately $500 million. With the decisions taken in 2015 and 2016 to decommission the Nanticoke and Lambton generating stations, respectively, OPG expects to review the decommissioning liability estimates for these sites. Any adjustments as a result of a change in the liability estimates for these stations will be recorded in net income in the period of change.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model.

The fair value of financial assets and liabilities for which quoted prices in an active market are available, including exchange traded derivatives and other financial instruments, are determined directly from those quoted market prices.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the

use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that may affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If the valuation technique or model is not based on observable market data, specific valuation techniques are used, primarily based on recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

OPG's use of financial instruments exposes the Company to certain risks, including credit risk, foreign currency risk and interest rate risk. A discussion of how OPG manages these and other risks is found under the section, *Risk Management*.

Variable Interest Entities

OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated. As at December 31, 2016, PSS Generating Station Limited Partnership was classified as a variable interest entity because it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership. Refer to Note 3 of OPG's 2016 audited consolidated financial statements for further details.

Recent Accounting Pronouncements

The recent US GAAP accounting pronouncements related to revenue recognition, leases, and financial instruments are described below. Other recent accounting pronouncements applicable to OPG are outlined in Note 3 of the audited consolidated financial statements.

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact that the new standard will have on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

RISK MANAGEMENT

Overview

OPG faces various risks that could significantly impact the achievement of its strategic imperatives. The objective of risk management is to identify and mitigate these risks, and to preserve and increase the value of the Shareholder's investment in the Company.

Risk Governance Structure

The Audit and Risk Committee of OPG's Board of Directors assists the Board of Directors in fulfilling its oversight responsibilities for matters relating to the identification and management of the Company's key business risks. An Executive Risk Committee (ERC), which is comprised of business unit leaders and the Chief Risk & Audit Executive (CRAE), assists the Audit and Risk Committee in fulfilling its governance and oversight responsibilities related to OPG's risk management activities.

Risk Management Activities

OPG faces a wide array of risks as a result of its business operations. OPG's Enterprise Risk Management (ERM) framework is designed to identify and evaluate risks on the basis of their potential impact on the Company's capacity to achieve specific strategic imperatives and business plan objectives.

A centralized ERM group led by the CRAE coordinates the quarterly risk management reporting activities. The activities begin with business units identifying, reviewing, and assessing risks that could prevent achievement of their objectives. The ERM group reviews, validates, and consolidates this information and prioritizes risks based on their potential to impact OPG's overall strategic imperatives. The ERM group also assesses external developments that may have implications on the corporate risk profile and facilitates the identification and assessment of emerging risks. The ERC then reviews and validates significant changes in the top risks that may impact OPG's ability to achieve its strategic imperatives, as well as any emerging risks that have been identified. The results of the ERC review and significant changes in the enterprise risk profile are reviewed by the Audit and Risk Committee.

In order to maintain an appropriate balance between risk and return, senior management sets limits for the market risk, credit risk and energy trading activities of the Company. Senior management also establishes risk management policies and processes to ensure compliance with such limits.

The key risks to OPG's strategic imperatives are briefly described below.

Risks to Achieving Operational Excellence

OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance.

Operational risks are the risks inherent in the operation of electricity generating facilities. These risks can lead to interruptions in the operations of generating stations affecting future production. The operational risks of a station are generally a function of its age, human performance, and the technology used.

Nuclear Generating Stations

Operating an aging nuclear fleet exposes OPG to unique risks such as unplanned outages, an increase in operating costs, and risks associated with nuclear waste management operations.

Operating nuclear stations exposes OPG to unique risks, such as greater-than-anticipated deterioration of station components and systems, risks associated with the nuclear industry, supply chain and vendor quality, risks related to the handling, storage and disposal of nuclear waste, and the risk of a nuclear accident. The primary implications of these risks include additional safety requirements, potentially lower than expected generation and revenues, and potentially higher operating costs.

The uncertainty associated with production by OPG's Canadian Deuterium Uranium nuclear generating units is primarily driven by the condition of station components and systems, which are all subject to the effects of aging. Fuel channels are expected to be the most life-limiting component affecting station end-of-life. Another significant factor identified to date includes degradation of primary heat transport pump motors at the Darlington GS. Additionally, there are fuel handling performance challenges at both the Darlington GS and Pickering GS. To respond to these risks, OPG continues to monitor performance, implement extensive inspection and maintenance programs, identify corrective actions and undertake projects required to operate reliably and within design parameters.

Deterioration of station components may progress in an unexpected manner, resulting in the need to increase monitoring, conduct extensive repairs, or undertake additional remedial measures. To maintain a safe operating margin, a nuclear unit could be derated resulting in reduced generation. When an unexpected condition first appears, a specific monitoring program is established. The primary impact of these conditions on OPG is an increase in the long-term cost of operations. The associated mitigation may create additional outage work, increasing the number of outages or extending planned outages.

Pickering Extended Operations to 2024

In January 2016, the Province of Ontario announced its approval of OPG's plan to pursue the continued safe and reliable operation of the Pickering GS to 2024. Under OPG's plan, all six operating units at the Pickering GS would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The current operating licence for the Pickering GS, which expires in August 2018, was issued in 2013 assuming that the station would shut down in 2020.

Inability to achieve Pickering extended operations as planned would result in a reduction of OPG's future generation revenue and cash flows and lead to the advancement of shutdown and station decommissioning expenditures.

Risk factors for continued operation of the Pickering units include the discovery of unexpected conditions, equipment failures, the state of critical plant components that are reaching end-of-life, and a requirement for significant plant modifications. To mitigate these risks, OPG continues to undertake a number of activities, including the following:

- work to confirm achievability of fuel channel life necessary to enable extended operations
- component condition assessments to identify the work required to support the extended operation of the station
- modification of the operating and maintenance strategy to support continued operation of the station.

Over the remaining lifespan of the station, risks such as performance of the fuel handling system, challenges with parts procurement, and a shortage of qualified human resources may challenge operational excellence at the Pickering GS. OPG is addressing these risks by taking appropriate actions, including undertaking fuel handling reliability improvements, equipment modifications and targeted investments in plant systems and components, supply chain initiatives, and developing workforce planning and resourcing strategies.

Nuclear Waste Management

The process of generating electricity by nuclear generating stations produces nuclear waste. As required by the CNSC, OPG is accountable for the management of used fuel and L&ILW, and decommissioning of its nuclear stations and waste management facilities, including the stations on lease to Bruce Power. Currently, there are no licenced facilities in Canada for the permanent disposal of nuclear used fuel or L&ILW. The risks to OPG's proposed L&ILW DGR for the safe long-term management of L&ILW are discussed below, under the heading, *Deep Geologic Repository for Low and Intermediate Level Waste* in the section *Risks to Achieving Project Excellence*.

The NWMO has developed a process for moving forward with Adaptive Phased Management as the long-term solution for Canada's nuclear fuel waste. The Adaptive Phased Management plan contemplates the eventual long-term permanent disposal of radioactive nuclear fuel waste in a deep geologic repository. The NWMO is in the process of undertaking a multi-year site selection process for the used fuel deep geologic repository.

In the interim, OPG is storing and managing L&ILW at the WWMF site and used fuel at its nuclear generating station sites.

Nuclear Regulatory Requirements

The uncertainty associated with nuclear regulatory requirements is primarily driven by plant aging, changes to technical codes, and challenges raised by the public at regulatory hearings, particularly in the areas of safety, environment and emergency preparedness. Addressing these requirements could add to the cost of operations, and in some instances, may result in a reduction or elimination of the productive capacity of a station, earlier than planned replacement of a station component or additional requirements for waste management. Additionally, the operations of nuclear stations are often directly impacted by circumstances or events that occur at other nuclear stations globally. These circumstances or events may lead to CNSC regulatory changes with a significant impact on the cost and future operation of OPG's nuclear fleet.

In December 2015, the CNSC granted the station a 10-year operating licence, valid until November 30, 2025. The new licence spans most of the planned duration of the Darlington Refurbishment project, which provides greater regulatory stability and reduces regulatory risk. As discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Nuclear Operations*, the plan to extend Pickering operations to 2024 is subject to the CNSC's approval of the Pickering licence renewal application and other regulatory requirements as set out by the CNSC.

In January 2014, the federal government introduced Bill C-22 which contains a new *Nuclear Liability and Compensation Act* (NLCA). This bill received Royal Assent in February 2015, and the NLCA came into effect on January 1, 2017. The NLCA requires all operators of nuclear generating stations in Canada to maintain specified amounts of nuclear liability insurance purchased from a federal government approved insurer or other equivalent forms of financial security approved by the federal government. The NLCA increases OPG's nuclear liability limit from $75 million to an initial $650 million, with successive annual increases to $750 million, $850 million, and $1 billion. OPG has met this requirement for the $650 million liability limit required by the NLCA for 2017 and is assessing the availability and premium cost of coverage for the $750 million liability limit required for 2018.

Hydroelectric Generating Stations

OPG's hydroelectric generation is exposed to risks associated with water flows, the age of plant and equipment,surplus baseload generation conditions, and dam safety requirements.

The extent to which OPG can operate its hydroelectric generation facilities depends upon the availability of water. Significant variability in weather, including impacts of climate change, could affect water flows. For OPG's regulated hydroelectric generation, the financial impact of variability in electricity production due to differences between the forecast water conditions underpinning the hydroelectric regulated prices and the actual water conditions are captured in an OEB-approved regulatory variance account.

OPG's hydroelectric generating stations have an average age of approximately 80 years, with the majority of the hydroelectric generating equipment being over 50 years old. The condition of the equipment and civil components resulting from the age of these components requires OPG to plan potentially significant work to mitigate risks to the reliability of some hydroelectric generating stations. OPG manages these risks by performing inspection and maintenance of critical components and by reviewing mitigating actions. In addition, OPG conducts detailed engineering reviews and station condition assessments on an ongoing basis. These reviews and assessments help to identify future work required to sustain and, as appropriate, upgrade a station.

SBG has, and will continue to be, an issue in Ontario when electricity supply exceeds demand. To manage SBG conditions, the IESO may require OPG to reduce hydroelectric generation and spill water. A regulatory variance account authorized by the OEB helps to mitigate the financial impact of spill due to SBG conditions for OPG's regulated hydroelectric generating stations. The Company anticipates a declining trend in SBG for its hydroelectric assets due to reduced nuclear availability resulting from the refurbishment of the Darlington GS, future refurbishment of the Bruce generating stations, and the eventual shutdown of the Pickering GS.

The hydroelectric business operates 238 dams across Ontario. Dam safety legislation does not currently exist in the province. Technical guidelines which were published by the MNRF represent the government standards for dam safety. In general, OPG's practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the MNRF technical guidelines. OPG continues to develop a new risk-informed approach in cooperation with the MNRF to prioritize the outcomes of dam safety assessments. OPG could eventually incur additional costs for certain dams that it operates in order to comply with any new requirements.

People and Culture

OPG's operations could be affected if skilled human resources are not available or aligned with its talent requirements.

The development of new leaders and retention of staff in critical roles across OPG is a key factor to OPG's success. Another success factor is related to the effective transfer of knowledge from those in critical positions throughout the organization to future leaders. The risk associated with the alignment and/or availability of skilled and experienced resources continues to exist for OPG in specific areas, including leadership and project management positions. To mitigate this risk, OPG continues to focus on succession planning, leadership development and knowledge management programs to improve the capability of its workforce. There is also a continued risk of a mismatch between attrition levels and the resource requirements to meet OPG's future business needs.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification, which requires a long-term outlook to workforce planning.

To mitigate the above risks, OPG is developing an organization-wide workforce planning and resourcing strategies and has established ongoing monitoring processes to reassess risks, challenges and opportunities related to staffing on a regular basis. OPG expects to meet the human resource needs of the business by developing existing employees and hiring in specific areas, while continuing to leverage attrition through realignment of work and streamlining of processes, where appropriate.

As of December 31, 2016, approximately 90 percent of OPG's regular labour force was represented by a union. OPG's current collective agreements with the PWU and The Society expire on March 31, 2018 and December 31, 2018, respectively, while all 19 collective agreements with craft unions expire on April 30, 2020. As a result of these agreements, OPG considers the likelihood of a labour disruption in the near future to be significantly reduced.

Health and Safety

OPG's operations involve inherent occupational safety risks and hazards.

OPG's operations involve inherent occupational safety risks and hazards that could impact the achievement of the Company's health and safety goals. OPG is committed to continuous improvement and achievement of its ultimate goal of zero injuries through a formal enterprise-wide safety management system, integrated at the operating site level, and by continuing to foster a strong health and safety culture among its employees and contractors. The safety management system serves to focus the Company on proactively managing safety risks and hazard exposures to employees and contractors. In 2016, OPG launched the organization-wide "iCare Enough to Act" initiative aimed at renewing employees' and contractors' commitments to their own and each other's safety and well-being.

Cyber Security

OPG's ability to operate effectively is, in part, dependent on the efficient operation and management of the Company's complex information technology and industrial control systems in a secure, vigilant, and resilient manner that minimizes cyber risks. Cyber security incidents may have an adverse impact on OPG's reputation, energy production, and public and employee safety.

Cyber security incidents have been on the rise for the past few years and this trend is only expected to intensify as organizations' reliance on technology increases. OPG has strategies in place to prepare for, respond to, and recover from cyber security incidents. OPG continuously monitors, assesses, and improves the effectiveness of its strategies and program considering leading industry practices and remains proactive in information and intelligence sharing to learn and adapt to the changing cyber environment.

As a registered Ontario market participant, OPG is accountable to comply with all applicable reliability obligations. Within the context of the Ontario regulatory framework, OPG is a registered generator, and is responsible for complying with the associated reliability standards. These standards apply to the relevant Bulk Electric System (BES) elements specified under North American Electric Reliability Corporation (NERC) and the relevant Bulk Power System (BPS) facilities as determined by the Northeast Power Coordinating Council. In addition, OPG's nuclear cyber assets are subject to CNSC licensing conditions and regulatory requirements. For other cyber assets not subject to applicable regulatory requirements, OPG has adopted a risk-based approach based on the National Institute of Standards and Technology Cybersecurity Framework to manage its cyber security.

To mitigate cyber risks, OPG's cyber security program focuses on educating employees, contractors, and vendors, improving processes, and upgrading technology infrastructure. In particular, OPG's program focuses on the following:

1. Complying with regulatory requirements and applicable laws
2. Improving its cyber security protection and detection capabilities to reduce known or potential exposures by engaging the services of external experts to evaluate the security of its information technology infrastructure and controls
3. Adopting industry leading practices to reduce third party cyber security risks through enhanced vendor risk assessments, introducing cyber security requirements into commercial agreements, and enhanced governance
4. Improving and exercising its incident response, recovery capability, and business continuity plans to minimize the business impact of an incident
5. Increasing the cyber security awareness and training level of its workforce through mandatory annual cyber security awareness training, specialized training for cyber specialists, social engineering tests, and periodic company-wide communications on relevant cyber security topics.

The oversight responsibility of the Audit and Risk Committee of OPG's Board of Directors over the Company's risk management activities includes the review of a semi-annual update from management on the Company's cyber security position and programs.

Suppliers

Non-performance by strategic suppliers or an inability to diversify the supplier base could adversely impact operating and project performance, financial results and reputation of OPG.

OPG's ability to operate effectively is in part dependent upon timely access to equipment, materials, and service suppliers. Loss of key equipment, materials, and service suppliers, particularly for the nuclear business, could affect OPG's ability to operate effectively and/or to execute major development projects or other capital investment programs. OPG mitigates this risk, to the extent possible, through contract negotiations, contract terms, vendor monitoring, diversification of supplier base, and business continuity plans.

Business Continuity and Emergency Management

Natural, technological or human-caused hazards may impact OPG's business continuity.

OPG is exposed to potential or actual incidents or developments resulting from extreme temperatures, precipitation, wind conditions or other natural disasters, and technological or human-caused hazards; to significant events against which it is not fully insured or indemnified; or to parties that fail to meet their indemnification obligations. These incidents have the potential to disrupt operations resulting in decreased generation revenue or additional costs to repair damages and restore operations.

OPG's business continuity program provides a framework to build resilience into critical business processes by facilitating development of risk response plans and business continuity exercises. OPG's emergency management

program is designed to ensure that the Company can manage an emergency in a timely and effective manner. OPG's plans and implementation procedures identify immediate response actions to be taken to protect the health and safety of employees and the public, and to limit the impact of the crisis on site security, production capability, and the environment. The program elements are designed to meet legal and regulatory requirements.

Risks to Achieving Project Excellence

The risks associated with the cost, schedule, technical and contractor performance aspects of the major projects could adversely impact OPG's financial performance and its corporate reputation.

OPG is undertaking several capital intensive projects with significant investments. There may be an adverse effect on the Company if it is unable to: obtain necessary approvals; raise the necessary funds; effectively manage the projects on time and on budget; or fully recover capital costs and earn an appropriate return on investment in a timely manner. These projects may also have a significant impact on OPG's borrowing capacity and credit rating. Some projects may be ultimately reassessed as being uneconomic. The risks associated with OPG's current major projects are described below.

Darlington Refurbishment

OPG is responsible for the management of the Darlington Refurbishment project, including the project's budget and schedule, and continues to systematically manage all of the risks associated with the project through robust risk management practices. There are financial and reputational risk exposures for OPG if actual costs exceed the budget or if OPG does not meet the project schedule. In addition, failure to achieve the objectives of the refurbishment project may result in future forced outages and more complex planned outages, potentially impacting the post-refurbishment performance or useful life of the station. Failure to carry out the refurbishment of the first unit as planned may result in not proceeding with the refurbishment of the remaining units, which, together with the end of commercial operations at the Pickering GS, could result in most of OPG's nuclear units shutting down by the early to mid 2020s.

There are a number of specific risks that OPG is managing and mitigating in relation to the Darlington Refurbishment project, which include OPG and vendor performance risks, delay or productivity risks, financial risks related to escalation of costs, technical risks such as equipment conditions resulting in additional scope, and execution risks such as failure to manage foreign material exclusion from the heat transport system that could lead to post refurbishment operational risks.

To mitigate the above risks and to build on major lessons learned from other nuclear refurbishments and large scale, complex projects, OPG engaged in an extensive five-year project planning phase in order to determine the project scope, rigorously estimate costs in keeping with best practices, and incorporate lessons learned from other nuclear refurbishments. In order to fully define the scope and material requirements for the project, the planning phase included the completion of detailed designs before proceeding with the execution of the unit refurbishments. Further risk mitigation has been implemented through the construction of a full scale model training reactor, which allows for simulations and training for unit refurbishment execution tasks.

A large portion of the costs for the Darlington Refurbishment project is being paid to contractors and suppliers, including vendors that will engineer, procure, and construct components of the project. There is a risk that, as the volume of work increases significantly, vendor capability, capacity, and performance shortfalls may impact project objectives and deliverables. OPG's risk management strategy aims to ensure that contractors are held accountable and appropriate off-ramps are in place. In mitigating its overall financial risk, OPG utilizes a contracting strategy that aims to share the risk with key vendors in a cost effective manner, where appropriate. There is also an increased risk of contractor initiated safety events, which may impact OPG's reputation. Mitigating actions include collaborative execution phase planning, an enhanced human performance program, active risk management, increased field presence by supervisory staff, and assisting vendors in removing barriers to work. OPG also is managing other

ongoing risks that could potentially impact the project, including those related to continuity of skilled leaders within OPG and its vendor partners, as well as the availability of technical resources to support the project through execution.

Independent, third-party oversight has been established for the execution phase of the project, for both the project executive team and OPG's Board of Directors. The Ontario Ministry of Energy has also retained an external advisor to provide oversight of the project, reporting to the Minister of Energy.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG, with the support of Bruce County municipalities, is proposing to construct and operate a deep geologic repository as the preferred solution for the safe long-term management of L&ILW. While broad local community support for the proposed L&ILW DGR is stable, there are pockets of opposition. OPG is currently awaiting a decision on the EA for the project by the federal Minister of Environment and Climate Change, before the issuance of the site preparation and construction licence may proceed. There is a risk of delay to the EA approval and/or the issuance of the site preparation and construction licence from potential political or legal challenges. OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR.

Other Development Projects

Projects that are in the initial development stages are subject to schedule delays or possible cancellation due to unforeseen delays in receiving permits or approvals, or establishing sufficient certainty regarding project cost recovery through revenue mechanisms, which may involve various external stakeholders. OPG attempts to mitigate these risks through early involvement and regular communication with applicable government agencies, close consultation with external stakeholders and ongoing monitoring of contractor compliance relative to permits. Projects in the execution phase are subject to inherent risks related to performance against approved budgets and schedules. Mitigating activities for the risks include performing detailed engineering designs before proceeding with execution, engaging qualified and experienced vendors, and effectively monitoring and controlling performance.

Development projects also could be faced with increasing costs for equipment and construction that could impact their economic viability. OPG continuously monitors such trends in costs in order to identify emerging issues and seeks to manage and limit cost increases through contracting strategies, where possible.

Risks to Maintaining Financial Strength

Risks related to rate regulation, financial markets, and long-term obligations could significantly impact OPG's financial performance. The Company is also exposed to risks such as weak electricity demand, displacement of generation by competitors and financial risk associated with energy trading.

There is a risk that future regulated prices will not allow OPG to consistently achieve financial performance that is commensurate with that of a commercial enterprise. OPG is exposed to a number of other significant financial risks, many of which arise due to decreasing demand for electricity, competing energy sources, OPG's exposure to volatility in commodity and equity markets and interest rate fluctuations. This includes the Company's pension and OPEB obligations and costs that are impacted by market and interest rate fluctuations. OPG manages this complex array of risks with a view to reduce the uncertainty and/or mitigate the potential unfavourable impact on the Company's financial results.

Rate Regulation

Significant uncertainties remain regarding the outcome of rate and generic proceedings impacting OPG's rate regulated operations.

There is an inherent risk that regulated prices established by the OEB may not provide for the recovery of all actual costs that will be incurred by OPG's regulated operations or allow the regulated operations to earn an appropriate

rate of return. This could occur if, in setting regulated prices, the OEB makes adjustments to forecasts submitted by OPG, if actual production and costs significantly differ from the forecasts approved by the OEB, or if OPG is unable to achieve additional efficiencies to meet the OEB-approved stretch factors included in regulated prices under incentive ratemaking. Differences between OPG's actual and forecast production and costs could be due to factors such as outages or project execution risks. In providing evidence in support of its applications for regulated prices, OPG aims to clearly demonstrate to the OEB that the costs for the regulated operations are reasonable, being prudently incurred and should be fully recovered.

Certain differences between elements of OEB-approved revenue requirements and OPG's actual results are recorded in OEB-approved variance and deferral accounts for future review by the OEB, including a number of the variance and deferral accounts that are subject to an OEB prudence review. There is inherent uncertainty associated with the outcomes of future proceedings for the clearance of these balances.

Proposed Incentive Regulation Ratemaking Methodologies

In May 2016, OPG submitted a 5-year application to the OEB for new regulated prices effective January 1, 2017, on the basis of an incentive regulation rate making methodology for the hydroelectric operations and a custom incentive regulation ratemaking framework for the nuclear operations. If accepted by the OEB, both approaches would result in greater decoupling of OPG's revenues for the regulated operations from their costs. The OEB's decision on OPG's application is expected in the second half of 2017.

Effective Date of New Regulated Prices

There are inherent uncertainties regarding the effective date that the OEB will establish for the new regulated prices. OPG has requested January 1, 2017 as the effective date. The OEB's decision on the effective date and the timing of the decision issuance could have a significant impact on OPG's 2017 results. Until the OEB's decision is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017.

Nuclear Rate Smoothing Proposal

Consistent with *Ontario Regulation 53/05*, OPG's May 2016 application includes a nuclear rate smoothing proposal, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. There is an inherent risk that the magnitude of the deferral ordered by the OEB will result in regulated prices that do not provide sufficient cash flow to the Company for meeting its financial objectives in an optimal manner, including ensuring sufficient liquidity, cost effectively funding the Darlington Refurbishment project and other expenditures, and maintaining the Company's investment grade credit rating. Maintaining adequate levels of credit metrics will support OPG's investment grade credit rating. As such, OPG has advanced credit metrics as a key criterion for the OEB to apply in determining the smoothed nuclear base rates.

Recovery of Pension and OPEB Costs

The OEB is currently conducting a consultation in the gas and electricity sectors to develop standard principles to guide the OEB's review of pension and OPEB costs for rate-regulated utilities, including establishing appropriate regulatory mechanisms for cost recovery. The OEB's November 2014 decision establishing OPG's existing regulated prices indicated that a change in the recovery methodology for OPG's pension and OPEB costs from the accrual basis, if required, would be addressed in OPG's next rate proceeding, having been informed by the outcome of the OEB's generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The decision also stated that the future recovery, if any, of amounts recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account authorized by that decision also would be subject to the outcome of the generic proceeding. As such, the outcome of the current consultation could have a material impact on OPG's ability to recover the balance in

the Pension & OPEB Cash Versus Accrual Differential Deferral Account and full pension and OPEB costs in the future. This would have significant adverse implications on OPG's future financial results. OPG is participating in the OEB consultation and has advanced its position in support of the appropriateness of using the accrual basis for cost recovery purposes.

Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds

Changes in cost estimates or strategies for nuclear waste management and nuclear facilities decommissioning obligations could impact OPG's future contributions to the Nuclear Segregated Funds to cover these obligations.

As required by the CNSC, OPG is responsible for the management of used nuclear fuel and L&ILW and the decommissioning of its nuclear stations and waste management facilities. The cost estimates for OPG's nuclear waste management and decommissioning obligations are based on multiple underlying assumptions and estimates that are inherently uncertain and may evolve over time. The assumptions include station end-of-life dates, waste volumes, waste disposal methods, the timing of construction of assumed waste disposal facilities, waste packaging systems, decommissioning strategy, and financial indicators. To address the inherent uncertainty, OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates at least once every five years, in line with the required ONFA Reference Plan update process.

The most recent comprehensive update of the nuclear waste management and decommissioning obligations was performed as part the 2017 ONFA Reference Plan approved by the Province in December 2016. An approved ONFA Reference Plan determines OPG's contributions to the Nuclear Segregated Funds. The changes in contribution levels are impacted by changes in the values of the Nuclear Segregated Funds as well as changes in the associated nuclear waste management and nuclear facilities decommissioning obligations. Based on the 2017 ONFA Reference Plan, no contributions are currently required to the Nuclear Segregated Funds. Contributions may be required in the future should the Nuclear Segregated Funds be in an underfunded position relative to the funding requirement of a new approved reference plan.

Financial Markets

The market value of investments held by OPG's Nuclear Segregated Funds and registered pension plan could be significantly affected by changes in various market factors such as equity prices, interest rates, inflation, and commodity prices.

Nuclear Segregated Funds Market Risk

Investments in the Nuclear Segregated Funds are allocated to certain asset classes including fixed income securities, domestic and international equity securities, pooled funds, infrastructure, agriculture and real estate. These funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, in order to fund the expenditures associated with the long-term management of used fuel and L&ILW after station shutdown, and the decommissioning of OPG's nuclear stations and waste management facilities. The rates of return earned on these segregated funds are subject to various factors including the current and future financial market conditions, which are inherently uncertain. The asset mix of the funds is determined jointly by OPG and the Province in accordance with the ONFA.

For the Used Fuel Segregated Fund, the Province guarantees the annual rate of return at 3.25 percent plus the change in the Ontario CPI, as defined by the ONFA, for the portion of the fund attributed to the first 2.23 million nuclear fuel bundles. As such, a change in the portion of the fund's value attributed to the first 2.23 million bundles impacts OPG's earnings to the extent of changes in the Ontario CPI. OPG is subject to the market risk for the investment of funds set aside in the Used Fuel Segregated Fund for incremental bundles in excess of 2.23 million.

In accordance with the cost recovery methodology established by the OEB, the performance of the portion of the Nuclear Segregated Funds attributed to the nuclear generating stations leased to Bruce Power has been subject to the Bruce Lease Net Revenues Variance Account. The variance account partially mitigates rate of return risk related to the Nuclear Segregated Funds, as it captures the differences between actual and forecast earnings from the Nuclear Segregated Funds related to these stations. Forecast earnings are those approved by the OEB in setting nuclear regulated prices. OPG is exposed to rate of return risk related to the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodology. The income statement impact of rate of return risk is reduced when the Nuclear Segregated Funds are in a fully funded position.

Post-Employment Benefit Obligations Risk

OPG's post-employment benefit obligations include pension, group life insurance, health care benefits, and LTD benefits. OPG's post-employment benefit obligations and costs, and pension plan contributions could be materially affected in the future by numerous factors, including: changes in discount rates, inflation rates, and other actuarial assumptions; future investment returns; experience gains and losses; the funded status of the pension plans; changes in benefits; changes in the regulatory environment including potential changes to the *Pension Benefits Act* (Ontario); changes in OPG's operations; and the measurement uncertainty incorporated into the actuarial valuation process.

The OPG registered pension plan, which covers most of OPG's employees and retirees, is a contributory defined benefit plan that is indexed to inflation. Contributions to the OPG registered pension plan are determined by actuarial valuations, which are filed with the appropriate regulatory authorities at least every three years. The most recent actuarial valuation of the OPG registered pension plan, covering the three-year period to the end of 2018, was completed as of January 1, 2016. There is an inherent risk that future actuarial valuations could increase OPG's funding requirements due to market and economic-related conditions. A significant decline in the financial markets could trigger an immediate requirement to update the actuarial valuation based on declines in the funded status. OPG continues to assess the requirements for contributions to the registered pension plan, including the timing of future actuarial valuations. The next actuarial valuation of the OPG registered plan must have an effective date no later than January 1, 2019. OPG's OPEB obligations are not funded and the associated employee benefits are paid from cash flow provided by operating activities or other sources of liquidity.

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017	2018	2019
Estimated fuel requirements hedged[1]	75%	76%	65%

[1] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars (USD). To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at December 31, 2016, OPG had total foreign exchange contracts outstanding with a notional value of USD $9 million.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. During 2016, the VaR utilization ranged between nil and $1.5 million, compared to between nil and $1.5 million in 2015.

Credit

Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

The Company's credit risk exposure is a function of its electricity sales, trading and hedging activities, treasury activities including investing, and commercial transactions with various suppliers of goods and services. OPG's credit risk exposure relating to electricity sales is considered low as the majority of sales are through the IESO-administered spot market. The IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market.

Other major components of OPG's credit risk exposure include those associated with vendors that are contracted to provide services or products. OPG manages its exposure to various suppliers or counterparties by evaluating their financial condition and ensuring that the Company holds appropriate collateral or other forms of security.

The following table summarizes OPG's credit exposure to all counterparties from electricity transactions and trading as at December 31, 2016:

Credit Rating [1]	Number of Counterparties [2]	Potential Exposure [3] *(million of dollars)*	Potential Exposure for Largest Counterparties: Number of Counterparties	Potential Exposure for Largest Counterparties: Counterparty Exposure *(millions of*
Investment grade	11	11	5	9
IESO[4]	1	421	1	422
Total	12	432	6	431

[1] Credit ratings are based on OPG's own analysis, taking into consideration external rating agency analysis where available, as well as recognizing explicit credit support provided through parental guarantees, Letters of Credit or other forms of security.

[2] OPG's counterparties are defined on the basis of individual master agreements.

[3] Potential exposure is OPG's statistical assessment of maximum exposure over the life of each transaction at a 95 percent confidence interval.

[4] Credit exposure is an estimate of the receivable amount arising from OPG's electricity sales into the IESO market. The credit exposure and associated receivable vary each month based on electricity sales. The monthly receivable from the IESO is typically paid to OPG in the subsequent month as per the IESO payment schedule.

Liquidity

Rising liquidity requirements can impact OPG's capital investment projects and ability to meet financial obligations.

OPG operates in a capital intensive business. Significant financial resources are required to fund major development and other capital improvement projects, including the Darlington Refurbishment project. In addition, the Company has other significant disbursement requirements including pension contributions, payments towards OPEB and other benefit plans, expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, debt maturities with the OEFC, and investments in new generating capacity and other business growth opportunities. OPG must ensure that it has the financial capacity and sufficient access to cost effective financing sources to fund its capital requirements and other disbursements. In support of this objective, OPG utilizes multiple sources and forecasts availability of funds, actively monitors funding requirements, and is focused on maintaining its investment grade credit rating. A discussion of corporate liquidity is included under the section, *Liquidity and Capital Resources*.

Contracted Generation

OPG may incur costs if its contracted generating assets do not meet performance targets as specified in the ESAs with the IESO or other long-term contracts. There is also a risk that, upon expiry, subsequent ESAs may not be available.

The Company's generating stations operating under ESAs with the IESO or other long-term contracts are subject to availability and production targets specified in their respective contracts. OPG could incur charges and other costs if these facilities fail to operate at required capacity or production levels, as required. This risk is mitigated through the implementation of maintenance, capital investment and other programs, as appropriate.

OPG's owned and co-owned thermal generating stations operate under ESAs with the IESO or other long-term agreements. In December 2016, the Ontario and Quebec governments signed an electricity trade agreement that will allow Ontario to import up to 2 TWh of hydroelectric power from Quebec annually from 2017 to 2023. This is expected to replace some gas-fired generation in Ontario. While OPG expects that its thermal generating stations will continue to provide capacity to the market over the term of the respective agreements, there is a risk that, upon expiry of the current agreements, subsequent contracts for these stations may not be available or may not be available on financially viable terms.

Ontario Electricity Market

Ontario electricity market conditions could impact OPG's revenue and operations.

OPG's revenue can be impacted by external factors related to the electricity market including: the entrance of new participants into the Ontario market; the competitive actions of market participants; Ontario electricity demand; changes in the regulatory environment; and wholesale electricity prices in the interconnected markets.

The structure of the Ontario electricity market is subject to regulation and market rules, changes to which may affect OPG's revenue. The Province, the IESO, the OEB, or another entity or regulatory body may change or institute regulations or rules that can impact OPG's capability to generate revenue or ability to recover appropriate costs and earn a return on the assets.

Ownership by the Province

OPG's commitment to maximize the return on the Shareholder's investment in the Company may compete with the obligation of the Shareholder to respond to a broad range of matters in its role as the Government of Ontario.

The Province owns all of OPG's issued and outstanding common shares. Accordingly, the Province, as represented by the Ontario Ministry of Energy, has the authority to make appointments to OPG's Board of Directors. OPG could be subject to Shareholder direction, under Section 108 of the OBCA, that can directly influence major decisions including those related to project development, timing and strategy of applications for regulated prices, asset divestitures, financing and capital structure, that could require OPG to undertake activities that result in increased expenditures, or that reduce revenues or cash flows relative to the business activities or strategies that would have otherwise been undertaken. In addition, the obligation of OPG's Shareholder to respond to a broad range of matters in its role as the Government of Ontario may compete with OPG's commitment to maximize the return on the Shareholder's investment in the Company. This includes, but is not limited to, the Province's response to mitigate the impact of rising electricity prices on consumers.

Government Legislation and Regulation Change

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on the Company's operations and financial position.

OPG's core business and strategy may be impacted by changes in federal and provincial legislation and regulations. Matters that are subject to regulation include, among others, rate regulation, electricity generating operations, nuclear waste management and nuclear decommissioning, and taxation. Regulatory bodies may change or enact regulations or rules, such as new nuclear fitness for duty requirements, that could increase OPG's costs, decrease OPG's revenue, or limit the Company's ability to recover appropriate costs or earn a return on the assets.

Since legal requirements are subject to change and to interpretation, OPG is unable to predict the impact of such changes on the Company and its operations. To mitigate legislative risks, OPG continues to monitor and actively engage with the federal and provincial governments in order to determine if future legislation will impact the Company.

Risks to Maintaining Social Licence

OPG is exposed to risks associated with its social licence and public profile due to changes in the opinions of various stakeholders, including local communities, Ontario customers, government agencies, and Indigenous Communities. Additionally, inability to achieve operational excellence and project excellence safely and reliably and to maintain financial strength could impact OPG's social licence.

Maintaining public trust and meeting stakeholders and Indigenous communities' expectations are critical to OPG's success. OPG focuses on building and maintaining its social licence and corporate reputation through safe, reliable,

environmentally-responsible operations as well as corporate citizenship initiatives across the province. The inability to maintain safe, reliable operations could negatively impact OPG's reputation and result in a loss of public support.

OPG has transparent governance practices and works continuously towards effective communication and consultation with Indigenous communities and stakeholders. Efforts to reinforce OPG's social licence include various media campaigns that highlight the Company's contribution as a clean power generator with a commitment to safety, environment and community partnerships. OPG undertakes various assurance and risk management activities to effectively manage the risks to its social licence and corporate reputation. Issue management and response plans are developed to address specific concerns as they arise.

Indigenous Communities

The quality of OPG's relationships and the outcome of negotiations with Indigenous communities may impact OPG's project and financial performance, as well as its social licence to operate.

OPG may be subject to claims by Indigenous communities. These claims stem from projects and generation development related to the operations of OPG and historic operations of OPG's predecessor company, Ontario Hydro, which may have impacted the Aboriginal and/or Treaty rights of Indigenous communities.

OPG has an Indigenous Relations Policy, which sets out the Company's commitment to proactively build and maintain positive relationships with Indigenous communities. OPG has been successful in resolving a number of past grievances by Indigenous communities. However, the outcome of the ongoing and any future negotiations depends on a number of factors, including legislation and regulations and precedents created by court rulings, which are subject to change over time. OPG pursues generation-related developments in partnerships with Indigenous communities on the basis of long-term mutually beneficial commercial arrangements.

Environmental Risks

OPG may be subject to orders or charges if it is not in compliance with applicable environmental laws. Changes in environmental regulatory requirements can result in existing operations being in a state of non-compliance, a potential inability to comply, and potential costs and liabilities for OPG.

Changes to environmental laws could create compliance risks and result in potential liabilities that may be addressed by the installation of control technologies, development of new processes, allowances or offsets, or constraints on electricity production. A failure to comply with applicable environmental laws may result in enforcement actions, including the potential for orders or charges. In addition, some of OPG's activities have the potential to impair natural habitat, damage aquatic or terrestrial plant and wildlife, or cause contamination to land or water that may require remediation. There is also a risk that OPG may incur additional costs to meet heritage conservation program requirements under the *Ontario Heritage Act*.

Potential environmental regulatory changes being managed as risks by the Company include electricity production constraints and water flow management requirements to protect fish and fish habitat, expanded fish passage requirements, and lower drinking and ground water tritium concentration standards. These changes could impact plant operations and increase costs. OPG continues to monitor and address risks associated with changes to environmental laws and regulatory requirements. There were no significant changes to environmental legislation applicable to OPG during 2016.

OPG recognizes that efforts are required to plan for the effects of climate change and has identified climate change adaptation as a strategic issue for the company. OPG monitors developments in climate science, adaptation activities, and potential changes to policy and regulatory requirements. OPG continues to work with stakeholders to better define adaptation requirements through analysis and understanding of climate change impacts on watersheds and electricity supply and demand. Once adaptation requirements are better known, a risk-based analysis will help OPG determine the extent of efforts it will undertake to reduce the impact of climate change on its operations.

A carbon cap and trade program became effective in Ontario in January 2017. The program is not expected to have a material adverse economic impact on OPG due to the Company's low GHG emitting generating fleet. Further details can be found under the heading, *Environmental Performance*, in the section, *Core Business, Strategy and Outlook*.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		2015	
(millions of dollars)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**15**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,070**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

Management, including the President and Chief Executive Officer (President and CEO) and the Chief Financial Officer (CFO), are responsible for maintaining Disclosure Controls and Procedures (DC&P) and Internal Controls over Financial Reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements in accordance with US GAAP.

There were no other changes in OPG's ICOFR during the year ended December 31, 2016 that have materially affected or are reasonably likely to materially affect OPG's ICOFR.

Management, including the President and CEO and the CFO, concluded that, as of December 31, 2016, OPG's DC&P and ICOFR (as defined in National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings*) were effective.

FOURTH QUARTER

Discussion of Results

(millions of dollars) (unaudited)	Three Months Ended December 31 2016	2015
Revenue	**1,388**	1,312
Fuel expense	**186**	175
Gross margin	**1,202**	1,137
Operations, maintenance and administration	**686**	788
Depreciation and amortization	**316**	354
Accretion on fixed asset removal and nuclear waste management liabilities	**233**	223
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(126)**	(169)
Income from investments subject to significant influence	**(9)**	(9)
Property taxes	**11**	11
Restructuring	**6**	5
Income (loss) before other loss, interest, and income taxes	**85**	(66)
Other loss	**6**	12
Income (loss) before interest and income taxes	**79**	(78)
Net interest expense	**28**	44
Income (loss) before income taxes	**51**	(122)
Income tax expense (recovery)	**59**	(22)
Net loss	**(8)**	(100)
Net loss attributable to the Shareholder	**(13)**	(101)
Net income attributable to non-controlling interest	**5**	1

Net loss attributable to the Shareholder for the fourth quarter was $13 million, compared to a net loss of $101 million for the same quarter in 2015.

Income before interest and income taxes was $79 million during the fourth quarter of 2016, an increase of $157 million compared to loss before interest and income taxes of $78 million during the same period in 2015. The following summarizes the significant factors which caused the variance:

Significant factors that increased income before other loss, interest and income taxes:

- Lower number of outage days increased nuclear generation by 2.2 TWh during the fourth quarter in 2016, compared to the same period in 2015, primarily due to the four-unit Darlington VBO that was completed on October 30, 2015 and a lower number of unplanned outage days at the Darlington GS. The increase in nuclear generation resulted in an increase in revenue from the nuclear base regulated price of approximately $130 million.
- Lower OM&A expenses of $77 million in the Regulated – Nuclear Generation segment primarily due to increased outage activities in 2015, including the Darlington VBO.

Significant factors that decreased income before other loss, interest and income taxes:

- Decrease in earnings from the Nuclear Segregated Funds of $43 million during the fourth quarter of 2016, compared to the same quarter in 2015, mainly due to an accounting adjustment recorded during the fourth quarter of 2016 to limit the funds asset values recognized on OPG's consolidated balance sheet to the lower underlying obligations as reflected in the 2017 ONFA Reference Plan.
- Higher accretion expense of $10 million, reflecting the increase in the Nuclear Liabilities recognized in December 2015 in connection with the changes in the estimated useful life assumptions for OPG's nuclear stations, net of the impact of the Bruce Lease Net Revenues Variance Account.

The increase in income tax expense during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets in 2016.

Average Sales Prices

The average sales price for the Regulated – Nuclear Generation segment during the fourth quarter of 2016 was 6.9 ¢/kWh, compared to 7.0 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of an OEB-authorized nuclear rate rider of $1.33/MWh related to the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment during the fourth quarter of 2016 was 4.5 ¢/kWh, compared to 4.8 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of a rate rider of $6.04 per MWh related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014.

The income impact of changes in revenue from rate riders was largely offset by changes in amortization expense related to regulatory balances.

Electricity Generation

OPG's electricity generation for the three months ended December 31, 2016 and 2015 was as follows:

	Three Months Ended December 31	
(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**11.0**	8.8
Regulated – Hydroelectric	**6.7**	7.3
Contracted Generation Portfolio [1]	**0.6**	0.7
Total OPG electricity generation	**18.3**	16.8
Total electricity generation by all other generators in Ontario [2]	**18.9**	19.6

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The increase in OPG's electricity generation of 1.5 TWh during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher electricity generation of 2.2 TWh from the Regulated – Nuclear Generation segment as a result of fewer outage days at the Darlington GS during the fourth quarter of 2016, which was primarily due to the Darlington VBO that occurred during the fourth quarter of 2015. The increase in generation was partially offset by reduced generation from the Regulated – Hydroelectric Segment of 0.6 TWh, primarily due to lower water flows in eastern Ontario during the fourth quarter of 2016.

Ontario's electricity demand as reported by the IESO was 33.2 TWh during the fourth quarter of 2016, compared to 32.7 TWh during the fourth quarter of 2015.

Liquidity and Capital Resources

Cash flow provided by operating activities during the three months ended December 31, 2016 was $437 million, compared to $111 million for the same period in 2015. The increase in cash flow was primarily due to higher generation revenue receipts, lower pension plan contributions and lower OM&A expenditures during the fourth quarter of 2016. Higher generation revenue receipts reflected higher nuclear generation in the fourth quarter of 2016, compared to the same period in 2015.

Cash flow used in investing activities during the three months ended December 31, 2016 was $497 million, compared to $571 million during the same period in 2015. The decrease was primarily due to partial maturity, in the fourth quarter of 2016, of a structured deposit note invested in the fourth quarter of 2015, partially offset by higher expenditures for the Darlington Refurbishment project. The deposit note invested proceeds from the long-term debt issued in support of the Peter Sutherland Sr. GS project in October 2015.

Cash flow used by financing activities during the three months ended December 31, 2016 was $180 million, compared to cash flow provided in financing activities of $356 million for the same period in 2015. The decrease in cash flow provided by financing activities was due to the net repayment of short-term notes and lower net issuance of long-term debt in the fourth quarter of 2016.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected annual financial information for the last three years and financial information for each of the eight most recently completed quarters. This information is derived from OPG's unaudited interim consolidated financial statements and the audited consolidated financial statements, and has been prepared in accordance with US GAAP.

Annual Financial Information

(millions of dollars – except where noted)	**2016**	**2015**	**2014**
Revenue	**5,653**	5,476	4,963
Income before extraordinary item attributable to the Shareholder	**436**	402	561
Net income attributable to the Shareholder	**436**	402	804
Net income per common share before extraordinary item *(dollars)*	**$1.70**	$1.57	$2.19
Net income per common share *(dollars)*	**$1.70**	$1.57	$3.14
Total assets	**44,372**	44,250	41,645
Total long-term liabilities	**31,460**	32,404	30,483
Common shares outstanding *(millions)*	**256.3**	256.3	256.3

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**2016 Quarters Ended**				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	**1,388**	**1,400**	**1,387**	**1,478**	**5,653**
Net (loss) income	**(8)**	**198**	**135**	**128**	**453**
Less: Net income attributable to non-controlling interest	**5**	**4**	**3**	**5**	**17**
Net (loss) income attributable to the Shareholder	**(13)**	**194**	**132**	**123**	**436**
Per common share, attributable to the Shareholder *(dollars)*	**($0.05)**	**$0.76**	**$0.51**	**$0.48**	**$1.70**

Quarterly Financial Information

(millions of dollars – except where noted) (unaudited)	2015 Quarters Ended				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	1,312	1,426	1,383	1,355	5,476
Net (loss) income	(100)	85	193	239	417
Less: Net income attributable to non-controlling interest	1	5	4	5	15
Net (loss) income attributable to the Shareholder	(101)	80	189	234	402
Per common share, attributable to the Shareholder *(dollars)*	($0.39)	$0.31	$0.74	$0.91	$1.57

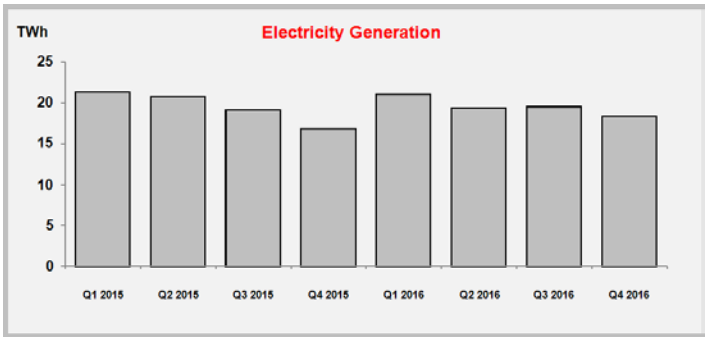
Trends

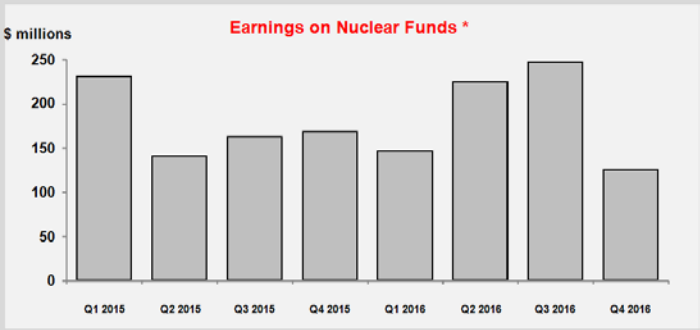
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues are higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of foregone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington VBO, which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items which affected net income (loss) in certain quarters above are described below:

- A gain of $22 million recorded during the first quarter of 2016 reflecting the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to Niagara Tunnel project expenditures.
- Lower earnings of $16 million during the first quarter of 2015, compared to the same quarter in 2016, in the Contracted Generation Portfolio segment, primarily as a result of a provision made in that quarter related to an IESO audit.
- Higher OM&A expenses of $105 million for the Regulated – Nuclear Generation segment during the first half of 2016, compared to the same period in 2015, primarily resulting from an increase in planned outage activities and the timing of planned outage activities during the year.
- Lower OM&A expenses of $91 million for the Regulated – Nuclear Generation segment during the last half of 2016, compared to the same period in 2015, primarily as a result of the VBO at the Darlington GS in the third and fourth quarters of 2015.

Additional information about OPG, including its audited consolidated financial statements and notes thereto, can be found on SEDAR at www.sedar.com.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow from operations, or any other measure in accordance with US GAAP, but as an indicator of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period.

ROE Excluding AOCI is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**436**	402
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,442**	10,023
ROE Excluding AOCI *(percent)*	**4.2**	4.0

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
FFO before interest		
Cash flow provided by operating activities	**1,705**	1,465
Add: Interest paid	**269**	269
Less: Interest capitalized to fixed and intangible assets	**(141)**	(102)
Add: Changes to non-cash working capital balances	**(68)**	100
FFO before interest	**1,765**	1,732
Adjusted interest expense		
Net interest expense	**120**	180
Add: Interest income	**7**	9
Add: Interest capitalized to fixed and intangible assets	**141**	102
Add: Interest related to regulatory assets and liabilities	**30**	2
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**45**	53
Adjusted interest expense	**343**	346
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.0

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Enterprise TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Enterprise TGC		
Total OM&A expenses	**2,747**	2,783
Total fuel expense	**727**	687
Total capital expenditures	**1,704**	1,376
Less: Darlington Refurbishment capital and non-capital costs	**(1,022)**	(707)
Less: Other generation development project capital and OM&A costs	**(162)**	(197)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**62**	250
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(55)
Add: Hydroelectric gross revenue charge due to electricity foregone due to SBG conditions	**49**	34
Less: OM&A expenses ancillary to electricity generation business	**(24)**	(27)
Other adjustments	**(25)**	(46)
	3,989	4,098
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**78.2**	78.0
Add: Electricity generation foregone due to SBG conditions	**4.7**	3.2
	82.9	81.2
Enterprise TGC per MWh *($/MWh)* [1]	**48.10**	**50.46**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Nuclear TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**2,210**	2,196
Regulated – Nuclear Generation fuel expense	**315**	301
Regulated – Nuclear Generation capital expenditures	**1,338**	1,023
Less: Darlington Refurbishment capital and OM&A costs	**(1,022)**	(708)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**81**	230
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(62)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(6)**	(6)
Other adjustments	**(8)**	(28)
	2,841	2,946
Nuclear electricity generation *(TWh)*	**45.6**	44.5
Nuclear TGC per MWh *($/MWh)* [1]	**62.30**	66.20

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Hydroelectric TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**325**	340
Regulated – Hydroelectric Generation fuel expense	**353**	345
Contracted Generation Portfolio OM&A expenses	**178**	185
Contracted Generation Portfolio fuel expense	**58**	39
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**333**	311
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(158)**	(197)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(177)**	(163)
(Less) Add: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(24)**	18
Add: Hydroelectric gross revenue charge and water rental payments due to electricity generation foregone due to SBG conditions	**49**	34
Other adjustments	**(1)**	-
	936	912
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**29.5**	30.4
Contracted Generation Portfolio electricity generation	**3.1**	3.1
Add: Hydroelectric electricity generation foregone due to SBG conditions	**4.7**	3.2
Less: Non-hydroelectric electricity generation of the Contracted Generation Portfolio	**(0.7)**	(0.6)
	36.6	36.1
Hydroelectric TGC per MWh *($/MWh)*[1]	**25.57**	25.26

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

For further information, please contact: Investor Relations 416-592-6700

1-866-592-6700

investor.relations@opg.com

Media Relations 416-592-4008

1-877-592-4008

www.opg.com

www.sedar.com

From:	Ronald Kwan
To:	Scott Nelms (ENERGY)
Cc:	Gadi Mayman; Nancy Kennedy (MOHLTC)
Subject:	RE: EXTERNAL - Re: OPG Q4 2016 submission to Province - Draft Global Adjustment disclosure
Date:	Monday, March 06, 2017 2:04:53 PM

Hi Scott,

I think the "implementation approach" wording is fine.

I would say that we tried to collapse the two sentences into one in part to drop the word "refinancing", as it seemed to me that it created some confusion rather than clarity when it was used last week for comms. I'd be happy if going-forward messaging moved away from it, but understand that it's already out there.

Is leaving in "based on the Province's Plan" high-level enough that OPG's implementation of it and Board approval of it good enough for accounting purposes?

Ron

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: March-06-17 13:53
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>
Subject: FW: EXTERNAL - Re: OPG Q4 2016 submission to Province - Draft Global Adjustment disclosure

Hi Ron,

To your point, I like the following language more (red words are mine). While this may add a bit more detail relative to comms products, it is in line with the technical briefing and I think it may be helpful in meeting the independence test.

Does that work for you?

Scott

From: Montgomery, Kaitlin (MOF)
Sent: March 6, 2017 1:48 PM
To: Nelms, Scott (MOF)
Subject: FW: EXTERNAL - Re: OPG Q4 2016 submission to Province - Draft Global Adjustment disclosure

OPG accepted some changes to their annual report that ESP requested but added new language which I've highlighted below.

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: March 6, 2017 11:15 AM
To: Montgomery, Kaitlin (MOF)
Subject: RE: EXTERNAL - Re: OPG Q4 2016 submission to Province - Draft Global Adjustment disclosure

Hi Kaitlin,

Please see the amended current wording which takes into consideration your edits. Please let us know if you have any further comments. Thank you.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 percent on average for all residential consumers in the province. As part of the Plan, the Province has proposed refinancing a portion of the Global Adjustment costs over a longer time period for Regulated Price Plan eligible customers (e.g., residential , farm, small businesses). According to the Plan, the Province intends to introduce legislation that would, if passed, enable the IESO and OPG to work together to undertake this financing. The Global Adjustment is administered by the IESO. OPG intends to work with the Province and the IESO as part of the refinancing proposal. Based on the Province's Plan, OPG is exploring implementation options. The implementation approach ~~final plan~~ is expected to be reviewed and is subject to approval by OPG's Board of Directors. The Global Adjustment includes the difference between Ontario's electricity market clearing price used to dispatch generation and the prices paid to contracted and regulated generators in the province, and the cost of conservation and demand management programs. Virtually all generators in Ontario have bilateral contracts with the IESO that provide for payments that are different from the market clearing price of electricity, while the prices for all of OPG's nuclear and a majority of its hydroelectric generation are set by the OEB.

Regards,

Philip

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: March 2, 2017 1:36 PM
To: Montgomery, Kaitlin (MOF); Talwar, Shruti (ENERGY); Chander, Sunita (ENERGY)
Cc: CHENG Alec -FIN & C CTRL
Subject: OPG Q4 2016 submission to Province - Draft Global Adjustment disclosure

Hi Kaitlin, Shruti and Sunita,
We are proposing to include the following language regarding the Global Adjustment refinancing portion of the Ontario's Fair Hydro Plan into OPG's 2016 MD&A and AIF. The wording is based on the announcement by the Province today.
We will be mailing the relevant documents to our Board today. Your comments will be appreciated. Please let us know if you have questions.

Ontario's Fair Hydro Plan
On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 per cent on average for all residential consumers

in the province. As part of the Plan, the Province has proposed refinancing a portion of total electricity system Global Adjustment costs over a longer time period for residential consumers. According to the Plan, the Province intends to introduce legislation that would, if passed, enable the IESO and OPG to work together to undertake this financing. The Global Adjustment portion of the total price of electricity in the province is administered by the IESO. The Global Adjustment includes the difference between Ontario's electricity market clearing price used to dispatch generation and the prices paid to contracted and regulated generators in the province, and the cost of conservation and demand management programs. Virtually all generators in Ontario have bilateral contracts with the IESO that provide for payments that are different from the market clearing price of electricity, while the prices for all of OPG's nuclear and most of its hydroelectric generation are set by the OEB. OPG intends to work with the Province and the IESO as part of the refinancing proposal.
Regards,
Philip
Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy (Acting)| Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com<mailto:philip.ho@opg.com>

From: Montgomery, Kaitlin (ENERGY) [mailto:Kaitlin.Montgomery@ontario.ca]
Sent: Monday, February 27, 2017 3:14 PM
To: DYKXHOORN Sandra -CORPRELCOMM
Cc: CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
Subject: RE: EXTERNAL - FW: OPG Q4 2016 submission to Province

Hi Sandra – attached are our proposed comments.

Let me know if you have any questions.
Kaitlin

From: DYKXHOORN Sandra -CORPRELCOMM [mailto:sandra.dykxhoorn@opg.com]
Sent: February 15, 2017 9:15 AM
To: Kim, John (OFA); Kwan, Ronald (OFA); Talwar, Shruti (ENERGY); Chander, Sunita (ENERGY)
Cc: CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
Subject: OPG Q4 2016 submission to Province

Good morning,

Please find attached OPG's draft Q4 2016 News Release, Management's Discussion and Analysis (MD&A), Annual Information Form (AIF) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above no later than Monday, February 27th.

These documents will be filed with the Ontario Securities Commission on Friday, March 10th following OPG's Board of Directors meeting.

Kindly forward all comments directly to Sandra Dykxhoorn (copy to Alec Cheng –

alec.cheng@opg.com<mailto:alec.cheng@opg.com> and Philip Ho – philip.ho@opg.com<mailto:philip.ho@opg.com>).

To assist the review process, the following are the key items in the Q4 2016 MD&A:

Highlights
Recent Developments

MD&A p.11-16

Darlington Refurbishment

MD&A p.11-12; 24-25

Peter Sutherland Sr. GS project

MD&A p.25

Outlook – OEB application on OPG's results, impact of ONFA update on Nuclear Segregated Funds earnings, and the expected income and cash flow trends for 2017

MD&A p.30-31

Sandra Dykxhoorn | Acting Director, Provincial Relations | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | p: (416) 592-2887 | c: (416) 571-4366 | sandra.dykxhoorn@opg.com<mailto:philip.ho@opg.com>

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From:	Ronald Kwan
To:	Scott Nelms (ENERGY); Gadi Mayman; Nancy Kennedy (MOHLTC)
Subject:	RE: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG
Date:	Monday, March 06, 2017 12:01:00 PM

Hi Scott,

Just wondering on if there is a line to not wander over with respect to positioning and the targeted accounting treatment.

Ron

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: March-06-17 11:58
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>
Subject: RE: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG

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From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: March 6, 2017 11:56 AM
To: Mayman, Gadi (OFA); Kennedy, Nancy (MOF); Nelms, Scott (MOF)
Subject: FW: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG

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To: HO Philip -FIN & C CTRL
Cc: CHENG Alec -FIN & C CTRL; Ronald Kwan
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Regards,

Philip

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy (Acting)| Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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From: John Kim
To: "HO Philip -FIN & C CTRL"
Cc: CHENG Alec -FIN & C CTRL; Ronald Kwan
Subject: RE: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG
Date: Monday, March 06, 2017 11:50:09 AM

Hi Philip,

Some minor changes.

Thanks,

John.

Ontario's Fair Hydro Plan

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From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: Monday, March 06, 2017 11:22 AM
To: John Kim <John.Kim@ofina.on.ca>
Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: RE: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG

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Regards,

Philip

From: John Kim [mailto:John.Kim@ofina.on.ca]
Sent: Thursday, March 02, 2017 7:55 PM
To: HO Philip -FIN & C CTRL
Cc: CHENG Alec -FIN & C CTRL; Ronald Kwan
Subject: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG

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Suggestions below:

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From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: March-02-17 1:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: Draft Global Adjustment disclosure for OPG

Hi John and Ronald,

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philip.ho@opg.com

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From: Ronald Kwan
To: John Kim
Subject: RE: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG
Date: Monday, March 06, 2017 11:47:22 AM

Hi John,

Without "as part of", I'm not sure that the sentence makes sense. An alternative to "as part of" could be "on".

Ron

Ontario's Fair Hydro Plan

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From: John Kim
Sent: March-06-17 11:38
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: FW: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG

Hi Ron,

These are my edits….just trying to simplify and delete words that could become problematic later on.

Ontario's Fair Hydro Plan

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From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: Monday, March 06, 2017 11:22 AM
To: John Kim <John.Kim@ofina.on.ca>
Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: RE: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG

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Regards,

Philip

From: John Kim [mailto:John.Kim@ofina.on.ca]
Sent: Thursday, March 02, 2017 7:55 PM
To: HO Philip -FIN & C CTRL
Cc: CHENG Alec -FIN & C CTRL; Ronald Kwan
Subject: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG

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Sent: March-02-17 1:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
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From: HO Philip -FIN & C CTRL
To: John Kim
Cc: CHENG Alec -FIN & C CTRL; Ronald Kwan
Subject: RE: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG
Date: Monday, March 06, 2017 11:21:58 AM

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From: John Kim [mailto:John.Kim@ofina.on.ca]
Sent: Thursday, March 02, 2017 7:55 PM
To: HO Philip -FIN & C CTRL
Cc: CHENG Alec -FIN & C CTRL; Ronald Kwan
Subject: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG

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To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
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From:	HO Philip -FIN & C CTRL
To:	John Kim
Cc:	CHENG Alec -FIN & C CTRL; Ronald Kwan
Subject:	RE: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG
Date:	Monday, March 06, 2017 12:16:14 PM

Thanks John. The two sentences have been revised as follows:

OPG intends to work with the Province and the IESO as part of the ~~refinancing~~ proposal and~~:~~ ~~Based on the Province's Plan, OPG~~ is exploring implementation options.

From: John Kim [mailto:John.Kim@ofina.on.ca]
Sent: Monday, March 06, 2017 11:50 AM
To: HO Philip -FIN & C CTRL
Cc: CHENG Alec -FIN & C CTRL; Ronald Kwan
Subject: RE: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG

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From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: Monday, March 06, 2017 11:22 AM
To: John Kim <John.Kim@ofina.on.ca>

Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: RE: EXTERNAL – RE: Draft Global Adjustment disclosure for OPG

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Suggestions below:

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 per cent on average for all residential consumers in the province. As part of the Plan, the Province has proposed refinancing a portion of total electricity system Global Adjustment costs over a longer time period for regulated price plan eligible customers (e.g., residential , farm, small businesses). According to the Plan, the Province intends to introduce legislation that would, if passed, enable the IESO and OPG to work together to undertake this financing. The Global Adjustment portion of the total price of electricity in the province is administered by the IESO. The Global Adjustment includes the difference between Ontario's electricity market clearing price used to dispatch generation and the prices paid to contracted and regulated generators in the province, and the cost of conservation and demand management programs. Virtually all generators in Ontario have bilateral contracts with the IESO that provide for payments that are different from the market clearing price of electricity, while the prices for all of OPG's nuclear and a majority of its hydroelectric generation are set by the OEB. OPG intends to work with the Province and the IESO as part of the refinancing proposal.

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: March-02-17 1:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: Draft Global Adjustment disclosure for OPG

Hi John and Ronald,

We are proposing to include the following language regarding the Global Adjustment refinancing portion of the Ontario's Fair Hydro Plan into OPG's 2016 MD&A and AIF.

We will be mailing the relevant documents to our Board today. Your comments will be appreciated. Please let us know if you have questions.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 per cent on average for all residential consumers in the province. As part of the Plan, the Province has proposed refinancing a portion of total electricity system Global Adjustment costs over a longer time period for residential consumers. According to the Plan, the Province intends to introduce legislation that would, if passed, enable the IESO and OPG to work together to undertake this financing. The Global Adjustment portion of the total price of electricity in the province is administered by the IESO. The Global Adjustment includes the difference between Ontario's electricity market clearing price used to dispatch generation and the prices paid to contracted and regulated generators in the province, and the cost of conservation and demand management programs. Virtually all generators in Ontario have bilateral contracts with the IESO that provide for payments that are different from the market clearing price of electricity, while the prices for all of OPG's nuclear and most of its hydroelectric generation are set by the OEB. OPG intends to

work with the Province and the IESO as part of the refinancing proposal.

Regards,

Philip

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy (Acting)| Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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by return e-mail and delete this message from your system. Ontario Power Generation Inc.

From:	John Kim
To:	"HO Philip -FIN & C CTRL"
Cc:	MAK Ricky -FIN & C CTRL; Ronald Kwan
Subject:	RE: OPG Q1 2017 Submission to Province
Date:	Tuesday, May 02, 2017 6:38:24 PM
Attachments:	Q1 2017 MDA - DRAFT - PROVINCE MAILING_CEFD edit v4.docx

Hi Philip,

See attached.

John

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: April-28-17 5:04 PM
To: 'Shruti.Talwar@ontario.ca' <Shruti.Talwar@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>
Subject: OPG Q1 2017 Submission to Province

Hi All,

Please find attached OPG's draft Q1 2017 Management's Discussion and Analysis (MD&A) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, May 2nd**.

These documents will be filed with the Ontario Securities Commission on **Friday, May 12th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q1 2017 MD&A:

Highlights	
Recent Developments	MD&A p.9-11
Darlington Refurbishment	MD&A p.9; 13-14
Ontario's Fair Hydro Plan	MD&A p.10
Peter Sutherland Sr. GS project	MD&A p.9, 13

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

2017 FIRST QUARTER REPORT

[DRAFT]

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ONTARIO POWER GENERATION

ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the unaudited interim consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the three months ended March 31, 2017. OPG's unaudited interim consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

For a complete description of OPG's corporate strategies, risk management, corporate governance, and the effect of critical accounting policies and estimates on OPG's results of operations and financial condition, this MD&A should also be read in conjunction with OPG's audited consolidated financial statements, accompanying notes, the Annual Information Form, and the MD&A as at and for the year ended December 31, 2016.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Exemptive Relief for Reporting under US GAAP,* in OPG's 2016 annual MD&A. This MD&A is dated May 12, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy, and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), Total Generating Cost (TGC) and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at March 31, 2017, OPG's electricity generation portfolio had an in-service capacity of 16,205 megawatts (MW). OPG operates two nuclear generating stations, 66 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report. A description of OPG's segments is provided in OPG's 2016 annual MD&A in the section, *Business Segments*.

All of OPG's owned and co-owned generating facilities are located in Ontario. OPG does not operate PEC, Brighton Beach, the Bruce A GS and the Bruce B GS.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of March 31, 2017 and December 31, 2016 was as follows:

	As at	
(MW)	**March 31 2017**	**December 31 2016**
Regulated – Nuclear Generation [1]	**5,728**	5,728
Regulated – Hydroelectric	**6,421**	6,421
Contracted Generation Portfolio [2]	**4,056**	4,028
Total	**16,205**	16,177

[1] The in-service generating capacity as of March 31, 2017 and December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

During the three months ended March 31, 2017, the total in-service capacity increased by 28 MW. The increase was due to the completion of Peter Sutherland Sr. hydroelectric GS, which was placed in-service on March 31, 2017. The Peter Sutherland Sr. GS is discussed in the section, *Highlights* under the heading, *Recent Developments*.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's unaudited interim consolidated operating results. Significant factors which contributed to OPG's results during the three months ended March 31, 2017, compared to the same period in 2016, are discussed below.

(millions of dollars – except where noted) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**1,176**	1,478
Fuel expense	**155**	172
Gross margin	**1,021**	1,306
Operations, maintenance and administration	**708**	686
Depreciation and amortization	**167**	312
Accretion on fixed asset removal and nuclear waste management liabilities	**238**	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Income from investments subject to significant influence	**(10)**	(8)
Property taxes	**11**	12
	925	1,087
Income before other gains, interest, and income taxes	**96**	219
Other gains	**(3)**	(23)
Income before interest and income taxes	**99**	242
Net interest expense	**19**	33
Income before income taxes	**80**	209
Income tax expense	**12**	81
Net income	**68**	128
Net income attributable to the Shareholder	**64**	123
Net income attributable to non-controlling interest [1]	**4**	5
Electricity production (TWh) [2]	**18.6**	21.0
Cash flow		
Cash flow provided by operating activities	**118**	366

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $64 million for the first quarter of 2017, a decrease of $59 million compared to 2016. Income before interest and income taxes was $99 million for 2017, a decrease of $143 million compared to 2016. The following summarizes the significant factors which contributed to the variance:

Significant factors that reduced income before interest and income taxes:

- As expected, lower revenue from the nuclear base regulated price of approximately $134 million, partially offset by the largely associated decrease in fuel expense of $13 million, reflecting lower electricity generation of 2.3 terawatt hours (TWh) from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. Existing base regulated prices continue to be in effect pending the OEB's decision on OPG's current application for new regulated prices, expected in the second half of 2017. The lower nuclear generation was primarily due to the ongoing

refurbishment of Unit 2 at the Darlington GS since October 2016. The existing base regulated prices were set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. OPG has requested January 1, 2017 as the effective date of the new regulated prices. Further details on OPG's current application for new regulated prices can be found under the heading, *Recent Developments – OPG's Application for New Regulated Prices.*

- Higher operations, maintenance and administration (OM&A) expenses of $22 million, mainly in the Regulated – Nuclear Generation segment, reflecting use of temporary staff and planned hiring to fill vacant positions due to attrition, and higher material costs related to maintenance work at the nuclear stations.
- A gain of $22 million recorded in the first quarter of 2016 to reflect the OEB's decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices.

Significant factors that increased income before interest and income taxes:

- Higher earnings on the nuclear fixed asset removal and nuclear waste management funds (Nuclear Segregated Funds) of $42 million, primarily due to higher earnings on the Used Fuel Segregated Fund
- Higher hydroelectric incentive mechanism revenue of $7 million from the Regulated – Hydroelectric segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts (regulatory accounts) on December 31, 2016 contributed to the decrease in revenue in the first quarter of 2017, compared to the same period in 2016, but was primarily offset by a decrease in the amortization expense related to regulatory account balances. New rate riders have been requested in OPG's application for new regulated prices with the OEB, effective January 1, 2017.

Net interest expense decreased by $14 million in the first quarter of 2017, compared to the same quarter in 2016, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project.

Income tax expense decreased by $69 million in the first quarter of 2017, compared to the same quarter in 2016, primarily due to lower income before income taxes in the first quarter of 2017 and a higher income tax expense in the first quarter of 2016 due to a reduction in regulatory assets related to income taxes.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	Three Months Ended March 31	
	2017	**2016**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**(118)**	46
Regulated – Hydroelectric	**180**	196
Contracted Generation Portfolio	**77**	78
Total electricity generation business segments	**139**	320
Regulated – Nuclear Waste Management	**(47)**	(83)
Services, Trading, and Other Non-Generation	**7**	5
	99	242

Electricity Generation

Electricity generation was as follows:

(TWh)	Three Months Ended March 31 2017	2016
Regulated – Nuclear Generation	**10.0**	12.3
Regulated – Hydroelectric	**8.0**	7.9
Contracted Generation Portfolio [1]	**0.6**	0.8
Total OPG electricity generation	**18.6**	21.0
Total electricity generation by other generators in Ontario [2]	**18.6**	18.9

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the Independent Electricity System Operator (IESO), minus OPG electricity generation.

The lower electricity generation from the Regulated – Nuclear Generation segment in the first quarter of 2017 compared to the same quarter in 2016 was primarily a result of the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment that began in October 2016. This decrease in electricity generation was partially offset by an increase in generation from the Pickering GS, primarily due to a decrease in the number of planned outage days.

The higher electricity generation from the Regulated – Hydroelectric generating segment in the first quarter of 2017 was primarily due to a lower volume of water spilled as a result of less prevalent SBG conditions, largely offset by the impact of lower water flows on the eastern and northeastern Ontario river systems, compared to the first quarter in 2016.

The lower electricity generation from the Contracted Generation Portfolio segment was primarily the result of lower water flows on the northeastern Ontario river systems.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. For the first quarter of 2017, Ontario's electricity demand as reported by the IESO was 34.3 TWh compared to 35.2 TWh for the same quarter in 2016, which excludes electricity exports out of the province.

Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric, other grid-connected renewable resources and nuclear stations. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. While baseload generation supply surplus in Ontario was less prevalent in the first quarter of 2017 compared to the same period in 2016, OPG lost 0.8 TWh of hydroelectric generation due to SBG conditions in the first quarter of 2017. OPG lost 1.7 TWh of hydroelectric generation due to SBG conditions during the first quarter of 2016. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions during these periods was offset by the impact of a regulatory variance account authorized by the OEB. OPG did not forgo any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The same base regulated prices for electricity generated by these segments, authorized by the OEB effective November 1, 2014, were in effect during the first quarter of 2017 as in 2016. These prices will remain in effect until such time as the OEB approves new regulated prices based on OPG's current application, discussed under the heading, *Recent Developments – OPG's Application for New Regulated Prices.* The base regulated prices established in 2014 are discussed in OPG's 2016 annual MD&A in the section, *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment was 5.8 cents per kilowatt hour (¢/kWh) during the first quarter of 2017, compared to 7.0 ¢/kWh during the same quarter in 2016. The decrease in the average sales price was primarily due to the expiry, on December 31, 2016, of the OEB-authorized nuclear rate rider of $10.84 per megawatt hour (MWh) for the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment was 4.2 ¢/kWh during the first quarter of 2017, compared to 4.4 ¢/kWh during the same quarter in 2016. The decrease in average sales price was primarily due to the expiry, on December 31, 2016, of a regulated hydroelectric rate rider of $3.19/MWh for the recovery of variance and deferral account balances. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years. As such, the year-over-year changes in revenue from the rate riders were largely offset by changes in amortization expense related to regulatory account balances. There were no rate riders in effect during the first quarter of 2017 for either nuclear or regulated hydroelectric generation, pending the outcome of OPG's current application with the OEB for new regulated prices, including rate riders.

Cash Flow from Operations

Cash flow provided by operating activities for the three months ended March 31, 2017 was $118 million, compared to $366 million for the same period in 2016. As expected, the decrease in cash flow provided by operating activities in the first quarter of 2017, compared to the same quarter in 2016, was primarily due to lower generation revenue receipts reflecting lower generation from the Regulated – Nuclear Generation segment as a result of the ongoing refurbishment of Unit 2 at the Darlington GS and the expiry, on December 31, 2016, of the OEB-authorized rate riders for nuclear and regulated hydroelectric generation. The decrease in cash flow in the first quarter of 2017 was also due to higher income tax installments and higher OM&A expenditures, compared to the same quarter in 2016. The decrease in cash flow provided by operating activities was partially offset by lower pension plan contributions reflecting an updated actuarial valuation of the OPG registered pension plan filed with the Financial Services Commission of Ontario in September 2016, and lower contributions to the Used Fuel Segregated Fund and the Decommissioning Segregated Fund. Both the Used Fuel Segregated Fund and the Decommissioning Segregated Fund were determined to be fully funded based on an updated estimate of OPG's nuclear waste management and nuclear facilities decommissioning obligations pursuant to a reference plan approved by the Province, for years 2017 to 2021, under the Ontario Nuclear Funds Agreement (ONFA), effective January 1, 2017. Pursuant to the ONFA, the reference plan is required to be updated at least once every five years. Contributions to either or both of the Nuclear Segregated Funds may be required in the future should the funds be in an underfunded position at the time of the next ONFA reference plan update. The year-over-year decrease in cash flow also was partially offset by the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to a period in 2015. The lease agreement for the Bruce nuclear generating stations giving rise to this rebate was amended in late 2015 to eliminate this provision going forward.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. FFO Adjusted Interest Coverage was 5.1 times for the 12 month-periods ended March 31, 2017 and December 31, 2016. FFO Adjusted Interest Coverage in 2017 reflected a year-over-year decrease in FFO before interest due to lower cash flow provided by operating activities, offset by the

impact of a lower adjusted interest expense due to a decrease in the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets.

The decrease in the excess of interest on pension and OPEB benefit obligations over expected return on pension plan assets in 2017 was primarily due to the change in the method used to estimate the interest cost and current service cost component of pension and OPEB costs. Effective January 1, 2017, OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs in the first quarter of 2017 was largely offset by the impact of OEB-authorized variance and deferral accounts. Further details on the full yield curve approach can be found in the 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Pension and Other Post-Employment Benefits*. **[UPDATE]**

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for the 12 months ended March 31, 2017 was 3.5 percent, compared to 4.2 percent for the 12 months ended December 31, 2016. The decrease was primarily due to lower net income attributable to the Shareholder. As expected, reduced revenue due to the continuation of existing base regulated prices that do not reflect the lower nuclear generation as a result of the Unit 2 refurbishment outage at the Darlington GS negatively impacted net income and ROE Excluding AOCI for the 12-month period ended March 31, 2017. The continuation of existing base regulated prices until such time as new regulated prices are approved by the OEB later in 2017 will negatively affect OPG's ROE Excluding AOCI.

Enterprise Total Generating Cost per MWh

The Enterprise TGC per MWh was $47.86 for the three months ended March 31, 2017, compared to $41.82 for the same period in 2016. The increase in Enterprise TGC per MWh for the three months ended March 31, 2017, compared to the same period in 2016, was expected and primarily due to the decrease in electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $69.87 for the three months ended March 31, 2017, compared to $56.37 for the same period in 2016. The increase in Nuclear TGC per MWh for the three months ended March 31, 2017, compared to the same period in 2016, was expected and primarily due to the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $19.79 for the three months ended March 31, 2017, which was comparable to $19.94 for the same period in 2016.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow provided by operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016 and de-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017. Islanding of Unit 2, the physical separation of the unit under refurbishment from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second segment commenced immediately following the islanding of Unit 2. The second segment continues preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening the reactor air lock doors, installation of shielding, setting up specialized tooling and equipment, and commencing the disassembly and removal of reactor components. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. The project is tracking on schedule and budget.

The Darlington Refurbishment project is discussed further in the section, *Core Business, Strategy, and Outlook* under the heading, *Project Excellence.*

Peter Sutherland Sr. Hydroelectric GS

In March 2017, the project to construct the 28 MW two-unit Peter Sutherland Sr. hydroelectric GS successfully completed final testing and commissioning of the turbine and generator units and both units were declared substantially complete. On March 31, 2017, the project received a permit from the Ministry of Environment and Climate Change (MOECC) to take water for operations to allow the station to operate commercially. This in-service date is well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. The project is expected to close below the approved budget of $300 million, following the completion of site remediation, camp dismantling, demobilization and other project close-out activities.

The project was constructed in partnership with the Coral Rapids Power Corporation (CRP), a corporation wholly owned by the Taykwa Tagamou Nation, through the PSS Generating Station Limited Partnership (PSS). Under the partnership agreement, as the unit is placed in-service, the CRP may acquire up to a 33 percent partnership interest through its investment in PSS. In April 2017, the CRP acquired a 33 percent interest in PSS.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017, on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. For the hydroelectric facilities, the application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021, based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production. The application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment through rate riders that were in effect to December 31, 2016. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed further in the section, *Balance Sheet Highlights* under the heading, *Pension & OPEB Cash Versus Accrual Differential Deferral Account*.

Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application submission in May 2016 incorporated a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved annual nuclear revenue requirements during the period from January 1, 2017 to the end of the Darlington Refurbishment project in a deferral account for future collection.

In March 2017, the Province amended *Ontario Regulation 53/05* to require that the portion of the approved annual nuclear revenue requirements deferred for future collection under rate smoothing be determined with a view of making more stable year-over-year changes in OPG's weighted-average nuclear and hydroelectric regulated prices, including rate riders. Previously, the regulation required that the deferred amounts be determined with a view of making more stable year-over-year changes in OPG's nuclear regulated prices only, excluding rate riders. The amendment is intended to make more predictable the impact on customer bills resulting from changes in OPG's overall regulated prices, reducing the average year-over-year change in customer bills over the term of OPG's current application. Following the amendment, in March 2017, OPG submitted a modified rate smoothing proposal to the OEB to reflect the new requirements of the regulation, as part of the application for new regulated prices. OPG expects to recognize amounts deferred under rate smoothing as income in the period to which the underlying approved revenue requirements relate.

In March 2017, the OEB approved a settlement agreement reached by OPG and intervenors on a limited set of issues in OPG's application (Settlement Agreement). Among the settled issues, the agreement provided for the continuation of all applicable existing variance and deferral accounts and accepted a number of variance and deferral account balances for recovery, as requested in OPG's application. In addition, the Settlement Agreement accepted OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017 to 2021 period. The Settlement Agreement did not impact OPG's financial results for the three months ended March 31, 2017.

The OEB conducted 23 public oral hearing days on the unsettled issues in OPG's application between February 27, 2017 and April 13, 2017, as part of an overall public proceeding on the application. Final arguments in the proceeding are scheduled to be completed by June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected in the second half of 2017.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills for all residential consumers in the province by 25 percent on average ~~for all residential consumers in the province~~. Approximately 500,000 small businesses and farms would also benefit. As part of the Plan, the Province has proposed refinancing a portion of the Global Adjustment costs over a longer time period for Regulated Price Plan eligible customers (e.g., residential, farm, small businesses). On May [11], 2017, the Province introduced legislation that, if passed, will enable the IESO and OPG to work together to implement this financing as requested by the Province. Any final agreement to implement OPG's involvement with the Plan ~~is~~ would be subject to approval by OPG's Board of Directors, which has established a Special Committee to provide oversight on behalf of the Board of Directors. **[MONITOR]**

Shareholder Declaration and Shareholder Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution requiring the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. A purchase and sale agreement was executed in December 2016, and the sale was completed in April 2017. An after-tax gain on sale of approximately $280 million **[MONITOR]** was recognized upon completion of the transaction in the second quarter of 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the act, into the Province's Consolidated Revenue Fund. OPG is working with the

Ministry of Finance to finalize the prescribed costs incurred in connection with the disposition of the sale and the designated proceeds that will be transferred ~~in~~to the Trillium Trust ~~Fund~~.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. OPG is in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund. **[MONITOR]**

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business, and are reported under the Services, Trading, and Other Non-Generation segment.

CORE BUSINESS, STRATEGY, AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

The following sections provide an update to OPG's disclosures in the 2016 annual MD&A related to its four key strategic imperatives – operational excellence, project excellence, financial strength, and social licence. A detailed discussion of these strategic imperatives is included in the 2016 annual MD&A in the section, *Core Business, Strategy, and Outlook*.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Public Safety

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for individuals living or working near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (µSv), which is an international unit of radiation dose measurement. For 2016, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.6 µSv and 1.5 µSv, respectively, which is approximately 0.1 percent and 0.2 percent of the annual legal limit of 1,000 µSv, respectively.

Electricity Generation Production and Reliability

- As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will remain fit for service for operation to 2024. OPG is also nearing completion of component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently set at the end of 2020, are expected to be reassessed, after the required fuel channel maintenance strategies in support of extended operations have been implemented on the initial units, taking into account the requirement for the Canadian Nuclear Safety Commission's (CNSC) approval, discussed below.
- OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30,

2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. Work on the Pickering licence renewal application is proceeding and is expected to be filed August 31, 2017 for the CNSC's approval in 2018. The requested licence renewal will span the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. OPG will submit a Periodic Safety Review, Global Assessment Report, and Integrated Implementation Plan (IIP) for the station to the CNSC as part of the licence renewal.

- In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications were presented to the CNSC at public hearings in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018. Renewal decisions on the WWMF and PWMF licences are expected to be issued prior to expiry of the respective current licences. **[MONITOR]**
- During the first quarter of 2017, OPG completed the reservoir refurbishment at Sir Adam Beck Pump GS and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.
- Work continues on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 1 of the Sir Adam Beck Pump GS, and the overhaul and upgrade of Unit 1 of the Harmon GS.
- Work continues work on the replacement of the Station Service System at R.H. Saunders GS and Synchronizing Breakers at Lennox GS.
- OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS.
- Later in 2017, OPG will be starting definition phase activities, including engineering studies, condition assessments, and stakeholder engagement, as part of a Water Conveyance System project to restore structural integrity, flow capacity and ensure safe and reliable operations, of the Sir Adam Beck 1 GS canal and associated structures, for approximately the next 50 years.

As part of streamlining OPG's hydroelectric operations, OPG will be reducing from five regional hydroelectric offices to four by integrating the Central Operations group into its existing operations. This will result in operational efficiency improvements. Currently, work is in progress to plan and implement this change.

OPG continues to progress on its plan to remove site structures from Nanticoke GS. Project milestones in 2017 include the elimination of coal yard equipment and structures and removal of ash silos, and the selection of a contractor to remove the stacks, the powerhouse, interior equipment and supporting site structures.

Environmental Performance

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. OPG has an internal program to meet its GHG emissions compliance obligations. With OPG's low GHG emitting fleet, these obligations do not have a material financial impact on the Company. The Ontario MOECC held the first quarterly auction of GHG allowances on March 22, 2017.

Disclosures related to the Company's environmental policy and environmental risks can be found in OPG's 2016 annual MD&A.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. The status updates for OPG's major projects as of March 31, 2017 are outlined in the following table with further details below.

Project	Capital expenditures		Approved budget	Expected in-service date	Current status
(millions of dollars)	Year-to-date	Life-to-date			
Darlington Refurbishment	306	3,491	12,800 [1]	First unit - 2020 Last unit - 2026	Islanding of Unit 2 was completed in April 2017. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies is in progress. The project is tracking on schedule and on budget.
Peter Sutherland Sr. Hydroelectric GS	22	258	300	2017	The station was placed in-service on March 31, 2017, ahead of the originally planned schedule, and is expected to close below the approved budget. Refer to the section, *Core Business, Strategy, and Outlook* under the heading, *Recent Developments* for further details.
Sir Adam Beck Pump GS Reservoir Refurbishment	2	48	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget.
Ranney Falls Hydroelectric GS	2	5	77	2019	Project definition work has been completed and site clearing and mobilization work has commenced.
Nanticoke Solar Facility	1	2		2019	Project definition work is in progress and construction is planned to commence as early as in the fourth quarter of 2017.
Deep Geologic Repository for low and intermediate level radioactive waste (L&ILW)	2 [2]	197 [2]			Additional information requested by the Canadian Environmental Assessment Agency (CEAA) based on their review of the material submitted by OPG in December 2016 is being prepared and will be submitted by May 26, 2017.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, ahead of schedule, with a total of 480 fuel channels de-fuelled. Islanding of Unit 2, the physical separation of the refurbishment unit from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second segment commenced immediately following the islanding of the unit. The second segment continues the preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening the reactor air lock doors, installation of shielding, setting up specialized tooling and equipment, and commencing the disassembly and removal of reactor components. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. The project is tracking on schedule and budget.

A number of pre-requisite projects in support of the execution phase of the project, including construction of facilities, infrastructure upgrades and installation of safety enhancements, have been completed. This includes the Containment Filtered Venting System and the Third Emergency Power Generator safety enhancement projects that were placed in-service in April 2017 **[MONITOR]**. Completion of the Heavy Water Storage and Drum Handling Facility has been delayed due to challenges with construction. Remediation measures are in progress **[UPDATE]**. This delay will not impact the overall Darlington Refurbishment project schedule, as the Heavy Water Storage and Drum Handling Facility is not on the critical path. The remaining projects are tracking for completion within the overall refurbishment execution schedule. **[UPDATE]**

In addition to the de-fuelling and islanding of Unit 2 completed, the following other key project activities are continuing in 2017:

- Completion of preparation activities to support Retube and Feeder Replacement work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Re-tube Waste Processing Building Facility.
- Continued construction of the Heavy Water Storage and Drum Handling.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of Unit 3, and is entering into associated commitments to procure major components that require long-lead times. As of March 31, 2017, $43 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The work on the project included installation of a new partial liner and construction of a grout

curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

In the first quarter of 2017, OPG completed the contractor selection process and awarded contracts for the construction of a 10 MW single-unit powerhouse on the existing Ranney Falls GS site, as part of the Regulated – Hydroelectric segment. The new unit will replace an existing unit that reached its end of life in 2014. The civil contractor has begun site clearing and mobilization. The expected in-service date is in the fourth quarter of 2019 with a budget of $77 million.

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands under a Large Renewable Procurement contract with the IESO, through Nanticoke Solar LP, is planned to commence as early as in the fourth quarter of 2017. In the first quarter of 2017, OPG purchased SunEdison Canadian Construction LP's (SECCLP) interests in Nanticoke Solar LP, originally a partnership between OPG, SECCLP and a subsidiary of the Six Nations of the Grand River Development Corporation, and is working to obtain approvals and permits required to enable the commencement of construction. The facility is expected to be completed in the first quarter of 2019.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the Environmental Assessment (EA) to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and potential for cumulative environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization were to be located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following CEAA's review of OPG's submission and a period of public comment, the CEAA has requested additional information from OPG. OPG has reviewed the information request and will respond to the CEAA by May 26, 2017. An EA Decision Statement by the Minister is expected by the fourth quarter of 2017. Based on the information submitted to the Minister in December 2016, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

OPG anticipates a site preparation and construction licence may be issued in the first half of 2018, if the EA Decision Statement supports licensing. OPG has initiated work to ensure all licensing-related submissions will be completed and ready to be submitted to the CNSC for an expeditious license review. In addition, work has been initiated to seek OPG's Board of Directors' approval to proceed to the definition phase work in 2018. This includes completion of engineering design activities. OPG also continues its engagement with the Saugeen Ojibway Nations toward

securing community support for the L&ILW DGR. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction. **[CONFIRM]**

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application incorporates a rate smoothing proposal, as amended in March 2017. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impacts on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the nuclear rate base, effective in early 2020, to reflect the planned placement in service of approximately $4.8 billion of capital expenditures upon the scheduled return to service of Unit 2 at the Darlington GS as part of the Darlington Refurbishment project and, effective in 2017, an increase in the deemed capital structure applied to the total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt reflected in the existing regulated prices. If approved, this would improve OPG's return on Shareholder's investment.

A public oral hearing on OPG's application commenced in late February 2017 and was completed in April 2017, with final arguments scheduled to be completed by June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected in the second half of 2017. Further details on OPG's rate application can be found in the section, *Highlights* under the heading, *Recent Developments*.

For generation assets that do not form part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements. In line with this strategy, virtually all of OPG's non-regulated operating facilities and assets under construction are subject to long-term Energy Supply Agreements (ESAs) or other long-term contracts with the IESO. This includes the Peter Sutherland Sr. GS, which will begin earning contracted revenue under its hydroelectric ESA once the IESO confirms commercial operation, but effective on March 31, 2017. The ESA expires in 2067. **[CONFIRM]**

Ensure Availability of Cost Effective Funding

In April 2017, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook.

Social Licence

As the largest electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish these relationships based on

a foundation of respect for the languages, customs, and political, social and cultural organizations of the Indigenous communities. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, such as the construction of the Peter Sutherland Sr. GS in partnership with Taykwa Tagamou Nation and the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River. In March 2017, the Peter Sutherland Sr. GS was placed in-service and, in April 2017, the Taykwa Tagamou Nation acquired a 33 percent interest in PSS under the partnership agreement. OPG also continues to engage with Indigenous communities regarding the Company's regulated nuclear waste operations, through regularly scheduled meetings and ongoing dialogue in connection with OPG's proposed L&ILW DGR, and the re-licensing of the PWMF and the WWMF.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of costs and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's current application for new regulated prices is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017 in its decision on the application. This would allow OPG to recover the difference between the approved new regulated prices and the existing regulated prices for the period between January 1, 2017 and the implementation date of the new prices based on the OEB's order.

The continuation of existing regulated prices until the OEB's decision on OPG's application is issued is expected to continue to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI during 2017, compared to 2016. In large part, this is due to the year-over-year reduction in nuclear electricity generation resulting from the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined in 2014 based on a higher production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision issuance, could have a significant impact on OPG's financial results during 2017. OPG's application for new regulated prices is further discussed in the section, *Highlights* under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. As expected, combined with the expiry of rate riders in effect to the end of 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment outage, this will result in lower cash flow from operations and a lower FFO Adjusted Interest Coverage ratio in 2017, compared to 2016. The continuation of existing base regulated prices until such time as new prices are determined and implemented by the OEB also is expected to contribute to lower cash flow from operations in 2017. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements.

Lower nuclear generation due to the Darlington refurbishment outages will continue to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Variability in sustaining capital investment expenditures, including major sustaining projects for the hydroelectric operations, also will impact the Enterprise TGC in future periods.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, these variance accounts include those related to the revenue impact of variability in water flows and forgone production due to SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Considering the impact of the variance and deferral accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow from operations going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric and other development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI. In the short term, these factors can be volatile and cause fluctuations in the Company's income. This volatility is partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account and, as discussed below, the funded status of the two segregated funds.

As OPG does not have the right to withdraw surplus amounts from the Nuclear Segregated Funds when the segregated funds are overfunded relative to the life cycle funding liability pursuant an approved ONFA Reference Plan, OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle funding liability per the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus in the Decommissioning Segregated Fund that it may direct to the Used Fuel Fund in accordance with the ONFA, up to the amount, if any, by which the Used Fuel Fund is underfunded. This reduces the volatility of earnings on the Nuclear Segregated Funds reflected in net income when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at March 31, 2017, the Decommissioning Segregated Fund was overfunded by approximately 24 percent, and the Used Fuel Segregated Fund was marginally overfunded, by less than one percent, based on the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**652**	926
Fuel expense	**68**	81
Gross margin	**584**	845
Operations, maintenance and administration	**589**	563
Depreciation and amortization	**107**	230
Property taxes	**6**	7
(Loss) income before other losses, interest, and income taxes	**(118)**	45
Other gains	**-**	(1)
(Loss) income before interest and income taxes	**(118)**	46

Segment earnings decreased by $164 million during the first quarter of 2017, compared to the same quarter in 2016. The decrease in earnings was expected and primarily due to reduced revenue from the nuclear base regulated price of approximately $134 million, partly offset by the largely associated decrease in fuel expense of $13 million, reflecting lower electricity generation of 2.3 TWh and the continuation of the existing nuclear base regulated price set by the OEB in 2014. The existing regulated price continues to be in effect pending the OEB's decision on OPG's application for new regulated prices, proposed to be effective on January 1, 2017. The lower nuclear generation was primarily due to the ongoing Unit 2 refurbishment outage at the Darlington GS that began October 2016. The existing regulated price does not reflect the lower generation as a result of the refurbishment outage, as that price were set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume based on the 2014 and 2015 outage profile that did not include a refurbishment outage. The year-over-year reduction in nuclear electricity generation was partially offset by the impact of the decreased number of planned outage days at the Pickering GS in the first quarter of 2017, compared to the same quarter in 2016.

The increase in OM&A expenses of $26 million in the first quarter of 2017, compared to the same quarter in 2016, also contributed to lower segment earnings. The increase in OM&A expenses reflected use of temporary staff and planned hiring to fill vacant positions due to attrition, and higher material costs related to maintenance work at the nuclear stations.

The expiry of an OEB-authorized nuclear rate rider on December 31, 2016 contributed to the decrease in segment revenue in the first quarter of 2017, compared to the same quarter in 2016. As rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this decrease in revenue was largely offset by a decrease in amortization expense related to regulatory account balances. A new rate rider has been requested in OPG's application with the OEB for new regulated prices effective January 1, 2017.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2017 and 2016 were as follows:

	Three Months Ended March 31 2017	2016
Unit Capability Factor *(%)* [1]		
Darlington GS	**85.3**	97.2
Pickering GS	**78.5**	72.8

[1] The nuclear Unit Capability Factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS decreased in the first quarter of 2017, compared to the same quarter in 2016, primarily due to a higher number of unplanned outage days at the station in the first quarter of 2017.

The increase in the Unit Capability Factor at the Pickering GS in the first quarter of 2017, compared to the same quarter in 2016, was primarily due to a lower number of planned outage days at the station in the first quarter of 2017.

Regulated – Nuclear Waste Management Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**27**	34
Operations, maintenance and administration	**29**	36
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**234**	228
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Loss before interest and income taxes	**(47)**	(83)

Earnings from the segment improved by $36 million in the first quarter of 2017 compared to the same quarter in 2016. The year-over-year improvement in earnings was primarily due to higher earnings from the Nuclear Segregated Funds.

Higher earnings on the Used Fuel Segregated Fund, net of the impact of the Bruce Lease Net Revenue Variance Account, were the primary reasons for the higher Nuclear Segregated Fund earnings during the first quarter of 2017, compared to the same period in 2016. As the Used Fuel Segregated Fund was overfunded as at December 31, 2016 and March 31, 2017, the earnings on the fund recorded in income during the first quarter of 2017 were based at the growth rate of the present-value used fuel life cycle funding liability per the 2017 ONFA Reference Plan. During the first quarter of 2016, the Used Fuel Segregated Fund was underfunded based on the ONFA reference plan then in effect and therefore earnings on the fund reflected the CPI-adjusted rate of return guaranteed by the Province under the ONFA for funding related to the initial 2.23 million used fuel bundles and market returns on the portion of the fund not guaranteed by the Province.

As of December 31, 2016, OPG recorded a decrease of approximately $1,570 million to the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities) and associated asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to reflect the comprehensive update of the underlying assumptions and baseline cost estimates for these liabilities carried out as part of the 2017 ONFA Reference Plan update process. The resulting year-over-year decreases in accretion on fixed asset removal and nuclear waste management liabilities recorded in the Regulated – Nuclear Waste Management segment and depreciation and fuel expenses recorded in the Regulated – Nuclear Generation segment during the first quarter of 2017, compared to the same quarter in 2016, were largely offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account authorized by the OEB. Further details on the change in the estimate of the Nuclear Liabilities as of December 31, 2016 are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Asset Retirement Obligation*.

Under the current OEB-approved cost recovery methodology, the changes in expenses associated with the year-end 2016 adjustment to the Nuclear Liabilities are not expected to materially affect OPG's income during 2017, as the associated impact on expenses is expected to continue to be largely offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently to be offset by the impact of the new regulated prices.

Regulated – Hydroelectric Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue [1]	**363**	385
Fuel expense	**73**	79
Gross margin	**290**	306
Operations, maintenance and administration	**76**	76
Depreciation and amortization	**34**	56
Income before other gains, interest and income taxes	**180**	174
Other gains	**-**	(22)
Income before interest and income taxes	**180**	196

[1] During the three months ended March 31, the Regulated – Hydroelectric segment revenue included incentive payments of $8 million in 2017 and $1 million in 2016 related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $16 million during the first quarter of 2017, compared to the same period in 2016, was primarily due to a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to a motion by OPG. The decrease in income was partially offset by higher hydroelectric incentive mechanism payments in the first quarter of 2017.

The decrease in revenue was largely due to the expiry of an OEB-authorized rate rider on December 31, 2016. As the rider allowed for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, the resulting reduction in revenue was largely offset by lower amortization expense related to the regulatory account balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	Three Months Ended March 31 2017	2016
Hydroelectric Availability *(%)*	**89.5**	94.8

The Hydroelectric Availability decreased in the first quarter of 2017, compared to the same period in 2016, primarily due to the reservoir refurbishment project at the Sir Adam Beck Pump GS and a higher number of unplanned outage days for the regulated hydroelectric stations.

Contracted Generation Portfolio Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**143**	145
Fuel expense	**14**	12
Gross margin	**129**	133
Operations, maintenance and administration	**39**	40
Depreciation and amortization	**19**	19
Accretion on fixed asset removal liabilities	**2**	2
Property taxes	**2**	2
Income from investments subject to significant influence	**(10)**	(8)
Income before interest and income taxes	**77**	78

Income before interest and income taxes decreased by $1 million during the first quarter of 2017, compared to the same period in 2016. The decrease primarily resulted from lower revenues from the Lower Mattagami River generating stations. The decrease was partially offset by higher gross margin from the Lennox GS, which was primarily due to increased market demand.

The Hydroelectric Availability and the Thermal Equivalent Forced Outage Rate (EFOR) for the Contracted Generation Portfolio segment were as follows:

	Three Months Ended March 31 2017	2016
Hydroelectric Availability *(%)*	**83.6**	83.9
Thermal EFOR *(%)*	**12.6**	0.9

The Hydroelectric Availability in the first quarter of 2017, was comparable to the same period in 2016. The higher thermal EFOR in the first quarter of 2017, compared to the same period in 2016, was primarily due to a higher number of unplanned outage days at a Lennox GS unit as a result of a transmission outage.

Services, Trading, and Other Non-Generation Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**17**	21
Gross margin	**17**	21
Operations, maintenance and administration	**1**	4
Depreciation and amortization	**7**	7
Accretion on fixed asset removal liabilities	**2**	2
Property taxes	**3**	3
Loss before other losses, interest, and income taxes	**4**	5
Other gains	**(3)**	-
Income before interest and income taxes	**7**	5

Segment earnings increased by $2 million during the first quarter of 2017, compared to the same quarter in 2016, due to lower OM&A expenses reflecting the decision, in the fourth quarter of 2016, to proceed with the decommissioning of the Lambton GS, and dividend income from OPG's investment in Hydro One Limited (Hydro One) shares acquired in April 2016. OPG acquired the shares for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union and The

Society of Energy Professionals. The increase in segment earnings was partially offset by lower revenues from the Company's electricity trading activities in the first quarter of 2017.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies, to undertake major projects, to fund long-term obligations such as contributions to the pension fund and the Nuclear Segregated Funds, to make payments under the OPEB plans, to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, and to service and repay long-term debt.

Changes in cash and cash equivalents for the three months ended March 31, 2017 and 2016 were as follows:

	Three Months Ended March 31	
(millions of dollars) (unaudited)	**2017**	**2016**
Cash and cash equivalents, beginning of period	**186**	464
Cash flow provided by operating activities	**118**	366
Cash flow used in investing activities	**(363)**	(310)
Cash flow used in financing activities	**279**	20
Net increase	**34**	76
Cash and cash equivalents, end of period	**220**	540

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details in the section, *Highlights* under the heading, *Overview of Results*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities during the first quarter of 2017 increased by $53 million compared to the same quarter in 2016. The increase was primarily due to higher expenditures on the Darlington Refurbishment project, offset by the staggered maturity of a structured deposit note entered in 2015 in support of the Peter Sutherland Sr. GS project. The principal amount of the deposit note that matured in the first quarter of 2017 was higher than in the same quarter in 2016. The final maturity date of the deposit note was in April 2017.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG expects to renew and extend the expiry date of both tranches from May 2021 to May 2022. There were no amounts outstanding under the bank credit facility as at March 31, 2017.

There was $133 million of commercial paper outstanding under OPG's commercial paper program as at March 31, 2017.

As at March 31, 2017, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at March 31, 2017, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust, expiring on November 30, 2018. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. As at March 31, 2017, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

As at March 31, 2017, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at March 31, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at March 31, 2017. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. As at March 31, 2017, there were outstanding long-term borrowings of $200 million under this credit facility.

As at March 31, 2017, OPG's long-term debt outstanding was $5,684 million, including $1,328 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent.

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's unaudited interim consolidated financial position using selected balance sheet data:

(millions of dollars) (unaudited)	As At March 31 2017	As At December 31 2016
Property, plant and equipment – net	**20,248**	19,998
The increase was primarily due to capital expenditures on the Darlington Refurbishment project, partially offset by depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**16,157**	15,984
The increase was primarily due to earnings on the Nuclear Segregated Funds, partially offset by reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Short-term debt	**135**	2
The increase was due to commercial paper issued under OPG's commercial paper program.		
Long-term debt *(current and non-current portions)*	**5,670**	5,520
The increase was primarily due to the issuance of senior notes payable to the OEFC totalling $200 million in February 2017.		
Fixed asset removal and nuclear waste management liabilities	**19,683**	19,484
The increase was primarily as a result of accretion expense representing the increase in the present value liabilities due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		

Pension & OPEB Cash Versus Accrual Differential Deferral Account

In setting OPG's regulated prices effective November 1, 2014, the OEB limited the recovery of the regulated portion of OPG's pension and OPEB costs to the Company's cash expenditures for its pension and OPEB plans. Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account, which records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and OPG's corresponding actual cash expenditures for these plans. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The Company has recognized the amount set aside in the Pension & OPEB Cash Versus Accrual Differential Deferral account as a regulatory asset. As at March 31, 2017, the regulatory asset balance was $517 million, which represents the excess of pension and OPEB costs calculated using the accrual basis in accordance with US GAAP over the corresponding cash expenditures for the period from November 1, 2014 to March 31, 2017.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and OPG's corresponding cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the OEB's consultation process. If, as part of the above consultation process or another proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory asset for the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's interim consolidated financial statements or are recorded in the Company's interim consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies are outlined in Note 3 to the audited consolidated financial statements as at and for the year ended December 31, 2016. A discussion of recent accounting pronouncements is included in Note 2 to OPG's unaudited interim consolidated financial statements as at and for the three months ended March 31, 2017 under the heading, *Significant Accounting Policies and Estimates*. Disclosure regarding OPG's critical accounting policies is included in OPG's 2016 annual MD&A.

RISK MANAGEMENT

The following provides an update to the discussion of the Company's risks and risk management activities included in OPG's 2016 annual MD&A. As such, the disclosure in this section should be read in conjunction with the *Risk Management* section included in the annual MD&A.

Financial Risks

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017 [1]	2018	2019
Estimated fuel requirements hedged [2]	75%	74%	63%

[1] Based on actual fuel requirements hedged for the three months ended March 31, 2017 and forecast for the remainder of the year.

[2] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to, US dollars. To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at March 31, 2017, OPG had no foreign exchange contracts outstanding.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. For the first quarter of 2017, the VaR utilization ranged between $0.1 million and $0.3 million.

Credit

Deterioration in energy markets counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

OPG manages its exposure to suppliers or counterparties by evaluating their financial condition and negotiating appropriate collateral or other forms of security. OPG's credit exposure relating to energy markets transactions as at March 31, 2017 was $361 million, including $348 million to the IESO. Management considers the Company's risk exposure relating to electricity sales through the IESO-administered spot market to be low as the IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market. Of the $13 million remaining exposure as at March 31, 2017, over 95 percent was related to investment grade counterparties.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The

transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions are summarized below:

	Three Months Ended March 31			
	2017		2016	
(millions of dollars) (unaudited)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**4**	**-**	2	-
Services	**1**	**5**	1	5
Dividends	**2**			
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**163**	-	(177)
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**217**	-	(159)
Hydroelectric gross revenue charge	**-**	**28**	-	31
ONFA guarantee fee	**-**	**2**	-	2
OEFC				
Gross revenue charge	**-**	**38**	-	37
Interest expense on long-term notes	**-**	**41**	-	42
Income taxes, net of investment tax credits	**-**	**12**	-	32
IESO				
Electricity related revenue	**1,073**	**6**	1,364	10
	1,080	**512**	1,367	(177)

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at March 31, 2017 and December 31, 2016, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,795 million and $3,415 million, respectively. The details of accounting for the Nuclear Funds are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars) (unaudited)	**March 31 2017**	**December 31 2016**
Receivables from related parties		
Hydro One	**1**	1
IESO	**348**	421
OEFC	**5**	1
PEC	**4**	4
Province of Ontario	**4**	2
Available-for-sale securities		
Hydro One shares	**218**	212
Accounts payable and accrued charges		
Hydro One	**-**	-
OEFC	**45**	61
Province of Ontario	**7**	2
IESO	**2**	2
Long-term debt (including current portion)		
Notes payable to OEFC	**3,445**	3,295

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at March 31, 2017, the Nuclear Segregated Funds and the registered pension fund held $1,650 million and $237 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

The Company maintains a comprehensive system of policies, procedures, and processes that represents its framework for internal controls over financial reporting and for its disclosure controls and procedures (together, ICOFR). There were no changes in the Company's internal control system during the current interim period that has or is reasonably likely to have a material impact to the ICOFR.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected financial information from OPG's unaudited interim consolidated financial statements for each of the eight most recently completed quarters.

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**March 31 2017**	**December 31 2016**	**September 30 2016**	**June 30 2016**
Revenue	**1,176**	**1,388**	**1,400**	**1,387**
Net income (loss)	**68**	**(8)**	**198**	**135**
Less: Net income attributable to non-controlling interest	**4**	**5**	**4**	**3**
Net income (loss) attributable to the Shareholder	**64**	**(13)**	**194**	**132**
Per common share, attributable to the Shareholder *(dollars)*	**$0.25**	**($0.05)**	**$0.76**	**$0.51**

(millions of dollars – except where noted) *(unaudited)*	**March 31 2016**	**December 31 2015**	**September 30 2015**	**June 30 2015**
Revenue	1,478	1,312	1,426	1,383
Net income (loss)	128	(100)	85	193
Less: Net income attributable to non-controlling interest	5	1	5	4
Net income (loss) attributable to the Shareholder	123	(101)	80	189
Per common share, attributable to the Shareholder *(dollars)*	$0.48	($0.39)	$0.31	$0.74

Trends

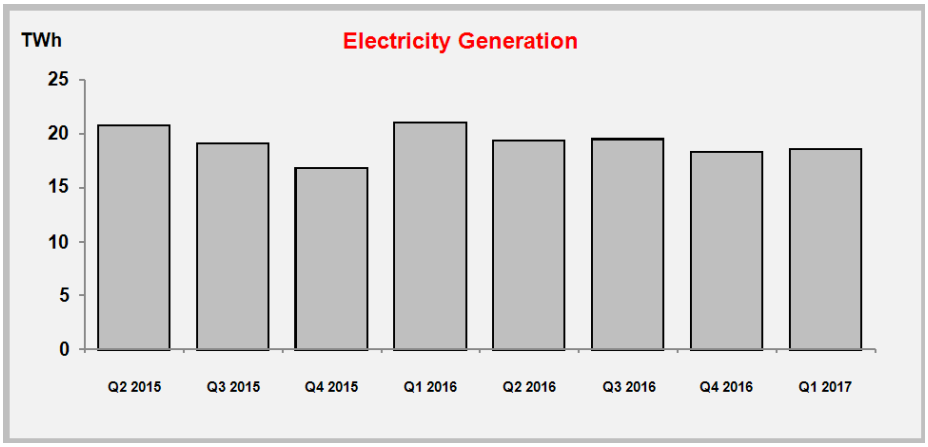
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues have been higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of forgone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

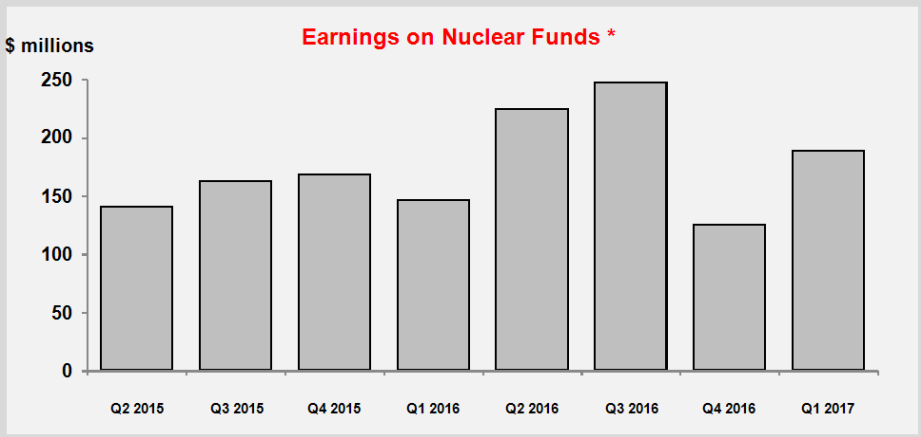
The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington Vacuum Building Outage (VBO), which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

During the fourth quarter of 2016 and the first quarter of 2017, OPG's electricity generation was reduced as a result of the Unit 2 refurbishment outage at the Darlington GS, which began in October 2016 and is expected to continue until early 2020.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items that affected net income in certain quarters above are described in OPG's 2016 annual MD&A in the section, *Quarterly Financial Highlights*.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder, improve cost performance, and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow provided by operating activities, or any other measure in accordance with US GAAP, but as indicators of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE Excluding AOCI is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended March 31 2017	December 31 2016
ROE Excluding AOCI		
Net income attributable to the Shareholder	**377**	436
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,834**	10,442
ROE Excluding AOCI *(percent)*	**3.5**	4.2

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended March 31 2017	December 31 2016
FFO before interest		
Cash flow provided by operating activities	**1,457**	1,705
Add: Interest paid	**268**	269
Less: Interest capitalized to fixed and intangible assets	**(152)**	(141)
Add: Changes to non-cash working capital balances	**(22)**	(68)
FFO before interest	**1,551**	1,765
Adjusted interest expense		
Net interest expense	**106**	120
Add: Interest income	**5**	7
Add: Interest capitalized to fixed and intangible assets	**152**	141
Add: Interest related to regulatory assets and liabilities	**32**	30
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**10**	45
Adjusted interest expense	**305**	343
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.1

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding the Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation from OPG-operated generating stations plus electricity generation forgone due to SBG conditions during the period.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Enterprise TGC		
Total OM&A expenses	**708**	686
Total fuel expense	**155**	172
Total capital expenditures	**408**	320
Less: Darlington Refurbishment capital and OM&A costs	**(309)**	(205)
Less: Other generation development project capital and OM&A costs	**(17)**	(38)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(11)**	18
Less: Nuclear fuel expense for non OPG-operated stations	**(13)**	(17)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**11**	18
Less: OM&A expenses ancillary to electricity generation business	**(5)**	(5)
Other adjustments	**(2)**	(5)
	925	944
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**18.6**	21.0
Adjust for electricity generation forgone due to SBG conditions and OPG's share of electricity generation from co-owned facilities	**0.7**	1.6
	19.3	22.6
Enterprise TGC per MWh *($/MWh)* [1]	**47.86**	**41.82**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**589**	563
Regulated – Nuclear Generation fuel expense	**68**	81
Regulated – Nuclear Generation capital expenditures	**366**	249
Less: Darlington Refurbishment capital and OM&A costs	**(309)**	(205)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(2)**	24
Less: Nuclear fuel expense for non OPG-operated stations	**(13)**	(17)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(1)**	(1)
Other adjustments	**-**	(1)
	698	693
Nuclear electricity generation *(TWh)*	**10.0**	12.3
Nuclear TGC per MWh *($/MWh)* [1]	**69.87**	56.37

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation forgone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**76**	76
Regulated – Hydroelectric Generation fuel expense	**73**	79
Contracted Generation Portfolio OM&A expenses	**39**	40
Contracted Generation Portfolio fuel expense	**14**	12
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**37**	59
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(16)**	(37)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(39)**	(37)
Less: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(9)**	(7)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**11**	18
Other adjustments	**(1)**	2
	185	205
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**8.0**	7.9
Contracted Generation Portfolio electricity generation	**0.6**	0.8
Adjust for hydroelectric electricity generation forgone due to SBG conditions and non-hydroelectric electricity generation of the Contracted Generation Portfolio	**0.7**	1.6
	9.3	10.3
Hydroelectric TGC per MWh *($/MWh)*[1]	**19.79**	19.94

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

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From: Ronald Kwan
To: John Kim
Cc: Deena Padamadan; Francisco Chinchon; Bruno Amara
Subject: RE: OPG Q1 2017 Submission to Province
Date: Tuesday, May 02, 2017 6:26:20 PM
Attachments: Q1 2017 MDA - DRAFT - PROVINCE MAILING_CEFD edit v4.docx

---

Hi John,

Just skimmed it. A few small edits -- a copy edit and a bit of wording edits under the Ontario FHP.

Ron

From: Deena Padamadan
Sent: May-02-17 16:23
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: FW: OPG Q1 2017 Submission to Province

Hi Ron,

Please see attached for your review. This version includes the edits from SIFB (already sent yesterday to you at 2:45pm yesterday) plus a few edits from EFB.
For timing, this is due EoD today.

Thanks,
Deena

From: John Kim
Sent: Tuesday, May 02, 2017 4:04 PM
To: Deena Padamadan <Deena.Padamadan@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Subject: RE: OPG Q1 2017 Submission to Province

Hi Deena,

Some very minor edits.

John

From: John Kim
Sent: Tuesday, May 02, 2017 1:26 PM
To: Deena Padamadan <Deena.Padamadan@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Subject: RE: OPG Q1 2017 Submission to Province

Thanks for the reminder. Will get back to you on this.

John

From: Deena Padamadan
Sent: Tuesday, May 02, 2017 1:20 PM
To: John Kim <John.Kim@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Subject: RE: OPG Q1 2017 Submission to Province

Hi Bruno & John,

Checking in if EFB has any edits on this, as it's due EoD today.

Thanks,
Deena

From: Francisco Chinchon
Sent: Monday, May 01, 2017 2:45 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Subject: RE: OPG Q1 2017 Submission to Province

Hi,

We have a few relatively minor edits, in particular, with respect to the sale of the OPG HQ. Also, note they are updating the figure to $280M after tax.

Thanks,

Francisco

From: Ronald Kwan
Sent: Friday, April 28, 2017 5:06 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Subject: FW: OPG Q1 2017 Submission to Province

Hi,

Please review.

Thanks,
Ron

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: April-28-17 17:04
To: 'Shruti.Talwar@ontario.ca' <Shruti.Talwar@ontario.ca>; Sunita Chander (ENERGY)

<Sunita.Chander@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>
Subject: OPG Q1 2017 Submission to Province

Hi All,

Please find attached OPG's draft Q1 2017 Management's Discussion and Analysis (MD&A) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, May 2nd**.

These documents will be filed with the Ontario Securities Commission on **Friday, May 12th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q1 2017 MD&A:

Highlights	
Recent Developments	MD&A p.9-11
Darlington Refurbishment	MD&A p.9; 13-14
Ontario's Fair Hydro Plan	MD&A p.10
Peter Sutherland Sr. GS project	MD&A p.9, 13

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

2017 FIRST QUARTER REPORT

[DRAFT]

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ONTARIO POWER GENERATION

ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the unaudited interim consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the three months ended March 31, 2017. OPG's unaudited interim consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

For a complete description of OPG's corporate strategies, risk management, corporate governance, and the effect of critical accounting policies and estimates on OPG's results of operations and financial condition, this MD&A should also be read in conjunction with OPG's audited consolidated financial statements, accompanying notes, the Annual Information Form, and the MD&A as at and for the year ended December 31, 2016.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Exemptive Relief for Reporting under US GAAP,* in OPG's 2016 annual MD&A. This MD&A is dated May 12, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy, and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), Total Generating Cost (TGC) and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at March 31, 2017, OPG's electricity generation portfolio had an in-service capacity of 16,205 megawatts (MW). OPG operates two nuclear generating stations, 66 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report. A description of OPG's segments is provided in OPG's 2016 annual MD&A in the section, *Business Segments*.

All of OPG's owned and co-owned generating facilities are located in Ontario. OPG does not operate PEC, Brighton Beach, the Bruce A GS and the Bruce B GS.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of March 31, 2017 and December 31, 2016 was as follows:

	As at	
(MW)	**March 31 2017**	**December 31 2016**
Regulated – Nuclear Generation [1]	**5,728**	5,728
Regulated – Hydroelectric	**6,421**	6,421
Contracted Generation Portfolio [2]	**4,056**	4,028
Total	**16,205**	16,177

[1] The in-service generating capacity as of March 31, 2017 and December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

During the three months ended March 31, 2017, the total in-service capacity increased by 28 MW. The increase was due to the completion of Peter Sutherland Sr. hydroelectric GS, which was placed in-service on March 31, 2017. The Peter Sutherland Sr. GS is discussed in the section, *Highlights* under the heading, *Recent Developments*.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's unaudited interim consolidated operating results. Significant factors which contributed to OPG's results during the three months ended March 31, 2017, compared to the same period in 2016, are discussed below.

(millions of dollars – except where noted) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**1,176**	1,478
Fuel expense	**155**	172
Gross margin	**1,021**	1,306
Operations, maintenance and administration	**708**	686
Depreciation and amortization	**167**	312
Accretion on fixed asset removal and nuclear waste management liabilities	**238**	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Income from investments subject to significant influence	**(10)**	(8)
Property taxes	**11**	12
	925	1,087
Income before other gains, interest, and income taxes	**96**	219
Other gains	**(3)**	(23)
Income before interest and income taxes	**99**	242
Net interest expense	**19**	33
Income before income taxes	**80**	209
Income tax expense	**12**	81
Net income	**68**	128
Net income attributable to the Shareholder	**64**	123
Net income attributable to non-controlling interest [1]	**4**	5
Electricity production (TWh) [2]	**18.6**	21.0
Cash flow		
Cash flow provided by operating activities	**118**	366

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $64 million for the first quarter of 2017, a decrease of $59 million compared to 2016. Income before interest and income taxes was $99 million for 2017, a decrease of $143 million compared to 2016. The following summarizes the significant factors which contributed to the variance:

Significant factors that reduced income before interest and income taxes:

- As expected, lower revenue from the nuclear base regulated price of approximately $134 million, partially offset by the largely associated decrease in fuel expense of $13 million, reflecting lower electricity generation of 2.3 terawatt hours (TWh) from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. Existing base regulated prices continue to be in effect pending the OEB's decision on OPG's current application for new regulated prices, expected in the second half of 2017. The lower nuclear generation was primarily due to the ongoing

refurbishment of Unit 2 at the Darlington GS since October 2016. The existing base regulated prices were set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. OPG has requested January 1, 2017 as the effective date of the new regulated prices. Further details on OPG's current application for new regulated prices can be found under the heading, *Recent Developments – OPG's Application for New Regulated Prices.*

- Higher operations, maintenance and administration (OM&A) expenses of $22 million, mainly in the Regulated – Nuclear Generation segment, reflecting use of temporary staff and planned hiring to fill vacant positions due to attrition, and higher material costs related to maintenance work at the nuclear stations.
- A gain of $22 million recorded in the first quarter of 2016 to reflect the OEB's decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices.

Significant factors that increased income before interest and income taxes:

- Higher earnings on the nuclear fixed asset removal and nuclear waste management funds (Nuclear Segregated Funds) of $42 million, primarily due to higher earnings on the Used Fuel Segregated Fund
- Higher hydroelectric incentive mechanism revenue of $7 million from the Regulated – Hydroelectric segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts (regulatory accounts) on December 31, 2016 contributed to the decrease in revenue in the first quarter of 2017, compared to the same period in 2016, but was primarily offset by a decrease in the amortization expense related to regulatory account balances. New rate riders have been requested in OPG's application for new regulated prices with the OEB, effective January 1, 2017.

Net interest expense decreased by $14 million in the first quarter of 2017, compared to the same quarter in 2016, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project.

Income tax expense decreased by $69 million in the first quarter of 2017, compared to the same quarter in 2016, primarily due to lower income before income taxes in the first quarter of 2017 and a higher income tax expense in the first quarter of 2016 due to a reduction in regulatory assets related to income taxes.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	Three Months Ended March 31	
	2017	**2016**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**(118)**	46
Regulated – Hydroelectric	**180**	196
Contracted Generation Portfolio	**77**	78
Total electricity generation business segments	**139**	320
Regulated – Nuclear Waste Management	**(47)**	(83)
Services, Trading, and Other Non-Generation	**7**	5
	99	242

Electricity Generation

Electricity generation was as follows:

(TWh)	Three Months Ended March 31 2017	2016
Regulated – Nuclear Generation	**10.0**	12.3
Regulated – Hydroelectric	**8.0**	7.9
Contracted Generation Portfolio [1]	**0.6**	0.8
Total OPG electricity generation	**18.6**	21.0
Total electricity generation by other generators in Ontario [2]	**18.6**	18.9

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the Independent Electricity System Operator (IESO), minus OPG electricity generation.

The lower electricity generation from the Regulated – Nuclear Generation segment in the first quarter of 2017 compared to the same quarter in 2016 was primarily a result of the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment that began in October 2016. This decrease in electricity generation was partially offset by an increase in generation from the Pickering GS, primarily due to a decrease in the number of planned outage days.

The higher electricity generation from the Regulated – Hydroelectric generating segment in the first quarter of 2017 was primarily due to a lower volume of water spilled as a result of less prevalent SBG conditions, largely offset by the impact of lower water flows on the eastern and northeastern Ontario river systems, compared to the first quarter in 2016.

The lower electricity generation from the Contracted Generation Portfolio segment was primarily the result of lower water flows on the northeastern Ontario river systems.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. For the first quarter of 2017, Ontario's electricity demand as reported by the IESO was 34.3 TWh compared to 35.2 TWh for the same quarter in 2016, which excludes electricity exports out of the province.

Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric, other grid-connected renewable resources and nuclear stations. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. While baseload generation supply surplus in Ontario was less prevalent in the first quarter of 2017 compared to the same period in 2016, OPG lost 0.8 TWh of hydroelectric generation due to SBG conditions in the first quarter of 2017. OPG lost 1.7 TWh of hydroelectric generation due to SBG conditions during the first quarter of 2016. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions during these periods was offset by the impact of a regulatory variance account authorized by the OEB. OPG did not forgo any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The same base regulated prices for electricity generated by these segments, authorized by the OEB effective November 1, 2014, were in effect during the first quarter of 2017 as in 2016. These prices will remain in effect until such time as the OEB approves new regulated prices based on OPG's current application, discussed under the heading, *Recent Developments – OPG's Application for New Regulated Prices.* The base regulated prices established in 2014 are discussed in OPG's 2016 annual MD&A in the section, *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment was 5.8 cents per kilowatt hour (¢/kWh) during the first quarter of 2017, compared to 7.0 ¢/kWh during the same quarter in 2016. The decrease in the average sales price was primarily due to the expiry, on December 31, 2016, of the OEB-authorized nuclear rate rider of $10.84 per megawatt hour (MWh) for the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment was 4.2 ¢/kWh during the first quarter of 2017, compared to 4.4 ¢/kWh during the same quarter in 2016. The decrease in average sales price was primarily due to the expiry, on December 31, 2016, of a regulated hydroelectric rate rider of $3.19/MWh for the recovery of variance and deferral account balances. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years. As such, the year-over-year changes in revenue from the rate riders were largely offset by changes in amortization expense related to regulatory account balances. There were no rate riders in effect during the first quarter of 2017 for either nuclear or regulated hydroelectric generation, pending the outcome of OPG's current application with the OEB for new regulated prices, including rate riders.

Cash Flow from Operations

Cash flow provided by operating activities for the three months ended March 31, 2017 was $118 million, compared to $366 million for the same period in 2016. As expected, the decrease in cash flow provided by operating activities in the first quarter of 2017, compared to the same quarter in 2016, was primarily due to lower generation revenue receipts reflecting lower generation from the Regulated – Nuclear Generation segment as a result of the ongoing refurbishment of Unit 2 at the Darlington GS and the expiry, on December 31, 2016, of the OEB-authorized rate riders for nuclear and regulated hydroelectric generation. The decrease in cash flow in the first quarter of 2017 was also due to higher income tax installments and higher OM&A expenditures, compared to the same quarter in 2016. The decrease in cash flow provided by operating activities was partially offset by lower pension plan contributions reflecting an updated actuarial valuation of the OPG registered pension plan filed with the Financial Services Commission of Ontario in September 2016, and lower contributions to the Used Fuel Segregated Fund and the Decommissioning Segregated Fund. Both the Used Fuel Segregated Fund and the Decommissioning Segregated Fund were determined to be fully funded based on an updated estimate of OPG's nuclear waste management and nuclear facilities decommissioning obligations pursuant to a reference plan approved by the Province, for years 2017 to 2021, under the Ontario Nuclear Funds Agreement (ONFA), effective January 1, 2017. Pursuant to the ONFA, the reference plan is required to be updated at least once every five years. Contributions to either or both of the Nuclear Segregated Funds may be required in the future should the funds be in an underfunded position at the time of the next ONFA reference plan update. The year-over-year decrease in cash flow also was partially offset by the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to a period in 2015. The lease agreement for the Bruce nuclear generating stations giving rise to this rebate was amended in late 2015 to eliminate this provision going forward.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. FFO Adjusted Interest Coverage was 5.1 times for the 12 month-periods ended March 31, 2017 and December 31, 2016. FFO Adjusted Interest Coverage in 2017 reflected a year-over-year decrease in FFO before interest due to lower cash flow provided by operating activities, offset by the

impact of a lower adjusted interest expense due to a decrease in the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets.

The decrease in the excess of interest on pension and OPEB benefit obligations over expected return on pension plan assets in 2017 was primarily due to the change in the method used to estimate the interest cost and current service cost component of pension and OPEB costs. Effective January 1, 2017, OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs in the first quarter of 2017 was largely offset by the impact of OEB-authorized variance and deferral accounts. Further details on the full yield curve approach can be found in the 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Pension and Other Post-Employment Benefits*. **[UPDATE]**

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for the 12 months ended March 31, 2017 was 3.5 percent, compared to 4.2 percent for the 12 months ended December 31, 2016. The decrease was primarily due to lower net income attributable to the Shareholder. As expected, reduced revenue due to the continuation of existing base regulated prices that do not reflect the lower nuclear generation as a result of the Unit 2 refurbishment outage at the Darlington GS negatively impacted net income and ROE Excluding AOCI for the 12-month period ended March 31, 2017. The continuation of existing base regulated prices until such time as new regulated prices are approved by the OEB later in 2017 will negatively affect OPG's ROE Excluding AOCI.

Enterprise Total Generating Cost per MWh

The Enterprise TGC per MWh was $47.86 for the three months ended March 31, 2017, compared to $41.82 for the same period in 2016. The increase in Enterprise TGC per MWh for the three months ended March 31, 2017, compared to the same period in 2016, was expected and primarily due to the decrease in electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $69.87 for the three months ended March 31, 2017, compared to $56.37 for the same period in 2016. The increase in Nuclear TGC per MWh for the three months ended March 31, 2017, compared to the same period in 2016, was expected and primarily due to the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $19.79 for the three months ended March 31, 2017, which was comparable to $19.94 for the same period in 2016.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow provided by operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016 and de-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017. Islanding of Unit 2, the physical separation of the unit under refurbishment from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second segment commenced immediately following the islanding of Unit 2. The second segment continues preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening the reactor air lock doors, installation of shielding, setting up specialized tooling and equipment, and commencing the disassembly and removal of reactor components. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. The project is tracking on schedule and budget.

The Darlington Refurbishment project is discussed further in the section, *Core Business, Strategy, and Outlook* under the heading, *Project Excellence.*

Peter Sutherland Sr. Hydroelectric GS

In March 2017, the project to construct the 28 MW two-unit Peter Sutherland Sr. hydroelectric GS successfully completed final testing and commissioning of the turbine and generator units and both units were declared substantially complete. On March 31, 2017, the project received a permit from the Ministry of Environment and Climate Change (MOECC) to take water for operations to allow the station to operate commercially. This in-service date is well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. The project is expected to close below the approved budget of $300 million, following the completion of site remediation, camp dismantling, demobilization and other project close-out activities.

The project was constructed in partnership with the Coral Rapids Power Corporation (CRP), a corporation wholly owned by the Taykwa Tagamou Nation, through the PSS Generating Station Limited Partnership (PSS). Under the partnership agreement, as the unit is placed in-service, the CRP may acquire up to a 33 percent partnership interest through its investment in PSS. In April 2017, the CRP acquired a 33 percent interest in PSS.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017, on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. For the hydroelectric facilities, the application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021, based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production. The application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment through rate riders that were in effect to December 31, 2016. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed further in the section, *Balance Sheet Highlights* under the heading, *Pension & OPEB Cash Versus Accrual Differential Deferral Account*.

Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application submission in May 2016 incorporated a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved annual nuclear revenue requirements during the period from January 1, 2017 to the end of the Darlington Refurbishment project in a deferral account for future collection.

In March 2017, the Province amended *Ontario Regulation 53/05* to require that the portion of the approved annual nuclear revenue requirements deferred for future collection under rate smoothing be determined with a view of making more stable year-over-year changes in OPG's weighted-average nuclear and hydroelectric regulated prices, including rate riders. Previously, the regulation required that the deferred amounts be determined with a view of making more stable year-over-year changes in OPG's nuclear regulated prices only, excluding rate riders. The amendment is intended to make more predictable the impact on customer bills resulting from changes in OPG's overall regulated prices, reducing the average year-over-year change in customer bills over the term of OPG's current application. Following the amendment, in March 2017, OPG submitted a modified rate smoothing proposal to the OEB to reflect the new requirements of the regulation, as part of the application for new regulated prices. OPG expects to recognize amounts deferred under rate smoothing as income in the period to which the underlying approved revenue requirements relate.

In March 2017, the OEB approved a settlement agreement reached by OPG and intervenors on a limited set of issues in OPG's application (Settlement Agreement). Among the settled issues, the agreement provided for the continuation of all applicable existing variance and deferral accounts and accepted a number of variance and deferral account balances for recovery, as requested in OPG's application. In addition, the Settlement Agreement accepted OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017 to 2021 period. The Settlement Agreement did not impact OPG's financial results for the three months ended March 31, 2017.

The OEB conducted 23 public oral hearing days on the unsettled issues in OPG's application between February 27, 2017 and April 13, 2017, as part of an overall public proceeding on the application. Final arguments in the proceeding are scheduled to be completed by June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected in the second half of 2017.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills for all residential consumers in the province by 25 percent on average ~~for all residential consumers in the province~~. Approximately 500,000 small businesses and farms would also benefit. As part of the Plan, the Province has proposed refinancing a portion of the Global Adjustment costs over a longer time period for Regulated Price Plan eligible customers (e.g., residential, farm, small businesses). On May [11], 2017, the Province introduced legislation that, if passed, will enable the IESO and OPG to work together to implement this financing as requested by the Province. Any final agreement to implement OPG's involvement with the Plan ~~is~~ would be subject to approval by OPG's Board of Directors, which has established a Special Committee to provide oversight on behalf of the Board of Directors. **[MONITOR]**

Shareholder Declaration and Shareholder Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution requiring the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. A purchase and sale agreement was executed in December 2016, and the sale was completed in April 2017. An after-tax gain on sale of approximately $280 million **[MONITOR]** was recognized upon completion of the transaction in the second quarter of 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the act, into the Province's Consolidated Revenue Fund. OPG is working with the

Ministry of Finance to finalize the prescribed costs incurred in connection with the disposition of the sale and the designated proceeds that will be transferred ~~in~~to the Trillium Trust ~~Fund~~.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. OPG is in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund. **[MONITOR]**

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business, and are reported under the Services, Trading, and Other Non-Generation segment.

CORE BUSINESS, STRATEGY, AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

The following sections provide an update to OPG's disclosures in the 2016 annual MD&A related to its four key strategic imperatives – operational excellence, project excellence, financial strength, and social licence. A detailed discussion of these strategic imperatives is included in the 2016 annual MD&A in the section, *Core Business, Strategy, and Outlook*.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Public Safety

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for individuals living or working near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (µSv), which is an international unit of radiation dose measurement. For 2016, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.6 µSv and 1.5 µSv, respectively, which is approximately 0.1 percent and 0.2 percent of the annual legal limit of 1,000 µSv, respectively.

Electricity Generation Production and Reliability

- As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will remain fit for service for operation to 2024. OPG is also nearing completion of component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently set at the end of 2020, are expected to be reassessed, after the required fuel channel maintenance strategies in support of extended operations have been implemented on the initial units, taking into account the requirement for the Canadian Nuclear Safety Commission's (CNSC) approval, discussed below.
- OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30,

2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. Work on the Pickering licence renewal application is proceeding and is expected to be filed August 31, 2017 for the CNSC's approval in 2018. The requested licence renewal will span the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. OPG will submit a Periodic Safety Review, Global Assessment Report, and Integrated Implementation Plan (IIP) for the station to the CNSC as part of the licence renewal.

- In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications were presented to the CNSC at public hearings in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018. Renewal decisions on the WWMF and PWMF licences are expected to be issued prior to expiry of the respective current licences. **[MONITOR]**
- During the first quarter of 2017, OPG completed the reservoir refurbishment at Sir Adam Beck Pump GS and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.
- Work continues on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 1 of the Sir Adam Beck Pump GS, and the overhaul and upgrade of Unit 1 of the Harmon GS.
- Work continues work on the replacement of the Station Service System at R.H. Saunders GS and Synchronizing Breakers at Lennox GS.
- OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS.
- Later in 2017, OPG will be starting definition phase activities, including engineering studies, condition assessments, and stakeholder engagement, as part of a Water Conveyance System project to restore structural integrity, flow capacity and ensure safe and reliable operations, of the Sir Adam Beck 1 GS canal and associated structures, for approximately the next 50 years.

As part of streamlining OPG's hydroelectric operations, OPG will be reducing from five regional hydroelectric offices to four by integrating the Central Operations group into its existing operations. This will result in operational efficiency improvements. Currently, work is in progress to plan and implement this change.

OPG continues to progress on its plan to remove site structures from Nanticoke GS. Project milestones in 2017 include the elimination of coal yard equipment and structures and removal of ash silos, and the selection of a contractor to remove the stacks, the powerhouse, interior equipment and supporting site structures.

Environmental Performance

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. OPG has an internal program to meet its GHG emissions compliance obligations. With OPG's low GHG emitting fleet, these obligations do not have a material financial impact on the Company. The Ontario MOECC held the first quarterly auction of GHG allowances on March 22, 2017.

Disclosures related to the Company's environmental policy and environmental risks can be found in OPG's 2016 annual MD&A.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. The status updates for OPG's major projects as of March 31, 2017 are outlined in the following table with further details below.

Project	Capital expenditures		Approved budget	Expected in-service date	Current status
(millions of dollars)	Year-to-date	Life-to-date			
Darlington Refurbishment	306	3,491	12,800 [1]	First unit - 2020 Last unit - 2026	Islanding of Unit 2 was completed in April 2017. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies is in progress. The project is tracking on schedule and on budget.
Peter Sutherland Sr. Hydroelectric GS	22	258	300	2017	The station was placed in-service on March 31, 2017, ahead of the originally planned schedule, and is expected to close below the approved budget. Refer to the section, *Core Business, Strategy, and Outlook* under the heading, *Recent Developments* for further details.
Sir Adam Beck Pump GS Reservoir Refurbishment	2	48	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget.
Ranney Falls Hydroelectric GS	2	5	77	2019	Project definition work has been completed and site clearing and mobilization work has commenced.
Nanticoke Solar Facility	1	2		2019	Project definition work is in progress and construction is planned to commence as early as in the fourth quarter of 2017.
Deep Geologic Repository for low and intermediate level radioactive waste (L&ILW)	2 [2]	197 [2]			Additional information requested by the Canadian Environmental Assessment Agency (CEAA) based on their review of the material submitted by OPG in December 2016 is being prepared and will be submitted by May 26, 2017.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, ahead of schedule, with a total of 480 fuel channels de-fuelled. Islanding of Unit 2, the physical separation of the refurbishment unit from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second segment commenced immediately following the islanding of the unit. The second segment continues the preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening the reactor air lock doors, installation of shielding, setting up specialized tooling and equipment, and commencing the disassembly and removal of reactor components. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. The project is tracking on schedule and budget.

A number of pre-requisite projects in support of the execution phase of the project, including construction of facilities, infrastructure upgrades and installation of safety enhancements, have been completed. This includes the Containment Filtered Venting System and the Third Emergency Power Generator safety enhancement projects that were placed in-service in April 2017 **[MONITOR]**. Completion of the Heavy Water Storage and Drum Handling Facility has been delayed due to challenges with construction. Remediation measures are in progress **[UPDATE]**. This delay will not impact the overall Darlington Refurbishment project schedule, as the Heavy Water Storage and Drum Handling Facility is not on the critical path. The remaining projects are tracking for completion within the overall refurbishment execution schedule. **[UPDATE]**

In addition to the de-fuelling and islanding of Unit 2 completed, the following other key project activities are continuing in 2017:

- Completion of preparation activities to support Retube and Feeder Replacement work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Re-tube Waste Processing Building Facility.
- Continued construction of the Heavy Water Storage and Drum Handling.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of Unit 3, and is entering into associated commitments to procure major components that require long-lead times. As of March 31, 2017, $43 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The work on the project included installation of a new partial liner and construction of a grout

curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

In the first quarter of 2017, OPG completed the contractor selection process and awarded contracts for the construction of a 10 MW single-unit powerhouse on the existing Ranney Falls GS site, as part of the Regulated – Hydroelectric segment. The new unit will replace an existing unit that reached its end of life in 2014. The civil contractor has begun site clearing and mobilization. The expected in-service date is in the fourth quarter of 2019 with a budget of $77 million.

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands under a Large Renewable Procurement contract with the IESO, through Nanticoke Solar LP, is planned to commence as early as in the fourth quarter of 2017. In the first quarter of 2017, OPG purchased SunEdison Canadian Construction LP's (SECCLP) interests in Nanticoke Solar LP, originally a partnership between OPG, SECCLP and a subsidiary of the Six Nations of the Grand River Development Corporation, and is working to obtain approvals and permits required to enable the commencement of construction. The facility is expected to be completed in the first quarter of 2019.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the Environmental Assessment (EA) to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and potential for cumulative environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization were to be located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following CEAA's review of OPG's submission and a period of public comment, the CEAA has requested additional information from OPG. OPG has reviewed the information request and will respond to the CEAA by May 26, 2017. An EA Decision Statement by the Minister is expected by the fourth quarter of 2017. Based on the information submitted to the Minister in December 2016, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

OPG anticipates a site preparation and construction licence may be issued in the first half of 2018, if the EA Decision Statement supports licensing. OPG has initiated work to ensure all licensing-related submissions will be completed and ready to be submitted to the CNSC for an expeditious license review. In addition, work has been initiated to seek OPG's Board of Directors' approval to proceed to the definition phase work in 2018. This includes completion of engineering design activities. OPG also continues its engagement with the Saugeen Ojibway Nations toward

securing community support for the L&ILW DGR. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction. **[CONFIRM]**

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application incorporates a rate smoothing proposal, as amended in March 2017. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impacts on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the nuclear rate base, effective in early 2020, to reflect the planned placement in service of approximately $4.8 billion of capital expenditures upon the scheduled return to service of Unit 2 at the Darlington GS as part of the Darlington Refurbishment project and, effective in 2017, an increase in the deemed capital structure applied to the total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt reflected in the existing regulated prices. If approved, this would improve OPG's return on Shareholder's investment.

A public oral hearing on OPG's application commenced in late February 2017 and was completed in April 2017, with final arguments scheduled to be completed by June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected in the second half of 2017. Further details on OPG's rate application can be found in the section, *Highlights* under the heading, *Recent Developments*.

For generation assets that do not form part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements. In line with this strategy, virtually all of OPG's non-regulated operating facilities and assets under construction are subject to long-term Energy Supply Agreements (ESAs) or other long-term contracts with the IESO. This includes the Peter Sutherland Sr. GS, which will begin earning contracted revenue under its hydroelectric ESA once the IESO confirms commercial operation, but effective on March 31, 2017. The ESA expires in 2067. **[CONFIRM]**

Ensure Availability of Cost Effective Funding

In April 2017, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook.

Social Licence

As the largest electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish these relationships based on

a foundation of respect for the languages, customs, and political, social and cultural organizations of the Indigenous communities. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, such as the construction of the Peter Sutherland Sr. GS in partnership with Taykwa Tagamou Nation and the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River. In March 2017, the Peter Sutherland Sr. GS was placed in-service and, in April 2017, the Taykwa Tagamou Nation acquired a 33 percent interest in PSS under the partnership agreement. OPG also continues to engage with Indigenous communities regarding the Company's regulated nuclear waste operations, through regularly scheduled meetings and ongoing dialogue in connection with OPG's proposed L&ILW DGR, and the re-licensing of the PWMF and the WWMF.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of costs and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's current application for new regulated prices is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017 in its decision on the application. This would allow OPG to recover the difference between the approved new regulated prices and the existing regulated prices for the period between January 1, 2017 and the implementation date of the new prices based on the OEB's order.

The continuation of existing regulated prices until the OEB's decision on OPG's application is issued is expected to continue to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI during 2017, compared to 2016. In large part, this is due to the year-over-year reduction in nuclear electricity generation resulting from the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined in 2014 based on a higher production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision issuance, could have a significant impact on OPG's financial results during 2017. OPG's application for new regulated prices is further discussed in the section, *Highlights* under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. As expected, combined with the expiry of rate riders in effect to the end of 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment outage, this will result in lower cash flow from operations and a lower FFO Adjusted Interest Coverage ratio in 2017, compared to 2016. The continuation of existing base regulated prices until such time as new prices are determined and implemented by the OEB also is expected to contribute to lower cash flow from operations in 2017. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements.

Lower nuclear generation due to the Darlington refurbishment outages will continue to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Variability in sustaining capital investment expenditures, including major sustaining projects for the hydroelectric operations, also will impact the Enterprise TGC in future periods.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, these variance accounts include those related to the revenue impact of variability in water flows and forgone production due to SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Considering the impact of the variance and deferral accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow from operations going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric and other development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI. In the short term, these factors can be volatile and cause fluctuations in the Company's income. This volatility is partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account and, as discussed below, the funded status of the two segregated funds.

As OPG does not have the right to withdraw surplus amounts from the Nuclear Segregated Funds when the segregated funds are overfunded relative to the life cycle funding liability pursuant an approved ONFA Reference Plan, OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle funding liability per the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus in the Decommissioning Segregated Fund that it may direct to the Used Fuel Fund in accordance with the ONFA, up to the amount, if any, by which the Used Fuel Fund is underfunded. This reduces the volatility of earnings on the Nuclear Segregated Funds reflected in net income when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at March 31, 2017, the Decommissioning Segregated Fund was overfunded by approximately 24 percent, and the Used Fuel Segregated Fund was marginally overfunded, by less than one percent, based on the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**652**	926
Fuel expense	**68**	81
Gross margin	**584**	845
Operations, maintenance and administration	**589**	563
Depreciation and amortization	**107**	230
Property taxes	**6**	7
(Loss) income before other losses, interest, and income taxes	**(118)**	45
Other gains	**-**	(1)
(Loss) income before interest and income taxes	**(118)**	46

Segment earnings decreased by $164 million during the first quarter of 2017, compared to the same quarter in 2016. The decrease in earnings was expected and primarily due to reduced revenue from the nuclear base regulated price of approximately $134 million, partly offset by the largely associated decrease in fuel expense of $13 million, reflecting lower electricity generation of 2.3 TWh and the continuation of the existing nuclear base regulated price set by the OEB in 2014. The existing regulated price continues to be in effect pending the OEB's decision on OPG's application for new regulated prices, proposed to be effective on January 1, 2017. The lower nuclear generation was primarily due to the ongoing Unit 2 refurbishment outage at the Darlington GS that began October 2016. The existing regulated price does not reflect the lower generation as a result of the refurbishment outage, as that price were set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume based on the 2014 and 2015 outage profile that did not include a refurbishment outage. The year-over-year reduction in nuclear electricity generation was partially offset by the impact of the decreased number of planned outage days at the Pickering GS in the first quarter of 2017, compared to the same quarter in 2016.

The increase in OM&A expenses of $26 million in the first quarter of 2017, compared to the same quarter in 2016, also contributed to lower segment earnings. The increase in OM&A expenses reflected use of temporary staff and planned hiring to fill vacant positions due to attrition, and higher material costs related to maintenance work at the nuclear stations.

The expiry of an OEB-authorized nuclear rate rider on December 31, 2016 contributed to the decrease in segment revenue in the first quarter of 2017, compared to the same quarter in 2016. As rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this decrease in revenue was largely offset by a decrease in amortization expense related to regulatory account balances. A new rate rider has been requested in OPG's application with the OEB for new regulated prices effective January 1, 2017.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2017 and 2016 were as follows:

	Three Months Ended March 31 2017	2016
Unit Capability Factor *(%)* [1]		
Darlington GS	**85.3**	97.2
Pickering GS	**78.5**	72.8

[1] The nuclear Unit Capability Factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS decreased in the first quarter of 2017, compared to the same quarter in 2016, primarily due to a higher number of unplanned outage days at the station in the first quarter of 2017.

The increase in the Unit Capability Factor at the Pickering GS in the first quarter of 2017, compared to the same quarter in 2016, was primarily due to a lower number of planned outage days at the station in the first quarter of 2017.

Regulated – Nuclear Waste Management Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**27**	34
Operations, maintenance and administration	**29**	36
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**234**	228
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Loss before interest and income taxes	**(47)**	(83)

Earnings from the segment improved by $36 million in the first quarter of 2017 compared to the same quarter in 2016. The year-over-year improvement in earnings was primarily due to higher earnings from the Nuclear Segregated Funds.

Higher earnings on the Used Fuel Segregated Fund, net of the impact of the Bruce Lease Net Revenue Variance Account, were the primary reasons for the higher Nuclear Segregated Fund earnings during the first quarter of 2017, compared to the same period in 2016. As the Used Fuel Segregated Fund was overfunded as at December 31, 2016 and March 31, 2017, the earnings on the fund recorded in income during the first quarter of 2017 were based at the growth rate of the present-value used fuel life cycle funding liability per the 2017 ONFA Reference Plan. During the first quarter of 2016, the Used Fuel Segregated Fund was underfunded based on the ONFA reference plan then in effect and therefore earnings on the fund reflected the CPI-adjusted rate of return guaranteed by the Province under the ONFA for funding related to the initial 2.23 million used fuel bundles and market returns on the portion of the fund not guaranteed by the Province.

As of December 31, 2016, OPG recorded a decrease of approximately $1,570 million to the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities) and associated asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to reflect the comprehensive update of the underlying assumptions and baseline cost estimates for these liabilities carried out as part of the 2017 ONFA Reference Plan update process. The resulting year-over-year decreases in accretion on fixed asset removal and nuclear waste management liabilities recorded in the Regulated – Nuclear Waste Management segment and depreciation and fuel expenses recorded in the Regulated – Nuclear Generation segment during the first quarter of 2017, compared to the same quarter in 2016, were largely offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account authorized by the OEB. Further details on the change in the estimate of the Nuclear Liabilities as of December 31, 2016 are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Asset Retirement Obligation*.

Under the current OEB-approved cost recovery methodology, the changes in expenses associated with the year-end 2016 adjustment to the Nuclear Liabilities are not expected to materially affect OPG's income during 2017, as the associated impact on expenses is expected to continue to be largely offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently to be offset by the impact of the new regulated prices.

Regulated – Hydroelectric Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue [1]	**363**	385
Fuel expense	**73**	79
Gross margin	**290**	306
Operations, maintenance and administration	**76**	76
Depreciation and amortization	**34**	56
Income before other gains, interest and income taxes	**180**	174
Other gains	**-**	(22)
Income before interest and income taxes	**180**	196

[1] During the three months ended March 31, the Regulated – Hydroelectric segment revenue included incentive payments of $8 million in 2017 and $1 million in 2016 related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $16 million during the first quarter of 2017, compared to the same period in 2016, was primarily due to a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to a motion by OPG. The decrease in income was partially offset by higher hydroelectric incentive mechanism payments in the first quarter of 2017.

The decrease in revenue was largely due to the expiry of an OEB-authorized rate rider on December 31, 2016. As the rider allowed for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, the resulting reduction in revenue was largely offset by lower amortization expense related to the regulatory account balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	Three Months Ended March 31 2017	2016
Hydroelectric Availability *(%)*	**89.5**	94.8

The Hydroelectric Availability decreased in the first quarter of 2017, compared to the same period in 2016, primarily due to the reservoir refurbishment project at the Sir Adam Beck Pump GS and a higher number of unplanned outage days for the regulated hydroelectric stations.

Contracted Generation Portfolio Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**143**	145
Fuel expense	**14**	12
Gross margin	**129**	133
Operations, maintenance and administration	**39**	40
Depreciation and amortization	**19**	19
Accretion on fixed asset removal liabilities	**2**	2
Property taxes	**2**	2
Income from investments subject to significant influence	**(10)**	(8)
Income before interest and income taxes	**77**	78

Income before interest and income taxes decreased by $1 million during the first quarter of 2017, compared to the same period in 2016. The decrease primarily resulted from lower revenues from the Lower Mattagami River generating stations. The decrease was partially offset by higher gross margin from the Lennox GS, which was primarily due to increased market demand.

The Hydroelectric Availability and the Thermal Equivalent Forced Outage Rate (EFOR) for the Contracted Generation Portfolio segment were as follows:

	Three Months Ended March 31 2017	2016
Hydroelectric Availability *(%)*	**83.6**	83.9
Thermal EFOR *(%)*	**12.6**	0.9

The Hydroelectric Availability in the first quarter of 2017, was comparable to the same period in 2016. The higher thermal EFOR in the first quarter of 2017, compared to the same period in 2016, was primarily due to a higher number of unplanned outage days at a Lennox GS unit as a result of a transmission outage.

Services, Trading, and Other Non-Generation Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**17**	21
Gross margin	**17**	21
Operations, maintenance and administration	**1**	4
Depreciation and amortization	**7**	7
Accretion on fixed asset removal liabilities	**2**	2
Property taxes	**3**	3
Loss before other losses, interest, and income taxes	**4**	5
Other gains	**(3)**	-
Income before interest and income taxes	**7**	5

Segment earnings increased by $2 million during the first quarter of 2017, compared to the same quarter in 2016, due to lower OM&A expenses reflecting the decision, in the fourth quarter of 2016, to proceed with the decommissioning of the Lambton GS, and dividend income from OPG's investment in Hydro One Limited (Hydro One) shares acquired in April 2016. OPG acquired the shares for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union and The

Society of Energy Professionals. The increase in segment earnings was partially offset by lower revenues from the Company's electricity trading activities in the first quarter of 2017.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies, to undertake major projects, to fund long-term obligations such as contributions to the pension fund and the Nuclear Segregated Funds, to make payments under the OPEB plans, to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, and to service and repay long-term debt.

Changes in cash and cash equivalents for the three months ended March 31, 2017 and 2016 were as follows:

	Three Months Ended March 31	
(millions of dollars) (unaudited)	**2017**	**2016**
Cash and cash equivalents, beginning of period	**186**	464
Cash flow provided by operating activities	**118**	366
Cash flow used in investing activities	**(363)**	(310)
Cash flow used in financing activities	**279**	20
Net increase	**34**	76
Cash and cash equivalents, end of period	**220**	540

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details in the section, *Highlights* under the heading, *Overview of Results*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities during the first quarter of 2017 increased by $53 million compared to the same quarter in 2016. The increase was primarily due to higher expenditures on the Darlington Refurbishment project, offset by the staggered maturity of a structured deposit note entered in 2015 in support of the Peter Sutherland Sr. GS project. The principal amount of the deposit note that matured in the first quarter of 2017 was higher than in the same quarter in 2016. The final maturity date of the deposit note was in April 2017.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG expects to renew and extend the expiry date of both tranches from May 2021 to May 2022. There were no amounts outstanding under the bank credit facility as at March 31, 2017.

There was $133 million of commercial paper outstanding under OPG's commercial paper program as at March 31, 2017.

As at March 31, 2017, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at March 31, 2017, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust, expiring on November 30, 2018. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. As at March 31, 2017, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

As at March 31, 2017, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at March 31, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at March 31, 2017. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. As at March 31, 2017, there were outstanding long-term borrowings of $200 million under this credit facility.

As at March 31, 2017, OPG's long-term debt outstanding was $5,684 million, including $1,328 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent.

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's unaudited interim consolidated financial position using selected balance sheet data:

(millions of dollars) (unaudited)	As At March 31 2017	As At December 31 2016
Property, plant and equipment – net	**20,248**	19,998
The increase was primarily due to capital expenditures on the Darlington Refurbishment project, partially offset by depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**16,157**	15,984
The increase was primarily due to earnings on the Nuclear Segregated Funds, partially offset by reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Short-term debt	**135**	2
The increase was due to commercial paper issued under OPG's commercial paper program.		
Long-term debt *(current and non-current portions)*	**5,670**	5,520
The increase was primarily due to the issuance of senior notes payable to the OEFC totalling $200 million in February 2017.		
Fixed asset removal and nuclear waste management liabilities	**19,683**	19,484
The increase was primarily as a result of accretion expense representing the increase in the present value liabilities due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		

Pension & OPEB Cash Versus Accrual Differential Deferral Account

In setting OPG's regulated prices effective November 1, 2014, the OEB limited the recovery of the regulated portion of OPG's pension and OPEB costs to the Company's cash expenditures for its pension and OPEB plans. Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account, which records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and OPG's corresponding actual cash expenditures for these plans. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The Company has recognized the amount set aside in the Pension & OPEB Cash Versus Accrual Differential Deferral account as a regulatory asset. As at March 31, 2017, the regulatory asset balance was $517 million, which represents the excess of pension and OPEB costs calculated using the accrual basis in accordance with US GAAP over the corresponding cash expenditures for the period from November 1, 2014 to March 31, 2017.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and OPG's corresponding cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the OEB's consultation process. If, as part of the above consultation process or another proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory asset for the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's interim consolidated financial statements or are recorded in the Company's interim consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies are outlined in Note 3 to the audited consolidated financial statements as at and for the year ended December 31, 2016. A discussion of recent accounting pronouncements is included in Note 2 to OPG's unaudited interim consolidated financial statements as at and for the three months ended March 31, 2017 under the heading, *Significant Accounting Policies and Estimates*. Disclosure regarding OPG's critical accounting policies is included in OPG's 2016 annual MD&A.

RISK MANAGEMENT

The following provides an update to the discussion of the Company's risks and risk management activities included in OPG's 2016 annual MD&A. As such, the disclosure in this section should be read in conjunction with the *Risk Management* section included in the annual MD&A.

Financial Risks

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017 [1]	2018	2019
Estimated fuel requirements hedged [2]	75%	74%	63%

[1] Based on actual fuel requirements hedged for the three months ended March 31, 2017 and forecast for the remainder of the year.

[2] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to, US dollars. To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at March 31, 2017, OPG had no foreign exchange contracts outstanding.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. For the first quarter of 2017, the VaR utilization ranged between $0.1 million and $0.3 million.

Credit

Deterioration in energy markets counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

OPG manages its exposure to suppliers or counterparties by evaluating their financial condition and negotiating appropriate collateral or other forms of security. OPG's credit exposure relating to energy markets transactions as at March 31, 2017 was $361 million, including $348 million to the IESO. Management considers the Company's risk exposure relating to electricity sales through the IESO-administered spot market to be low as the IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market. Of the $13 million remaining exposure as at March 31, 2017, over 95 percent was related to investment grade counterparties.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The

transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions are summarized below:

	Three Months Ended March 31			
	2017		2016	
(millions of dollars) (unaudited)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**4**	**-**	2	-
Services	**1**	**5**	1	5
Dividends	**2**			
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**163**	-	(177)
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**217**	-	(159)
Hydroelectric gross revenue charge	**-**	**28**	-	31
ONFA guarantee fee	**-**	**2**	-	2
OEFC				
Gross revenue charge	**-**	**38**	-	37
Interest expense on long-term notes	**-**	**41**	-	42
Income taxes, net of investment tax credits	**-**	**12**	-	32
IESO				
Electricity related revenue	**1,073**	**6**	1,364	10
	1,080	**512**	1,367	(177)

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at March 31, 2017 and December 31, 2016, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,795 million and $3,415 million, respectively. The details of accounting for the Nuclear Funds are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars) (unaudited)	**March 31 2017**	**December 31 2016**
Receivables from related parties		
Hydro One	**1**	1
IESO	**348**	421
OEFC	**5**	1
PEC	**4**	4
Province of Ontario	**4**	2
Available-for-sale securities		
Hydro One shares	**218**	212
Accounts payable and accrued charges		
Hydro One	**-**	-
OEFC	**45**	61
Province of Ontario	**7**	2
IESO	**2**	2
Long-term debt (including current portion)		
Notes payable to OEFC	**3,445**	3,295

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at March 31, 2017, the Nuclear Segregated Funds and the registered pension fund held $1,650 million and $237 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

The Company maintains a comprehensive system of policies, procedures, and processes that represents its framework for internal controls over financial reporting and for its disclosure controls and procedures (together, ICOFR). There were no changes in the Company's internal control system during the current interim period that has or is reasonably likely to have a material impact to the ICOFR.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected financial information from OPG's unaudited interim consolidated financial statements for each of the eight most recently completed quarters.

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**March 31 2017**	**December 31 2016**	**September 30 2016**	**June 30 2016**
Revenue	**1,176**	**1,388**	**1,400**	**1,387**
Net income (loss)	**68**	**(8)**	**198**	**135**
Less: Net income attributable to non-controlling interest	**4**	**5**	**4**	**3**
Net income (loss) attributable to the Shareholder	**64**	**(13)**	**194**	**132**
Per common share, attributable to the Shareholder *(dollars)*	**$0.25**	**($0.05)**	**$0.76**	**$0.51**

(millions of dollars – except where noted) *(unaudited)*	**March 31 2016**	**December 31 2015**	**September 30 2015**	**June 30 2015**
Revenue	1,478	1,312	1,426	1,383
Net income (loss)	128	(100)	85	193
Less: Net income attributable to non-controlling interest	5	1	5	4
Net income (loss) attributable to the Shareholder	123	(101)	80	189
Per common share, attributable to the Shareholder *(dollars)*	$0.48	($0.39)	$0.31	$0.74

Trends

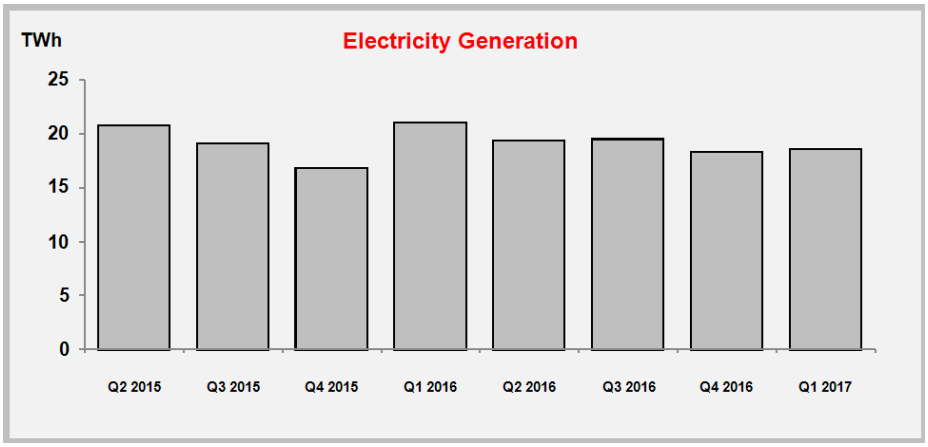
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues have been higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of forgone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

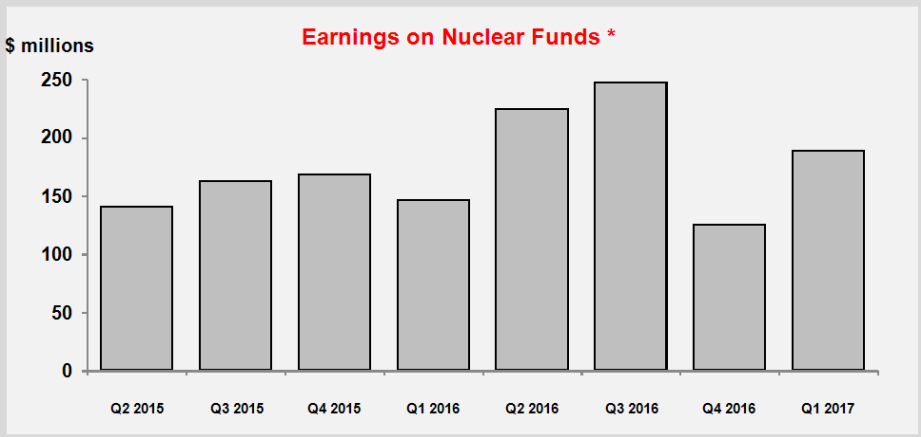
The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington Vacuum Building Outage (VBO), which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

During the fourth quarter of 2016 and the first quarter of 2017, OPG's electricity generation was reduced as a result of the Unit 2 refurbishment outage at the Darlington GS, which began in October 2016 and is expected to continue until early 2020.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items that affected net income in certain quarters above are described in OPG's 2016 annual MD&A in the section, *Quarterly Financial Highlights*.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder, improve cost performance, and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow provided by operating activities, or any other measure in accordance with US GAAP, but as indicators of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE Excluding AOCI is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended March 31 2017	December 31 2016
ROE Excluding AOCI		
Net income attributable to the Shareholder	**377**	436
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,834**	10,442
ROE Excluding AOCI *(percent)*	**3.5**	4.2

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended March 31 2017	December 31 2016
FFO before interest		
Cash flow provided by operating activities	**1,457**	1,705
Add: Interest paid	**268**	269
Less: Interest capitalized to fixed and intangible assets	**(152)**	(141)
Add: Changes to non-cash working capital balances	**(22)**	(68)
FFO before interest	**1,551**	1,765
Adjusted interest expense		
Net interest expense	**106**	120
Add: Interest income	**5**	7
Add: Interest capitalized to fixed and intangible assets	**152**	141
Add: Interest related to regulatory assets and liabilities	**32**	30
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**10**	45
Adjusted interest expense	**305**	343
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.1

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding the Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation from OPG-operated generating stations plus electricity generation forgone due to SBG conditions during the period.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Enterprise TGC		
Total OM&A expenses	**708**	686
Total fuel expense	**155**	172
Total capital expenditures	**408**	320
Less: Darlington Refurbishment capital and OM&A costs	**(309)**	(205)
Less: Other generation development project capital and OM&A costs	**(17)**	(38)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(11)**	18
Less: Nuclear fuel expense for non OPG-operated stations	**(13)**	(17)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**11**	18
Less: OM&A expenses ancillary to electricity generation business	**(5)**	(5)
Other adjustments	**(2)**	(5)
	925	944
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**18.6**	21.0
Adjust for electricity generation forgone due to SBG conditions and OPG's share of electricity generation from co-owned facilities	**0.7**	1.6
	19.3	22.6
Enterprise TGC per MWh *($/MWh)* [1]	**47.86**	**41.82**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**589**	563
Regulated – Nuclear Generation fuel expense	**68**	81
Regulated – Nuclear Generation capital expenditures	**366**	249
Less: Darlington Refurbishment capital and OM&A costs	**(309)**	(205)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(2)**	24
Less: Nuclear fuel expense for non OPG-operated stations	**(13)**	(17)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(1)**	(1)
Other adjustments	**-**	(1)
	698	693
Nuclear electricity generation *(TWh)*	**10.0**	12.3
Nuclear TGC per MWh *($/MWh)* [1]	**69.87**	56.37

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation forgone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**76**	76
Regulated – Hydroelectric Generation fuel expense	**73**	79
Contracted Generation Portfolio OM&A expenses	**39**	40
Contracted Generation Portfolio fuel expense	**14**	12
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**37**	59
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(16)**	(37)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(39)**	(37)
Less: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(9)**	(7)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**11**	18
Other adjustments	**(1)**	2
	185	205
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**8.0**	7.9
Contracted Generation Portfolio electricity generation	**0.6**	0.8
Adjust for hydroelectric electricity generation forgone due to SBG conditions and non-hydroelectric electricity generation of the Contracted Generation Portfolio	**0.7**	1.6
	9.3	10.3
Hydroelectric TGC per MWh *($/MWh)*[1]	**19.79**	19.94

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

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From: Francisco Chinchon
To: Ronald Kwan
Cc: Gavin He; Darren Scanlan; John Kim; Bruno Amara
Subject: RE: OPG Q1 2017 Submission to Province
Date: Monday, May 01, 2017 2:45:10 PM
Attachments: Q1 2017 MDA - DRAFT - PROVINCE MAILINGSIFB edit v2.docx

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Hi,

We have a few relatively minor edits, in particular, with respect to the sale of the OPG HQ. Also, note they are updating the figure to $280M after tax.

Thanks,

Francisco

From: Ronald Kwan
Sent: Friday, April 28, 2017 5:06 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Subject: FW: OPG Q1 2017 Submission to Province

Hi,

Please review.

Thanks,
Ron

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: April-28-17 17:04
To: 'Shruti.Talwar@ontario.ca' <Shruti.Talwar@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>
Subject: OPG Q1 2017 Submission to Province

Hi All,

Please find attached OPG's draft Q1 2017 Management's Discussion and Analysis (MD&A) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, May 2nd**.

These documents will be filed with the Ontario Securities Commission on **Friday, May 12th**

following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q1 2017 MD&A:

Highlights	
Recent Developments	MD&A p.9-11
Darlington Refurbishment	MD&A p.9; 13-14
Ontario's Fair Hydro Plan	MD&A p.10
Peter Sutherland Sr. GS project	MD&A p.9, 13

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

2017 FIRST QUARTER REPORT

[DRAFT]

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ONTARIO POWER GENERATION

ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the unaudited interim consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the three months ended March 31, 2017. OPG's unaudited interim consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

For a complete description of OPG's corporate strategies, risk management, corporate governance, and the effect of critical accounting policies and estimates on OPG's results of operations and financial condition, this MD&A should also be read in conjunction with OPG's audited consolidated financial statements, accompanying notes, the Annual Information Form, and the MD&A as at and for the year ended December 31, 2016.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Exemptive Relief for Reporting under US GAAP,* in OPG's 2016 annual MD&A. This MD&A is dated May 12, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy, and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), Total Generating Cost (TGC) and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at March 31, 2017, OPG's electricity generation portfolio had an in-service capacity of 16,205 megawatts (MW). OPG operates two nuclear generating stations, 66 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report. A description of OPG's segments is provided in OPG's 2016 annual MD&A in the section, *Business Segments*.

All of OPG's owned and co-owned generating facilities are located in Ontario. OPG does not operate PEC, Brighton Beach, the Bruce A GS and the Bruce B GS.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of March 31, 2017 and December 31, 2016 was as follows:

(MW)	As at March 31 2017	As at December 31 2016
Regulated – Nuclear Generation [1]	**5,728**	5,728
Regulated – Hydroelectric	**6,421**	6,421
Contracted Generation Portfolio [2]	**4,056**	4,028
Total	**16,205**	16,177

[1] The in-service generating capacity as of March 31, 2017 and December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

During the three months ended March 31, 2017, the total in-service capacity increased by 28 MW. The increase was due to the completion of Peter Sutherland Sr. hydroelectric GS, which was placed in-service on March 31, 2017. The Peter Sutherland Sr. GS is discussed in the section, *Highlights* under the heading, *Recent Developments*.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's unaudited interim consolidated operating results. Significant factors which contributed to OPG's results during the three months ended March 31, 2017, compared to the same period in 2016, are discussed below.

(millions of dollars – except where noted) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**1,176**	1,478
Fuel expense	**155**	172
Gross margin	**1,021**	1,306
Operations, maintenance and administration	**708**	686
Depreciation and amortization	**167**	312
Accretion on fixed asset removal and nuclear waste management liabilities	**238**	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Income from investments subject to significant influence	**(10)**	(8)
Property taxes	**11**	12
	925	1,087
Income before other gains, interest, and income taxes	**96**	219
Other gains	**(3)**	(23)
Income before interest and income taxes	**99**	242
Net interest expense	**19**	33
Income before income taxes	**80**	209
Income tax expense	**12**	81
Net income	**68**	128
Net income attributable to the Shareholder	**64**	123
Net income attributable to non-controlling interest [1]	**4**	5
Electricity production (TWh) [2]	**18.6**	21.0
Cash flow		
Cash flow provided by operating activities	**118**	366

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $64 million for the first quarter of 2017, a decrease of $59 million compared to 2016. Income before interest and income taxes was $99 million for 2017, a decrease of $143 million compared to 2016. The following summarizes the significant factors which contributed to the variance:

Significant factors that reduced income before interest and income taxes:

- As expected, lower revenue from the nuclear base regulated price of approximately $134 million, partially offset by the largely associated decrease in fuel expense of $13 million, reflecting lower electricity generation of 2.3 terawatt hours (TWh) from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. Existing base regulated prices continue to be in effect pending the OEB's decision on OPG's current application for new regulated prices, expected in the second half of 2017. The lower nuclear generation was primarily due to the ongoing

refurbishment of Unit 2 at the Darlington GS since October 2016. The existing base regulated prices were set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. OPG has requested January 1, 2017 as the effective date of the new regulated prices. Further details on OPG's current application for new regulated prices can be found under the heading, *Recent Developments – OPG's Application for New Regulated Prices.*

- Higher operations, maintenance and administration (OM&A) expenses of $22 million, mainly in the Regulated – Nuclear Generation segment, reflecting use of temporary staff and planned hiring to fill vacant positions due to attrition, and higher material costs related to maintenance work at the nuclear stations.
- A gain of $22 million recorded in the first quarter of 2016 to reflect the OEB's decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices.

Significant factors that increased income before interest and income taxes:

- Higher earnings on the nuclear fixed asset removal and nuclear waste management funds (Nuclear Segregated Funds) of $42 million, primarily due to higher earnings on the Used Fuel Segregated Fund
- Higher hydroelectric incentive mechanism revenue of $7 million from the Regulated – Hydroelectric segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts (regulatory accounts) on December 31, 2016 contributed to the decrease in revenue in the first quarter of 2017, compared to the same period in 2016, but was primarily offset by a decrease in the amortization expense related to regulatory account balances. New rate riders have been requested in OPG's application for new regulated prices with the OEB, effective January 1, 2017.

Net interest expense decreased by $14 million in the first quarter of 2017, compared to the same quarter in 2016, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project.

Income tax expense decreased by $69 million in the first quarter of 2017, compared to the same quarter in 2016, primarily due to lower income before income taxes in the first quarter of 2017 and a higher income tax expense in the first quarter of 2016 due to a reduction in regulatory assets related to income taxes.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	Three Months Ended March 31	
	2017	**2016**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**(118)**	46
Regulated – Hydroelectric	**180**	196
Contracted Generation Portfolio	**77**	78
Total electricity generation business segments	**139**	320
Regulated – Nuclear Waste Management	**(47)**	(83)
Services, Trading, and Other Non-Generation	**7**	5
	99	242

Electricity Generation

Electricity generation was as follows:

(TWh)	Three Months Ended March 31 2017	2016
Regulated – Nuclear Generation	**10.0**	12.3
Regulated – Hydroelectric	**8.0**	7.9
Contracted Generation Portfolio [1]	**0.6**	0.8
Total OPG electricity generation	**18.6**	21.0
Total electricity generation by other generators in Ontario [2]	**18.6**	18.9

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the Independent Electricity System Operator (IESO), minus OPG electricity generation.

The lower electricity generation from the Regulated – Nuclear Generation segment in the first quarter of 2017 compared to the same quarter in 2016 was primarily a result of the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment that began in October 2016. This decrease in electricity generation was partially offset by an increase in generation from the Pickering GS, primarily due to a decrease in the number of planned outage days.

The higher electricity generation from the Regulated – Hydroelectric generating segment in the first quarter of 2017 was primarily due to a lower volume of water spilled as a result of less prevalent SBG conditions, largely offset by the impact of lower water flows on the eastern and northeastern Ontario river systems, compared to the first quarter in 2016.

The lower electricity generation from the Contracted Generation Portfolio segment was primarily the result of lower water flows on the northeastern Ontario river systems.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. For the first quarter of 2017, Ontario's electricity demand as reported by the IESO was 34.3 TWh compared to 35.2 TWh for the same quarter in 2016, which excludes electricity exports out of the province.

Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric, other grid-connected renewable resources and nuclear stations. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. While baseload generation supply surplus in Ontario was less prevalent in the first quarter of 2017 compared to the same period in 2016, OPG lost 0.8 TWh of hydroelectric generation due to SBG conditions in the first quarter of 2017. OPG lost 1.7 TWh of hydroelectric generation due to SBG conditions during the first quarter of 2016. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions during these periods was offset by the impact of a regulatory variance account authorized by the OEB. OPG did not forgo any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The same base regulated prices for electricity generated by these segments, authorized by the OEB effective November 1, 2014, were in effect during the first quarter of 2017 as in 2016. These prices will remain in effect until such time as the OEB approves new regulated prices based on OPG's current application, discussed under the heading, *Recent Developments – OPG's Application for New Regulated Prices.* The base regulated prices established in 2014 are discussed in OPG's 2016 annual MD&A in the section, *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment was 5.8 cents per kilowatt hour (¢/kWh) during the first quarter of 2017, compared to 7.0 ¢/kWh during the same quarter in 2016. The decrease in the average sales price was primarily due to the expiry, on December 31, 2016, of the OEB-authorized nuclear rate rider of $10.84 per megawatt hour (MWh) for the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment was 4.2 ¢/kWh during the first quarter of 2017, compared to 4.4 ¢/kWh during the same quarter in 2016. The decrease in average sales price was primarily due to the expiry, on December 31, 2016, of a regulated hydroelectric rate rider of $3.19/MWh for the recovery of variance and deferral account balances. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years. As such, the year-over-year changes in revenue from the rate riders were largely offset by changes in amortization expense related to regulatory account balances. There were no rate riders in effect during the first quarter of 2017 for either nuclear or regulated hydroelectric generation, pending the outcome of OPG's current application with the OEB for new regulated prices, including rate riders.

Cash Flow from Operations

Cash flow provided by operating activities for the three months ended March 31, 2017 was $118 million, compared to $366 million for the same period in 2016. As expected, the decrease in cash flow provided by operating activities in the first quarter of 2017, compared to the same quarter in 2016, was primarily due to lower generation revenue receipts reflecting lower generation from the Regulated – Nuclear Generation segment as a result of the ongoing refurbishment of Unit 2 at the Darlington GS and the expiry, on December 31, 2016, of the OEB-authorized rate riders for nuclear and regulated hydroelectric generation. The decrease in cash flow in the first quarter of 2017 was also due to higher income tax installments and higher OM&A expenditures, compared to the same quarter in 2016. The decrease in cash flow provided by operating activities was partially offset by lower pension plan contributions reflecting an updated actuarial valuation of the OPG registered pension plan filed with the Financial Services Commission of Ontario in September 2016, and lower contributions to the Used Fuel Segregated Fund and the Decommissioning Segregated Fund. Both the Used Fuel Segregated Fund and the Decommissioning Segregated Fund were determined to be fully funded based on an updated estimate of OPG's nuclear waste management and nuclear facilities decommissioning obligations pursuant to a reference plan approved by the Province, for years 2017 to 2021, under the Ontario Nuclear Funds Agreement (ONFA), effective January 1, 2017. Pursuant to the ONFA, the reference plan is required to be updated at least once every five years. Contributions to either or both of the Nuclear Segregated Funds may be required in the future should the funds be in an underfunded position at the time of the next ONFA reference plan update. The year-over-year decrease in cash flow also was partially offset by the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to a period in 2015. The lease agreement for the Bruce nuclear generating stations giving rise to this rebate was amended in late 2015 to eliminate this provision going forward.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. FFO Adjusted Interest Coverage was 5.1 times for the 12 month-periods ended March 31, 2017 and December 31, 2016. FFO Adjusted Interest Coverage in 2017 reflected a year-over-year decrease in FFO before interest due to lower cash flow provided by operating activities, offset by the

impact of a lower adjusted interest expense due to a decrease in the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets.

The decrease in the excess of interest on pension and OPEB benefit obligations over expected return on pension plan assets in 2017 was primarily due to the change in the method used to estimate the interest cost and current service cost component of pension and OPEB costs. Effective January 1, 2017, OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs in the first quarter of 2017 was largely offset by the impact of OEB-authorized variance and deferral accounts. Further details on the full yield curve approach can be found in the 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Pension and Other Post-Employment Benefits*. **[UPDATE]**

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for the 12 months ended March 31, 2017 was 3.5 percent, compared to 4.2 percent for the 12 months ended December 31, 2016. The decrease was primarily due to lower net income attributable to the Shareholder. As expected, reduced revenue due to the continuation of existing base regulated prices that do not reflect the lower nuclear generation as a result of the Unit 2 refurbishment outage at the Darlington GS negatively impacted net income and ROE Excluding AOCI for the 12-month period ended March 31, 2017. The continuation of existing base regulated prices until such time as new regulated prices are approved by the OEB later in 2017 will negatively affect OPG's ROE Excluding AOCI.

Enterprise Total Generating Cost per MWh

The Enterprise TGC per MWh was $47.86 for the three months ended March 31, 2017, compared to $41.82 for the same period in 2016. The increase in Enterprise TGC per MWh for the three months ended March 31, 2017, compared to the same period in 2016, was expected and primarily due to the decrease in electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $69.87 for the three months ended March 31, 2017, compared to $56.37 for the same period in 2016. The increase in Nuclear TGC per MWh for the three months ended March 31, 2017, compared to the same period in 2016, was expected and primarily due to the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $19.79 for the three months ended March 31, 2017, which was comparable to $19.94 for the same period in 2016.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow provided by operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016 and de-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017. Islanding of Unit 2, the physical separation of the unit under refurbishment from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second segment commenced immediately following the islanding of Unit 2. The second segment continues preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening the reactor air lock doors, installation of shielding, setting up specialized tooling and equipment, and commencing the disassembly and removal of reactor components. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. The project is tracking on schedule and budget.

The Darlington Refurbishment project is discussed further in the section, *Core Business, Strategy, and Outlook* under the heading, *Project Excellence.*

Peter Sutherland Sr. Hydroelectric GS

In March 2017, the project to construct the 28 MW two-unit Peter Sutherland Sr. hydroelectric GS successfully completed final testing and commissioning of the turbine and generator units and both units were declared substantially complete. On March 31, 2017, the project received a permit from the Ministry of Environment and Climate Change (MOECC) to take water for operations to allow the station to operate commercially. This in-service date is well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. The project is expected to close below the approved budget of $300 million, following the completion of site remediation, camp dismantling, demobilization and other project close-out activities.

The project was constructed in partnership with the Coral Rapids Power Corporation (CRP), a corporation wholly owned by the Taykwa Tagamou Nation, through the PSS Generating Station Limited Partnership (PSS). Under the partnership agreement, as the unit is placed in-service, the CRP may acquire up to a 33 percent partnership interest through its investment in PSS. In April 2017, the CRP acquired a 33 percent interest in PSS.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017, on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. For the hydroelectric facilities, the application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021, based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production. The application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment through rate riders that were in effect to December 31, 2016. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed further in the section, *Balance Sheet Highlights* under the heading, *Pension & OPEB Cash Versus Accrual Differential Deferral Account*.

Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application submission in May 2016 incorporated a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved annual nuclear revenue requirements during the period from January 1, 2017 to the end of the Darlington Refurbishment project in a deferral account for future collection.

In March 2017, the Province amended *Ontario Regulation 53/05* to require that the portion of the approved annual nuclear revenue requirements deferred for future collection under rate smoothing be determined with a view of making more stable year-over-year changes in OPG's weighted-average nuclear and hydroelectric regulated prices, including rate riders. Previously, the regulation required that the deferred amounts be determined with a view of making more stable year-over-year changes in OPG's nuclear regulated prices only, excluding rate riders. The amendment is intended to make more predictable the impact on customer bills resulting from changes in OPG's overall regulated prices, reducing the average year-over-year change in customer bills over the term of OPG's current application. Following the amendment, in March 2017, OPG submitted a modified rate smoothing proposal to the OEB to reflect the new requirements of the regulation, as part of the application for new regulated prices. OPG expects to recognize amounts deferred under rate smoothing as income in the period to which the underlying approved revenue requirements relate.

In March 2017, the OEB approved a settlement agreement reached by OPG and intervenors on a limited set of issues in OPG's application (Settlement Agreement). Among the settled issues, the agreement provided for the continuation of all applicable existing variance and deferral accounts and accepted a number of variance and deferral account balances for recovery, as requested in OPG's application. In addition, the Settlement Agreement accepted OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017 to 2021 period. The Settlement Agreement did not impact OPG's financial results for the three months ended March 31, 2017.

The OEB conducted 23 public oral hearing days on the unsettled issues in OPG's application between February 27, 2017 and April 13, 2017, as part of an overall public proceeding on the application. Final arguments in the proceeding are scheduled to be completed by June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected in the second half of 2017.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 percent on average for all residential consumers in the province. As part of the Plan, the Province has proposed refinancing a portion of the Global Adjustment costs over a longer time period for Regulated Price Plan eligible customers (e.g., residential, farm, small businesses). On May 11, 2017, the Province introduced legislation that, if passed, will enable the IESO and OPG to work together to implement this financing as requested by the Province. Any final agreement to implement OPG's involvement with the Plan is subject to approval by OPG's Board of Directors, which has established a Special Committee to provide oversight on behalf of the Board of Directors. **[MONITOR]**

Shareholder Declaration and Shareholder Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution requiring the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. A purchase and sale agreement was executed in December 2016, and the sale was completed in April 2017. An after-tax gain on sale of approximately $280 million **[MONITOR]** was recognized upon completion of the transaction in the second quarter of 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the act, into the Province's Consolidated Revenue Fund. OPG is working with the Ministry of Finance to finalize the prescribed costs incurred in connection with the disposition of the sale and the designated proceeds that will be transferred ~~in~~to the Trillium Trust ~~Fund~~.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. OPG is in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund. **[MONITOR]**

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business, and are reported under the Services, Trading, and Other Non-Generation segment.

CORE BUSINESS, STRATEGY, AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

The following sections provide an update to OPG's disclosures in the 2016 annual MD&A related to its four key strategic imperatives – operational excellence, project excellence, financial strength, and social licence. A detailed discussion of these strategic imperatives is included in the 2016 annual MD&A in the section, *Core Business, Strategy, and Outlook*.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Public Safety

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for individuals living or working near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), which is an international unit of radiation dose measurement. For 2016, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.6 μSv and 1.5 μSv, respectively, which is approximately 0.1 percent and 0.2 percent of the annual legal limit of 1,000 μSv, respectively.

Electricity Generation Production and Reliability

- As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will remain fit for service for operation to 2024. OPG is also nearing completion of component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently set at the end of 2020, are expected to be reassessed, after the required fuel channel maintenance strategies in support of extended operations have been implemented on the initial units, taking into account the requirement for the Canadian Nuclear Safety Commission's (CNSC) approval, discussed below.
- OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. Work on the Pickering licence renewal application is proceeding and is expected to be filed August 31,

2017 for the CNSC's approval in 2018. The requested licence renewal will span the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. OPG will submit a Periodic Safety Review, Global Assessment Report, and Integrated Implementation Plan (IIP) for the station to the CNSC as part of the licence renewal.

- In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications were presented to the CNSC at public hearings in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018. Renewal decisions on the WWMF and PWMF licences are expected to be issued prior to expiry of the respective current licences. **[MONITOR]**
- During the first quarter of 2017, OPG completed the reservoir refurbishment at Sir Adam Beck Pump GS and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.
- Work continues on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 1 of the Sir Adam Beck Pump GS, and the overhaul and upgrade of Unit 1 of the Harmon GS.
- Work continues work on the replacement of the Station Service System at R.H. Saunders GS and Synchronizing Breakers at Lennox GS.
- OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS.
- Later in 2017, OPG will be starting definition phase activities, including engineering studies, condition assessments, and stakeholder engagement, as part of a Water Conveyance System project to restore structural integrity, flow capacity and ensure safe and reliable operations, of the Sir Adam Beck 1 GS canal and associated structures, for approximately the next 50 years.

As part of streamlining OPG's hydroelectric operations, OPG will be reducing from five regional hydroelectric offices to four by integrating the Central Operations group into its existing operations. This will result in operational efficiency improvements. Currently, work is in progress to plan and implement this change.

OPG continues to progress on its plan to remove site structures from Nanticoke GS. Project milestones in 2017 include the elimination of coal yard equipment and structures and removal of ash silos, and the selection of a contractor to remove the stacks, the powerhouse, interior equipment and supporting site structures.

Environmental Performance

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. OPG has an internal program to meet its GHG emissions compliance obligations. With OPG's low GHG emitting fleet, these obligations do not have a material financial impact on the Company. The Ontario MOECC held the first quarterly auction of GHG allowances on March 22, 2017.

Disclosures related to the Company's environmental policy and environmental risks can be found in OPG's 2016 annual MD&A.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. The status updates for OPG's major projects as of March 31, 2017 are outlined in the following table with further details below.

Project	Capital expenditures		Approved budget	Expected in-service date	Current status
(millions of dollars)	Year-to-date	Life-to-date			
Darlington Refurbishment	306	3,491	12,800 [1]	First unit - 2020 Last unit - 2026	Islanding of Unit 2 was completed in April 2017. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies is in progress. The project is tracking on schedule and on budget.
Peter Sutherland Sr. Hydroelectric GS	22	258	300	2017	The station was placed in-service on March 31, 2017, ahead of the originally planned schedule, and is expected to close below the approved budget. Refer to the section, *Core Business, Strategy, and Outlook* under the heading, *Recent Developments* for further details.
Sir Adam Beck Pump GS Reservoir Refurbishment	2	48	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget.
Ranney Falls Hydroelectric GS	2	5	77	2019	Project definition work has been completed and site clearing and mobilization work has commenced.
Nanticoke Solar Facility	1	2		2019	Project definition work is in progress and construction is planned to commence as early as in the fourth quarter of 2017.
Deep Geologic Repository for low and intermediate level radioactive waste (L&ILW)	2 [2]	197 [2]			Additional information requested by the Canadian Environmental Assessment Agency (CEAA) based on their review of the material submitted by OPG in December 2016 is being prepared and will be submitted by May 26, 2017.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, ahead of schedule, with a total of 480 fuel channels de-fuelled. Islanding of Unit 2, the physical separation of the refurbishment unit from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second segment commenced immediately following the islanding of the unit. The second segment continues the preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening the reactor air lock doors, installation of shielding, setting up specialized tooling and equipment, and commencing the disassembly and removal of reactor components. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. The project is tracking on schedule and budget.

A number of pre-requisite projects in support of the execution phase of the project, including construction of facilities, infrastructure upgrades and installation of safety enhancements, have been completed. This includes the Containment Filtered Venting System and the Third Emergency Power Generator safety enhancement projects that were placed in-service in April 2017 **[MONITOR]**. Completion of the Heavy Water Storage and Drum Handling Facility has been delayed due to challenges with construction. Remediation measures are in progress **[UPDATE]**. This delay will not impact the overall Darlington Refurbishment project schedule, as the Heavy Water Storage and Drum Handling Facility is not on the critical path. The remaining projects are tracking for completion within the overall refurbishment execution schedule. **[UPDATE]**

In addition to the de-fuelling and islanding of Unit 2 completed, the following other key project activities are continuing in 2017:

- Completion of preparation activities to support Retube and Feeder Replacement work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Re-tube Waste Processing Building Facility.
- Continued construction of the Heavy Water Storage and Drum Handling.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of Unit 3, and is entering into associated commitments to procure major components that require long-lead times. As of March 31, 2017, $43 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The work on the project included installation of a new partial liner and construction of a grout

curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

In the first quarter of 2017, OPG completed the contractor selection process and awarded contracts for the construction of a 10 MW single-unit powerhouse on the existing Ranney Falls GS site, as part of the Regulated – Hydroelectric segment. The new unit will replace an existing unit that reached its end of life in 2014. The civil contractor has begun site clearing and mobilization. The expected in-service date is in the fourth quarter of 2019 with a budget of $77 million.

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands under a Large Renewable Procurement contract with the IESO, through Nanticoke Solar LP, is planned to commence as early as in the fourth quarter of 2017. In the first quarter of 2017, OPG purchased SunEdison Canadian Construction LP's (SECCLP) interests in Nanticoke Solar LP, originally a partnership between OPG, SECCLP and a subsidiary of the Six Nations of the Grand River Development Corporation, and is working to obtain approvals and permits required to enable the commencement of construction. The facility is expected to be completed in the first quarter of 2019.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the Environmental Assessment (EA) to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and potential for cumulative environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization were to be located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following CEAA's review of OPG's submission and a period of public comment, the CEAA has requested additional information from OPG. OPG has reviewed the information request and will respond to the CEAA by May 26, 2017. An EA Decision Statement by the Minister is expected by the fourth quarter of 2017. Based on the information submitted to the Minister in December 2016, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

OPG anticipates a site preparation and construction licence may be issued in the first half of 2018, if the EA Decision Statement supports licensing. OPG has initiated work to ensure all licensing-related submissions will be completed and ready to be submitted to the CNSC for an expeditious license review. In addition, work has been initiated to seek OPG's Board of Directors' approval to proceed to the definition phase work in 2018. This includes completion of engineering design activities. OPG also continues its engagement with the Saugeen Ojibway Nations toward

securing community support for the L&ILW DGR. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction. **[CONFIRM]**

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application incorporates a rate smoothing proposal, as amended in March 2017. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impacts on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the nuclear rate base, effective in early 2020, to reflect the planned placement in service of approximately $4.8 billion of capital expenditures upon the scheduled return to service of Unit 2 at the Darlington GS as part of the Darlington Refurbishment project and, effective in 2017, an increase in the deemed capital structure applied to the total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt reflected in the existing regulated prices. If approved, this would improve OPG's return on Shareholder's investment.

A public oral hearing on OPG's application commenced in late February 2017 and was completed in April 2017, with final arguments scheduled to be completed by June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected in the second half of 2017. Further details on OPG's rate application can be found in the section, *Highlights* under the heading, *Recent Developments*.

For generation assets that do not form part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements. In line with this strategy, virtually all of OPG's non-regulated operating facilities and assets under construction are subject to long-term Energy Supply Agreements (ESAs) or other long-term contracts with the IESO. This includes the Peter Sutherland Sr. GS, which will begin earning contracted revenue under its hydroelectric ESA once the IESO confirms commercial operation, but effective on March 31, 2017. The ESA expires in 2067. **[CONFIRM]**

Ensure Availability of Cost Effective Funding

In April 2017, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook.

Social Licence

As the largest electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish these relationships based on

a foundation of respect for the languages, customs, and political, social and cultural organizations of the Indigenous communities. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, such as the construction of the Peter Sutherland Sr. GS in partnership with Taykwa Tagamou Nation and the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River. In March 2017, the Peter Sutherland Sr. GS was placed in-service and, in April 2017, the Taykwa Tagamou Nation acquired a 33 percent interest in PSS under the partnership agreement. OPG also continues to engage with Indigenous communities regarding the Company's regulated nuclear waste operations, through regularly scheduled meetings and ongoing dialogue in connection with OPG's proposed L&ILW DGR, and the re-licensing of the PWMF and the WWMF.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of costs and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's current application for new regulated prices is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017 in its decision on the application. This would allow OPG to recover the difference between the approved new regulated prices and the existing regulated prices for the period between January 1, 2017 and the implementation date of the new prices based on the OEB's order.

The continuation of existing regulated prices until the OEB's decision on OPG's application is issued is expected to continue to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI during 2017, compared to 2016. In large part, this is due to the year-over-year reduction in nuclear electricity generation resulting from the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined in 2014 based on a higher production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision issuance, could have a significant impact on OPG's financial results during 2017. OPG's application for new regulated prices is further discussed in the section, *Highlights* under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. As expected, combined with the expiry of rate riders in effect to the end of 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment outage, this will result in lower cash flow from operations and a lower FFO Adjusted Interest Coverage ratio in 2017, compared to 2016. The continuation of existing base regulated prices until such time as new prices are determined and implemented by the OEB also is expected to contribute to lower cash flow from operations in 2017. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements.

Lower nuclear generation due to the Darlington refurbishment outages will continue to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Variability in sustaining capital investment expenditures, including major sustaining projects for the hydroelectric operations, also will impact the Enterprise TGC in future periods.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, these variance accounts include those related to the revenue impact of variability in water flows and forgone production due to SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Considering the impact of the variance and deferral accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow from operations going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric and other development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI. In the short term, these factors can be volatile and cause fluctuations in the Company's income. This volatility is partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account and, as discussed below, the funded status of the two segregated funds.

As OPG does not have the right to withdraw surplus amounts from the Nuclear Segregated Funds when the segregated funds are overfunded relative to the life cycle funding liability pursuant an approved ONFA Reference Plan, OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle funding liability per the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus in the Decommissioning Segregated Fund that it may direct to the Used Fuel Fund in accordance with the ONFA, up to the amount, if any, by which the Used Fuel Fund is underfunded. This reduces the volatility of earnings on the Nuclear Segregated Funds reflected in net income when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at March 31, 2017, the Decommissioning Segregated Fund was overfunded by approximately 24 percent, and the Used Fuel Segregated Fund was marginally overfunded, by less than one percent, based on the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**652**	926
Fuel expense	**68**	81
Gross margin	**584**	845
Operations, maintenance and administration	**589**	563
Depreciation and amortization	**107**	230
Property taxes	**6**	7
(Loss) income before other losses, interest, and income taxes	**(118)**	45
Other gains	**-**	(1)
(Loss) income before interest and income taxes	**(118)**	46

Segment earnings decreased by $164 million during the first quarter of 2017, compared to the same quarter in 2016. The decrease in earnings was expected and primarily due to reduced revenue from the nuclear base regulated price of approximately $134 million, partly offset by the largely associated decrease in fuel expense of $13 million, reflecting lower electricity generation of 2.3 TWh and the continuation of the existing nuclear base regulated price set by the OEB in 2014. The existing regulated price continues to be in effect pending the OEB's decision on OPG's application for new regulated prices, proposed to be effective on January 1, 2017. The lower nuclear generation was primarily due to the ongoing Unit 2 refurbishment outage at the Darlington GS that began October 2016. The existing regulated price does not reflect the lower generation as a result of the refurbishment outage, as that price were set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume based on the 2014 and 2015 outage profile that did not include a refurbishment outage. The year-over-year reduction in nuclear electricity generation was partially offset by the impact of the decreased number of planned outage days at the Pickering GS in the first quarter of 2017, compared to the same quarter in 2016.

The increase in OM&A expenses of $26 million in the first quarter of 2017, compared to the same quarter in 2016, also contributed to lower segment earnings. The increase in OM&A expenses reflected use of temporary staff and planned hiring to fill vacant positions due to attrition, and higher material costs related to maintenance work at the nuclear stations.

The expiry of an OEB-authorized nuclear rate rider on December 31, 2016 contributed to the decrease in segment revenue in the first quarter of 2017, compared to the same quarter in 2016. As rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this decrease in revenue was largely offset by a decrease in amortization expense related to regulatory account balances. A new rate rider has been requested in OPG's application with the OEB for new regulated prices effective January 1, 2017.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2017 and 2016 were as follows:

	Three Months Ended March 31 2017	2016
Unit Capability Factor *(%)* [1]		
Darlington GS	**85.3**	97.2
Pickering GS	**78.5**	72.8

[1] The nuclear Unit Capability Factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS decreased in the first quarter of 2017, compared to the same quarter in 2016, primarily due to a higher number of unplanned outage days at the station in the first quarter of 2017.

The increase in the Unit Capability Factor at the Pickering GS in the first quarter of 2017, compared to the same quarter in 2016, was primarily due to a lower number of planned outage days at the station in the first quarter of 2017.

Regulated – Nuclear Waste Management Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**27**	34
Operations, maintenance and administration	**29**	36
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**234**	228
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(189)**	(147)
Loss before interest and income taxes	**(47)**	(83)

Earnings from the segment improved by $36 million in the first quarter of 2017 compared to the same quarter in 2016. The year-over-year improvement in earnings was primarily due to higher earnings from the Nuclear Segregated Funds.

Higher earnings on the Used Fuel Segregated Fund, net of the impact of the Bruce Lease Net Revenue Variance Account, were the primary reasons for the higher Nuclear Segregated Fund earnings during the first quarter of 2017, compared to the same period in 2016. As the Used Fuel Segregated Fund was overfunded as at December 31, 2016 and March 31, 2017, the earnings on the fund recorded in income during the first quarter of 2017 were based at the growth rate of the present-value used fuel life cycle funding liability per the 2017 ONFA Reference Plan. During the first quarter of 2016, the Used Fuel Segregated Fund was underfunded based on the ONFA reference plan then in effect and therefore earnings on the fund reflected the CPI-adjusted rate of return guaranteed by the Province under the ONFA for funding related to the initial 2.23 million used fuel bundles and market returns on the portion of the fund not guaranteed by the Province.

As of December 31, 2016, OPG recorded a decrease of approximately $1,570 million to the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities) and associated asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to reflect the comprehensive update of the underlying assumptions and baseline cost estimates for these liabilities carried out as part of the 2017 ONFA Reference Plan update process. The resulting year-over-year decreases in accretion on fixed asset removal and nuclear waste management liabilities recorded in the Regulated – Nuclear Waste Management segment and depreciation and fuel expenses recorded in the Regulated – Nuclear Generation segment during the first quarter of 2017, compared to the same quarter in 2016, were largely offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account authorized by the OEB. Further details on the change in the estimate of the Nuclear Liabilities as of December 31, 2016 are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Asset Retirement Obligation*.

Under the current OEB-approved cost recovery methodology, the changes in expenses associated with the year-end 2016 adjustment to the Nuclear Liabilities are not expected to materially affect OPG's income during 2017, as the associated impact on expenses is expected to continue to be largely offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently to be offset by the impact of the new regulated prices.

Regulated – Hydroelectric Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue [1]	**363**	385
Fuel expense	**73**	79
Gross margin	**290**	306
Operations, maintenance and administration	**76**	76
Depreciation and amortization	**34**	56
Income before other gains, interest and income taxes	**180**	174
Other gains	**-**	(22)
Income before interest and income taxes	**180**	196

[1] During the three months ended March 31, the Regulated – Hydroelectric segment revenue included incentive payments of $8 million in 2017 and $1 million in 2016 related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $16 million during the first quarter of 2017, compared to the same period in 2016, was primarily due to a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to a motion by OPG. The decrease in income was partially offset by higher hydroelectric incentive mechanism payments in the first quarter of 2017.

The decrease in revenue was largely due to the expiry of an OEB-authorized rate rider on December 31, 2016. As the rider allowed for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, the resulting reduction in revenue was largely offset by lower amortization expense related to the regulatory account balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	Three Months Ended March 31 2017	2016
Hydroelectric Availability *(%)*	**89.5**	94.8

The Hydroelectric Availability decreased in the first quarter of 2017, compared to the same period in 2016, primarily due to the reservoir refurbishment project at the Sir Adam Beck Pump GS and a higher number of unplanned outage days for the regulated hydroelectric stations.

Contracted Generation Portfolio Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**143**	145
Fuel expense	**14**	12
Gross margin	**129**	133
Operations, maintenance and administration	**39**	40
Depreciation and amortization	**19**	19
Accretion on fixed asset removal liabilities	**2**	2
Property taxes	**2**	2
Income from investments subject to significant influence	**(10)**	(8)
Income before interest and income taxes	**77**	78

Income before interest and income taxes decreased by $1 million during the first quarter of 2017, compared to the same period in 2016. The decrease primarily resulted from lower revenues from the Lower Mattagami River generating stations. The decrease was partially offset by higher gross margin from the Lennox GS, which was primarily due to increased market demand.

The Hydroelectric Availability and the Thermal Equivalent Forced Outage Rate (EFOR) for the Contracted Generation Portfolio segment were as follows:

	Three Months Ended March 31 2017	2016
Hydroelectric Availability *(%)*	**83.6**	83.9
Thermal EFOR *(%)*	**12.6**	0.9

The Hydroelectric Availability in the first quarter of 2017, was comparable to the same period in 2016. The higher thermal EFOR in the first quarter of 2017, compared to the same period in 2016, was primarily due to a higher number of unplanned outage days at a Lennox GS unit as a result of a transmission outage.

Services, Trading, and Other Non-Generation Segment

(millions of dollars) (unaudited)	Three Months Ended March 31 2017	2016
Revenue	**17**	21
Gross margin	**17**	21
Operations, maintenance and administration	**1**	4
Depreciation and amortization	**7**	7
Accretion on fixed asset removal liabilities	**2**	2
Property taxes	**3**	3
Loss before other losses, interest, and income taxes	**4**	5
Other gains	**(3)**	-
Income before interest and income taxes	**7**	5

Segment earnings increased by $2 million during the first quarter of 2017, compared to the same quarter in 2016, due to lower OM&A expenses reflecting the decision, in the fourth quarter of 2016, to proceed with the decommissioning of the Lambton GS, and dividend income from OPG's investment in Hydro One Limited (Hydro One) shares acquired in April 2016. OPG acquired the shares for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union and The

Society of Energy Professionals. The increase in segment earnings was partially offset by lower revenues from the Company's electricity trading activities in the first quarter of 2017.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies, to undertake major projects, to fund long-term obligations such as contributions to the pension fund and the Nuclear Segregated Funds, to make payments under the OPEB plans, to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, and to service and repay long-term debt.

Changes in cash and cash equivalents for the three months ended March 31, 2017 and 2016 were as follows:

	Three Months Ended March 31	
(millions of dollars) (unaudited)	**2017**	**2016**
Cash and cash equivalents, beginning of period	**186**	464
Cash flow provided by operating activities	**118**	366
Cash flow used in investing activities	**(363)**	(310)
Cash flow used in financing activities	**279**	20
Net increase	**34**	76
Cash and cash equivalents, end of period	**220**	540

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details in the section, *Highlights* under the heading, *Overview of Results*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities during the first quarter of 2017 increased by $53 million compared to the same quarter in 2016. The increase was primarily due to higher expenditures on the Darlington Refurbishment project, offset by the staggered maturity of a structured deposit note entered in 2015 in support of the Peter Sutherland Sr. GS project. The principal amount of the deposit note that matured in the first quarter of 2017 was higher than in the same quarter in 2016. The final maturity date of the deposit note was in April 2017.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG expects to renew and extend the expiry date of both tranches from May 2021 to May 2022. There were no amounts outstanding under the bank credit facility as at March 31, 2017.

There was $133 million of commercial paper outstanding under OPG's commercial paper program as at March 31, 2017.

As at March 31, 2017, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at March 31, 2017, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust, expiring on November 30, 2018. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. As at March 31, 2017, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

As at March 31, 2017, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at March 31, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at March 31, 2017. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. As at March 31, 2017, there were outstanding long-term borrowings of $200 million under this credit facility.

As at March 31, 2017, OPG's long-term debt outstanding was $5,684 million, including $1,328 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent.

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's unaudited interim consolidated financial position using selected balance sheet data:

(millions of dollars) (unaudited)	As At March 31 2017	As At December 31 2016
Property, plant and equipment – net	**20,248**	19,998
The increase was primarily due to capital expenditures on the Darlington Refurbishment project, partially offset by depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**16,157**	15,984
The increase was primarily due to earnings on the Nuclear Segregated Funds, partially offset by reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Short-term debt	**135**	2
The increase was due to commercial paper issued under OPG's commercial paper program.		
Long-term debt *(current and non-current portions)*	**5,670**	5,520
The increase was primarily due to the issuance of senior notes payable to the OEFC totalling $200 million in February 2017.		
Fixed asset removal and nuclear waste management liabilities	**19,683**	19,484
The increase was primarily as a result of accretion expense representing the increase in the present value liabilities due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		

Pension & OPEB Cash Versus Accrual Differential Deferral Account

In setting OPG's regulated prices effective November 1, 2014, the OEB limited the recovery of the regulated portion of OPG's pension and OPEB costs to the Company's cash expenditures for its pension and OPEB plans. Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account, which records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and OPG's corresponding actual cash expenditures for these plans. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The Company has recognized the amount set aside in the Pension & OPEB Cash Versus Accrual Differential Deferral account as a regulatory asset. As at March 31, 2017, the regulatory asset balance was $517 million, which represents the excess of pension and OPEB costs calculated using the accrual basis in accordance with US GAAP over the corresponding cash expenditures for the period from November 1, 2014 to March 31, 2017.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and OPG's corresponding cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the OEB's consultation process. If, as part of the above consultation process or another proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory asset for the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's interim consolidated financial statements or are recorded in the Company's interim consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies are outlined in Note 3 to the audited consolidated financial statements as at and for the year ended December 31, 2016. A discussion of recent accounting pronouncements is included in Note 2 to OPG's unaudited interim consolidated financial statements as at and for the three months ended March 31, 2017 under the heading, *Significant Accounting Policies and Estimates*. Disclosure regarding OPG's critical accounting policies is included in OPG's 2016 annual MD&A.

RISK MANAGEMENT

The following provides an update to the discussion of the Company's risks and risk management activities included in OPG's 2016 annual MD&A. As such, the disclosure in this section should be read in conjunction with the *Risk Management* section included in the annual MD&A.

Financial Risks

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017 [1]	2018	2019
Estimated fuel requirements hedged [2]	75%	74%	63%

[1] Based on actual fuel requirements hedged for the three months ended March 31, 2017 and forecast for the remainder of the year.

[2] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to, US dollars. To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at March 31, 2017, OPG had no foreign exchange contracts outstanding.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. For the first quarter of 2017, the VaR utilization ranged between $0.1 million and $0.3 million.

Credit

Deterioration in energy markets counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

OPG manages its exposure to suppliers or counterparties by evaluating their financial condition and negotiating appropriate collateral or other forms of security. OPG's credit exposure relating to energy markets transactions as at March 31, 2017 was $361 million, including $348 million to the IESO. Management considers the Company's risk exposure relating to electricity sales through the IESO-administered spot market to be low as the IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market. Of the $13 million remaining exposure as at March 31, 2017, over 95 percent was related to investment grade counterparties.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The

transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions are summarized below:

	Three Months Ended March 31			
	2017		2016	
(millions of dollars) (unaudited)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**4**	**-**	2	-
Services	**1**	**5**	1	5
Dividends	**2**			
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**163**	-	(177)
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**217**	-	(159)
Hydroelectric gross revenue charge	**-**	**28**	-	31
ONFA guarantee fee	**-**	**2**	-	2
OEFC				
Gross revenue charge	**-**	**38**	-	37
Interest expense on long-term notes	**-**	**41**	-	42
Income taxes, net of investment tax credits	**-**	**12**	-	32
IESO				
Electricity related revenue	**1,073**	**6**	1,364	10
	1,080	**512**	1,367	(177)

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at March 31, 2017 and December 31, 2016, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,795 million and $3,415 million, respectively. The details of accounting for the Nuclear Funds are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars) (unaudited)	**March 31 2017**	**December 31 2016**
Receivables from related parties		
Hydro One	**1**	1
IESO	**348**	421
OEFC	**5**	1
PEC	**4**	4
Province of Ontario	**4**	2
Available-for-sale securities		
Hydro One shares	**218**	212
Accounts payable and accrued charges		
Hydro One	**-**	-
OEFC	**45**	61
Province of Ontario	**7**	2
IESO	**2**	2
Long-term debt (including current portion)		
Notes payable to OEFC	**3,445**	3,295

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at March 31, 2017, the Nuclear Segregated Funds and the registered pension fund held $1,650 million and $237 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

The Company maintains a comprehensive system of policies, procedures, and processes that represents its framework for internal controls over financial reporting and for its disclosure controls and procedures (together, ICOFR). There were no changes in the Company's internal control system during the current interim period that has or is reasonably likely to have a material impact to the ICOFR.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected financial information from OPG's unaudited interim consolidated financial statements for each of the eight most recently completed quarters.

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**March 31 2017**	**December 31 2016**	**September 30 2016**	**June 30 2016**
Revenue	**1,176**	**1,388**	**1,400**	**1,387**
Net income (loss)	**68**	**(8)**	**198**	**135**
Less: Net income attributable to non-controlling interest	**4**	**5**	**4**	**3**
Net income (loss) attributable to the Shareholder	**64**	**(13)**	**194**	**132**
Per common share, attributable to the Shareholder *(dollars)*	**$0.25**	**($0.05)**	**$0.76**	**$0.51**

(millions of dollars – except where noted) *(unaudited)*	**March 31 2016**	**December 31 2015**	**September 30 2015**	**June 30 2015**
Revenue	1,478	1,312	1,426	1,383
Net income (loss)	128	(100)	85	193
Less: Net income attributable to non-controlling interest	5	1	5	4
Net income (loss) attributable to the Shareholder	123	(101)	80	189
Per common share, attributable to the Shareholder *(dollars)*	$0.48	($0.39)	$0.31	$0.74

Trends

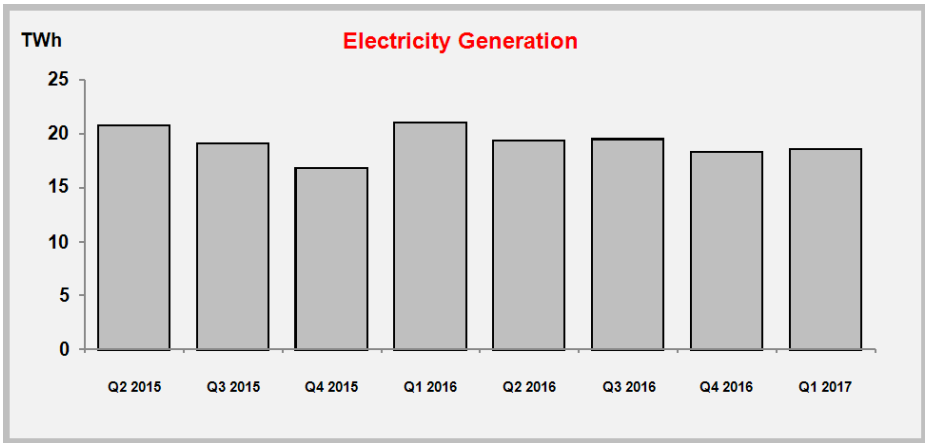
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues have been higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of forgone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

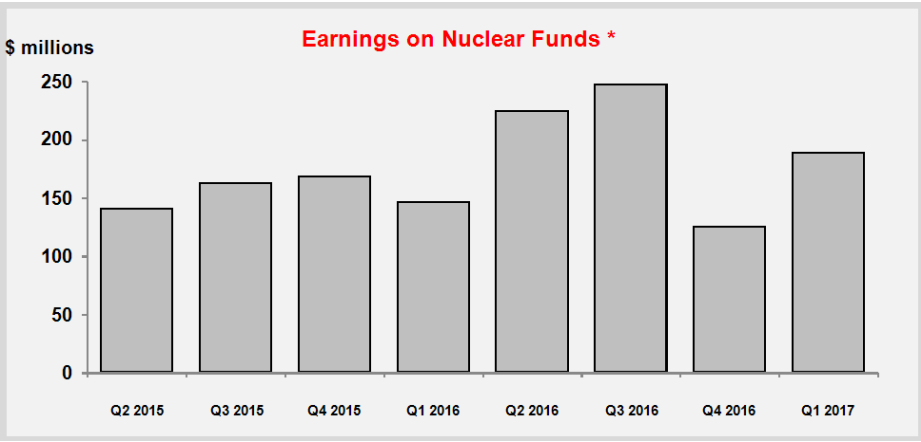
The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington Vacuum Building Outage (VBO), which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

During the fourth quarter of 2016 and the first quarter of 2017, OPG's electricity generation was reduced as a result of the Unit 2 refurbishment outage at the Darlington GS, which began in October 2016 and is expected to continue until early 2020.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items that affected net income in certain quarters above are described in OPG's 2016 annual MD&A in the section, *Quarterly Financial Highlights*.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder, improve cost performance, and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow provided by operating activities, or any other measure in accordance with US GAAP, but as indicators of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE Excluding AOCI is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended March 31 2017	December 31 2016
ROE Excluding AOCI		
Net income attributable to the Shareholder	**377**	436
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,834**	10,442
ROE Excluding AOCI *(percent)*	**3.5**	4.2

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended March 31 2017	December 31 2016
FFO before interest		
Cash flow provided by operating activities	**1,457**	1,705
Add: Interest paid	**268**	269
Less: Interest capitalized to fixed and intangible assets	**(152)**	(141)
Add: Changes to non-cash working capital balances	**(22)**	(68)
FFO before interest	**1,551**	1,765
Adjusted interest expense		
Net interest expense	**106**	120
Add: Interest income	**5**	7
Add: Interest capitalized to fixed and intangible assets	**152**	141
Add: Interest related to regulatory assets and liabilities	**32**	30
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**10**	45
Adjusted interest expense	**305**	343
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.1

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding the Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation from OPG-operated generating stations plus electricity generation forgone due to SBG conditions during the period.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Enterprise TGC		
Total OM&A expenses	**708**	686
Total fuel expense	**155**	172
Total capital expenditures	**408**	320
Less: Darlington Refurbishment capital and OM&A costs	**(309)**	(205)
Less: Other generation development project capital and OM&A costs	**(17)**	(38)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(11)**	18
Less: Nuclear fuel expense for non OPG-operated stations	**(13)**	(17)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**11**	18
Less: OM&A expenses ancillary to electricity generation business	**(5)**	(5)
Other adjustments	**(2)**	(5)
	925	944
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**18.6**	21.0
Adjust for electricity generation forgone due to SBG conditions and OPG's share of electricity generation from co-owned facilities	**0.7**	1.6
	19.3	22.6
Enterprise TGC per MWh *($/MWh)* [1]	**47.86**	**41.82**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**589**	563
Regulated – Nuclear Generation fuel expense	**68**	81
Regulated – Nuclear Generation capital expenditures	**366**	249
Less: Darlington Refurbishment capital and OM&A costs	**(309)**	(205)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(2)**	24
Less: Nuclear fuel expense for non OPG-operated stations	**(13)**	(17)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(1)**	(1)
Other adjustments	**-**	(1)
	698	693
Nuclear electricity generation *(TWh)*	**10.0**	12.3
Nuclear TGC per MWh *($/MWh)* [1]	**69.87**	56.37

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation forgone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

	Three Months Ended March 31	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**76**	76
Regulated – Hydroelectric Generation fuel expense	**73**	79
Contracted Generation Portfolio OM&A expenses	**39**	40
Contracted Generation Portfolio fuel expense	**14**	12
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**37**	59
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(16)**	(37)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(39)**	(37)
Less: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(9)**	(7)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**11**	18
Other adjustments	**(1)**	2
	185	205
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**8.0**	7.9
Contracted Generation Portfolio electricity generation	**0.6**	0.8
Adjust for hydroelectric electricity generation forgone due to SBG conditions and non-hydroelectric electricity generation of the Contracted Generation Portfolio	**0.7**	1.6
	9.3	10.3
Hydroelectric TGC per MWh *($/MWh)*[1]	**19.79**	19.94

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

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From:	HO Philip -FIN & C CTRL
To:	Ronald Kwan; John Kim; "Montgomery, Kaitlin (MOF"; "Shruti.Talwar@ontario.ca"; Sunita Chander (ENERGY)
Cc:	MAK Ricky -FIN & C CTRL; DYKXHOORN Sandra -CORPRELCOMM
Subject:	RE: OPG Q1 2017 Submission to Province
Date:	Wednesday, May 03, 2017 3:38:26 PM
Attachments:	Q1 2017 DRAFT PR - PROVINCE MAILING_May 3.docx

Hi All,

Please find attached OPG's draft Q1 2017 financial results press release for the Province's review.

This will be filed with the Ontario Securities Commission on **Friday, May 12th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to **Philip Ho – philip.ho@opg.com**.

From: HO Philip -FIN & C CTRL
Sent: Friday, April 28, 2017 5:04 PM
To: 'Shruti.Talwar@ontario.ca'; 'Sunita.Chander@ontario.ca'; Ronald Kwan; John Kim
Cc: MAK Ricky -FIN & C CTRL
Subject: OPG Q1 2017 Submission to Province

Hi All,

Please find attached OPG's draft Q1 2017 Management's Discussion and Analysis (MD&A) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, May 2nd**.

These documents will be filed with the Ontario Securities Commission on **Friday, May 12th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q1 2017 MD&A:

Highlights	
Recent Developments	MD&A p.9-11
Darlington Refurbishment	MD&A p.9; 13-14
Ontario's Fair Hydro Plan	MD&A p.10
Peter Sutherland Sr. GS project	MD&A p.9, 13

<< File: Q1 2017 MDA - DRAFT - PROVINCE MAILING.docx >> << File: Q1 2017 FS - DRAFT - PROVINCE MAILING.docx >>

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power

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ONTARIO POWER GENERATION

News
from Ontario Power Generation

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[DRAFT]

May 12, 2017

OPG REPORTS 2017 FIRST QUARTER FINANCIAL RESULTS

Company completes major projects on time and within budget

[Toronto]: – Ontario Power Generation Inc. (OPG or Company) has successfully completed three projects – the Peter Sutherland Sr. Hydroelectric Generating Station (GS), the refurbishment of the Sir Adam Beck Pump Hydroelectric GS reservoir, and the first segment of the Darlington Refurbishment. All three were completed on time and at or below budget.

"Our commitment to project management excellence is evident in these recent results," said Jeff Lyash, OPG President and CEO. "Projects that are well planned and managed often end the way they start and this shows the benefit of all the pre-planning we have done. We have a long way to go with refurbishing the Darlington station, but we're confident that we have done the work and have the people in place to deliver this project safely and to plan."

Lyash went on to say, "Completing the Peter Sutherland Sr. Generating Station ahead of schedule and below budget is another example of OPG's commitment to ensuring project excellence and creating respectful Indigenous partnerships." The refurbishment of the Sir Adam Beck Pump GS reservoir will ensure carbon-free electricity production at the station for approximately 50 more years.

The Company reported net income attributable to the Shareholder of $64 million for the first quarter of 2017, compared to $123 million for the same period in 2016. The decline in earnings was expected and is primarily the result of lower generation revenue, reflecting lower nuclear electricity generation due to the refurbishment outage for Unit 2 at the Darlington GS and the continuation of existing base regulated prices. Higher earnings on the nuclear fixed asset removal and nuclear waste management segregated funds of $42 million during the first quarter of 2017 partially offset the reduction in net income.

OPG provides electricity at a price that is 40 per cent less than other generators and is the only electricity generator in Ontario that has its prices set through a public hearing process by the Ontario Energy Board (OEB). In April 2017, OPG completed the public hearing for its current application with the OEB that will set prices for the Company's nuclear and most of its hydroelectric generation for the next five years, with a proposed effective date of January 1, 2017. The OEB is expected to make a decision on the rate application in the second half of this year. In the meantime, OPG is operating under base regulated prices that were set in 2014 and do not reflect reduced nuclear electricity generation, which is primarily due to the Darlington Refurbishment. The

continuation of these prices has negatively affected revenue and net income in the first quarter of 2017. The outcome of the current rate application and the effective date of the new regulated prices are expected to affect OPG's revenue and net income in subsequent quarters of 2017.

Generating and Operating Performance

Electricity generated during the three months ended March 31, 2017 decreased to 18.6 terawatt hours (TWh) from 21.0 TWh for the same quarter in 2016. Lower nuclear generation of 2.3 TWh was primarily due to the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment that began in October 2016 and is expected to continue until early 2020. Partially offsetting the reduction in generation from the Darlington GS was an increase of 0.3 TWh from the Pickering GS in the first quarter of 2017 compared to same quarter last year. Lower generation from the Contracted Generation Portfolio also contributed to the decrease in electricity generation, due to lower water flows on the northeastern Ontario river systems in the first quarter of 2017.

For the three months ended March 31, 2017, the unit capability factor at the Darlington GS was 85.3 per cent, compared to 97.2 per cent for the same period in 2016. The decrease was primarily a result of a higher number of unplanned outage days at the station in the first quarter of 2017.

At the Pickering GS, the unit capability factor increased to 78.5 per cent for the three months ended March 31, 2017 compared to 72.8 per cent for the same period in 2016, primarily due to favourable unit conditions and execution of planned outage work resulting in a lower number of planned outage days at the station in the first quarter of 2017.

The availability of OPG's regulated hydroelectric generating stations decreased for the three months ended March 31, 2017 to 89.5 per cent, from 94.8 per cent for the same period in 2016. The decrease was primarily due to the reservoir refurbishment project at the Sir Adam Beck Pump GS and a higher number of unplanned outage days.

For the contracted hydroelectric stations, the availability for the three months ended March 31, 2017 of 83.6 per cent was comparable to 83.9 per cent for the same period in 2016.

The Enterprise Total Generating Cost per megawatt hour (MWh) was $47.86 for the three months ended March 31, 2017, compared to $41.82 for the same period in 2016. The year-over-year increase was expected and reflects the lower volume of electricity produced due to the Unit 2 refurbishment outage at the Darlington GS.

Generation Development

OPG is undertaking a number of generation development and life extension projects in support of Ontario's electricity planning initiatives. Significant developments during the first quarter of 2017 were as follows:

Darlington Refurbishment

The Darlington Refurbishment project is expected to extend the operating life of the station by approximately 30 years. In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016 and de-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017. Islanding of Unit 2, the physical separation of the unit under refurbishment from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project, on time and on budget. The overall project continues to track on schedule and budget.

The second segment of the project commenced immediately following the islanding of Unit 2. This segment continues preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening the reactor air lock doors, installation of shielding, setting up specialized tooling and equipment, and commencing the disassembly and removal of reactor components. Unit 2 is scheduled to be returned to service, after a 40-month refurbishment outage, in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. Life-to-date capital expenditures were approximately $3.5 billion as at March 31, 2017.

Peter Sutherland Sr. GS

In March 2017, the project to construct the new 28 MW two-unit hydroelectric generating station successfully completed final testing and commissioning of the turbine and generator units and both units were declared substantially complete. On March 31, 2017, the project received the permit from the Ontario Ministry of the Environment and Climate Change to take water for operations to allow the station to operate commercially. This in-service date is well ahead of the originally planned schedule of the first half of 2018. The project is expected to close below the approved budget of $300 million following the completion of site remediation, demobilization and other project close-out activities. The project, which is a partnership between OPG and the Coral Rapids Power Corporation, a company wholly owned by the Taykwa Tagamou Nation (TTN), provided valuable employment and training opportunities for TTN members and other local Indigenous people and has created a sustainable revenue stream for the TTN community.

Sir Adam Beck Pump GS

The project to refurbish the 300-hectare Sir Adam Beck Pump GS reservoir began in April 2016 and was completed in February 2017. The project included installation of a new partial liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke, and is expected to add approximately 50 more years to the reservoir's life. The Sir Adam Beck Pump GS facility is integral to OPG's hydroelectric fleet as it

allows water to be diverted from the Sir Adam Beck complex during periods of low electricity demand and stored in the reservoir, to be used to generate up to 600 MW of electricity during subsequent periods of high demand. The project was completed ahead of the originally planned in-service date and below the approved budget of $58 million.

FINANCIAL AND OPERATIONAL HIGHLIGHTS

	Three Months Ended March 31	
(millions of dollars – except where noted)	**2017**	**2016**
Revenue	**1,176**	1,478
Fuel expense	**155**	172
Gross margin	**1,021**	1,306
Operations, maintenance and administration	**708**	686
Depreciation and amortization	**167**	312
Accretion on fixed asset removal and nuclear waste management liabilities	**238**	232
Earnings on Nuclear Segregated Funds - (a reduction to expenses)	**(189)**	(147)
Income from investments subject to significant influence	**(10)**	(8)
Other net expenses	**8**	(11)
Income before interest and income taxes	**99**	242
Net interest expense	**19**	33
Income tax expense	**12**	81
Net income	**68**	128
Net income attributable to the Shareholder	**64**	123
Net income attributable to non-controlling interest [1]	**4**	5
Income before interest and income taxes		
Electricity generation business segments	**139**	320
Regulated – Nuclear Waste Management	**(47)**	(83)
Services, Trading, and Other Non-Generation	**7**	5
Total income before interest and income taxes	**99**	242
Cash flow		
Cash flow provided by operating activities	**118**	366
Electricity generation (TWh)		
Regulated – Nuclear Generation	**10.0**	12.3
Regulated – Hydroelectric	**8.0**	7.9
Contracted Generation Portfolio [2]	**0.6**	0.8
Total electricity generation	**18.6**	21.0
Nuclear unit capability factor (per cent) [3]		
Darlington Nuclear GS	**85.3**	97.2
Pickering Nuclear GS	**78.5**	72.8
Availability (per cent)		
Regulated – Hydroelectric	**89.5**	94.8
Contracted Generation Portfolio – hydroelectric stations	**83.6**	83.9
Equivalent forced outage rate		
Contracted Generation Portfolio – thermal stations	**12.6**	0.9
Enterprise Total Generating Cost (TGC) per MWh for the three months ended March 31, 2017 and March 31, 2016 ($/MWh) [4]	**47.86**	41.82
Return on Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI) for the twelve months ended March 31, 2017 and December 31, 2016 (%) [4]	**3.5**	4.2
Funds from Operations (FFO) Adjusted Interest Coverage for the twelve months ended March 31, 2017 and December 31, 2016 (times) [4]	**5.1**	5.1

[1] Relates to the 25 per cent interest of a corporation wholly owned by the Moose Cree First Nation in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 per cent ownership interests in the Portlands Energy Centre and Brighton Beach GS.

[3] Nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Unit 2 of the Darlington GS is excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

[4] Enterprise TGC per MWh, ROE Excluding AOCI, and FFO Adjusted Interest Coverage are non-GAAP financial measures and do not have any standardized meaning prescribed by US GAAP. Additional information about the non-GAAP measures is provided in OPG's Management's Discussion and Analysis for the three months ended March 31, 2017, in the sections *Highlights – FFO Adjusted Interest Coverage*, *Highlights – Return on Common Equity Excluding Accumulated Other Comprehensive Income*, and *Highlights – Enterprise Total Generating Cost per MWh*, as well as *Supplementary Non-GAAP Financial Measures.*

Ontario Power Generation Inc. is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. Our mission is providing low cost power in a safe, clean, reliable and sustainable manner for the benefit of our customers and shareholder.

Ontario Power Generation Inc.'s unaudited interim consolidated financial statements and Management's Discussion and Analysis as at and for the three months ended March 31, 2017 can be accessed on OPG's web site (www.opg.com), the Canadian Securities Administrators' web site (www.sedar.com), or can be requested from the Company.

For further information, please contact: Investor Relations 416-592-6700
1-866-592-6700
investor.relations@opg.com

Media Relations 416-592-4008
1-877-592-4008

- 30 -

From: John Kim
To: Ronald Kwan; Gavin He
Cc: Francisco Chinchon; Bruno Amara; Shajee Kathirgamanathan; Emily Kerr; Karim Javeri
Subject: RE: OPG Q2 2017 Submission to Province
Date: Thursday, August 03, 2017 12:17:10 PM

Hi Ron,

We are fine with your suggested edits. I didn't see a problem with "the Ontario Fair Hydro Plan" but will put it back if you have a concern.

As for the OEB report, we would be doing a comprehensive rework of the Outlook by end of August, heading into FES and will review risks such as this one. The report is favourable based on our review thus far.

I did let OPG know that our comments are coming back today.

Thanks,

John

From: Ronald Kwan
Sent: Wednesday, August 02, 2017 7:20 PM
To: Gavin He <Gavin.He@ofina.on.ca>
Cc: John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
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It might be good if Linda Smith or CMD reviews the latter part of note 10 of the financials on the types of

investments in the ONFA funds.

Thanks,
Ron

From: Gavin He
Sent: August-01-17 13:28
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: John Kim <John.Kim@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
Subject: FW: OPG Q2 2017 Submission to Province

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SPFB only has one comment on the FS on page 27, and below is the additional details on their comment.

Please note that comments are due back to OPG today.

Regards,
Gavin He

From: Karim Javeri
Sent: Tuesday, August 01, 2017 11:48 AM
To: Gavin He <Gavin.He@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>
Subject: Re: OPG Q2 2017 Submission to Province

Hi Gavin,

The documents look fine except for a description regarding PSS in the F/S on page 27, to which we've added a comment in the attached markup. The document states that OPG is a general partner and CRP is only a limited partner when they are in fact both part of the GP and LP. We have alluded to the need to verify the structure in the comment but since our knowledge of this project comes from our engagement with PSS as stakeholders in ALGP, we do not want to propose any direct edits without Ron's consent. We were hoping you could share this context with Ron along with your consolidated edits on the documents.

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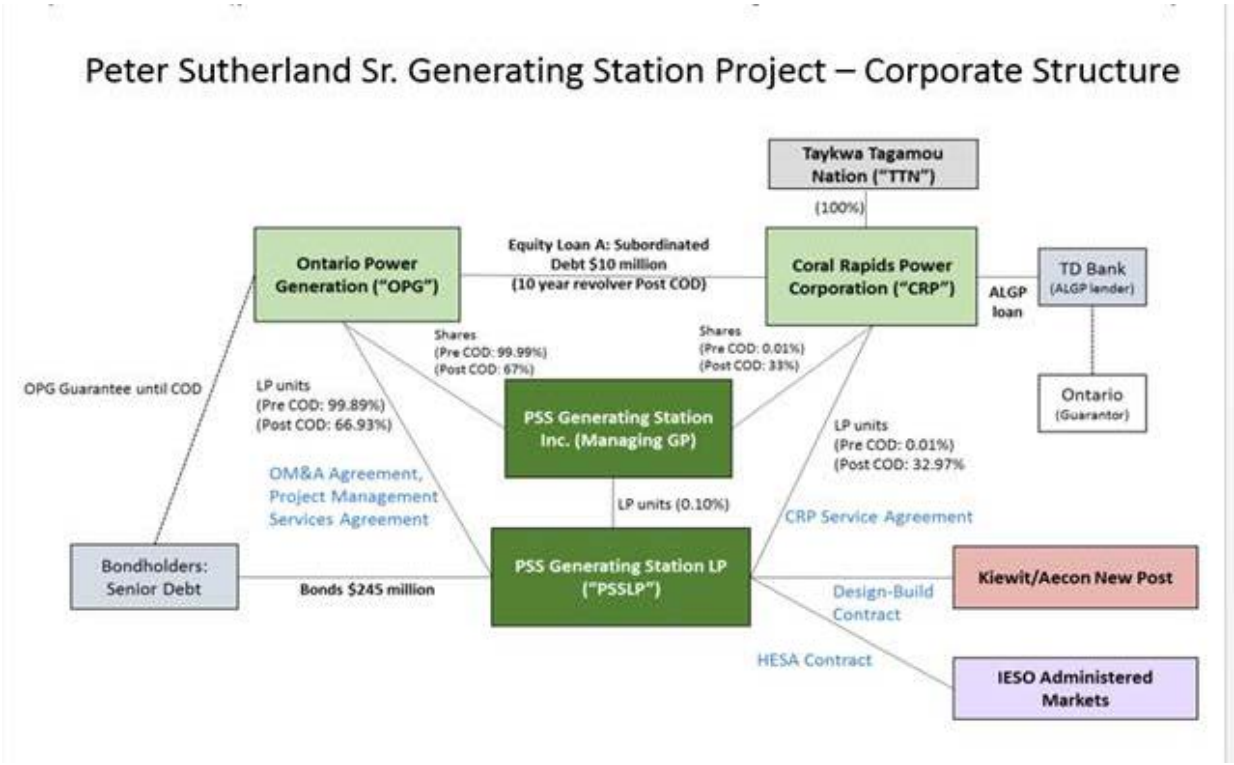

Regards,

Karim

From: Ronald Kwan
Sent: Friday, July 28, 2017 5:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: FW: OPG Q2 2017 Submission to Province

Hi All,

Please review, and note the timeline.

John, does FTD need to review any particular sections?

Ron

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: July-28-17 17:13
To: 'Shruti.Talwar@ontario.ca' <Shruti.Talwar@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>; DYKXHOORN Sandra -STAKEREL <sandra.dykxhoorn@opg.com>

Subject: OPG Q2 2017 Submission to Province

Hi All,

Please find attached OPG's draft Q2 2017 Financial Results Press Release, Management's Discussion and Analysis (MD&A), and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, Aug 1st**.

These documents will be filed with the Ontario Securities Commission on **Friday, August 11th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q2 2017 MD&A:

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Recent Developments	MD&A p.10-12
Darlington Refurbishment	MD&A p.14-15
Ontario's Fair Hydro Plan	MD&A p.11
Sale of Head Office Premises	MD&A p.11

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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From:	Ronald Kwan
To:	Gavin He
Cc:	John Kim; Francisco Chinchon; Bruno Amara; Shajee Kathirgamanathan; Emily Kerr; Karim Javeri
Subject:	RE: OPG Q2 2017 Submission to Province
Date:	Wednesday, August 02, 2017 7:20:02 PM
Attachments:	Q2 2017 DRAFT OPG FS - VP MAILING_CEFD_v2.docx Q2 2017 DRAFT MDA - VP MAILING_CEFD_v3.docx

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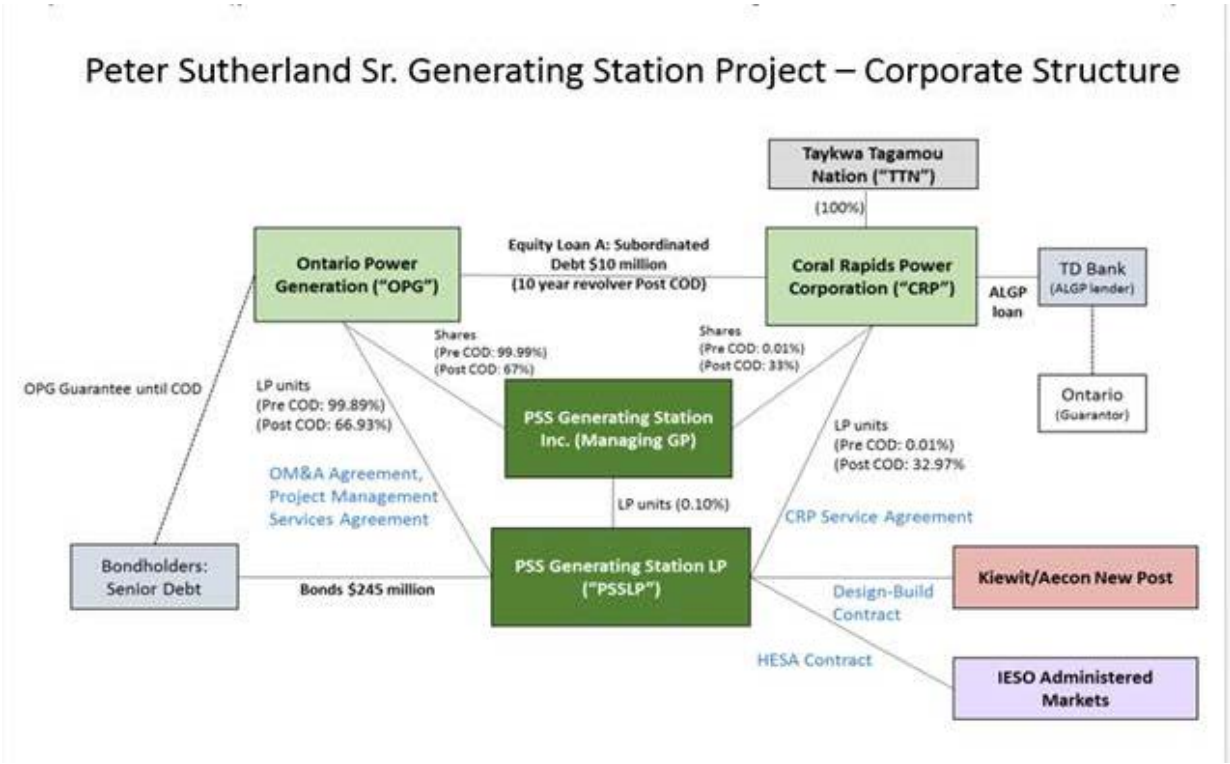

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Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>; DYKXHOORN Sandra -STAKEREL <sandra.dykxhoorn@opg.com>
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Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation
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ONTARIO POWER GENERATION INC.

INTERIM CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

JUNE 30, 2017

[DRAFT]

ONTARIO POWER GENERATION

INTERIM CONSOLIDATED STATEMENTS OF INCOME (UNAUDITED)

(millions of dollars except where noted)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue *(Note 12)*	**1,146**	1,387	**2,322**	2,865
Fuel expense *(Note 12)*	**178**	182	**333**	354
Gross margin	**968**	1,205	**1,989**	2,511
Expenses *(Note 12)*				
Operations, maintenance and administration	**711**	709	**1,419**	1,395
Depreciation and amortization	**172**	316	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**236**	232	**474**	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(194)**	(225)	**(383)**	(372)
Property taxes	**11**	11	**22**	23
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
	928	1,034	**1,853**	2,121
Income before other gains, interest and income taxes	**40**	171	**136**	390
Other gains *(Note 12)*	**(380)**	(1)	**(383)**	(24)
Income before interest and income taxes	**420**	172	**519**	414
Net interest expense *(Note 5)*	**16**	31	**35**	64
Income before income taxes	**404**	141	**484**	350
Income tax expense	**97**	6	**109**	87
Net income	**307**	135	**375**	263
Net income attributable to the Shareholder	**303**	132	**367**	255
Net income attributable to non-controlling interest	**4**	3	**8**	8
Basic and diluted net income per common share *(dollars)*	**1.18**	0.51	**1.43**	0.99
Common shares outstanding *(millions)*	**256.3**	256.3	**256.3**	256.3

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (UNAUDITED)

(millions of dollars)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Net income	**307**	135	**375**	263
Other comprehensive income, net of income taxes *(Note 7)*				
Reclassification to income of amounts related to pension and other post-employment benefits [1]	**2**	3	**5**	6
Reclassification to income of losses on derivatives designated as cash flow hedges [2]	**5**	6	**9**	10
Unrealized (loss) gain on available-for-sale securities [3]	**(7)**	15	**(2)**	15
Other comprehensive income for the period	**-**	24	**12**	31
Comprehensive income	**307**	159	**387**	294
Comprehensive income attributable to the Shareholder	**303**	156	**379**	286
Comprehensive income attributable to non-controlling interest	**4**	3	**8**	8

[1] Net of income tax expenses of $1 million for the three months ended June 30, 2017 and 2016. Net of income tax expenses of $2 million for the six months ended June 30, 2017 and 2016.

[2] Net of income tax expense of nil for the three months ended June 30, 2017 and 2016. Net of income tax expenses of $1 million for the six months ended June 30, 2017 and 2016.

[3] Net of income tax recovery of $2 million and income tax expense of $5 million for the three months ended June 30, 2017 and 2016, respectively. Net of income tax recovery of $1 million and income tax expense of $5 million for the six months ended June 30, 2017 and 2016, respectively.

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

Six Months Ended June 30 *(millions of dollars)*	**2017**	**2016**
Operating activities		
Net income	**375**	263
Adjust for non-cash items:		
Depreciation and amortization	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**474**	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(383)**	(372)
Pension and other post-employment benefit costs *(Note 8)*	**226**	233
Deferred income taxes	**16**	(11)
Mark-to-market on derivative instruments	**(3)**	2
Provision for used nuclear fuel and low and intermediate level nuclear waste	**53**	62
Regulatory assets and liabilities	**(73)**	(68)
Provision for materials and supplies	**9**	9
Other gains	**(379)**	(24)
Other	**(9)**	(16)
	645	1,170
Contributions to nuclear fixed asset removal and nuclear waste management funds	**-**	(74)
Expenditures on fixed asset removal and nuclear waste management	**(157)**	(125)
Reimbursement of expenditures on nuclear fixed asset removal and nuclear waste management	**41**	30
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans	**(180)**	(237)
Expenditures on restructuring	**(2)**	(3)
Distributions received from investments subject to significant influence	**23**	30
Net changes to other long-term assets and liabilities	**16**	16
Net changes in non-cash working capital balances *(Note 13)*	**(125)**	(93)
Cash flow provided by operating activities	**261**	714
Investing activities		
Net proceeds from sale of property, plant and equipment	**484**	-
Purchase of available-for-sale securities	**-**	(213)
Proceeds from deposit note *(Note 4)*	**70**	35
Investment in property, plant and equipment and intangible assets	**(859)**	(718)
Cash flow used in investing activities	**(305)**	(896)
Financing activities		
Issuance of long-term debt *(Note 4)*	**300**	-
Repayment of long-term debt	**(212)**	(2)
Contribution from non-controlling interest	**19**	-
Distribution to non-controlling interest	**(7)**	(7)
Issuance of short-term notes	**864**	1,985
Repayment of short-term notes	**(864)**	(1,963)
Cash flow provided by financing activities	**100**	13
Net increase (decrease) in cash and cash equivalents	**56**	(169)
Cash and cash equivalents, beginning of period	**186**	464
Cash and cash equivalents, end of period	**242**	295

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at *(millions of dollars)*	June 30 2017	December 31 2016
Assets		
Current assets		
Cash and cash equivalents	**242**	186
Available-for-sale securities	**195**	212
Receivables from related parties	**367**	429
Nuclear fixed asset removal and nuclear waste management funds	**18**	24
Fuel inventory	**306**	310
Materials and supplies	**94**	100
Prepaid expenses	**218**	198
Other current assets	**102**	298
	1,542	1,757
Property, plant and equipment	**30,049**	29,315
Less: accumulated depreciation	**9,539**	9,317
	20,510	19,998
Intangible assets	**534**	503
Less: accumulated amortization	**418**	404
	116	99
Other assets		
Nuclear fixed asset removal and nuclear waste management funds	**16,325**	15,960
Long-term materials and supplies	**353**	345
Regulatory assets *(Note 3)*	**5,961**	5,855
Investments subject to significant influence *(Note 14)*	**316**	321
Other long-term assets	**32**	37
	22,987	22,518
	45,155	44,372

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at *(millions of dollars)*	June 30 2017	December 31 2016
Liabilities		
Current liabilities		
Accounts payable and accrued charges	**1,021**	1,164
Deferred revenue due within one year	**12**	12
Short-term debt	**-**	2
Long-term debt due within one year *(Note 4)*	**1,218**	1,103
Income taxes payable	**-**	123
	2,251	2,404
Long-term debt *(Note 4)*	**4,390**	4,417
Other liabilities		
Fixed asset removal and nuclear waste management liabilities *(Note 6)*	**19,876**	19,484
Pension liabilities	**2,914**	3,012
Other post-employment benefit liabilities	**2,939**	2,897
Long-term accounts payable and accrued charges	**260**	213
Deferred revenue	**325**	298
Deferred income taxes	**845**	829
Regulatory liabilities *(Note 3)*	**446**	310
	27,605	27,043
Equity		
Common shares [1]	**5,126**	5,126
Retained earnings	**5,903**	5,534
Accumulated other comprehensive loss *(Note 7)*	**(280)**	(295)
Equity attributable to the Shareholder	**10,749**	10,365
Equity attributable to non-controlling interest	**160**	143
Total equity	**10,909**	10,508
	45,155	44,372

[1] 256,300,010 common shares outstanding at a stated value of $5,126 million as at June 30, 2017 and December 31, 2016.

Commitments and Contingencies *(Notes 4, 10 and 11)*

See accompanying notes to the interim consolidated financial statements

INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (UNAUDITED)

Six Months Ended June 30 *(millions of dollars)*	**2017**	**2016**
Common shares	**5,126**	5,126
Retained earnings		
Balance at beginning of period	**5,534**	5,098
Net income attributable to the Shareholder	**367**	255
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**2**	-
Balance at end of period	**5,903**	5,353
Accumulated other comprehensive loss, net of income taxes		
Balance at beginning of period	**(295)**	(319)
Other comprehensive income	**12**	31
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**3**	-
Balance at end of period	**(280)**	(288)
Equity attributable to the Shareholder	**10,749**	10,191
Equity attributable to non-controlling interest		
Balance at beginning of period	**143**	140
Equity contribution from non-controlling interest	**21**	-
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**(5)**	-
Distribution to non-controlling interest	**(7)**	(7)
Income attributable to non-controlling interest	**8**	8
Balance at end of period	**160**	141
Total equity	**10,909**	10,332

See accompanying notes to the interim consolidated financial statements

NOTES TO THE INTERIM CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

For the three and six months ended June 30, 2017 and 2016

1. BASIS OF PRESENTATION

These interim consolidated financial statements for the three and six months ended June 30, 2017 and 2016 include the accounts of Ontario Power Generation Inc. (OPG or the Company) and its subsidiaries. The Company consolidates its interest in entities over which it is able to exercise control and attributes the results to its sole shareholder, the Province of Ontario (Province). Interests owned by other parties are reflected as non-controlling interest. These interim consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP). These interim consolidated financial statements do not contain all of the disclosures required by US GAAP for annual financial statements. Accordingly, they should be read in conjunction with the annual consolidated financial statements of the Company as at and for the year ended December 31, 2016. All dollar amounts are presented in Canadian dollars.

Certain of the 2016 comparative amounts have been reclassified from financial statements previously presented to conform to the 2017 interim consolidated financial statement presentation.

Use of Management Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the interim consolidated financial statements, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefit (OPEB) balances, asset retirement obligations and associated asset retirement costs capitalized as part of property, plant and equipment, income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments and investments in segregated funds, depreciation and amortization expenses, and inventories. Actual results may differ significantly from these estimates.

2. SIGNIFICANT ACCOUNTING POLICIES AND ESTIMATES

Change in Accounting Estimate

Pension and Other Post-Employment Benefits

Effective January 1, 2017, OPG changed the method used to estimate the service and interest cost components of pension and OPEB costs. OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs is estimated at approximately $35 million and $70 million for the three and six month ended June 30, 2017, respectively. Approximately 90 percent of this reduction in pension and OPEB costs was attributed to the Company's regulated business segments and therefore was offset by the impact of regulatory variance and deferral accounts authorized by the Ontario Energy Board (OEB).

Recent Accounting Pronouncements Not Yet Adopted

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

As part of the project to implement the new revenue standard, OPG is continuing to assess the impact of the standard on accounting for the Company's revenue streams and consolidated financial statements. OPG's major revenue streams include regulated generation revenue from base regulated prices and rate riders established by the OEB, as well as revenue from generation assets under long-term contractual arrangements with the Independent Electricity System Operator (IESO). In March 2017, the American Institute of Certified Public Accountants (AICPA) issued Revenue Recognition Implementation Issue #13-1*, Scope Clarification Regarding Tariff Sales to Regulated Customers*. The draft implementation guidance was developed by the AICPA Power & Utilities task force. This draft guidance concludes that tariff-based revenue from the provision of regulated utility service to a utility's customers is within the scope of Topic 606. OPG has completed its analysis of the impact of Topic 606 on its accounting for generation revenue from base regulated prices and has not identified any material differences. The Company continues to work on its assessment of the impact of Topic 606 on its other revenue streams.

The Company currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements and is in the process of concluding on the method of adoption.

Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost

In March 2017, the FASB issued ASU No. 2017-07, *Compensation – Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. Under the new guidance, employers that sponsor defined benefit plans for pensions and/or other postretirement benefits are required to present the service cost component of net periodic benefit cost in the same statement of income line item as other employee compensation costs arising from services rendered during the period. The other components of the net periodic benefit cost are to be presented separately from the line item that includes the service cost and outside of any subtotal of income from operations, if such a subtotal is presented. In addition, the new guidance requires that only the service cost component of net benefit cost be eligible for capitalization.

This guidance is effective for fiscal years beginning after December 15, 2017, including interim periods of those years. The guidance is not expected to have a material impact on OPG's consolidated financial statements, as OPG currently capitalizes only the service cost component of post-retirement benefits costs. Additionally, OPG already includes the service cost component of post-retirement benefit costs with other compensation costs, within the operations, maintenance and administration expenses line item in the consolidated statements of income, and does not show a subtotal of income from operations. As such, the new guidance is not expected to affect the presentation of OPG's consolidated financial statements.

3. REGULATORY ASSETS AND LIABILITIES

The regulatory assets and liabilities recorded as at June 30, 2017 and December 31, 2016 are as follows:

(millions of dollars)	**June 30 2017**	**December 31 2016**
Regulatory assets		
Variance and deferral accounts authorized by the Ontario Energy Board		
Pension and OPEB Cost Variance Account	**716**	716
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 8)*	**533**	497
Hydroelectric Surplus Baseload Generation Variance Account	**299**	210
Bruce Lease Net Revenues Variance Account	**123**	95
Other variance and deferral accounts	**128**	107
	1,799	1,625
Pension and OPEB Regulatory Asset *(Note 8)*	**3,304**	3,392
Deferred Income Taxes	**858**	838
Total regulatory assets	**5,961**	5,855
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Hydroelectric Water Conditions Variance Account	**119**	51
Impact Resulting from Changes in Station End-of-Life Dates Deferral Account	**106**	71
Other variance and deferral accounts	**221**	188
Total regulatory liabilities	**446**	310

OPG's May 2016 application with the OEB for new regulated prices included a request for new rate riders to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, and the portion of these balances previously approved for recovery or repayment for through rate riders previously in effect. The application also requested the continuation of all applicable existing variance and deferral accounts. In March 2017, the OEB approved a settlement agreement reached by OPG and intervenors on a limited set of issues in the application (Settlement Agreement). Among the settled issues, the agreement provided for the continuation of all applicable existing variance and deferral accounts and accepted a number of variance and deferral account balances for recovery, as requested in OPG's application. The periods of recovery or repayment for the accepted variance and deferral account balances are excluded from the scope of the Settlement Agreement. The Settlement Agreement did not impact OPG's financial results for the three and six months ended June 30, 2017. The OEB's decision on OPG's application will be issued following final arguments, which were completed in the second quarter of 2017.

As at June 30, 2017 and December 31, 2016, regulatory assets for other variance and deferral accounts included amounts for the Nuclear Deferral and Variance Over/Under Recovery Variance Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Liability Deferral Account, the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account, and the Nuclear Development Variance Account. As at June 30, 2017 and December 31, 2016, regulatory liabilities for other variance and deferral accounts included the amounts for the Pension & OPEB Cash Payment Variance Account, the Capacity Refurbishment Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account.

4. LONG-TERM DEBT

Long-term debt consists of the following:

(millions of dollars)	June 30 2017	December 31 2016
Notes payable to the Ontario Electricity Financial Corporation	**3,385**	3,295
UMH Energy Partnership	**182**	184
PSS Generating Station Limited Partnership	**245**	245
Lower Mattagami Energy Limited Partnership	**1,795**	1,795
Other	**15**	15
	5,622	5,534
Less: bond issuance fees	**(14)**	(14)
Less: due within one year	**(1,218)**	(1,103)
Long-term debt	**4,390**	4,417

In the fourth quarter of 2015, PSS Generating Station Limited Partnership (PSS), a subsidiary of OPG, issued long-term debt totalling $245 million in support of the Peter Sutherland Sr. Generating Station (GS) project. The majority of the debt proceeds, totalling $180 million, were invested in a structured deposit note with staggered maturity dates ranging from January 2016 to April 2017. As at June 2017, the deposit note balance of nil (December 31, 2016 - $70 million) was reported in Other current assets on the consolidated balance sheets.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the Ontario Electricity Financial Corporation (OEFC), which expires on December 31, 2017. ~~In August 2017, the credit facility was increased to $2,350 million, which expires in December 2018.~~

Commented [A1]: EFB staff suggest deleting this sentence

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent. In June 2017, OPG issued senior notes payable to the OEFC totalling $100 million and maturing in June 2047. The effective interest rate and coupon interest rate of these notes was 3.65 percent.

5. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG renewed and extended the expiry date of both tranches from May 2021 to May 2022. As at June 30, 2017, there were no amounts outstanding under the bank credit facility. There was no commercial paper outstanding under OPG's commercial paper program as at June 30, 2017.

As at June 30, 2017, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at June 30, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at June 30, 2017.

As at June 30, 2017, OPG maintained $25 million of short-term, uncommitted overdraft facilities and $462 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at June 30, 2017, a total of $387 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $37 million for general corporate purposes, and $1 million related to the operation of the Portlands Energy Centre (PEC).

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million, expiring on November 30, 2018. As at June 30, 2017, there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

UMH Energy Partnership has entered into an $8 million short-term, uncommitted overdraft facility and $16 million of irrevocable, standby Letters of Credit facilities in support of its operations. As at June 30, 2017, total Letters of Credit of $14 million had been issued under these facilities.

The following table summarizes the net interest expense:

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars)	**2017**	**2016**	**2017**	**2016**
Interest on long-term debt	**71**	72	**141**	144
Interest on short-term debt	**2**	1	**2**	2
Interest income	**(2)**	(2)	**(2)**	(4)
Interest capitalized to property, plant and equipment and intangible assets	**(40)**	(34)	**(82)**	(65)
Interest related to regulatory assets and liabilities [1]	**(15)**	(6)	**(24)**	(13)
Net interest expense	**16**	31	**35**	64

[1] Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Bruce Lease Net Revenues Variance Account, the Capacity Refurbishment Variance Account, and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

6. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES

The liabilities for fixed asset removal and nuclear waste management on a present value basis as at June 30, 2017 and December 31, 2016 consist of the following:

(millions of dollars)	June 30 2017	December 31 2016
Liability for nuclear used fuel management	**11,554**	11,292
Liability for nuclear decommissioning and nuclear low and intermediate level waste management	**7,944**	7,811
Liability for non-nuclear fixed asset removal	**378**	381
Fixed asset removal and nuclear waste management liabilities	**19,876**	19,484

7. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of accumulated other comprehensive loss (AOCL), are as follows:

	Six Months Ended June 30, 2017			
(millions of dollars)	**Unrealized Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities [1]**	**Total [1]**
AOCL, beginning of period	**(87)**	**(207)**	**(1)**	**(295)**
Unrealized loss on available-for-sale securities	**-**	**-**	**(2)**	**(2)**
Amounts reclassified from AOCL	**9**	**5**	**-**	**14**
Other comprehensive income for the period	**9**	**5**	**(2)**	**12**
Reclassification of non-controlling interest on change in ownership interest *(Note 15)*	**3**	**-**	**-**	**3**
AOCL, end of period	**(75)**	**(202)**	**(3)**	**(280)**

[1] All amounts are net of income taxes.

	Six Months Ended June 30, 2016			
(millions of dollars)	**Unrealized Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities [1]**	**Total [1]**
AOCL, beginning of period	(106)	(213)	-	(319)
Unrealized gain on available-for-sale securities	-	-	15	15
Amounts reclassified from AOCL	10	6	-	16
Other comprehensive income for the period	10	6	15	31
AOCL, end of period	(96)	(207)	15	(288)

[1] All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the three and six months ended June 30, 2017 are as follows:

	Amount Reclassified from AOCL		
(millions of dollars)	**Three Months Ended June 30, 2017**	**Six Months Ended June 30, 2017**	**Statement of Income Line Item**
Amortization of losses from cash flow hedges			
Losses	**5**	**10**	Net interest expense
Income tax recovery	**-**	**(1)**	Income tax expense
	5	**9**	
Amortization of amounts related to pension and OPEB			
Actuarial losses	**3**	**7**	See (1) below
Income tax recovery	**(1)**	**(2)**	Income tax expense
	2	**5**	
Total reclassifications for the period	**7**	**14**	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 8 for additional details).

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the three and six months ended June 30, 2016 are as follows:

	Amount Reclassified from AOCL		
(millions of dollars)	Three Months Ended June 30, 2016	Six Months Ended June 30, 2016	Statement of Income Line Item
Amortization of losses from cash flow hedges			
Losses	6	11	Net interest expense
Income tax recovery	-	(1)	Income tax expense
	6	10	
Amortization of amounts related to pension and OPEB			
Actuarial losses	4	8	See (1) below
Income tax recovery	(1)	(2)	Income tax expense
	3	6	
Total reclassifications for the period	9	16	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 8 for additional details).

8. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

OPG's pension and OPEB costs for the three months ended June 30, 2017 and 2016 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		OPEB	
(millions of dollars)	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**
Components of Cost Recognized for the period						
Current service costs	**69**	69	**2**	1	**17**	17
Interest on projected benefit obligation	**136**	159	**3**	3	**27**	33
Expected return on plan assets, net of expenses	**(192)**	(184)	**-**	-	**-**	-
Amortization of net actuarial loss [1]	**46**	48	**1**	1	**-**	5
Cost recognized [2]	**59**	92	**6**	5	**44**	55

[1] The amortization of net actuarial loss is recognized as an increase to other comprehensive income. This increase for the three months ended June 30, 2017 was partially offset by a decrease in the Pension and OPEB Regulatory Asset of $44 million (three months ended June 30, 2016 – $50 million).

[2] These pension and OPEB costs for the three months ended June 30, 2017 exclude the net addition of costs of $4 million from the recognition of changes in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account (three months ended June 30, 2016 – net reduction of costs of $36 million).

OPG's pension and OPEB costs for the six months ended June 30, 2017 and 2016 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		OPEB	
(millions of dollars)	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**
Components of Cost Recognized						
Current service costs	**137**	138	**3**	3	**34**	34
Interest on projected benefit obligation	**273**	317	**6**	6	**54**	66
Expected return on plan assets, net of expenses	**(383)**	(367)	**-**	-	**-**	-
Amortization of net actuarial loss [1]	**92**	96	**3**	2	**-**	10
Cost recognized [2]	**119**	184	**12**	11	**88**	110

[1] The amortization of net actuarial loss is recognized as an increase to other comprehensive income. This increase for the six months ended June 30, 2017 was partially offset by a decrease in the Pension and OPEB Regulatory Asset of $88 million (six months ended June 30, 2016 – $100 million).

[2] These pension and OPEB costs for the six months ended June 30, 2017 exclude the net addition of costs of $7 million from the recognition of changes in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account (six months ended June 30, 2016 - net reduction of costs of $72 million).

9. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect the Company's assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/United States (US) foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are denominated in, or tied to, US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the IESO administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at June 30, 2017 was less than $1 million. OPG's fair value derivatives totalled a net liability of $13 million as at June 30, 2017 (December 31, 2016 – $24 million).

Existing pre-tax net losses of $20 million deferred in AOCL as at June 30, 2017 are expected to be reclassified to net income within the next 12 months.

10. FAIR VALUE MEASUREMENTS

The fair value of financial instruments traded in active markets is based on quoted market prices at the interim consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments. The fair value hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the interim consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Certain alternative investments are measured at fair value by their investment managers using net asset value (NAV). Investments measured at NAV as a practical expedient for determining their fair value are excluded from the fair value hierarchy.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The following is a summary of OPG's financial instruments and their fair value as at June 30, 2017 and December 31, 2016:

	Fair Value		Carrying Value [1]		
(millions of dollars)	**2017**	**2016**	**2017**	**2016**	**Balance Sheet Line Item**
Nuclear Segregated Funds (includes current portion) [2]	**16,343**	15,984	**16,343**	15,984	Nuclear fixed asset removal and nuclear waste management funds
Investment in Hydro One shares	**195**	212	**195**	212	Available-for-sale securities
Payable related to cash flow hedges	**(44)**	(48)	**(44)**	(48)	Long-term accounts payable and accrued charges
Long-term debt (includes current portion)	**(6,194)**	(6,033)	**(5,608)**	(5,520)	Long-term debt
Other financial instruments	**(8)**	(18)	**(8)**	(18)	Various

[1] The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other current assets, short-term debt, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

[2] The Nuclear Segregated Funds are comprised of the Decommissioning Segregated Fund and the Used Fuel Segregated Fund.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs.

The following tables present financial assets and financial liabilities measured at fair value in accordance with the fair value hierarchy as at June 30, 2017 and December 31, 2016:

	June 30, 2017			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**5,704**	**4,612**	**-**	**10,316**
Investments measured at NAV [1]				**1,223**
				11,539
Due to Province				**(2,194)**
Used Fuel Segregated Fund, net				**9,345**
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**4,264**	**3,407**	**-**	**7,671**
Investments measured at NAV [1]				**1,012**
				8,683
Due to Province				**(1,685)**
Decommissioning Segregated Fund, net				**6,998**
Investment in available-for-sale securities [2]	**195**	**-**	**-**	**195**
Other financial assets	**6**	**6**	**9**	**21**
Liabilities				
Other financial liabilities	**(21)**	**(8)**	**-**	**(29)**

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

[2] In the second quarter of 2017, approximately 622,000 of Hydro One Inc. shares held as available-for-sale securities were distributed to eligible employees represented by the Power Workers' Union under the terms of the of the collective bargaining agreement reached in 2015. On the day of transfer, the closing price was $24.25 per share.

(millions of dollars)	December 31, 2016 Level 1	Level 2	Level 3	Total
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	5,602	4,394	-	9,996
Investments measured at NAV [1]				1,086
				11,082
Due to Province				(1,938)
Used Fuel Segregated Fund, net				9,144
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	4,171	3,243	-	7,414
Investments measured at NAV [1]				903
				8,317
Due to Province				(1,477)
Decommissioning Segregated Fund, net				6,840
Investment in available-for-sale securities	212	-	-	212
Other financial assets	6	2	9	17
Liabilities				
Other financial liabilities	(29)	(6)	-	(35)

1 Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

During the six months ended June 30, 2017, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3 for the three months ended June 30, 2017:

(millions of dollars)	Other financial instruments
Opening balance, April 1, 2017	**7**
Realized losses included in revenue	**(2)**
Purchases	**4**
Closing balance, June 30, 2017	**9**

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3 for the six months ended June 30, 2017:

(millions of dollars)	Other financial instruments
Opening balance, January 1, 2017	**9**
Unrealized losses included in revenue	**(2)**
Realized losses included in revenue	**(3)**
Purchases	**5**
Closing balance, June 30, 2017	**9**

Nuclear Segregated Funds

The fair value of the investments within the Nuclear Segregated Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value. Alternative investments are measured at fair value using NAV as a practical expedient.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Segregated Funds that are reported on the basis of NAV as at June 30, 2017:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Alternative Investments				
Infrastructure	**1,275**	**806**	**n/a**	**n/a**
Real Estate	**882**	**478**	**n/a**	**n/a**
Agriculture	**78**	**115**	**n/a**	**n/a**
Pooled Funds				
Short-term Investments	**17**	**n/a**	**Daily**	**1 - 5 Days**
Fixed Income	**540**	**n/a**	**Daily**	**1 - 5 Days**
Equity	**850**	**n/a**	**Daily**	**1 - 5 Days**
Total	**3,642**	**1,399**		

The fair value of the pooled funds is classified as Level 2. Infrastructure, real estate and agriculture investments are measured using NAV as a practical expedient for determining their fair value.

Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

Real Estate

This class includes investments in institutional-grade real estate property. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests to another party, as stipulated in the partnership agreement. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements.

Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations, and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally managed portfolios. The fair value of the investments in this class has been estimated using NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

11. COMMITMENTS AND CONTINGENCIES

Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power L.P. (Bruce Power) by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered in accordance with an extension of the original June 30, 2017 delivery deadline set out in the timetable.

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at June 30, 2017, the total amount of guarantees OPG provided to these entities was $83 million (December 31, 2016 − $83 million). OPG may terminate some of these guarantees

within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at June 30, 2017, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at June 30, 2017 are as follows:

(millions of dollars)	**2017** [1]	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Fuel supply agreements	99	169	96	76	62	103	605
Contributions to the OPG registered pension plan [2]	122	251	-	-	-	-	373
Long-term debt repayment	891	398	368	663	413	2,889	5,622
Interest on long-term debt	124	207	189	167	138	2,545	3,370
Commitments related to Darlington Refurbishment [3]	506	-	-	-	-	-	506
Commitments related to Peter Sutherland Sr. GS project	29	-	-	-	-	-	29
Commitments related to Ranney Falls GS project	14	21	4	-	-	-	39
Operating licences	20	40	41	24	28	115	268
Operating lease obligations	14	27	25	25	23	93	207
Unconditional purchase obligations	31	59	58	56	5	-	209
Accounts payable and accrued charges	730	8	8	-	-	17	763
Other	44	38	26	2	1	65	176
Total	2,624	1,218	815	1,013	670	5,827	12,167

[1] Represents amounts for the remainder of the year.

[2] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[3] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

12. BUSINESS SEGMENTS

Segment (Loss) Income for the Three Months Ended June 30, 2017 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	609	30	379	147	10	(29)	1,146
Fuel expense	68	-	97	13	-	-	178
Gross margin	541	30	282	134	10	(29)	968
Operations, maintenance and administration	593	32	75	40	-	(29)	711
Depreciation and amortization	110	-	35	20	7	-	172
Accretion on fixed asset removal and nuclear waste management liabilities	-	232	-	2	2	-	236
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(194)	-	-	-	-	(194)
Property taxes	7	-	-	3	1	-	11
Income from investments subject to significant influence	-	-	-	(8)	-	-	(8)
Other gains	-	-	-	-	(380)	-	(380)
(Loss) income before interest and income taxes	(169)	(40)	172	77	380	-	420

Segment (Loss) Income for the Three Months Ended June 30, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	820	32	413	137	16	(31)	1,387
Fuel expense	79	-	92	11	-	-	182
Gross margin	741	32	321	126	16	(31)	1,205
Operations, maintenance and administration	581	34	75	45	5	(31)	709
Depreciation and amortization	231	-	57	18	10	-	316
Accretion on fixed asset removal and nuclear waste management liabilities	-	228	-	2	2	-	232
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(225)	-	-	-	-	(225)
Property taxes	6	-	-	3	2	-	11
Income from investments subject to significant influence	-	-	-	(9)	-	-	(9)
Other (gains) losses	(1)	-	2	-	(2)	-	(1)
(Loss) income before interest and income taxes	(76)	(5)	187	67	(1)	-	172

Segment (Loss) Income for the Six Months Ended June 30, 2017 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	**1,261**	**57**	**742**	**290**	**27**	**(55)**	**2,322**
Fuel expense	**136**	**-**	**170**	**27**	**-**	**-**	**333**
Gross margin	**1,125**	**57**	**572**	**263**	**27**	**(55)**	**1,989**
Operations, maintenance and administration	**1,182**	**61**	**151**	**79**	**1**	**(55)**	**1,419**
Depreciation and amortization	**217**	**-**	**69**	**39**	**14**	**-**	**339**
Accretion on fixed asset removal and nuclear waste management liabilities	**-**	**466**	**-**	**4**	**4**	**-**	**474**
Earnings on nuclear fixed asset removal and nuclear waste management funds	**-**	**(383)**	**-**	**-**	**-**	**-**	**(383)**
Property taxes	**13**	**-**	**-**	**5**	**4**	**-**	**22**
Income from investments subject to significant influence	**-**	**-**	**-**	**(18)**	**-**	**-**	**(18)**
Other gains	**-**	**-**	**-**	**-**	**(383)**	**-**	**(383)**
(Loss) income before interest and income taxes	**(287)**	**(87)**	**352**	**154**	**387**	**-**	**519**

Segment (Loss) Income for the Six Months Ended June 30, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Manage-ment	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	1,746	66	798	282	37	(64)	2,865
Fuel expense	160	-	171	23	-	-	354
Gross margin	1,586	66	627	259	37	(64)	2,511
Operations, maintenance and administration	1,144	70	151	85	9	(64)	1,395
Depreciation and amortization	461	-	113	37	17	-	628
Accretion on fixed asset removal and nuclear waste management liabilities	-	456	-	4	4	-	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(372)	-	-	-	-	(372)
Property taxes	13	-	-	5	5	-	23
Income from investments subject to significant influence	-	-	-	(17)	-	-	(17)
Other gains	(2)	-	(20)	-	(2)	-	(24)
(Loss) income before interest and income taxes	(30)	(88)	383	145	4	-	414

Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. In December 2016, a purchase and sale agreement was executed, and the sale was completed in April 2017. A gain on sale of $283 million, which is net of tax effects of $95 million, was recognized in net income upon completion of the transaction in the second quarter of 2017. The pre-tax gain on sale was recorded as Other gains in the interim consolidated statement of income in the Services, Trading and Other Non-Generation segment. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the Act, into the Province's Consolidated Revenue Fund. OPG is working with the Ontario Ministry of Finance to finalize the prescribed costs incurred in connection with the disposition and the designated proceeds to be transferred into the Province's Consolidated Revenue Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. An active program to locate a buyer for the property was initiated in June 2017. The Lakeview GS site assets were fully depreciated prior to June 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds, net of prescribed deductions under the Act, from this disposition into the Province's Consolidated Revenue Fund.

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility represent core assets of OPG's business. They have been reported under the Services, Trading, and Other Non-Generation segment.

13. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	Six Months Ended June 30 2017	2016
Receivables from related parties	**62**	52
Prepaid expenses	**(20)**	(22)
Other current assets [1]	**22**	14
Fuel inventory	**4**	11
Income taxes payable	**(74)**	(1)
Materials and supplies	**6**	1
Accounts payable and accrued charges	**(125)**	(148)
	(125)	(93)

[1] Includes other accounts receivable.

14. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of the PEC gas-fired combined cycle generating station and the Brighton Beach gas-fired combined cycle generating station (Brighton Beach), which are accounted for using the equity method. Details of the balances as at June 30, 2017 and December 31, 2016 are as follows:

(millions of dollars)	June 30 2017	December 31 2016
PEC		
Current assets	**15**	18
Long-term assets	**248**	256
Current liabilities	**(6)**	(8)
Long-term liabilities	**(5)**	(5)
Brighton Beach		
Current assets	**6**	5
Long-term assets	**164**	168
Current liabilities	**(16)**	(16)
Long-term liabilities	**(8)**	(7)
Long-term debt	**(82)**	(90)
Investments subject to significant influence	**316**	321

15. NON-CONTROLLING INTEREST

Nanticoke Solar LP

In March 2016, Nanticoke Solar LP (NSLP), then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation, was selected through IESO's Large Renewal Procurement program to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. In the first quarter of 2017, OPG acquired all of SECCLP's interests in NSLP, which represented 25 percent of the equity interest in NSLP. Subsequent to the acquisition, OPG owns 90 percent of the equity interest in NSLP, with an approximate value of $2 million. OPG consolidates the results of the NSLP in its consolidated financial statements and reports the equity interest of the other partner as non-controlling interest.

PSS Generating Station LP

PSS is a limited partnership between OPG, Coral Rapids Power Corporation (CRP), and PSS Generating Station Inc. (PSS GS Inc.). The principal business of the partnership is the development, construction, ownership, operation and maintenance of the 28 megawatt Peter Sutherland Sr. hydroelectric GS on the New Post Creek. OPG and PSS GS Inc. are general partners and CRP is a limited partner in the partnership. CRP is a wholly owned subsidiary of the Taykwa Tagamou Nation.

Commented [GH2]: From SPFB:
Suggest review of the structure of the general partnership and limited partnership to confirm accuracy of the role of the parties mentioned.

The Peter Sutherland Sr. GS was placed in-service in March 2017 and, in April 2017, CRP increased its interest in the PSS to 33 percent under the partnership agreement, by making contributions of $21 million, reducing OPG's interest to 67 percent. As a result of the contributions made by OPG and CRP, PSS has met the criteria of having sufficient equity at risk to finance its activities, and ceased being classified as a variable interest entity during the second quarter of 2017. OPG continues to consolidate the results of the PSS in its consolidated financial statements. CRP's 33 percent interest in the PSS is reported as non-controlling interest. As a result of CRP increasing its interest in the partnership, PSS' AOCL and partner's deficit were proportionately allocated to CRP as a reduction to its non-controlling interest during the second quarter of 2017.

ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

2017 SECOND QUARTER REPORT

[DRAFT]

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ONTARIO POWER GENERATION

ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the unaudited interim consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the three and six months ended June 30, 2017. OPG's unaudited interim consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

For a complete description of OPG's corporate strategies, risk management, corporate governance, and the effect of critical accounting policies and estimates on OPG's results of operations and financial condition, this MD&A should also be read in conjunction with OPG's audited consolidated financial statements, accompanying notes, the Annual Information Form, and the MD&A as at and for the year ended December 31, 2016.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Exemptive Relief for Reporting under US GAAP,* in OPG's 2016 annual MD&A. This MD&A is dated August 11, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out in the section, *Risk Management,* and forecasts discussed in the section, *Core Business, Strategy, and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), Total Generating Cost (TGC) and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at June 30, 2017, OPG's electricity generation portfolio had an in-service capacity of 16,210 megawatts (MW). OPG operates two nuclear generating stations, 66 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report. A description of OPG's segments is provided in OPG's 2016 annual MD&A in the section, *Business Segments*.

All of OPG's owned and co-owned generating facilities are located in Ontario. OPG does not operate PEC, Brighton Beach, the Bruce A GS and the Bruce B GS.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as at June 30, 2017 and December 31, 2016 was as follows:

(MW)	As at June 30 2017	As at December 31 2016
Regulated – Nuclear Generation [1]	**5,728**	5,728
Regulated – Hydroelectric	**6,426**	6,421
Contracted Generation Portfolio [2]	**4,056**	4,028
Total	**16,210**	16,177

[1] The in-service generating capacity as of June 30, 2017 and December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

During the six months ended June 30, 2017, the total in-service capacity increased by 33 MW. The increase was primarily due to the completion of the Peter Sutherland Sr. hydroelectric GS, which was placed in-service at the end of the first quarter of 2017, and the upgrade of Unit 10 of the Sir Adam Beck 1 hydroelectric GS, which was completed in June 2017.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's unaudited interim consolidated operating results. Significant factors which contributed to OPG's results during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, are discussed below.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**	**2017**	**2016**
Revenue	**1,146**	1,387	**2,322**	2,865
Fuel expense	**178**	182	**333**	354
Gross margin	**968**	1,205	**1,989**	2,511
Operations, maintenance and administration	**711**	709	**1,419**	1,395
Depreciation and amortization	**172**	316	**339**	628
Accretion on fixed asset removal and nuclear waste management liabilities	**236**	232	**474**	464
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(194)**	(225)	**(383)**	(372)
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
Property taxes	**11**	11	**22**	23
	928	1,034	**1,853**	2,121
Income before other gains, interest and income taxes	**40**	171	**136**	390
Other gains	**(380)**	(1)	**(383)**	(24)
Income before interest and income taxes	**420**	172	**519**	414
Net interest expense	**16**	31	**35**	64
Income before income taxes	**404**	141	**484**	350
Income tax expense	**97**	6	**109**	87
Net income	**307**	135	**375**	263
Net income attributable to the Shareholder	**303**	132	**367**	255
Net income attributable to non-controlling interest [1]	**4**	3	**8**	8
Electricity production (TWh) [2]	**18.0**	19.4	**36.6**	40.4
Cash flow provided by operating activities	**143**	348	**261**	714

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership, the 33 percent interest of Coral Rapids Power Corporation (CRP), a corporation wholly owned by the Taykwa Tagamou Nation, in the PSS Generating Station Limited Partnership (PSS), and the 10 percent interest of a corporation wholly owned by the Six Nations of Grand River Development Corporation in the Nanticoke Solar LP.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Second Quarter

Net income attributable to the Shareholder was $303 million for the second quarter of 2017, an increase of $171 million compared to the same quarter in 2016. Income before interest and income taxes for the second quarter of 2017 was $420 million, an increase of $248 million compared to the same quarter in 2016.

Significant factor that increased income before interest and income taxes:

- Higher earnings of $381 million from the Services, Trading, and Other Non-Generation segment, primarily as a result of the gain on sale of OPG's head office premises and associated parking facility, a non-core asset

of the business. A gain on sale of $283 million, which is net of payments-in-lieu of tax effects of $95 million, was recognized in net income upon completion of the transaction in the second quarter of 2017. The sale was undertaken pursuant to a Shareholder Declaration and a Shareholder Resolution. Further details can be found under the heading, *Recent Developments – Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties*.

Significant factors that reduced income before interest and income taxes:

- Lower earnings from the nuclear base regulated price of approximately $72 million, partially offset by a decrease in nuclear fuel expense of $11 million, reflecting lower electricity generation of 1.3 terawatt hours (TWh) from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. The lower nuclear generation was primarily due to the ongoing refurbishment of Unit 2 at the Darlington GS since October 2016. The base regulated prices set in 2014 continue to be in effect pending the OEB's decision on OPG's current application for new regulated prices, expected later in 2017. The existing nuclear base regulated price was set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. OPG has requested January 1, 2017 as the effective date of the new regulated prices.
- Lower earnings on the nuclear fixed asset removal and nuclear waste management funds (Nuclear Segregated Funds) of $31 million, primarily due to lower earnings on the Used Fuel Segregated Fund.
- Higher depreciation and amortization expense of $11 million, excluding amortization expense related to balances in OEB-authorized regulatory variance and deferral accounts (regulatory accounts), primarily due to new assets in service in the Regulated – Nuclear Generation segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory accounts on December 31, 2016 contributed to the decrease in revenue for the three months ended June 30, 2017, compared to the same period in 2016, but was largely offset by a decrease in the amortization expense related to these balances. OPG has requested new rate riders in its current application to the OEB for new regulated prices, with a proposed effective date of January 1, 2017.

Net interest expense decreased by $15 million during the second quarter of 2017, compared to the same quarter in 2016, primarily due to a higher amount of interest costs deferred in OEB-authorized regulatory accounts and a higher amount of interest costs capitalized for the Darlington Refurbishment project expenditures.

Income tax expense for the three months ended June 30, 2017 was $97 million, compared to $6 million for the same period in 2016. The increase in income tax expense was primarily due to higher income before taxes, a lower change in reserves from the resolution of uncertainties, and a higher amount of tax expense deferred in regulatory assets in 2017.

Year-To-Date

Net income attributable to the Shareholder was $367 million for the first six months of 2017, an increase of $112 million compared to the same period in 2016. Income before interest and income taxes for the six months ended of 2017 was $519 million, an increase of $105 million compared to the same period in 2016.

Significant factors that increased income before interest and income taxes:

- Higher earnings of $383 million from the Services, Trading, and Other Non-Generation segment, primarily as a result of the gain on sale of OPG's head office premises and associated parking facility recognized in the second quarter of 2017.

Significant factors that reduced income before interest and income taxes:

- Lower earnings from the nuclear base regulated price of approximately $206 million, partially offset by a decrease in nuclear fuel expense of $24 million, reflecting lower electricity generation of 3.6 TWh from the Regulated – Nuclear Generation segment and the continuation of existing base regulated prices set by the OEB in 2014. The lower nuclear generation was primarily due to the ongoing refurbishment of Unit 2 at the Darlington GS since October 2016.
- Higher OM&A expenses of $24 million, mainly in the Regulated – Nuclear Generation segment, reflecting planned expenditures related to major maintenance expenditures occurring at the nuclear stations.
- A gain of $22 million recorded in the first quarter of 2016 to reflect the OEB's decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices.
- Higher depreciation and amortization expense of $20 million, excluding amortization expense related to regulatory account balances, primarily due to new assets in service in the Regulated – Nuclear Generation segment.

The expiry of rate riders for the recovery of approved balances in OEB-authorized regulatory accounts on December 31, 2016 contributed to the decrease in revenue in the first half of 2017, compared to the same period in 2016, but was primarily offset by a decrease in the amortization expense related to these balances.

Net interest expense decreased by $29 million for the six months ended June 30, 2017, compared to the same period in 2016, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project expenditures and a higher amount of interest costs deferred in OEB-authorized regulatory accounts.

Income tax expense for the six months ended June 30, 2017 was $109 million, compared to $87 million for the same period in 2016. The increase in income tax expense was primarily due to higher income before income taxes and a lower change in reserves from the resolution of uncertainties, partly offset by a lower amount of tax expense deferred in regulatory assets in 2017.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars)	**2017**	**2016**	**2017**	**2016**
(Loss) income before interest and income taxes				
Regulated – Nuclear Generation	**(169)**	(76)	**(287)**	(30)
Regulated – Hydroelectric	**172**	187	**352**	383
Contracted Generation Portfolio	**77**	67	**154**	145
Total electricity generation business segments	**80**	178	**219**	498
Regulated – Nuclear Waste Management	**(40)**	(5)	**(87)**	(88)
Services, Trading, and Other Non-Generation	**380**	(1)	**387**	4
	420	172	**519**	414

Electricity Generation

Electricity generation for the three and six month periods ended June 30, 2017 and 2016 was as follows:

(TWh)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Regulated – Nuclear Generation	**9.3**	10.6	**19.3**	22.9
Regulated – Hydroelectric	**8.2**	8.0	**16.2**	15.9
Contracted Generation Portfolio [1]	**0.5**	0.8	**1.1**	1.6
Total OPG electricity generation	**18.0**	19.4	**36.6**	40.4
Total electricity generation by all other generators in Ontario [2]	**16.5**	15.5	**35.1**	34.4

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.
[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the Independent Electricity System Operator (IESO), minus OPG electricity generation.

Total OPG electricity generation decreased by 1.4 TWh during the second quarter of 2017, compared to the same quarter in 2016, and by 3.8 TWh during the six months ended June 30, 2017, compared to the same period in 2016. As expected, the lower electricity generation from the Regulated – Nuclear Generation segment was primarily the result of the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment, which began in October 2016. This decrease in electricity generation was partially offset by an increase in generation from the Pickering GS, primarily due to favourable unit conditions and execution of planned outage work resulting in a lower number of planned outage days at the station.

The higher electricity generation of 0.2 TWh and 0.3 TWh from the Regulated – Hydroelectric segment for the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, was largely due to higher water flows primarily on the eastern Ontario river systems, net of water spilled as a result of SBG conditions, discussed below.

The lower electricity generation of 0.3 TWh and 0.5 TWh from the Contracted Generation Portfolio segment for the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, was primarily due to a higher volume of water spilled as a result of SBG conditions.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. For the three and six month periods ended June 30, 2017, Ontario's electricity demand as reported by the IESO was 30.6 TWh and 64.9 TWh, respectively, compared to 31.9 TWh and 67.1 TWh for the same periods in 2016, respectively, excluding electricity exports out of the province.

Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric, other grid-connected renewable resources and nuclear stations. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. Baseload generation supply surplus in Ontario continued to be prevalent in 2017, resulting in forgone hydroelectric generation for OPG of 2.6 TWh and 3.4 TWh due to SBG conditions in the three and six month periods ended June 30, 2017, respectively, compared to 1.7 TWh and 3.4 TWh of forgone hydroelectric generation for OPG due to SBG conditions during the same periods in 2016, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions during these periods was offset by the impact of a regulatory variance account authorized by the OEB. OPG did not forgo any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The same base regulated prices for electricity generated by these segments, authorized by the OEB effective November 1, 2014, were in effect during the first six months of 2017 as in 2016. These prices will remain in effect until such time as the OEB approves new regulated prices based on OPG's current application. The base regulated prices established in 2014 are discussed in OPG's 2016 annual MD&A in the section, *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment was 5.7 and 5.8 cents per kilowatt hour (¢/kWh) during the three and six month periods ended June 30, 2017 respectively, compared to 6.9 ¢/kWh during the same periods in 2016. The decrease was primarily due to the expiry, on December 31, 2016, of an OEB-authorized nuclear rate rider of $10.84 per megawatt hour (MWh) for the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment was 4.0 ¢/kWh and 4.1 ¢/kWh during the three and six month periods ended June 30, 2017, respectively, compared to 4.4 ¢/kWh during the same periods in 2016. The decrease in the average sales price was primarily due to the expiry, on December 31, 2016, of an OEB-authorized regulated hydroelectric rate rider of $3.19/MWh for the recovery of variance and deferral account balances. The rate riders were established to recover approved balances recorded in the variance and deferral accounts in prior years. As such, the year-over-year changes in revenue from the rate riders were largely offset by changes in amortization expense related to these balances. There were no rate riders in effect during the first half of 2017 for either nuclear or regulated hydroelectric generation, pending the outcome of OPG's current application with the OEB for new regulated prices.

Cash Flow from Operations

Cash flow provided by operating activities was $143 million for the three months ended June 30, 2017 and $261 million for the six months ended June 30, 2017, compared to $348 million and $714 million for the same periods in 2016, respectively. The decrease in cash flow provided by operating activities was expected and primarily due to lower generation revenue receipts reflecting lower generation from the Regulated – Nuclear Generation segment as a result of the ongoing refurbishment of Unit 2 at the Darlington GS and the expiry, on December 31, 2016, of the OEB-authorized rate riders for nuclear and regulated hydroelectric generation. The decrease in cash flow in the first half of 2017 was also due to higher income tax instalments, compared to the same period in 2016.

The decrease in cash flow provided by operating activities for the three and six month periods ended June 30, 2017 was partially offset by lower pension plan contributions in 2017 reflecting an updated actuarial valuation of the OPG registered pension plan filed with the Financial Services Commission of Ontario in September 2016, and lower contributions to the Used Fuel Segregated Fund and the Decommissioning Segregated Fund in 2017. Both the Used Fuel Segregated Fund and the Decommissioning Segregated Fund were determined to be fully funded based on an updated estimate of OPG's nuclear waste management and nuclear facilities decommissioning obligations pursuant to a reference plan approved by the Province, for years 2017 to 2021, under the Ontario Nuclear Funds Agreement (ONFA), effective January 1, 2017. Pursuant to the ONFA, the reference plan is required to be updated at least once every five years. Contributions to either or both of the Nuclear Segregated Funds may be required in the future should the funds be in an underfunded position at the time of the next ONFA reference plan update. The year-over-year decrease in cash flow also was partially offset by the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to a period in 2015. The lease agreement for the Bruce nuclear generating stations giving rise to this rebate was amended in late 2015 to eliminate this provision going forward.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with the Company's strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period.

ROE Excluding AOCI was 5.0 percent for the 12 months ended June 30, 2017, compared to 4.2 percent for the 12 months ended December 31, 2016. The increase was primarily due to higher net income attributable to the Shareholder for the 12 months ended June 30, 2017, which reflected the gain on sale of OPG's head office premises and associated parking facility recorded in the second quarter of 2017, partly offset by the lower earnings from the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS without a corresponding increase in the nuclear base regulated price, as expected. The lower nuclear generation as a result of the refurbishment outage will continue to negatively affect OPG's ROE Excluding AOCI until such time as new regulated prices are approved by the OEB, anticipated later in 2017.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flows. The indicator is measured over a 12-month period. FFO Adjusted Interest Coverage for the 12 months ended June 30, 2017 was 4.5 times, compared to 5.1 times for the 12 months ended December 31, 2016. FFO Adjusted Interest Coverage in 2017 reflected a year-over-year decrease in FFO before interest due to lower cash flow provided by operating activities, partially offset by the impact of a lower adjusted interest expense due to a decrease in the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets.

The decrease in the excess of interest on pension and OPEB benefit obligations over expected return on pension plan assets in the first half of 2017 was primarily due to the change in the method used to estimate the interest cost and service cost component of pension and OPEB costs. Effective January 1, 2017, OPG adopted a full yield curve approach to the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Under the previous method, these components of pension and OPEB costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs for the three and six month periods ended June 30, 2017 did not have a material impact on net income as it was largely offset by the impact of OEB-authorized variance and deferral accounts in the regulated business segments. Further details on the full yield curve approach can be found in the 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Pension and Other Post-Employment Benefits*.

Enterprise Total Generating Cost per MWh

The Enterprise TGC per MWh increased to $48.72 for the three months ended June 30, 2017, compared to $48.48 for the same quarter in 2016. The increase was mainly due to reduction in nuclear electricity generation due to the Unit 2 refurbishment outage at the Darlington GS and higher capital expenditures, largely offset by higher SBG-adjusted hydroelectric electricity generation reflecting higher water flows and lower OM&A expenses before the impact of regulatory accounts.

The Enterprise TGC per MWh was $48.35 for the six months ended June 30, 2017, an increase compared to $45.01 for the same period in 2016. The increase was expected and mainly a result of lower electricity generation due to the Unit 2 refurbishment outage at the Darlington GS and higher capital expenditures, partially offset by lower OM&A expenses before the impact of regulatory accounts.

If Unit 2 at the Darlington GS were~~as~~ not currently undergoing refurbishment and had continued to operate in a manner consistent with the performance of the remaining units at the Darlington GS and adjusting for generation constraints on the remaining units related to the transition of the station toward refurbishment, the Enterprise TGC would have been approximately $3 to $4 per MWh lower for the three and six months ended June 30, 2017. This sensitivity was calculated using the estimated incremental electricity that would have been generated under these circumstances and the associated estimated fuel cost that would have been incurred.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $76.87 for the three months ended June 30, 2017, compared to $69.25 for the same quarter in 2016. The Nuclear TGC per MWh was $73.24 for the six months ended June 30, 2017, compared to $62.44 for the same period in 2016. The increase in the Nuclear TGC per MWh for these periods was expected and primarily due to the decrease in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $19.83 for the three months ended June 30, 2017, compared to $22.14 for the same quarter in 2016. The decrease was primarily due to higher SBG-adjusted hydroelectric electricity production reflecting higher water flows and lower capital expenditures. The Hydroelectric TGC per MWh was $19.81 for the six months ended June 30, 2017, compared to $21.08 for the same period in 2016. The decrease was primarily due to lower capital expenditures.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow provided by operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

OEB's Report on Regulatory Treatment of Pension and OPEB Costs

On May 18, 2017, the OEB issued a report on the regulatory treatment of pension and OPEB costs based on a consultation process aimed at developing standard principles to guide the OEB's future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including OPG, that began in May 2015. The report establishes the accrual basis of accounting as the method of determining pension and OPEB amounts for rate-setting purposes, unless the OEB finds that this method does not result in just and reasonable rates in the circumstances of a particular utility. The report also provides for the establishment of a generic variance account to record asymmetric carrying charges in favour of ratepayers on the differences between the forecast pension and OPEB accrual costs recovered by a utility through regulated rates and the actual cash payments made by it for pension and OPEB plans. Carrying charges on this differential are to be assessed at the OEB's prescribed interest rate, on a prospective basis from the effective date of the new variance account. The prescribed interest rate is set quarterly by the OEB based on the quarterly return of a mid-term corporate bond index yield. Certain implementation matters related to the report's requirements remain to be finalized by the OEB. This includes the effective date of the new variance account, the application of carrying charges, and the timing of disposition of both the new and previously established variance and deferral accounts related to pension and OPEB costs.

The report requires utilities, such as OPG, that have been previously directed to record differences between pension and OPEB accrual costs and cash payments in a separate variance or deferral account to continue to defer such differences in that account, until such time as the OEB approves the utility to resume the accrual basis of recovery. The future recovery of amounts recorded in such an account will be subject to this approval. In setting OPG's existing regulated prices effective November 1, 2014, the OEB limited the recovery of pension and OPEB costs to the regulated portion of the Company's cash expenditures for the pension and OPEB plans. It also required OPG to defer, effective November 1, 2014, the difference between its actual pension and OPEB costs for the regulated business determined on an accrual basis in accordance with US GAAP and the Company's actual cash payments for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of an

OEB generic proceeding on the regulatory treatment of pension and OPEB costs. Similarly, in its current application for new regulated prices filed with the OEB in May 2016, OPG has proposed to continue recording the difference between actual pension and OPEB accrual costs and actual cash payments for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the OEB's consultation process. The Company recognizes the amount set aside in the Pension & OPEB Cash Versus Accrual Differential Deferral account as a regulatory asset, which has a balance of $533 million as at June 30, 2017.

As currently outlined in the report, OPG does not expect that it would be subject to carrying charges on the differences between pension and OPEB accrual costs and cash payments until either it begins to recover, through future rate riders, amounts deferred in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, or the OEB establishes OPG's base regulated prices to reflect pension and OPEB amounts on an accrual basis. As such, the OEB's report did not impact OPG's financial results for the three and six month periods ended June 30, 2017.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Fair Hydro Plan) aimed at reducing electricity bills for all residential consumers in the province on average by 25 percent. As part of the Fair Hydro Plan, the Province has proposed refinancing a portion of the Global Adjustment costs over a longer time period for Regulated Price Plan and other eligible customers (e.g., residential, farm, small businesses). On June 1, 2017, the Province enacted *Bill 132 – An Act to enact the Ontario Fair Hydro Plan Act, 2017, and to make amendments to the Electricity Act, 1998 and the Ontario Energy Board Act, 1998* (Bill 132). Bill 132 establishes a framework under which the costs and benefits associated with the Government of Ontario's clean energy initiative are to be allocated fairly among present and future consumers of electricity, appoints OPG as the Financial Services Manager of the Fair Hydro Plan, unless OPG is not in a position to do so, and provides for a financing entity to be established by the Financial Services Manager for the purpose of funding a portion of the Global Adjustment. Bill 132 also made certain amendments to other legislation, which ~~will~~ enables the IESO and OPG to work together to implement ~~this financing~~the Ontario Fair Hydro Plan.

OPG's Board of Directors, which had established a Special Committee to provide oversight on behalf of the Board of Directors, has conditionally approved OPG's involvement with the Fair Hydro Plan on commercial terms. The form of the financing entity to be established by OPG is being determined, and the specific operating protocol between the IESO, OPG and the financing entity and the requirements for financing the Fair Hydro Plan are being negotiated. OPG continues to prepare for financing activities of the financing entity that are expected to commence later in 2017. **[MONITOR]**

Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution requiring the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. A purchase and sale agreement was executed in December 2016, and the sale was completed in April 2017. A gain on sale of $283 million, which is net of payments-in-lieu of tax effects of $95 million (payable to the Ontario Electricity Financial Corporation -- OEFC), was recognized in net income upon completion of the transaction in the second quarter of 2017. The pre-tax gain on sale was recorded as Other gain in the interim consolidated statement of income in the Service, Trading and Other Non-Generation segment. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the Act, into the Province's Consolidated Revenue Fund. OPG expects that the amount of designated proceeds to be transferred into the Consolidated Revenue Fund will be largely consistent with the after-tax gain, and is working with the Ontario Ministry of Finance to finalize the amount. The transfer is expected to take place later in 2017. **[MONITOR]**

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. An active program to locate a buyer for the property

was initiated in June 2017. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the Act, into the Province's Consolidated Revenue Fund. In accordance with the Shareholder Resolution, approximately one-third of the site is to be transferred to the City of Mississauga, by the purchaser, for parkland, institutional, and cultural uses.

CORE BUSINESS, STRATEGY, AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

The following sections provide an update to OPG's disclosures in the 2016 annual MD&A related to its four key strategic imperatives – operational excellence, project excellence, financial strength, and social licence. A detailed discussion of these strategic imperatives is included in the 2016 annual MD&A in the section, *Core Business, Strategy, and Outlook*.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Electricity Generation Production and Reliability

- As part of the plan to extend Pickering operations, OPG is continuing to undertake the required technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will remain fit for service for operation to 2024. OPG is also nearing completion of component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently set at the end of 2020, will be reassessed based on the fuel channel analysis and safety case consistent with submissions for the Canadian Nuclear Safety Commission's (CNSC) approval, discussed below. OPG's current application with the OEB for new base regulated prices, currently pending the OEB's decision, reflects OPG's plans to extend Pickering operations to 2024 and requests inclusion of the corresponding cost and generation impacts in the determination of the nuclear regulated price.
- OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. On June 28, 2017, OPG confirmed to the CNSC that it intends to cease commercial operation of all Pickering units on December 31, 2024. Work on the Pickering licence renewal application is proceeding and the application is expected to be filed by August 31, 2017 for the CNSC's approval in 2018. The requested licence renewal will span the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe storage state in 2028. Through an extensive Periodic Safety Review, OPG will submit a Global Assessment Report and Integrated Implementation Plan (IIP) for the station to the CNSC as part of the licence renewal.
- In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The

licence renewal applications were presented to the CNSC at public hearings in April 2017. On May 30, 2017, the CNSC announced that the WWMF licence was renewed for a period of ten years and is now valid from June 1, 2017 to May 31, 2027. A renewal decision on the PWMF licence is expected to be issued prior to the expiry of the current licence on March 31, 2018.

- During the second quarter of 2017, OPG completed the upgrade of Unit 10 of the Sir Adam Beck 1 hydroelectric GS, increasing the capacity of the station by 6 MW.
- Work continues on the rehabilitation of Unit 1 of the Sir Adam Beck Pump hydroelectric GS and the overhaul and upgrade of the following hydroelectric units: Unit 1 of the Harmon GS, Unit 2 of the DeCew Falls GS, and Unit 2 of the Lower Notch GS.
- OPG commenced definition phase activities for the Water Conveyance System project to rehabilitate the Sir Adam Beck 1 GS canal and associated structures, ensuring their continued safe and reliable operations for approximately the next 50 years.
- As part of the process to decommission the Nanticoke and Lambton generating stations, OPG is continuing to develop a demolition plan that will ensure that the stations are closed safely, securely and in an environmentally responsible manner. Project milestones in 2017 include the elimination of coal yard equipment and structures, removal of ash silos, and the selection of a contractor to remove the stacks, powerhouse, interior equipment and supporting site structures for the Nanticoke GS. An update of the associated asset retirement obligations related to these stations is expected to be finalized later in 2017. A demolition contract for the removal of the Nanticoke powerhouse was awarded in July 2017. A demolition contract for the removal of the Lambton powerhouse is expected to be awarded in 2018.

Environmental Performance

There were no significant changes to environmental legislation affecting the Company during the second quarter of 2017. Disclosures related to the Company's environmental policy and environmental risks can be found in OPG's 2016 annual MD&A.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. OPG remains focused on delivering projects safely, on time, on budget and with high quality. The status updates for OPG's major projects as at June 30, 2017 are outlined in the following table, with further details below.

Project	Capital expenditures		Approved budget	Expected in-service date	Current status
(millions of dollars)	Year-to-date	Life-to-date			
Darlington Refurbishment	608	3,793	12,800[1]	First unit - 2020 Last unit - 2026	Islanding of Unit 2 was completed in April 2017. Preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening of the reactor air lock doors and installation of shielding, was completed in the second quarter of 2017. The setup of specialized tooling and equipment needed for the removal and replacement of the reactor components is in progress. The project is tracking on schedule and budget.
Peter Sutherland Sr. Hydroelectric GS	32	268	300	2017	The station was placed in-service on March 31, 2017, ahead of the originally planned schedule, and is expected to close below the approved budget. Project close-out activities are in progress. In April 2017, CRP exercised its right under the partnership agreement to increase its interest in PSS to 33 percent.
Ranney Falls Hydroelectric GS	9	12	77	2019	Civil engineering design work and site clearing and mobilization have been completed. Work is progressing to expand forebay and tailrace channels. The project is tracking on schedule and budget.
Nanticoke Solar Facility	1	2		2019	Project definition work is continuing, with construction planned to commence as early as in the fourth quarter of 2017.
Deep Geologic Repository for low and intermediate level radioactive waste (L&ILW)	5[2]	200[2]			On June 26, 2017, the Canadian Environmental Assessment Agency (CEAA) advised that it was satisfied with the additional information submitted by OPG on May 26, 2017, and that a draft report was being prepared for public review. The Environmental Assessment (EA) Decision Statement by the federal Minister of Environment and Climate Change is expected in the fourth quarter of 2017.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities).

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017 with a total of 480 fuel channels de-fuelled. Islanding of Unit 2, the physical separation of the refurbishment unit from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project. The second major segment, which includes preparatory work and the removal of reactor components, commenced immediately following the islanding of Unit 2. Preparatory work to support the removal of feeder tubes and fuel channel assemblies, including opening of the reactor air lock doors and installation of shielding, was completed in the second quarter of 2017. The setup of specialized tooling and equipment needed for the removal and replacement of the reactor components is in progress. The Re-tube Tooling Platform, which will host the tooling for the removal, inspection, and installation activities, was completed in July 2017, and the disassembly of reactor components commenced immediately thereafter. **[MONITOR]** Other key project activities completed during the second segment include the drain and vacuum dry of the primary heat transport system, commencement of the major turbine generator overhaul and continuation of the major electrical scope. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the overall project. The project is tracking on schedule and budget.

A number of pre-requisite projects in support of the execution phase of the project, including construction of facilities, infrastructure upgrades and installation of safety enhancements, have been completed. Completion of the Heavy Water Storage and Drum Handling Facility has been delayed due to challenges with construction. OPG suspended the project in the second quarter of 2017 to evaluate the best approach to optimize cost and schedule and complete the project. Remediation measures are in progress. This delay will not impact the overall Darlington Refurbishment project schedule, as the Heavy Water Storage and Drum Handling Facility is not on the project's critical path. The remaining projects are tracking for completion in line with the refurbishment execution schedule.

In addition to the refurbishment activities on Unit 2 completed to date, other key project activities in 2017 are as follows:

- Completion of preparation activities to support Retube and Feeder Replacement work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Re-tube Waste Processing Building.
- Commencement of the fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG is continuing planning activities for the refurbishment of the second unit, Unit 3, and is entering into associated commitments to procure major components that require long lead times. As of June 30, 2017, $51 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Ranney Falls Hydroelectric GS

During the second quarter of 2017, OPG continued construction work of a 10 MW single-unit powerhouse on the existing Ranney Falls GS site, as part of the Regulated – Hydroelectric segment. The new unit will replace an existing unit that reached its end of life in 2014. Civil engineering design work and site clearing and mobilization have been completed. Construction is progressing to expand the existing forebay and tailrace channels to accommodate the new powerhouse. The project's expected in-service date is in the fourth quarter of 2019, with a budget of $77 million. The project is tracking on schedule and budget.

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands under a Large Renewable Procurement contract with the IESO, through Nanticoke Solar LP, a partnership between OPG and a subsidiary of the Six Nations of Grand River Development Corporation, is planned to commence as early as in the fourth quarter of 2017. During the second quarter of 2017, the partnership continued work to obtain approvals and permits required to enable the commencement of construction, and progressed procurement activities for equipment and for engineering and construction services. The facility is expected to be completed in the first quarter of 2019.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project. OPG completed the requested studies and submitted the requested information in December 2016, as planned. Following the CEAA's review of OPG's submission and a period of public comment, the CEAA requested additional information from OPG. OPG provided the additional information on May 26, 2017 and, on June 26, 2017, the CEAA notified OPG that it had sufficient and adequate information to proceed with the next step of the environmental assessment process and advised that a draft report and updated terms and conditions will be prepared for public review. An EA Decision Statement by the Minister is expected in the fourth quarter of 2017. Based on the additional information submitted, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW. Alternative locations reviewed in the Canadian Shield or Southwest Ontario, while technically feasible, would result in greater negative environmental impacts and higher costs, as well as a project delay of 15 years or more, while offering no additional benefits in safety.

If the EA Decision Statement supports licensing, a number of conditions will need to be met before construction begins. In addition, OPG continues its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. Consistent with the requirements of *Ontario Regulation 53/05*, the application incorporates a rate smoothing proposal that would defer, for future collection, a portion of the approved annual nuclear revenue requirement for the period from January 1, 2017 to the end of the Darlington Refurbishment project, with a view to making more stable year-over-year changes in OPG's regulated prices. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impacts on customers. OPG expects to recognize amounts deferred under rate smoothing as income in the periods to which the underlying approved revenue requirements relate.

The application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater opportunities for benefits from de-coupling of nuclear and hydroelectric regulated prices from actual costs in the context ofand a longer rate-setting period under the OEB's incentive ratemaking framework, which forms the basis for the ratemaking methodologies reflected in the application.

The application seeks an increase in the nuclear rate base, effective in early 2020, to reflect the planned placement in service of approximately $4.8 billion of capital expenditures upon the scheduled return to service of Unit 2 at the Darlington GS as part of the Darlington Refurbishment project and, effective in 2017, an increase in the deemed capital structure applied to the total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt reflected in the existing regulated prices. ~~If approved, this would improve OPG's return on Shareholder's investment.~~ The application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the portion of these balances approved for recovery or repayment through rate riders previously in effect.

A public oral hearing on the application took place between February 2017 and April 2017, with the final arguments completed on June 19, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected later in 2017.

For generation assets that do not form part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements. In line with this strategy, virtually all of OPG's non-regulated operating facilities and assets under construction are subject to long-term Energy Supply Agreements (ESAs) or other long-term contracts with the IESO. This includes the Peter Sutherland Sr. GS, which began receiving contracted revenue under its hydroelectric ESA following IESO's confirmation, in June 2017, of commercial operation of the station effective as of March 31, 2017. The ESA expires in 2067.

Ensure Availability of Cost Effective Funding

In April 2017, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2017, S&P Global Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

Social Licence

As the largest electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish these relationships based on a foundation of respect for the languages, customs, and political, social and cultural organizations of the Indigenous communities.

In June 2017, OPG launched an Indigenous Business Engagement (IBE) Initiative. The purpose of this initiative is to increase access to procurement opportunities for Indigenous businesses interested in supplying materials and services to OPG. The IBE Initiative is based on a strategy that will identify opportunities in contracts, scopes of work and business plans for potential Indigenous business engagement; include criteria in procurement proposals relating to supplier's ability to engage or partner with Indigenous people or businesses; and invest in relationships with Indigenous communities by increasing outreach efforts to enhance understanding of how to do business with OPG.

As part of its commitment to help de-carbonize Ontario's transportation sector, OPG is a founding sponsor of Plug'n Drive, a non-profit organization working to accelerate the adoption of electric vehicles and to maximize their environmental and economic benefits. In May 2017, Plug'n Drive announced the opening of the world's first experiential learning facility dedicated to electric vehicle education and awareness, with OPG sponsoring the Centre's training facility. Ontario's climate change plan aims for electric and hydrogen passenger vehicles to represent five percent of new vehicle sales in the province by 2020.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of costs and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's current application for new regulated prices, currently pending the OEB's decision, is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. Considering the timing of OPG's application and OPG's procedural adherence throughout the proceeding, the Company believes that the OEB could make the new regulated prices effective January 1, 2017. This would allow OPG to recover the difference between the approved new regulated prices and the existing regulated prices for the period between January 1, 2017 and the implementation date of the new prices based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected later in 2017. The continuation of existing regulated prices until the issuance of the OEB's decision is expected to continue to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and, excluding the gain on sale of the Company's head office premises and associated parking facility recorded in the second quarter of 2017, lower ROE Excluding AOCI during 2017, compared to 2016. In large part, this is due to the year-over-year reduction in nuclear electricity generation resulting from the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined in 2014 based on a higher production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision issuance, could have a significant impact on OPG's financial results during 2017.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues to future periods. Combined with the expiry of rate riders in effect to the end of 2016 and a year-over-year reduction in nuclear generation due to the Unit 2 refurbishment outage at the Darlington GS, as expected, this will result in lower cash flow from operations and a lower FFO Adjusted Interest Coverage ratio in 2017, compared to 2016. The continuation of existing base regulated prices until such time as the new prices are determined and implemented by the OEB also is contributing to lower cash flow from operations in 2017. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements.

Lower nuclear generation due to the Darlington Refurbishment outages will continue, as planned, to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Variability in sustaining capital investment expenditures, including major sustaining projects for the hydroelectric operations, also will impact the Enterprise TGC in future periods.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, the variance accounts include those related to the revenue impact of variability in water flows and forgone production due to SBG conditions at the regulated hydroelectric stations. As there are no variance or deferral accounts in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings. OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to ESAs with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow from operations going forward.

OPG's total forecast capital expenditures for the 2017 year are approximately $1.9 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric and other development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major projects are discussed in the section, *Project Excellence*.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and, for the portion of the Used Fuel Segregated Fund guaranteed by the Province under the ONFA, changes in the Ontario consumer price index (CPI). In the near term, these factors can be volatile and cause fluctuations in the Company's income. This volatility is partially mitigated by the impact of the OEB-authorized Bruce Lease Net Revenues Variance Account and, as discussed below, the funded status of the two segregated funds.

As OPG does not have the right to withdraw surplus amounts from the Nuclear Segregated Funds when the segregated funds are overfunded relative to the life cycle funding liability per the most recently approved ONFA Reference Plan, OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value of such life cycle funding liability. This reduces the volatility of earnings on the Nuclear Segregated Funds reflected in net income when the funds are in a fully funded or overfunded position. As at June 30, 2017, the Decommissioning Segregated Fund was overfunded by approximately 24 percent, and the Used Fuel Segregated Fund was marginally overfunded, by less than one percent, based on the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI, or changes in liability estimates, may result in either or both funds becoming underfunded in the future.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars) (unaudited)	**2017**	**2016**	**2017**	**2016**
Revenue	**609**	820	**1,261**	1,746
Fuel expense	**68**	79	**136**	160
Gross margin	**541**	741	**1,125**	1,586
Operations, maintenance and administration	**593**	581	**1,182**	1,144
Depreciation and amortization	**110**	231	**217**	461
Property taxes	**7**	6	**13**	13
Loss before other gains, interest, and income taxes	**(169)**	(77)	**(287)**	(32)
Other gains	**-**	(1)	**-**	(2)
Loss before interest and income taxes	**(169)**	(76)	**(287)**	(30)

For the three and six month periods ended June 30, 2017, segment losses before interest and income taxes increased by $93 million and $257 million, respectively, compared to the same periods in 2016. The decrease in earnings was expected and primarily due to reduced revenue from the nuclear base regulated price of approximately $72 million and $206 million, partly offset by a decrease in fuel expense of $11 million and $24 million, respectively. The decrease in revenue during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, reflected lower electricity generation of 1.3 TWh and 3.6 TWh, respectively, primarily due to the ongoing Unit 2 refurbishment outage at the Darlington GS that began in October 2016, without a corresponding increase in the base regulated price. The existing nuclear base regulated price set by the OEB in 2014 continues to be in effect pending the OEB's decision on OPG's application for new regulated prices, proposed to be effective on January 1, 2017. The existing price does not reflect the lower generation as a result of the refurbishment outage, as it was set to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a refurbishment outage. The reduction in nuclear electricity generation for the three and six month periods ended June 30, 2017 was partially offset by the higher electricity generation from the Pickering GS.

The increases in OM&A expenses of $12 million and $38 million during the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, also contributed to a year-over-year reduction in segment earnings. The higher OM&A expenses reflected planned expenditures related to major maintenance expenditures occurring at the nuclear stations.

Depreciation and amortization expense, excluding amortization expense related to regulatory account balances, increased by $11 million and $20 million during the three and six month periods ended June 30, 2017, respectively, compared to the same periods in 2016, primarily due to new assets in service.

The expiry of an OEB-authorized nuclear rate rider on December 31, 2016 contributed to the decrease in segment revenue for the three and six month periods ended June 30, 2017, compared to the same periods in 2016. As rate riders allow for recovery of approved balances in OEB-authorized regulatory accounts, this decrease in revenue was largely offset by a decrease in amortization expense related to these balances. There was no rate rider in effect during the first half of 2017 pending the outcome of OPG's current application to the OEB for new regulated prices.

The Unit Capability Factors for the Darlington and Pickering generating stations were as follows:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Unit Capability Factor *(%)* [1]				
Darlington GS	**64.6**	75.9	**74.9**	86.6
Pickering GS	**84.2**	71.4	**81.4**	72.1

[1] The nuclear Unit Capability Factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS decreased in the second quarter of 2017, compared to the same quarter in 2016, primarily due to the higher number of planned and unplanned outage days during the second quarter of 2017. The lower Unit Capability Factor at the Darlington GS for the six months ended June 30, 2017, compared to the same period in 2016, reflected the higher number of planned outage days, largely driven by constraints related to the transition of the station toward refurbishment.

The increase in Unit Capability Factor at the Pickering GS for the three and six month periods ended June 30, 2017 was primarily due to favourable unit conditions and execution of planned outage work resulting in a lower number of planned outage days at the station compared to 2016.

Regulated – Nuclear Waste Management Segment

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars) (unaudited)	**2017**	**2016**	**2017**	**2016**
Revenue	**30**	32	**57**	66
Operations, maintenance and administration	**32**	34	**61**	70
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**232**	228	**466**	456
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(194)**	(225)	**(383)**	(372)
Loss before interest and income taxes	**(40)**	(5)	**(87)**	(88)

The segment loss before interest and income taxes increased by $35 million in the second quarter of 2017 compared to the same quarter in 2016. The decline in earnings was primarily due to lower earnings from the Nuclear Segregated Funds. The segment loss before interest and income taxes for the six months ended June 30, 2017 was comparable to the same period in 2016.

Lower earnings on the Used Fuel Segregated Fund, net of the impact of the Bruce Lease Net Revenue Variance Account, were the primary reason for the lower Nuclear Segregated Funds earnings during the second quarter of 2017. As the Used Fuel Segregated Fund was overfunded as at March 31, 2017 and June 30, 2017, the earnings on the fund recorded in income during the second quarter of 2017 reflected the growth in the present value of the used fuel life cycle funding liability per the 2017 ONFA Reference Plan. During the second quarter of 2016, the Used Fuel Segregated Fund was underfunded based on the ONFA reference plan then in effect, and therefore earnings on the fund reflected the CPI-adjusted rate of return guaranteed by the Province under the ONFA for funding related to the initial 2.23 million used fuel bundles and market returns for the portion of the fund not guaranteed by the Province.

As of December 31, 2016, OPG recorded a decrease of approximately $1,570 million to the Nuclear Liabilities and associated asset retirement costs capitalized as part of the carrying value of the nuclear generating stations. The resulting year-over-year decreases in accretion on fixed asset removal and nuclear waste management liabilities recorded in the Regulated – Nuclear Waste Management segment, and depreciation and fuel expenses recorded in

the Regulated – Nuclear Generation segment during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, were offset by the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account authorized by the OEB.

Under the current OEB-approved cost recovery methodology, these changes in expenses are not expected to materially affect OPG's income during the rest of 2017, as they are expected to continue to be largely offset by the impact of the regulatory accounts until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of such new regulated prices. Further details on the change in the estimate of the Nuclear Liabilities as of December 31, 2016 are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Asset Retirement Obligation*.

Regulated – Hydroelectric Segment

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue [1]	**379**	413	**742**	798
Fuel expense	**97**	92	**170**	171
Gross margin	**282**	321	**572**	627
Operations, maintenance and administration	**75**	75	**151**	151
Depreciation and amortization	**35**	57	**69**	113
Income before other losses (gains), interest and income taxes	**172**	189	**352**	363
Other losses (gains)	**-**	2	**-**	(20)
Income before interest and income taxes	**172**	187	**352**	383

[1] During the three and six month periods ended June 30, 2017, the Regulated – Hydroelectric segment revenue reflected incentive payment reductions of $3 million and incentive payments of $5 million, respectively, related to the OEB-approved hydroelectric incentive mechanism (three and six month periods ended June 30, 2016 – incentive payments of $1 million and $2 million, respectively). The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers. The incentive payments are reduced to remove incentive revenues arising in connection with SBG conditions.

The decrease in income before interest and income taxes of $15 million during the second quarter of 2017, compared to the same quarter in 2016, was primarily the result of the income impact of OEB-approved variance accounts and lower hydroelectric incentive mechanism payments.

The decrease in income before interest and income taxes of $31 million during the six months ended June 30, 2017, compared to the same period in 2016, was primarily due to a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to a motion by OPG. The income impact of OEB-approved variance accounts also contributed to the year-over-year decrease in income for the period.

The decrease in revenue for the three and six month periods ended June 30, 2017, compared to the same periods in 2016, was largely due to the expiry of an OEB-authorized rate rider on December 31, 2016. As the rider allowed for the recovery of approved balances in OEB-authorized regulatory accounts, the resulting reduction in revenue was largely offset by lower amortization expense related to these balances. There was no rate rider in effect during the first half of 2017 pending the outcome of OPG's current application to the OEB for new regulated prices.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Hydroelectric Availability *(%)*	**90.1**	90.4	**89.8**	92.6

The Hydroelectric Availability in the second quarter of 2017 was comparable to the same period in 2016. The decrease in Hydroelectric Availability during the six months ended June 30, 2017, compared to the same period in 2016, was primarily due to a higher number of unplanned outage days at the regulated hydroelectric stations.

Contracted Generation Portfolio Segment

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars) (unaudited)	**2017**	**2016**	**2017**	**2016**
Revenue	**147**	137	**290**	282
Fuel expense	**13**	11	**27**	23
Gross margin	**134**	126	**263**	259
Operations, maintenance and administration	**40**	45	**79**	85
Depreciation and amortization	**20**	18	**39**	37
Accretion on fixed asset removal liabilities	**2**	2	**4**	4
Property taxes	**3**	3	**5**	5
Income from investments subject to significant influence	**(8)**	(9)	**(18)**	(17)
Income before interest and income taxes	**77**	67	**154**	145

Income before interest and income taxes increased by $10 million and $9 million during the three and six month periods June 30, 2017, compared to the same periods in 2016, respectively. The increase in earnings for the three months ended June 30, 2017 mainly resulted from revenues from the Peter Sutherland Sr. GS that was placed in-service at the end of the first quarter of 2017, higher revenues from the Lennox GS primarily due to increased production to support electricity system requirements, and lower OM&A expenses. For the six months ended June 30, 2017, the increase in earnings was primarily due to higher revenues from Lennox GS primarily due to increased production to support electricity system requirements, and lower OM&A expenses, partially offset by lower revenues from the Lower Mattagami River hydroelectric generating stations.

The Hydroelectric Availability and the Thermal Equivalent Forced Outage Rate (EFOR) for the Contracted Generation Portfolio segment were as follows:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Hydroelectric Availability *(%)*	**81.4**	87.0	**82.5**	85.5
Thermal EFOR *(%)*	**2.7**	1.0	**7.8**	1.0

Lower Hydroelectric Availability during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, was primarily due to an increase in the number of unplanned outage days at the Lower Mattagami River hydroelectric generating stations.

The higher Thermal EFOR during the three and six month periods ended June 30, 2017, compared to the same periods in 2016, was primarily due to a higher number of unplanned outage days at the Lennox GS unit as a result of a transmission outage in 2017.

Services, Trading, and Other Non-Generation Segment

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Revenue	**10**	16	**27**	37
Gross margin	**10**	16	**27**	37
Operations, maintenance and administration	**-**	5	**1**	9
Depreciation and amortization	**7**	10	**14**	17
Accretion on fixed asset removal liabilities	**2**	2	**4**	4
Property taxes	**1**	2	**4**	5
Income (loss) before other gains, interest, and income taxes	**-**	(3)	**4**	2
Other gains	**(380)**	(2)	**(383)**	(2)
Income (loss) before interest and income taxes	**380**	(1)	**387**	4

Segment earnings increased by $381 million and $383 million for the three and six month periods ended June 30, 2017, compared to the same periods in 2016, respectively. The increase in earnings mainly reflected the gain on sale of OPG's head office premises and associated parking facility recorded during the second quarter of 2017, as further discussed in the section, *Highlights* under the heading, *Recent Developments – Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties*.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including to invest in plants and technologies, to undertake major projects, to fund long-term obligations such as contributions to the pension fund and the Nuclear Segregated Funds, to make payments under the OPEB plans, to fund expenditures on Nuclear Liabilities not reimbursable from the Nuclear Segregated Funds, and to service and repay long-term debt.

Changes in cash and cash equivalents for the three and six month periods ended June 30 are as follows:

(millions of dollars) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Cash and cash equivalents, beginning of period	**220**	540	**186**	464
Cash flow provided by operating activities	**143**	348	**261**	714
Cash flow provided by (used in) investing activities	**58**	(586)	**(305)**	(896)
Cash flow (used in) provided by financing activities	**(179)**	(7)	**100**	13
Net increase (decrease)	**22**	(245)	**56**	(169)
Cash and cash equivalents, end of period	**242**	295	**242**	295

For a discussion of cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details in the section, *Highlights* under the heading, *Overview of Results*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to

increase the generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow provided by investing activities during the second quarter of 2017 was $58 million, compared to cash flow used of $586 million for the same period in 2016. Cash flow used in investing activities decreased by $591 million for the six months ended June 30, 2017, compared to the same period in 2016. The decrease in cash flow used in investing activities during these periods was primarily due to the receipt of proceeds from the sale of OPG's head office premises and associated parking facility in the second quarter of 2017 and the acquisition of nine million common shares of Hydro One Limited (Hydro One) in the second quarter of 2016, partially offset by higher expenditures on the Darlington Refurbishment project in 2017. OPG acquired the Hydro One shares for investment purposes, to mitigate the risk of future price volatility related to the Company's future share delivery obligations under the collective agreements with the Power Workers' Union and The Society of Energy Professionals.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG renewed and extended the expiry date of both tranches from May 2021 to May 2022. There were no amounts outstanding under the bank credit facility as at June 30, 2017.

There was no commercial paper outstanding under OPG's commercial paper program as at June 30, 2017.

As at June 30, 2017, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $462 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at June 30, 2017, a total of $387 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $37 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust, expiring on November 30, 2018. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. As at June 30, 2017, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

As at June 30, 2017, Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. In the third quarter of 2017, OPG expects to extend the maturity of the $300 million tranche to August 2022, and to reduce the $200 million tranche to $100 million while extending its maturity date to August 2018. As at June 30, 2017, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at June 30, 2017.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. As at June 30, 2017, there were outstanding long-term borrowings of $300 million under this credit facility. ~~In August 2017, the credit facility was increased to $2,350 million, which expires in December 2018. [**CONFIRM**]~~

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent. In June 2017, OPG issued senior notes payable to the OEFC totalling $100 million and maturing in June 2047. The effective interest rate and coupon interest rate of these notes was 3.65 percent.

Commented [A1]: EFB staff suggest deleting this sentence.

Commented [RK2R1]: What's the status and expected timeline for the larger facility?

As at June 30, 2017, OPG's long-term debt outstanding was $5,622 million, including $1,218 million due within one year.

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's unaudited interim consolidated financial position using selected balance sheet data:

(millions of dollars) (unaudited)	As At June 30 2017	As At December 31 2016
Property, plant and equipment - net	**20,510**	19,998
The increase was primarily due to capital expenditures on the Darlington Refurbishment project, partially offset by depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**16,343**	15,984
The increase was primarily due to earnings on the Nuclear Segregated Funds, partially offset by reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Fixed asset removal and nuclear waste management liabilities	**19,876**	19,484
The increase was primarily a result of accretion expense representing the increase in the liabilities due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's interim consolidated financial statements or are recorded in the Company's interim consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies are outlined in Note 3 to the audited consolidated financial statements as at and for the year ended December 31, 2016. A discussion of recent accounting pronouncements and change in accounting estimate are included in Note 2 to OPG's unaudited interim consolidated financial statements as at and for the three and six month periods ended June 30, 2017 under the heading, *Significant Accounting Policies and Estimates*. Disclosure regarding OPG's critical accounting policies is included in OPG's 2016 annual MD&A.

RISK MANAGEMENT

The following provides an update to the discussion of the Company's risks and risk management activities included in OPG's 2016 annual MD&A. As such, the disclosure in this section should be read in conjunction with the *Risk Management* section included in the annual MD&A.

Risks to Achieving Project Excellence

Darlington Refurbishment

During the second quarter of 2017, OPG continued to mitigate and manage risks related to the Darlington Refurbishment project portfolio. Further risk treatment and remediation measures are being developed or implemented for the projects and their upcoming work windows. Several initiatives and plans are also being developed to manage risks associated with reintegration of the refurbished Unit 2 with the other units, which involves coordination between vendors, project teams and station operations.

Risks to Maintaining Financial Strength

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix, and as such, are subject to change as these forecasts are updated.

	2017 [1]	2018	2019
Estimated fuel requirements hedged [2]	75%	74%	70%

[1] Based on actual fuel requirements hedged for the six months ended June 30, 2017 and forecast for the remainder of the year.

[2] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar (USD) relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are denominated in, or tied to, US dollars. To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at June 30, 2017, OPG had one foreign exchange contract outstanding with a notional value of USD $5 million.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio

based on normal market conditions over a set period of time. For the second quarter of 2017, the VaR utilization ranged between $0.1 million and $0.3 million.

Credit

Deterioration in energy markets counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

OPG manages its exposure to suppliers or counterparties by evaluating their financial condition and negotiating appropriate collateral or other forms of security. OPG's credit exposure relating to energy markets transactions as at June 30, 2017 was $362 million, including $347 million with the IESO. Management considers the Company's risk exposure relating to electricity sales through the IESO-administered spot market to be low as the IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market. Of the $15 million remaining exposure as at June 30, 2017, over 95 percent was related to investment grade counterparties.

Ontario's Fair Hydro Plan

OPG's involvement with Ontario's Fair Hydro Plan could have significant financial and reputational impacts on the Company.

The *Ontario Fair Hydro Plan Act, 2017* received Royal Assent on June 1, 2017 and regulations under this Act came into force in June and early July. The regulations clarify aspects of the structure and programs that are ~~required~~provided for OPG, ~~appointed~~ as the Financial Services Manager of the Fair Hydro Plan, to refinance a portion of the Global Adjustment through a financing entity. OPG's credit rating and reputation could potentially be adversely impacted by the Fair Hydro Plan, through financial implications to the Company from its involvement with the Fair Hydro Plan and through stakeholder opinions related to this involvement.

Commented [RK3]: The Act provides a choice for OPG (if it is "unwilling").

Using "required" may not be apt.

Commented [RK4]: If it is willing.

Recovery of Pension and OPEB Costs

On May 18, 2017, the OEB issued its report on the guiding principles and the policy for recovery mechanisms of pension and OPEB costs. This report established accrual basis as the default rate-setting method. This outcome reduces OPG's risk related to the recovery of actual pension and OPEB accrual costs and the recovery of the balance in the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Further details can be found in the section, *Highlights* under the heading, *Recent Developments*.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions are summarized below:

	Three Months Ended June 30			
	2017		2016	
(millions of dollars) (unaudited)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**1**	**-**	1	-
Services	**-**	**-**	-	4
Dividends	**2**	**-**	2	-
Province of Ontario				
Decommissioning Fund excess funding [1]	**-**	**45**	-	113
Used Fuel Fund rate of return guarantee and excess funding [1]	**-**	**39**	-	54
Gross revenue charges	**-**	**29**	-	32
ONFA guarantee fee	**-**	**2**	-	2
Other	**-**	**1**	-	-
OEFC				
Gross revenue charges	**-**	**56**	-	53
Interest expense on long-term notes	**-**	**41**	-	43
Income taxes, net of investment tax credits	**-**	**97**	-	52
IESO				
Electricity related revenue	**1,029**	**1**	1,239	5
	1,032	**311**	1,242	358

	Six Months Ended June 30			
	2017		2016	
(millions of dollars) (unaudited)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**5**	**-**	3	-
Services	**1**	**5**	1	9
Dividends	**4**	**-**	2	-
Province of Ontario				
Decommissioning Fund excess funding [1]	**-**	**208**	-	(64)
Used Fuel Fund rate of return guarantee and excess funding [1]	**-**	**256**	-	(105)
Gross revenue charges	**-**	**57**	-	63
ONFA guarantee fee	**-**	**4**	-	4
Other	**-**	**1**	-	-
OEFC				
Gross revenue charges	**-**	**94**	-	90
Interest expense on long-term notes	**-**	**82**	-	85
Income taxes, net of investment tax credits	**-**	**109**	-	84
IESO				
Electricity related revenue	**2,102**	**7**	2,601	15
	2,112	**823**	2,607	181

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at June 30, 2017 and December 31, 2016, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,879 million and $3,415 million, respectively. The details of accounting for the Nuclear Segregated Funds are described in OPG's 2016 annual MD&A in the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars) (unaudited)	**June 30 2017**	**December 31 2016**
Receivables from related parties		
Hydro One	**-**	1
IESO	**347**	421
OEFC	**8**	1
PEC	**4**	4
Province of Ontario	**8**	2
Available-for-sale securities		
Hydro One shares	**195**	212
Accounts payable and accrued charges		
OEFC	**66**	61
Province of Ontario	**7**	2
IESO	**2**	2
Long-term debt (including current portion)		
Notes payable to OEFC	**3,385**	3,295

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at June 30, 2017, the Nuclear Segregated Funds held $1,663 million of interest-bearing Province of Ontario bonds, while the registered pension fund had no such holdings. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

There have been no related party transactions related to the Fair Hydro Plan and associated financing activities.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

The Company maintains a comprehensive system of policies, procedures, and processes that represents its framework for internal controls over financial reporting and for its disclosure controls and procedures (together, ICOFR). There were no changes in the Company's internal control system during the current interim period that has or is reasonably likely to have a material impact to the ICOFR.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected financial information from OPG's unaudited interim consolidated financial statements for each of the eight most recently completed quarters.

(millions of dollars - except where noted) *(unaudited)*	**June 30 2017**	**March 31 2017**	**December 31 2016**	**September 30 2016**
Revenue	**1,146**	1,176	1,388	1,400
Net income (loss)	**307**	68	(8)	198
Less: Net income attributable to non-controlling interest	**4**	4	5	4
Net income (loss) attributable to the Shareholder	**303**	64	(13)	194
Per common share, attributable to the Shareholder *(dollars)*	**$1.18**	$0.25	($0.05)	$0.76

(millions of dollars - except where noted) *(unaudited)*	**June 30 2016**	**March 31 2016**	**December 31 2015**	**September 30 2015**
Revenue	1,387	1,478	1,312	1,426
Net income (loss)	135	128	(100)	85
Less: Net income attribute to the non-controlling interest	3	5	1	5
Net income (loss) attributable to the Shareholder	132	123	(101)	80
Per common share, attributable to the Shareholder *(dollars)*	$0.51	$0.48	($0.39)	$0.31

Trends

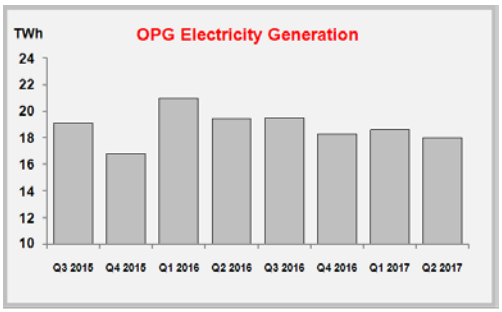
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues have been higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and

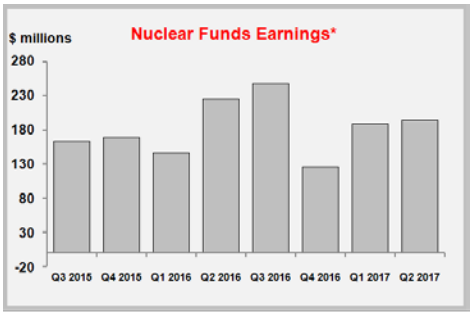
cooling demands. The financial impact of forgone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are mitigated by regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the fourth quarter of 2016 and the first half of 2017, OPG's electricity generation was reduced as a result of the Unit 2 refurbishment outage at the Darlington GS, which began in October 2016 and is expected to continue until early 2020.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items that affected net income in certain quarters above are described in OPG's 2016 annual MD&A under the section, *Quarterly Financial Highlights*.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder, improve cost performance, and ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow provided by operating activities, or any other measure in accordance with US GAAP, but as indicators of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) **ROE Excluding AOCI** is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE Excluding AOCI is measured over a 12-month period and is calculated as follows:

	Twelve Months Ended	
(millions of dollars – except where noted) (unaudited)	**June 30 2017**	**December 31 2016**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**548**	436
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,894**	10,442
ROE Excluding AOCI *(percent)*	**5.0**	4.2

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows:

(millions of dollars – except where noted) (unaudited)	Twelve Months Ended June 30 2017	Twelve Months Ended December 31 2016
FFO before interest		
Cash flow provided by operating activities	**1,252**	1,705
Add: Interest paid	**267**	269
Less: Interest capitalized to fixed and intangible assets	**(158)**	(141)
Less: Changes to non-cash working capital balances	**(36)**	(68)
FFO before interest	**1,325**	1,765
Adjusted interest expense		
Net interest expense	**91**	120
Add: Interest income	**5**	7
Add: Interest capitalized to fixed and intangible assets	**158**	141
Add: Interest related to regulatory assets and liabilities	**41**	30
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets [1]	**-**	45
Adjusted interest expense	**295**	343
FFO Adjusted Interest Coverage *(times)*	**4.5**	5.1

[1] A value of nil is used in the calculation when interest on pension and OPEB projected benefit obligations is lower than expected return on pension plan assets.

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding the Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation from OPG-operated generating stations plus electricity generation forgone due to SBG conditions during the period.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**	**2017**	**2016**
Enterprise TGC				
Total OM&A expenses	**711**	709	**1,419**	1,395
Total fuel expense	**178**	182	**333**	354
Total capital expenditures	**451**	398	**859**	718
Less: Darlington Refurbishment capital and OM&A costs	**(306)**	(243)	**(615)**	(448)
Less: Other generation development project capital and OM&A costs	**(19)**	(41)	**(36)**	(79)
(Less) Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(12)**	23	**(23)**	41
Less: Nuclear fuel expense for non OPG-operated stations	**(16)**	(15)	**(29)**	(32)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**23**	15	**34**	33
Less: OM&A expenses ancillary to electricity generation business	**(4)**	(7)	**(9)**	(12)
Other adjustments	**(2)**	2	**(4)**	(3)
	1,004	1,023	**1,929**	1,967
Adjusted electricity generation *(TWh)*				
Total OPG electricity generation	**18.0**	19.4	**36.6**	40.4
Adjust for electricity generation forgone due to SBG conditions and OPG's share of electricity generation from co-owned facilities	**2.6**	1.7	**3.3**	3.3
	20.6	21.1	**39.9**	43.7
Enterprise TGC per MWh *($/MWh)* [1]	**48.72**	48.48	**48.35**	45.01

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

(millions of dollars – except where noted) (unaudited)	Three Months Ended June 30		Six Months Ended June 30	
	2017	**2016**	**2017**	**2016**
Nuclear TGC				
Regulated – Nuclear Generation OM&A expenses	**593**	581	**1,182**	1,144
Regulated – Nuclear Generation fuel expense	**68**	79	**136**	160
Regulated – Nuclear Generation capital expenditures	**375**	308	**741**	557
Less: Darlington Refurbishment capital and OM&A costs	**(306)**	(243)	**(615)**	(448)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**3**	29	**1**	53
Less: Nuclear fuel expense for non OPG-operated stations	**(16)**	(15)	**(29)**	(32)
Less: Regulated - Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(1)**	(2)	**(2)**	(3)
Other adjustments	**(2)**	(3)	**(2)**	(4)
	714	734	**1,412**	1,427
Nuclear electricity generation (TWh)	**9.3**	10.6	**19.3**	22.9
Nuclear TGC per MWh (*$/MWh*) [1]	**76.87**	69.25	**73.24**	62.44

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation forgone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

	Three Months Ended June 30		Six Months Ended June 30	
(millions of dollars – except where noted) (unaudited)	**2017**	**2016**	**2017**	**2016**
Hydroelectric TGC				
Regulated – Hydroelectric OM&A expenses	**75**	75	**151**	151
Regulated – Hydroelectric fuel expense	**97**	92	**170**	171
Contracted Generation Portfolio OM&A expenses	**40**	45	**79**	85
Contracted Generation Portfolio fuel expense	**13**	11	**27**	23
Regulated – Hydroelectric and Contracted Generation Portfolio capital expenditures	**48**	80	**85**	139
Less: Regulated – Hydroelectric and Contracted Generation Portfolio generation development project capital and OM&A costs	**(19)**	(39)	**(35)**	(76)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(41)**	(38)	**(80)**	(75)
Less: Regulated – Hydroelectric OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(15)**	(5)	**(24)**	(12)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**23**	15	**34**	33
Other adjustments	**2**	(2)	**1**	-
	223	234	**408**	439
Adjusted hydroelectric electricity generation *(TWh)*				
Regulated – Hydroelectric electricity generation	**8.2**	8.0	**16.2**	15.9
Contracted Generation Portfolio electricity generation	**0.5**	0.8	**1.1**	1.6
Adjust for hydroelectric electricity generation forgone due to SBG conditions and non-hydroelectric electricity generation of the Contracted Generation Portfolio, including OPG's share of electricity generation from co-owned facilities	**2.6**	1.7	**3.3**	3.3
	11.3	10.5	**20.6**	20.8
Hydroelectric TGC per MWh *($/MWh)* [1]	**19.83**	22.14	**19.81**	21.08

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense.

For further information, please contact:

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From:	Ronald Kwan
To:	John Kim; Gavin He
Cc:	Francisco Chinchon; Bruno Amara; Shajee Kathirgamanathan; Emily Kerr; Karim Javeri
Subject:	RE: OPG Q2 2017 Submission to Province
Date:	Thursday, August 03, 2017 12:28:40 PM

Hi John,

Thanks. I'd rather limit it to ''this financing'', unless there are other aspects of the OFHP that they are involved in working together on implementing (not OESP, RRRP, on-reserve delivery credit, Affordability Fund?).

Ron

From: John Kim
Sent: August-03-17 12:17
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
Cc: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
Subject: RE: OPG Q2 2017 Submission to Province

Hi Ron,

We are fine with your suggested edits. I didn't see a problem with "the Ontario Fair Hydro Plan" but will put it back if you have a concern.

As for the OEB report, we would be doing a comprehensive rework of the Outlook by end of August, heading into FES and will review risks such as this one. The report is favourable based on our review thus far.

I did let OPG know that our comments are coming back today.

Thanks,

John

From: Ronald Kwan
Sent: Wednesday, August 02, 2017 7:20 PM
To: Gavin He <Gavin.He@ofina.on.ca>
Cc: John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
Subject: RE: OPG Q2 2017 Submission to Province

Hi,

Some small suggestions.

Also, has EFB reviewed the cited OEB report on pensions and OPEB ("On May 18, 2017, the OEB issued a report on the regulatory treatment of pension and OPEB costs")?

And on p.11 of the MD&A, why the suggestion on broadening the scope – from implementing "this financing" to "the Ontario Fair Hydro Plan"?

Please review some suggested edits on p.17 – do they work?

We should have some qs&as ready wrt the disclosure on the OPG HQ premises and associated parking facility. And is SIFB okay with the disclosure detail provided?

I did not really review the FS document, though I tweaked your comment on SPFB`s issue.

It might be good if Linda Smith or CMD reviews the latter part of note 10 of the financials on the types of investments in the ONFA funds.

Thanks,
Ron

From: Gavin He
Sent: August-01-17 13:28
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: John Kim <John.Kim@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
Subject: FW: OPG Q2 2017 Submission to Province

Hi Ron,

Please find attached the proposed edits from EFB and SPFB.

SPFB only has one comment on the FS on page 27, and below is the additional details on their comment.

Please note that comments are due back to OPG today.

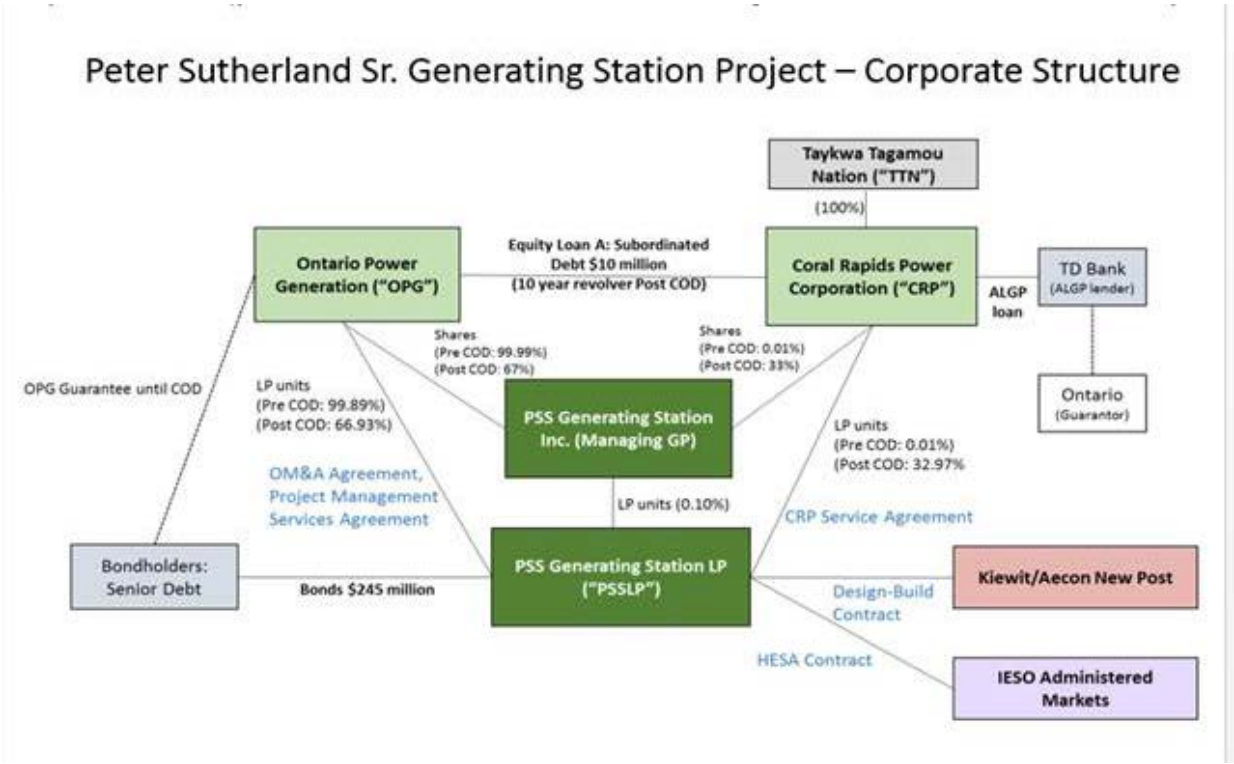
Regards,
Gavin He

From: Karim Javeri
Sent: Tuesday, August 01, 2017 11:48 AM
To: Gavin He <Gavin.He@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>
Subject: Re: OPG Q2 2017 Submission to Province

Hi Gavin,

The documents look fine except for a description regarding PSS in the F/S on page 27, to which we've added a comment in the attached markup. The document states that OPG is a general partner and CRP is only a limited partner when they are in fact both part of the GP and LP. We have alluded to the need to verify the structure in the comment but since our knowledge of this project comes from our engagement with PSS as stakeholders in ALGP, we do not want to propose any direct edits without Ron's consent. We were hoping you could share this context with Ron along with your consolidated edits on the documents.

Thanks



Regards,

Karim

From: Ronald Kwan
Sent: Friday, July 28, 2017 5:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: FW: OPG Q2 2017 Submission to Province

Hi All,

Please review, and note the timeline.

John, does FTD need to review any particular sections?

Ron

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: July-28-17 17:13
To: 'Shruti.Talwar@ontario.ca' <Shruti.Talwar@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>; DYKXHOORN Sandra -STAKEREL <sandra.dykxhoorn@opg.com>
Subject: OPG Q2 2017 Submission to Province

Hi All,

Please find attached OPG's draft Q2 2017 Financial Results Press Release, Management's Discussion and Analysis (MD&A), and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, Aug 1st**.

These documents will be filed with the Ontario Securities Commission on **Friday, August 11th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q2 2017 MD&A:

Highlights	
Recent Developments	MD&A p.10-12
Darlington Refurbishment	MD&A p.14-15
Ontario's Fair Hydro Plan	MD&A p.11
Sale of Head Office Premises	MD&A p.11

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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hereby notified that any review, retransmission, dissemination, distribution, copying, conversion to hard copy or other use of this communication is strictly prohibited. If you are not the intended recipient and have received this message in error, please notify me by return e-mail and delete this message from your system. Ontario Power Generation Inc.

From: John Kim
To: DYKXHOORN Sandra -CORPRELCOMM
Cc: Ronald Kwan; CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
Subject: RE: OPG Q4 2016 submission to Province
Date: Thursday, March 02, 2017 9:46:12 AM
Attachments: Q4 2016 MDA_DRAFT_PROVINCE MAILING_comment-v2(Sent).docx

Hi Sandra,

See attached.

Thanks,

John.

From: Ronald Kwan
Sent: Tuesday, February 28, 2017 8:35 PM
To: DYKXHOORN Sandra -CORPRELCOMM <sandra.dykxhoorn@opg.com>
Cc: John Kim <John.Kim@ofina.on.ca>; CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; HO Philip -FIN & C CTRL <philip.ho@opg.com>
Subject: Re: OPG Q4 2016 submission to Province

Hi Sandra,

We haven't forgotten. It's been busy. We'll try to get you something tomorrow.

Thanks for you patience.
Ron

On Feb 28, 2017, at 7:01 PM, DYKXHOORN Sandra -CORPRELCOMM <sandra.dykxhoorn@opg.com> wrote:

> Hi John & Ronald,
>
> Checking in.
>
> Thanks!
>
> S.
>
> _____
> **From:** DYKXHOORN Sandra -CORPRELCOMM
> **Sent:** Wednesday, February 15, 2017 9:15 AM
> **To:** 'John.Kim@ofina.on.ca'; 'ronald.kwan@ofina.on.ca'; 'Talwar, Shruti (ENERGY)'; 'Chander, Sunita (ENERGY)'
> **Cc:** CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
> **Subject:** OPG Q4 2016 submission to Province
>
> Good morning,
>
> Please find attached OPG's draft Q4 2016 News Release, Management's Discussion and Analysis (MD&A), Annual Information Form (AIF) and Financial Statements for the Province's review.
>
> We would greatly appreciate comments on the above **no later than Monday, February 27th**.
>
> These documents will be filed with the Ontario Securities Commission on **Friday, March 10th** following OPG's Board of Directors meeting.
>
> **Kindly forward all comments directly to Sandra Dykxhoorn (copy to Alec Cheng – alec.cheng@opg.com and Philip Ho – philip.ho@opg.com).**
>
> To assist the review process, the following are the key items in the Q4 2016 MD&A:

Highlights Recent Developments	MD&A p.11-16
	MD&A p.11-12;

Darlington Refurbishment	24-25
Peter Sutherland Sr. GS project	MD&A p.25
Outlook – OEB application on OPG's results, impact of ONFA update on Nuclear Segregated Funds earnings, and the expected income and cash flow trends for 2017	MD&A p.30-31

<< File: OPG News Release YE 2016_DRAFT_PROVINCE MAILING.docx >> << File: Q4 2016 MDA_DRAFT_PROVINCE MAILING.docx >> << File: Q4 2016 FS DRAFT_PROVINCE MAILING.docx.docx >> << File: 2016 AIF DRAFT_PROVINCE MAILING.docx >>

Sandra Dykxhoorn | Acting Director, Provincial Relations | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | p: (416) 592-2887 | c: (416) 571-4366 | sandra.dykxhoorn@opg.com

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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

DECEMBER 31, 2016

[DRAFT]

2016 YEAR-END REPORT

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ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the audited consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the year ended December 31, 2016. OPG's consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. The Ontario Securities Commission (OSC) approved an exemption that allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the heading, *Exemptive Relief for Reporting under US GAAP,* in the section *Critical Accounting Policies and Estimates.* This MD&A is dated March 10, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act (Ontario)* (OBCA) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at December 31, 2016, OPG's electricity generation portfolio had an in-service capacity of 16,177 megawatts (MW). OPG operates two nuclear generating stations, 65 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report.

All of OPG's owned and co-owned generating facilities are located in Ontario.

OPG's Reporting Structure

The composition of OPG's reportable business segments is as follows:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

OPG receives regulated prices for electricity generated from most of its hydroelectric facilities and all of the nuclear facilities that it operates (collectively, prescribed facilities or regulated facilities). This includes the following facilities:

- the six hydroelectric generating stations prescribed for rate regulation prior to 2014, as follows:
    - Sir Adam Beck 1, 2 and Pump hydroelectric generating stations
    - DeCew Falls 1 and 2 hydroelectric generating stations
    - R.H. Saunders hydroelectric GS
- the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014
- Pickering Nuclear GS (Pickering GS)
- Darlington Nuclear GS (Darlington GS).

The operating results related to these regulated facilities are described under the Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, and Regulated – Hydroelectric segments. For the remainder of OPG's operating generating facilities, the operating results are described under the Contracted Generation Portfolio segment. A description of all OPG's segments is provided under the section, *Business Segments*.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of December 31 was as follows:

(MW)	**2016**	**2015**
Regulated – Nuclear Generation [1]	**5,728**	6,606
Regulated – Hydroelectric	**6,421**	6,428
Contracted Generation Portfolio [2]	**4,028**	4,021
Total	**16,177**	17,055

[1] The in-service generating capacity as of December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

The total in-service capacity as at December 31, 2016 decreased by 878 MW compared to 2015. The decrease was primarily due to the commencement of the refurbishment of the first Darlington GS unit, Unit 2, which was taken offline in mid-October 2016. In addition, during 2016, the capacity of the regulated hydroelectric units at the Abitibi Canyon GS and the Sir Adam Beck 1 GS was reduced to reflect unit limit capability. This decrease in in-service capacity was partially offset by an increase in capacity of the Contracted Generation Portfolio segment, reflecting the completion of an upgrade and rehabilitation of Unit 2 of the Harmon hydroelectric GS during 2016.

REVENUE MECHANISMS FOR REGULATED AND NON-REGULATED GENERATION

Regulated Generation

The OEB sets the prices for electricity generated from OPG's regulated nuclear and regulated hydroelectric facilities. The following are the OEB-authorized regulated prices for electricity generated from these facilities:

	2016	**2015**	
($/MWh)		**January 1 to June 30**	**July 1 to December 31**
Regulated – Nuclear Generation			
Base regulated price	**59.29**	59.29	59.29
Rate riders	**10.84** [1]	1.33	12.17 [1]
	70.13	60.62	71.46
Regulated – Hydroelectric			
Hydroelectric generating stations prescribed for rate regulation prior to 2014			
Base regulated price	**40.20**	40.20	40.20
Rate riders	**3.19** [1]	6.04	9.23 [1]
	43.39	46.24	49.43
Hydroelectric generating stations prescribed for rate regulation effective in 2014			
Base regulated price	**41.93**	41.93	41.93
Rate rider	**3.19** [1]	-	3.19 [1]
	45.12	41.93	45.12

[1] The increase in the 2015 rate riders effective July 1, 2015 was implemented by the OEB effective October 1, 2015. As such, the OEB authorized interim period rate riders for the period from October 1, 2015 to December 31, 2016 to allow for the recovery of the increase in the riders for the period from July 1, 2015 to September 30, 2015. The revenue from the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The nuclear interim period rate rider was $2.17 per megawatt hour (MWh) and the regulated hydroelectric interim period rate rider was $0.64/MWh. These interim period rate riders have not been included in the above table. All rate riders in effect during 2016 expired on December 31, 2016.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements for the 2014 to 2015 period, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base for OPG represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital.

In accordance with *Ontario Regulation 53/05* under the *Ontario Energy Board Act, 1998*, OPG's nuclear regulated prices are reduced by the amount of OPG's revenues, net of costs, from leasing the Bruce nuclear generating stations to Bruce Power. As directed by the OEB, OPG's revenues and costs related to the Bruce nuclear generating stations are determined in accordance with US GAAP for the purposes of establishing OPG's nuclear regulated prices and are subject to the Bruce Lease Net Revenues Variance Account in accordance with *Ontario Regulation 53/05*. This includes OPG's costs related to its obligations for nuclear waste management and nuclear facilities decommissioning associated with the Bruce nuclear generating stations and the corresponding portion of earnings on the nuclear fixed asset removal and nuclear waste management segregated funds (Nuclear Segregated Funds) established pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province.

Rate riders for OPG are established to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts. Variance and deferral accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The rate riders in effect during 2015 included those established by the OEB's December 2014 order for the period from January 1, 2015 to December 31, 2015, as well as those authorized by the OEB's October 2015 order on OPG's 2014 application to recover the December 31, 2014 variance and deferral account balances, for the period from July 1, 2015 December 31, 2016. The rate riders in effect during 2016 were those authorized by the October 2015 order.

Non-Regulated Generation

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements (ESAs) with the Independent Electricity System Operator (IESO). Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO was substituted as the counterparty of ESAs and other agreements that were previously executed with the OPA.

During 2016, ESAs were in effect for the following thermal generating facilities:

- Lennox GS: Capacity provided by, and production from, the station are subject to an ESA for the period from January 1, 2013 to September 30, 2022
- Atikokan GS: Capacity provided by, and production from, the station are subject to a 10-year ESA expiring in July 2024
- Thunder Bay GS: Capacity provided by, and production from, the station are subject to a 5-year ESA expiring in January 2020.

In addition, long-term hydroelectric ESAs are in place for the following facilities, with expiry dates for currently operating stations ranging from 2059 to 2064:

- Lac Seul and Ear Falls generating stations
- Healey Falls GS
- Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations
- Little Long, Harmon, Smoky Falls, and Kipling generating stations (collectively the Lower Mattagami River generating stations)

- Peter Sutherland Sr. GS which is being commissioned. **[MONITOR]** Payments under this ESA will commence when the station achieves commercial operation. Further details on the Peter Sutherland Sr. GS project are found under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's operating results for 2016 and 2015.

(millions of dollars – except where noted)	**2016**	**2015**
Revenue	**5,653**	5,476
Fuel expense	**727**	687
Gross margin	**4,926**	4,789
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (income) loss, interest, and income taxes	**724**	703
Other (income) loss	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense	**120**	180
Income before income taxes	**621**	509
Income tax expense	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest [1]	**17**	15
Electricity production (TWh) [2]	**78.2**	78.0
Cash flow		
Cash flow provided by operating activities	**1,705**	1,465

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $436 million for 2016, an increase of $34 million compared to 2015. Income before interest and income taxes was $741 million for 2016, an increase of $52 million compared to 2015.

The following summarizes the significant factors which contributed to the variance:

Significant factors that increased income before interest and income taxes:

- Higher generation of 1.1 terawatt hours (TWh) from the Regulated – Nuclear generation segment, resulting in an increase in revenue of $65 million from the nuclear base regulated price. The year-over-year increase

in revenue from the higher nuclear rate riders in effect during the first half of 2016, compared to the same period in 2015, was primarily offset by an increase in the amortization expense related to regulatory balances.

- Higher earnings on the Nuclear Segregated Funds of $42 million, primarily due to a higher rate of return on the portion of the Used Fuel Segregated Fund that is subject to a consumer price index (CPI) adjusted rate of return guarantee by the Province pursuant to the ONFA. This increase in Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the updated ONFA reference plan, approved by the Province in December 2016
- Increase in earnings from the Services, Trading, and Other Non-Generation segment of $24 million, primarily due to lower operations, maintenance and administration (OM&A) expenses
- A gain of $22 million recorded during the first quarter of 2016, reflecting the OEB's January 2016 decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices
- Increase in earnings of $20 million from the Contracted Generation Portfolio segment, mainly as a result of an increase in the gross margin due to higher revenues from the Lower Mattagami River generating stations, the Lennox GS and the Atikokan GS.

Significant factors that reduced income before interest and income taxes:

- Higher financing expense of $32 million, which represents an increase in the present value of the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities). The financing expense, known as accretion expense, is added to the Nuclear Liabilities balance over time
- A decrease in nuclear non-electricity revenue of $21 million, primarily due to a decrease in nuclear detritiation services revenue and lower isotope sales
- Higher OM&A expenses, fuel expense and depreciation expense for the Regulated – Nuclear Generation segment. The increase in OM&A expenses of $14 million reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium costs and higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million, primarily due to new assets in service in 2016. The increase in amortization expense related to regulatory balances was largely offset by the increase in nuclear revenue related to rate riders
- Lower earnings before other gains from the Regulated – Hydroelectric segment of $28 million, primarily due to lower hydroelectric incentive mechanism revenue and the income impact of OEB-approved variance accounts.

Net interest expense decreased by $60 million in 2016, compared to 2015, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project and a higher amount of interest costs deferred in regulatory variance and deferral accounts.

Income tax expense increased by $76 million in 2016, compared to 2015, primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. Significant factors which contributed to the higher income during 2016, compared to 2015, are discussed above. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	**2016**	**2015**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**4**	2
Regulated – Hydroelectric	**642**	648
Contracted Generation Portfolio	**282**	262
Total electricity generation business segments	**928**	912
Regulated – Nuclear Waste Management	**(174)**	(186)
Services, Trading, and Other Non-Generation	**(13)**	(37)
	741	689

Electricity Generation

Electricity generation for 2016 and 2015 was as follows:

(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**45.6**	44.5
Regulated – Hydroelectric	**29.5**	30.4
Contracted Generation Portfolio [1]	**3.1**	3.1
Total OPG electricity generation	**78.2**	78.0
Total electricity generation by other generators in Ontario [2]	**72.7**	76.1

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The higher electricity generation from the Regulated – Nuclear Generation segment in 2016 was primarily a result of a lower number of non-refurbishment outage days at the Darlington GS due to the planned Vacuum Building Outage (VBO) in 2015 and a decrease in unplanned outages at the station in 2016. The VBO is a unique outage to inspect and maintain specific safety and other systems common to all four units of the station. The 2015 VBO required the shutdown of the four units for 47 days. Vacuum building outages are currently required every 12 years at the Darlington GS. The year-over-year increase in electricity generation was partially offset by a decrease in generation from the Pickering GS, primarily due to an increase in the number of unplanned outage days, and the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment beginning on October 15, 2016.

Lower electricity generation from the Regulated – Hydroelectric generating segment was primarily due to a higher volume of water spilled as a result of higher SBG conditions during 2016.

Electricity generation from the Contracted Generation Portfolio segment was 3.1 TWh for each of 2016 and 2015. Electricity generation in 2016 reflected higher production from the Lennox and Atikokan generating stations, primarily due to increased market demand. The increase was offset by a higher volume of water spilled at the contracted hydroelectric stations as a result of higher SBG conditions during 2016, and transmission system constraints in northeastern Ontario in 2016. **[CONFIRM]**

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Ontario's electricity demand as reported by the IESO was 137.0 TWh in each of 2016 and 2015, which excludes electricity exports out of the province.

Baseload generation supply surplus in Ontario was more prevalent in 2016 than in 2015, mainly due to higher water flows in the province during 2016 and limitations on the export of surplus power out of the province, primarily due to transmission constraints in the state of New York. Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric and nuclear stations and other grid-connected renewable resources. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. During 2016 and 2015, OPG lost 4.7 TWh and 3.2 TWh of hydroelectric generation due to SBG conditions, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions in 2016 and 2015 was offset by a regulatory variance account authorized by the OEB. OPG did not forego any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The regulated prices authorized by the OEB for electricity generated from OPG's nuclear and regulated hydroelectric generating stations are discussed in the section *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment during 2016 was 6.9 cents per kilowatt hour (¢/kWh), compared to 6.5 ¢/kWh during 2015. The average sales price in 2016 reflected the higher OEB-authorized nuclear rate rider of $10.84/MWh for recovery of variance and deferral account balances in effect during the year. The average sales price for the Regulated – Hydroelectric segment was 4.4 ¢/kWh, compared to 4.7 ¢/kWh during 2015. The decrease was primarily due to a lower rate rider in effect during 2016 related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years.

As such, the year-over-year changes in revenue from rate riders were largely offset by changes in amortization expense related to regulatory balances.

Cash Flow from Operations

Cash flow provided by operating activities for 2016 was $1,705 million, compared to $1,465 million for 2015. The increase in cash flow provided by operating activities for 2016, compared to 2015, was primarily due to higher generation revenue receipts reflecting higher nuclear rate riders and higher nuclear generation in 2016. The increase in cash flow was also due to lower pension plan contributions in 2016 reflecting an updated actuarial valuation of the OPG registered pension plan. The increase in cash flow was partially offset by higher OM&A expenditures during 2016, compared to 2015, and the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to the period from January 1, 2015 to December 4, 2015. The rebate was made pursuant to a provision under the lease agreement for the Bruce nuclear generating stations. This provision was eliminated effective December 4, 2015 as part of the 2015 amendments to the lease agreement.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. The FFO Adjusted Interest Coverage was 5.1 times for 2016, compared to 5.0 times for 2015. The modest increase in the FFO Adjusted Interest Coverage in 2016 reflected an increase in FFO before interest for 2016, compared to 2015, as a result of the year-over-year increase in cash flow provided by operating activities.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for 2016 was 4.2 percent, compared to 4.0 percent for 2015. ROE Excluding AOCI increased for 2016, compared to 2015, primarily due to higher net income attributable to the Shareholder. OPG's ROE Excluding AOCI reflects regulated prices established by the OEB in 2014. These prices were lower than requested by OPG based on submitted forecast cost and production levels, which has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

ROE Excluding AOCI also reflects the relatively higher equity component in the Company's capital structure, compared to the deemed capital structure used by the OEB in determining OPG's regulated prices. The OEB establishes the allowed return on OPG's investment in regulated assets, which represent the majority of the Company's operations, using the OEB's generic prescribed rate of return and an OPG-specific deemed capital structure. In setting the regulated prices in 2014, the OEB applied a deemed capital structure of 45 percent equity and 55 percent debt. OPG's actual capital structure (excluding AOCI) contains approximately 65 percent equity. The higher equity component in OPG's actual capital structure, compared to the deemed capital structure applied by the OEB, results in a reduced actual ROE Excluding AOCI. In its application for new regulated prices filed with the OEB in May 2016, OPG is seeking an increase in the deemed capital structure to 49 percent equity and 51 percent debt. For further discussion on OPG's application, refer to the heading *Recent Developments* in the section *Highlights*.

Enterprise Total Generating Cost per MWh

The Enterprise Total Generating Cost (TGC) per MWh was $48.10 for the year ended December 31, 2016, compared to $50.46 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses, excluding the impact of regulatory variance and deferral accounts, and higher electricity generation as adjusted for foregone generation due to SBG conditions during 2016.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $62.30 for the year ended December 31, 2016, compared to $66.20 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses excluding the impact of regulatory variance and deferral accounts, and higher electricity generation during 2016.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $25.57 for the year ended December 31, 2016, which was comparable to $25.26 for the same period in 2015.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow from operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in

January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The unit is scheduled to be returned to service in the first quarter of 2020. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

In April 2016, the Federal Court of Appeal unanimously dismissed the request by certain intervenors for a judicial review of the 2013 Environmental Assessment (EA) decision for the Darlington Refurbishment project by the Canadian Nuclear Safety Commission (CNSC) and Fisheries and Oceans Canada. The EA decision had confirmed that, taking into account identified mitigation measures, the project was not likely to cause significant adverse environmental effects. In dismissing the appeal, the Federal Court of Appeal determined that there were no gaps in the EA, that there was nothing unreasonable about the discretionary determinations made by the responsible authorities, and that the intervenors' arguments were not borne out by the evidence. OPG was also awarded its costs of the appeal, as the successful party.

The Darlington Refurbishment project is discussed further under the heading, *Project Excellence* in the *Core Business, Strategy and Outlook* section.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. For the first time since OPG's prescribed assets became subject to rate regulation, the new prices are expected to be determined on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. Rate-setting under incentive regulation is typically more formulaic and involves greater de-coupling of a regulated entity's allowed revenues or prices from its costs than under a cost-of-service rate-setting methodology.

For the hydroelectric facilities, OPG's May 2016 application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021 based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production.

The proposed nuclear revenue requirements reflect OPG's plans to pursue Pickering extended operations until 2024, as well as the projected impact of the scheduled return to service of the first refurbished Darlington unit in the first quarter of 2020. OPG is also seeking an increase in the deemed capital structure applied to its total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt applied by the OEB in setting the existing regulated prices.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG's application incorporates a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved nuclear revenue requirements in a deferral account for future collection, with a view of making more stable year-over-year changes in OPG's nuclear regulated prices for the period from January 1, 2017 to the end of the Darlington Refurbishment project. The regulation stipulates that the deferral account will record interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually, and that the OEB shall authorize recovery of the balance in the account on a straight line basis over a period not to exceed 10 years following the end of the Darlington Refurbishment project. OPG expects to recognize the deferred amounts as income in the period to which the approved revenue requirements relate.

OPG's application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the

Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment in 2016 through rate riders in effect to December 31, 2016. The application also requests the continuation of all applicable existing variance and deferral accounts. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed in the section *Critical Accounting Policies and Estimates,* under the heading, *Rate Regulated Accounting.*

In December 2016, the OEB issued an order granting OPG's request to declare the existing base regulated prices interim, effective January 1, 2017. This preserves the OEB's ability to make new regulated prices effective as early as January 1, 2017, which would allow OPG to recover the difference between the approved new regulated prices and the existing prices for the period between the effective date of the new regulated prices and their implementation date based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017, following a public proceeding. The public proceeding is in progress, with the oral hearing portion having commenced in February 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

In February 2017, the OEB approved a settlement agreement reached by OPG and intervenors on certain limited elements of OPG's application (Settlement Agreement). Among other elements, the Settlement Agreement accepts a number of year-end 2015 variance and deferral account balances totaling $419 million, allows for continuation of all applicable existing variance and deferral accounts, and confirms methodologies for calculating amounts to be recorded in most of the continuing accounts once new regulated prices take effect, as proposed by OPG. The balances of, and methodologies for recording future amounts in the Nuclear Liability Deferral Account, the Bruce Lease Net Revenues Variance Account and the Capacity Refurbishment Variance Account are excluded from the Settlement Agreement. The agreement also results in approval of OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017-2021 period. The Settlement Agreement does not impact OPG's 2016 financial results. **[MONITOR]**

OEB's Decision on OPG's December 2014 Motion

In January 2016, the OEB issued its decision on OPG's December 2014 motion asking the OEB to review and vary the parts of its November 2014 decision related to the disallowance of the Niagara Tunnel project expenditures, and the application of the 2013 regulatory tax loss to reduce the 2014/2015 revenue requirement. In its decision, the OEB reversed a portion of the original disallowance of the Niagara Tunnel project expenditures, and upheld the original tax loss decision. In the first quarter of 2016, OPG recorded a gain of $22 million to recognize the expected future recovery from customers of the portion of the disallowance reversed by the OEB's motion decision.

The original disallowance of the Niagara Tunnel project expenditures resulted in a write-off of $77 million that was charged to operations in 2014. The original tax loss decision resulted in a reduction of the 2014/2015 revenue requirement by approximately $70 million. As OPG's financial results have previously reflected the effect of the OEB's original tax loss decision, the motion decision on the tax loss did not impact OPG's 2016 financial results.

Ontario Nuclear Funds Agreement Reference Plan Update

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for nuclear waste management and nuclear facilities decommissioning as at December 31, 2016 was finalized as part of the required process to update the reference plan under the ONFA. As at December 31, 2016, the update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities with a corresponding decrease to the asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear facilities decommissioning at least once every five years, in line with the required ONFA reference plan update process.

The updated estimate of the obligations was reflected in a new ONFA reference plan, for years 2017 to 2021, which was approved by the Province in December 2016, effective January 1, 2017 (the 2017 ONFA Reference Plan). Based on the lower life cycle liability estimates per the 2017 ONFA Reference Plan, starting in 2017, OPG is not currently required to make overall contributions to the Used Fuel Segregated Fund or the Decommissioning Segregated Fund established under the ONFA. Prior to 2017, OPG made contributions to the Used Fuel Segregated Fund every year, including a one-time special payment in earlier years, as required by the ONFA. These contributions reflected ONFA requirements to fund the majority of the underlying used fuel liability by the end of the estimated useful lives of the nuclear stations in effect at OPG's inception in 1999, resulting in significantly higher contributions to the Used Fuel Segregated Fund in the earlier years of OPG's existence. OPG has not been required to make contributions to the Decommissioning Segregated Fund, which was fully funded at its inception and at the time of every subsequent approved ONFA reference plan. Contributions to either or both funds may be required in the future should the funds be in an underfunded position when a new reference plan is prepared. Such may be the case as a result of variability in asset performance due to volatility inherent in financial markets and Ontario CPI changes. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the underlying obligations in subsequent ONFA reference plans.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of the new regulated prices. In accordance with *Ontario Regulation 53/05*, the OEB is required to ensure that OPG recovers the revenue requirement impact of its nuclear waste management and nuclear decommissioning liabilities arising from the current approved ONFA reference plan. For further discussion on the accounting for Nuclear Liabilities, refer to the section, *Critical Accounting Policies* under the heading, *Asset Retirement Obligation*.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the amount due to the Province. This accounting adjustment represented the overfunded position of Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 relative to the value of the corresponding present value life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province as OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and as any excess funding in the Nuclear Segregated Funds upon termination of the ONFA accrues to the Province. Of the $88 million reduction in Nuclear Segregated Funds earnings, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

For further discussion of the accounting for the Nuclear Segregated Funds, refer to the section, *Critical Accounting Policies* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*. For further discussion of OPG's risks with respect to nuclear waste management and nuclear decommissioning obligations and Nuclear Segregated Funds, refer to the section, *Risk Management* under the headings, *Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds* and *Financial Markets*.

Shareholder Declaration and Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that required the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. The assets are reported under the Services, Trading and Other Non-Generation segment. An active program to locate a buyer for these real estate assets was initiated in October 2016, and a purchase and sale agreement was executed in December 2016. The sale is expected to be completed during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be

recognized upon completion of the transaction. Pursuant to the December 2015 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer ~~a portion of the~~ proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario, an asset reported under the Services, Trading and Other Non-Generation segment. OPG is currently in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer ~~a portion of the~~ proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund.

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business.

Contract Award for Nanticoke Solar Facility

In March 2016, Nanticoke Solar LP, then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation, was selected through the first phase of the IESO's Large Renewable Procurement (LRP) program to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands in Haldimand County, Ontario. The LRP program was a competitive bidding process for procuring large renewable energy projects in Ontario. In March 2016, Nanticoke Solar LP and the IESO executed a 20-year LRP contract, which formalized the terms and conditions for the development and operation of the new solar facility. In the first quarter of 2017 **[MONITOR]**, OPG purchased SECCLP's interests in Nanticoke Solar LP and is working to obtain approvals and permits required to enable the commencement of construction planned for the first half of 2018.

The 20-year term of the LRP contract takes effect once the station achieves commercial operation, which is expected in the first quarter of 2019. For further discussion, refer to the section, *Core Business, Strategy and Outlook* under the heading, *Project Excellence*.

Decommissioning of the Lambton GS

In November 2016, the Company announced the decommissioning of the Lambton GS, which ceased coal-fired generation in 2013, as it was determined that continuing to preserve the station beyond 2016 for future conversion was no longer economically feasible. OPG is currently developing a decommissioning plan for the Lambton GS, which will ensure that the station is closed safely, securely, and in an environmentally responsible manner.

Canadian Nuclear Safety Commission Safety Rating for the Pickering GS and the Darlington GS

The CNSC publishes an annual report on the safety performance of Canada's nuclear power plants. The report assesses how well plant operators are meeting regulatory requirements and program expectations in the areas of operational performance, safety analysis, radiation protection, waste management and conventional health and safety. In its 2015 annual report, the CNSC gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". The Pickering GS received this rating for the first time, while the Darlington GS achieved the rating for the seventh year in a row.

Acquisition of Hydro One Limited Shares

In April 2016, OPG acquired nine million common shares of Hydro One Limited (Hydro One) at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. OPG paid the same price as other investors in the offering. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union (PWU) and The Society of Energy Professional (The Society) renewed in 2015. Changes to these agreements included increases to employee pension plan contributions and provisions for existing employees represented by the

PWU and The Society with eligibility to annually receive common shares of Hydro One for up to 15 years starting in the third year of the respective agreements, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service. The shares acquired in the April 2016 transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

CORE BUSINESS, STRATEGY AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

OPG's four key strategic imperatives are as follows:

- Operational Excellence
- Project Excellence
- Financial Strength
- Social Licence.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Workplace Safety and Public Safety

Workplace safety and public safety are fundamental core values at OPG. OPG is committed to operating all of its facilities in a safe, secure, and reliable manner that minimizes risks to a reasonably achievable level. Safety is an overriding priority in all activities performed at OPG's generating and other facilities, and all employees and contractors are expected to conduct themselves in manner that ensures workplace safety and public safety in line with the Company's safety culture.

In the area of workplace safety, OPG is committed to achieving excellent safety performance through continuous improvement and a strong safety culture, with the ultimate goal of zero injuries. OPG utilizes an integrated health and safety management system and set of operational risk control procedures to ensure continued monitoring of health and safety performance and to support continuous learning and improvement in this area. Overall, OPG's workplace safety performance has been one of the best amongst its comparator Canadian electrical utilities. In 2016, OPG received the Canadian Electricity Association (CEA) President's Gold Award recognizing three consecutive years, 2013 to 2015, of sustained top quartile safety performance within the comparator group.

Workplace safety performance is measured using two primary indicators at OPG, All Injury Rate (AIR) and Accident Severity Rate (ASR). OPG's AIR and ASR results for employee workplace safety were as follows for the year ended December 31:

	2016	2015
AIR *(injuries per 200,000 hours worked)*	**0.56**	0.39
ASR *(days lost per 200,000 hours)*	**2.59**	0.50

In 2016, OPG's AIR and ASR safety performance was worse than in 2015. OPG's analysis of the underlying events indicated that major contributors to the injuries and near misses included inadequate situational awareness and

attention to detail, and suboptimal risk-based decisions, rather than missing or inadequate standards or programs. OPG is implementing a number of initiatives to target the injury trends based on the analysis of the safety events, with a focus on the use of human performance tools including increased field supervisory oversight, situational awareness, communication, and procedural use and adherence.

In 2016, OPG launched an organization-wide "iCare Enough to Act" initiative aimed at renewing employees' commitment to their own and each other's safety and well-being. Plans to further strengthen safety as a foundational element of the Company's values-based culture are being developed through leadership forums and other engagement activities.

Contractors are required to conduct work safely at OPG sites. In support of this requirement, OPG utilizes an independent contractor pre-qualification process, provides on-site safety support for many of OPG's major projects, and works with contract partners to improve their health and safety programs to meet OPG's requirements. To further strengthen contractors' safety performance, in 2016, OPG updated its contractor's safety requirements and related governance, and implemented additional oversight and field monitoring to ensure ongoing compliance. In the past eight years, OPG has consistently shown a better than average Construction Contractor AIR as compared to the Health and Safety Association Contractor AIR, a metric of construction contractor safety performance across Ontario.

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for those individuals who live or work near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), which is an international unit of radiation dose measurement. For 2015, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.5 μSv and 1.2 μSv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000 μSv. While the public doses from OPG's nuclear operations for the 2016 operating year will not be finalized until the second quarter of 2017, they are not expected to differ significantly from the 2015 levels.

In June 2016 and August 2016, the CNSC released sampling results from its independent environmental monitoring program, which confirmed that the public and the environment around OPG's nuclear generating stations continued to be safe. Also in 2016, the CNSC published its 2015 annual report on the safety performance of Canada's nuclear power plants, which gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". For further details, refer to the CNSC safety rating discussion under the heading, *Recent Developments* in the *Highlights* section.

OPG remains committed to high standards of public safety on waterways around hydroelectric dams and generating stations. A Dam Safety Review Panel comprised of internationally recognized experts has previously concluded that OPG's dam and public safety program is comparable with international best practices in a number of areas related to maintaining safe dam operations. OPG continues to develop a new risk-informed approach on behalf of the Ontario Ministry of Natural Resources and Forestry (MNRF) to prioritize and manage risks identified through dam safety assessments. In 2016, OPG continued its water safety campaign with a series of public service announcements illustrating the danger of water near hydroelectric dams and hydroelectric generating stations.

Electricity Generation Production and Reliability

Key strategic initiatives in support of operational excellence, specific to each of OPG's core generating operations, are discussed below. Generation and reliability performance for 2016 is discussed by operating segment in the section, *Discussion of Operating Results by Business Segment*.

Nuclear Operations

OPG is pursuing a number of strategic initiatives aimed at the continued safe and reliable operation of the Pickering GS and targeting top performance at the Darlington GS.

OPG's nuclear operations are regularly benchmarked against top performing nuclear facilities around the world. This allows OPG to identify, develop and implement initiatives to further improve performance. During 2016, OPG participated in two World Association of Nuclear Operators (WANO) peer evaluations to compare its stations against standards of excellence through an in-depth, objective review by an international panel of industry experts. In May 2016, OPG hosted a WANO peer evaluation for the Darlington GS. The review maintained Darlington's excellent standing as one of the top performing nuclear plants in the world. In September 2016, OPG hosted a team of experts from the International Atomic Energy Agency at the Pickering GS to conduct a standard Operational Safety Review Team mission. The team conducted an in-depth review of performance and adherence to international safety standards. A report on the mission is expected to be released in the second quarter of 2017.

In January 2016, OPG announced its plan to pursue continued safe and reliable operation of the Pickering GS beyond 2020. OPG's objective is to maximize the operating life of the Pickering units. Under OPG's current plan, all six operating units at the station would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The Province announced its approval of OPG's plan to pursue continued operation of the Pickering GS beyond 2020 up to 2024 in January 2016. Extending operations at the Pickering GS will provide continued employment to approximately 3,000 regular employees at OPG, and will help reduce approximately 17 million tonnes of carbon dioxide emissions, which is the equivalent to removing 3.4 million cars from Ontario's roads.

As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will achieve the additional life necessary to operate to 2024. OPG is also conducting component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently established as the end of 2020, are expected to be reassessed when OPG's further technical work confirms the longer fuel channel life and the units' fitness to operate beyond 2020, taking into account the requirement for the CNSC's approval, discussed below.

OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. OPG has started work on the Pickering licence renewal application, which is expected to be filed in mid-2017 for the CNSC's approval in 2018. The requested licence renewal spans the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. A Periodic Safety Review and an Integrated Implementation Plan (IIP) for the station will be submitted to the CNSC as part of the application.

OPG strives to operate and maintain its nuclear facilities to optimize equipment, performance, availability and electricity generation, while improving the reliability and predictability of the fleet. Improved equipment reliability generally results in fewer generation interruptions. OPG continues to make investments in the performance of the Pickering GS, with a focus on improving plant reliability and maximizing the value of the asset through implementing equipment modifications and fuel handling reliability improvements, reducing equipment maintenance backlogs, and completing critical and high priority work.

Nuclear inspection and testing programs are largely driven by maintenance and regulatory requirements, and are designed to ensure that equipment is performing safely and reliably. Execution of this and other outage work continues to be a high priority. As part of its commitment to operational excellence, OPG continues to focus on improving the planning, execution, monitoring, and reporting of outage work.

Work continues to ensure the integration of life cycle management and refurbishment programs at the Darlington GS. This includes developing staffing strategies to support both ongoing station operations and the refurbishment project, planning and incorporating pre-requisite work for the refurbishment into the station's work schedule, and identifying life cycle and aging management work to sustain safe and reliable station operations for the next three decades.

OPG's longer-term efforts are aimed at positioning the Darlington GS for industry leading operating and cost performance.

Delivering solutions that provide the best combination of safety, cost and effectiveness, as well as establishing challenging financial targets based on comprehensive benchmarking continues to be a vital part of OPG's strategy to improve performance of the nuclear business unit. Financial and staffing targets continue to be reviewed and adjusted where necessary to reduce operating costs, while ensuring safety is not compromised.

In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications will be presented to the CNSC at a public hearing in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018.

Hydroelectric Operations

The objectives of OPG's hydroelectric operations include operating and maintaining the generating facilities in an efficient and cost-effective manner, while enhancing their reliability and availability. OPG continues to evaluate and implement plans to increase capacity, maintain and improve performance, and extend the operating life of its hydroelectric generating assets.

OPG's plans for its existing hydroelectric generating stations are accomplished through multi-year capital investment and other programs, including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers, and controls. The aim of OPG's runner replacement and upgrade program is to increase hydroelectric station capacity by leveraging efficiency enhancements in runner design. Where economical and practical, OPG pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations. Over the next three years, OPG plans to increase the total capacity of its hydroelectric generating fleet by approximately 135 MW, which, in addition to the runner replacement and upgrade program, includes the Peter Sutherland Sr. GS project and the Ranney Falls GS projects. Both of these projects are discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Project Excellence*. OPG is also planning to repair, rehabilitate, or replace a number of aging civil hydroelectric structures.

As part of its commitment to operational excellence, OPG continues to make investments in its existing hydroelectric generating fleet. During 2016, OPG continued to execute a number of projects, including:

- Completion of major equipment overhauls and rehabilitation work on Unit 5 of the Sir Adam Beck Pump GS, and Unit 2 of the Whitedog Falls GS
- Completion of a runner upgrade, headgate replacement and rehabilitation of Unit 2 of the Harmon GS
- Completion of headgate replacement at Units 1 and 2 of the Kipling GS
- Completion of concrete rehabilitation of the main dam at Chats Falls GS
- Continued work on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 5 of the DeCew Falls 1 GS, Unit 1 of the Harmon GS, and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.

OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS. **[MONITOR]**

Thermal Operations

OPG's thermal operations consist of biomass-fuelled generating units at each of Atikokan GS and Thunder Bay GS, and the oil/gas dual-fuelled Lennox GS.

These stations, which operate as peaking facilities, provide Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements and enable the system to accommodate the expansion of Ontario's renewable generation portfolio. The continued operation of these stations during the initial years of the refurbishment of the Darlington GS and Bruce nuclear facilities is expected to provide Ontario with over 2,000 MW of peaking generation.

During the third quarter of 2016, the Atikokan and Thunder Bay generating stations provided renewable generation when called upon to meet system requirements while utility maintenance was being conducted on a local transformer station. As a result of utility maintenance, the Atikokan GS operated continuously from late July 2016 to early September 2016, while the Thunder Bay GS operated as needed. To meet the increased demand for biomass fuels at Atikokan GS, OPG coordinated the acceleration of biomass fuel deliveries with suppliers while continuing to operate the plant safely.

As part of OPG's ongoing strategy to reduce costs and increase efficiency, the operations of the Company's hydroelectric and thermal assets have been combined into one organization. OPG continues to evaluate opportunities to consolidate departments within the stations and across regions.

Thermal stations that are no longer available to generate electricity are included in the Services, Trading and Other Non-Generation segment once they are removed from service. This includes the Lambton GS and Nanticoke GS sites, which ceased coal-fired generation in 2013. In 2015, OPG announced the decommissioning of the Nanticoke GS, as it could not commercially support continued preservation costs.

In November 2016, OPG announced the decommissioning of the Lambton GS, as further discussed in the section, *Highlights* under the heading, *Recent Developments*. OPG is currently developing decommissioning plans for the Lambton and Nanticoke generating stations, which will ensure that they are closed safely, securely and in an environmentally responsible manner. The decommissioning plan for the Nanticoke GS will accommodate the construction and operation of the Nanticoke solar facility. The costs of decommissioning the stations will be charged to a previously established decommissioning provision. OPG expects to review the decommissioning provision estimates for these sites in 2017.

Environmental Performance

OPG's Environmental Policy states that "OPG shall meet all legal requirements and any environmental commitments that it makes, with the objective of exceeding these legal requirements where it makes business sense". This policy commits OPG to:

- establish and maintain an environmental management system (EMS)
- work to prevent or mitigate adverse effects on the environment with a long-term objective of continual improvement
- manage sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern.

In 2016, OPG maintained the ISO 14001 registration of its company-wide EMS. Within the EMS, OPG has planning, operational control, and monitoring programs to manage the Company's positive and negative impacts on the environment. Significant environmental aspects of OPG's operations include: spills, chemical and thermal emissions to water, water flow and level changes, radioactive emissions, low and intermediate level radioactive waste (L&ILW), wildlife habitat, displacement of fossil fuels, and fish impingement and entrainment. Further details regarding OPG's environmental risks can be found in the section, *Risk Management* under the heading, *Environmental Risk*.

Environmental performance targets are set as part of the annual business planning process. OPG met or outperformed its 2016 targets for spills, environmental infractions, and carbon-14 emissions to air. An increase in the volume of waste generated from work activities at the Darlington GS and preparation for the Darlington Refurbishment project led to a higher than expected volume of L&ILW produced in 2016. Performance for tritium

emissions to air and water during 2016 remained less than one percent of the regulatory limit. There were no significant environmental events during 2016.

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. The program requirements are expected to result in increased fuel costs for some OPG-owned and co-owned generating facilities. Fuel costs for these stations are generally recovered from the electricity market. With OPG's low GHG emitting fleet, the program is not expected to have a material adverse financial impact on the Company. OPG has established the necessary processes to comply with the cap and trade program requirements.

OPG is monitoring actions being taken by the Government of Ontario and the Government of Canada to reduce GHG emission levels and transition to a low-carbon economy. In support of efforts to mitigate climate change, the Company continues to evaluate and implement plans to increase the generation capacity of its hydroelectric generating fleet, where economic, and invest in other low-carbon technologies.

OPG communicates its environmental performance internally to employees and to external stakeholders, including the Ontario Ministry of the Environment and Climate Change, Environment and Climate Change Canada, the CNSC, and local communities. Details of OPG's environmental performance and initiatives to fulfill the Company's Environmental Policy can be found in OPG's 2015 Sustainability Report, available on the Company's website at www.opg.com.

Improving Efficiency and Reducing Costs

As part of its commitment to operational excellence, OPG remains focused on reducing costs by pursuing efficiency and productivity improvements across operating business units and support functions, while ensuring that there is no adverse impact on the safety, reliability and environmental sustainability of the Company's operations. This includes streamlining of processes, simplifying governance, upgrading information technology, optimizing service delivery models, and, where appropriate, leveraging attrition to achieve human resource targets aligned with business requirements. Initiatives to improve cost performance and organizational capability are being implemented at the enterprise and business unit level.

To drive efficiency and performance improvement, the Company continues to leverage a more scalable, centre-led organizational model. In 2016, the reduction in OPG's regular headcount from ongoing operations, since the beginning of 2011, reached over 2,800. Improving organizational performance and building on these efficiency gains remains a key priority for the Company. OPG continues to review its cost structure, identify cost improvement strategies and embed an outcomes-driven culture that reinforces low cost, efficiency, and organizational agility as part of business decision-making. In order to enhance the overall focus on productivity, in 2016 OPG adopted Enterprise TGC per MWh as a measure of OPG's overall organizational cost performance and Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets, in addition to the existing Nuclear TGC per MWh measure. Further details regarding these measures are included in the sections, *Highlights, Key Operating and Financial Performance Indicators* and *Supplemental Non-GAAP Measures*.

People and Culture

A well trained and engaged workforce is fundamental to the achievement of OPG's strategic imperatives. To succeed in a demanding business environment, OPG is focused on building a diverse, healthy, engaged workforce and fostering a culture of collaboration, accountability and innovation. OPG also continues to communicate and

implement the values and behaviours expected from its employees in order to maintain a strong focus on safety, performance excellence, continuous improvement, and corporate citizenship.

The Company continues to focus on improving the capability of its workforce through leadership development, knowledge management, diversity and inclusion programs, and hiring in key areas. Ability to secure the right talent mix in order to effectively meet the Company's immediate and longer term business needs on a timely basis is supported through workforce planning, resourcing and on-boarding strategies, both to acquire external talent into the organization and to develop existing employees. The goal of workforce planning and resourcing strategies is to ensure that the Company's workforce is diverse and has the right skill set and capability for the safe and effective operation of the generating facilities and successful delivery of major projects, including the refurbishment of the Darlington GS. These strategies are being designed to take into account anticipated staffing requirements to the end of planned commercial operations of the Pickering GS, through to the end of the planned period to de-fuel, de-water and place the station in a safe state condition.

As part of the strategy to develop and engage employees and to build leadership talent, the Company has an active succession planning program with a focus on accelerating development. OPG also has a talent management monitoring process to proactively assess staffing risks, challenges and opportunities. Since 2015, OPG offers a company-wide high-potential leadership development program to qualified internal candidates. This 18-month cross-functional, competitive-entry program is designed to identify and develop candidates for future leadership positions while they are still relatively early in their career.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification. In addition to maintaining its internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners and educational institutions to meet the required level of qualification. Training delivery models are evaluated for effectiveness and efficiency.

Effective January 1, 2017, OPG implemented a new Executive Compensation Program that is compliant with *Ontario Regulation 304/16: Executive Compensation Framework*, introduced in September 2016. The regulation sets out how all employers designated under the *Broader Public Sector Executive Compensation Act, 2014*, including OPG, must establish and post compensation programs for executives. The program must include the compensation philosophy, salary and performance-related pay caps, comparative analysis details, and a description of other elements of compensation. OPG's new Executive Compensation Program, which applies to employees at the Vice President level and higher, is designed to provide compensation that is at the 50th percentile of the market and focused on at-risk, performance based pay. The program will better enable OPG to attract, align and retain the executive talent critical to delivering Shareholder and customer value, while ensuring continued safe and reliable operations.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. OPG also continues to plan and execute maintenance and capital improvement projects related to its existing assets. OPG strives for excellence in the planning and delivery of all projects across the Company.

OPG's vision for project excellence is to be an industry leader in project management capability and performance. As part of its commitment to project excellence, OPG continues to enhance and streamline its approach to project planning and execution, with the goal of delivering all projects safely, on time, on budget, and with high quality. Achieving project excellence at OPG involves, among other things, putting in place a common, scalable project delivery model across all business units, establishing qualified project management teams, optimizing contracting strategies, engaging qualified and experienced vendors, and effectively monitoring and controlling performance. The status updates for OPG's major projects as of December 31, 2016 are outlined below.

Project	Capital	Approved	Expected

(millions of dollars)	expenditures Year-to-date	Life-to-date	budget	in-service date	Current status
Darlington Refurbishment	1,019	3,185	12,800 [1]	First unit - 2020 Last unit - 2026	The refurbishment of Unit 2 commenced in October 2016, as planned. De-fueling of Unit 2, the first critical path activity, was completed in January 2017, ahead of schedule. The project is tracking on budget. See update below.
Peter Sutherland Sr. Hydroelectric GS	141	236	300	2017	Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, ahead of the originally planned schedule. **[MONITOR]** See update below.
Sir Adam Beck Pump GS Reservoir Refurbishment	39	46	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget. See update below.
Ranney Falls Hydroelectric GS	2	3	77 **[MONITOR]**	2019	Project design work was completed in 2016 and construction is expected to commence in 2017. See update below. **[MONITOR]**
Nanticoke Solar Facility	1	1			Project definition work is in progress and construction is planned to commence in the first half of 2018. See update below.
Deep Geologic Repository for L&ILW	9 [2]	195 [2]			OPG has completed the additional studies required by the Canadian Environmental Assessment Agency (CEAA) and the federal Minister of Environment and Climate Change and submitted this information in December 2016. See update below.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the Darlington GS by approximately 30 years. The Darlington Refurbishment project is a multi-phase program comprising the following five major sub-projects:

- **Retube and Feeder Replacement (RFR)**, which includes the removal and replacement of fuel channel assemblies and feeder tubes in each reactor

- **Turbines and Generators**, which consists of inspections and repairs of turbine generator sets and the replacement of analog control systems with digital control systems
- **De-fuelling and Fuel Handling**, which involves the de-fuelling of the reactors and the refurbishment of the fuel handling equipment
- **Steam Generators**, which includes mechanical cleaning, water lancing, and inspection and maintenance work on the generators
- **Balance of Plant**, which consists of work on smaller projects to replace or repair certain other station components.

In January 2016, the Government of Ontario's support for the Darlington Refurbishment project was affirmed through the Ontario Minister of Energy's announcement endorsing OPG's plan to refurbish the four Darlington units at a total project budget of $12.8 billion, including capitalized interest and escalation. The Province's announcement followed the approval of the project budget and schedule by OPG's Board of Directors in November 2015. The refurbishment of the last unit is scheduled to be completed by 2026. OPG's current operating licence for the Darlington GS spans most of the planned duration of the Darlington Refurbishment project, expiring in November 2025.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. *Ontario Regulation 53/05* requires the OEB to accept the need for the Darlington Refurbishment project in light of Ontario's 2013 Long-Term Energy Plan (LTEP) and the related policy of the Province endorsing the need for nuclear refurbishment. It also requires the OEB to ensure that OPG recovers capital and non-capital costs and firm financial commitments in respect of the Darlington Refurbishment project, if the OEB is satisfied that the costs were prudently incurred and that the firm financial commitments were prudently made.

A number of pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, in support of the execution phase of the project have been completed, with the remaining projects continuing to track for completion in line with the refurbishment execution schedule.

All major contracts for the Darlington Refurbishment project that OPG expected to award were in place prior to proceeding with the Unit 2 refurbishment. This included the RFR execution phase contract awarded in January 2016 and valued at approximately $2.75 billion for work to be executed on all four units. All of the major contracts contain suspension and termination provisions.

Other key activities related to the project in 2016 included the following:

- Fabrication of the major reactor components including fuel channels and feeder tubes is in progress, with the first set of feeder tubes delivered in the fourth quarter of 2016. The remaining components have planned deliveries tracking in line with the project schedule.
- The specialized tooling for removal and replacement of feeder tubes and fuel channel assemblies in each reactor was delivered to OPG's reactor training and mock-up facility in the second quarter of 2016, as planned, and testing of the tooling has been completed.

- All 28 storage tanks have been installed in the Heavy Water Storage and Drum Handling Facility, which will provide storage and processing capability for the removal of heavy water from the units during refurbishment, as well as for continued station operations.
- The RFR Island Support Annex was completed in February 2016. The facility houses RFR field preparatory, contractor management, and project oversight activities.

In addition to the de-fuelling of the Unit 2 reactor completed in January 2017, milestones for the Darlington Refurbishment project in 2017 include:

- Completion of reactor vault preparation activities to support RFR work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Third Emergency Power Generator and Containment Filtered Venting System safety enhancement projects, which were originally scheduled to be placed in-service in 2016. Remediation measures are in progress and OPG expects both projects to be placed in-service during the first quarter of 2017. These delays will not impact the overall Darlington Refurbishment project schedule, as neither of the two projects is on the critical path.
- Completion of the Re-tube Waste Processing Building and the Heavy Water Storage and Drum Handling Facility.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of the second unit, Unit 3, at the Darlington GS and is entering into associated commitments to procure major components that require long-lead times. As of December 31, 2016, $31 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Peter Sutherland Sr. Hydroelectric GS

The project to construct the 28 MW Peter Sutherland Sr. hydroelectric GS is in the process of testing and commissioning the turbine and generator units, as well as operator training and document turnover. Work also continues on demobilization efforts, as well as site reclamation. Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. **[MONITOR]** The project is tracking within the approved budget of $300 million.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The construction work on the project included installation of a partial new liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

During 2016, OPG completed project design work for the construction of an additional 10 MW single-unit powerhouse on the existing Ranney Falls GS site. The new unit will replace an existing unit that reached its end of life in 2014. Capital expenditures for project definition work completed as of December 31, 2016 were $3 million. OPG plans to commence construction work in 2017, with an expected in-service date in the fourth quarter of 2019 and a budget of $77 million. **[MONITOR]**

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS and adjacent lands is planned to commence in the first half of 2018. It is expected to be completed in early 2019. Capital expenditures for project definition work completed as of December 31, 2016 were $1 million.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In August 2015, OPG responded to the CEAA's list of potential environmental conditions relating to the JRP report. In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and the impact on environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization (NWMO) were located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following a review by the CEAA and a period of public comment, an EA Decision Statement by the Minister is expected by the third quarter of 2017. Based on the information submitted to the Minister, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

In 2013, OPG suspended design activities on the project pending receipt of a site preparation and construction licence. If the decision on the EA is positive, the licensing process will resume. Upon receipt of the site preparation and construction licence, OPG will complete detailed design and development of a project schedule and a budget. In parallel, OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The approval of OPG's Board of Directors must also be obtained in order to proceed with construction. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

New Nuclear Units

The 2013 LTEP also indicated that the Ontario Ministry of Energy would work with OPG to maintain the site preparation licence granted by the CNSC in relation to the potential construction of these reactors. As such, OPG has been undertaking activities required to support the CNSC Power Reactor Site Preparation Licence and the

Darlington New Nuclear Project EA. The JRP Report on the EA had concluded that the project was not likely to cause significant adverse environmental effects, given mitigation. In April 2016, the Supreme Court of Canada dismissed the application for leave to appeal filed by the parties that had challenged the Darlington New Nuclear Project EA through a judicial review, concluding the litigation on the matter. The CNSC site preparation licence expires in 2022.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth. Inherent in this priority are three objectives:

- Increase revenue, reduce costs and achieve appropriate return
- Ensure availability of cost effective funding for operational needs, generation development projects and long-term obligations
- Pursue opportunities to expand the existing core business and capitalize on new growth paths.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In line with its commercial mandate, OPG is focused on increasing revenue and achieving an appropriate rate of return on the Shareholder's investment, while taking into account the impact on Ontario electricity customers.

In order to achieve the above objectives with respect to the regulated operations, OPG is focused on clearly demonstrating in its rate applications to the OEB that the costs required to operate and invest in the assets are reasonable and being prudently incurred, and should be fully recovered, and that the Shareholder's investment in these assets should earn an appropriate rate of return. OPG's existing base regulated prices, which came into effect in November 2014, were lower than requested by OPG based on its forecast costs. This has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

To improve the financial strength of the regulated operations going forward, OPG has been focused on providing appropriate, transparent evidence in support of its OEB rate requests, aligning organizational resources to support an effective rate application process, and continuing to identify opportunities for further efficiencies in the Company's cost structure. To date, OPG's focus on cost reduction and efficiency improvement initiatives has resulted in significant changes across the Company. This includes over $1 billion in cumulative savings realized across the Company since the beginning of 2011 from reductions in ongoing operations regular headcount through Business Transformation and other initiatives. OPG's cost and productivity improvement efforts are discussed further under the heading, *Operational Excellence*.

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. The OEB's decision on the application, including the effective date of the approved new regulated prices, is expected in the second half of 2017. Consistent with *Ontario Regulation 53/05*, OPG incorporated a nuclear rate smoothing proposal into its application, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impact on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the deemed capital structure applied to the regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent

debt. If approved, this would improve OPG's return on Shareholder's investment. Further details on OPG's rate application can be found under the heading, *Recent Developments* in the *Highlights* section.

For generation development projects that do not form a part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements prior to proceeding with the project. In line with this strategy, most of OPG's non-regulated operating facilities and assets under construction are subject to ESAs with the IESO. Based on these agreements, OPG expects its non-regulated generation operations, reported under the Contracted Generation Portfolio segment, to continue to provide a generally stable level of earnings and cash flow going forward.

OPG's capital structure currently reflects lower levels of debt than the deemed capital structure reflected in the Company's existing or proposed regulated prices. OPG is evaluating strategies to enhance Shareholder returns by optimizing the Company's capital structure through better alignment with the deemed capital structure, taking into account the overall financial strength of the Company and the potential impact on the Company's investment grade credit rating.

Ensure Availability of Cost Effective Funding

OPG actively monitors its funding requirements and forecasts availability of funds to ensure that it can meet the Company's operational needs, project commitments and long-term obligations. OPG utilizes multiple sources of funds, including funds from operations, commercial paper, securitization of assets, letters of credit, credit facilities, long-term corporate debt, and private placement project financing. The Company's financing strategy leverages the strength of its balance sheet to obtain cost effective long-term corporate debt. OPG also accesses the capital markets for private placement project financing, secured by the assets of the project, where the characteristics of the project support such financing. Maintaining an investment grade credit rating is critical to OPG's ability to access cost effective financing.

In April 2016, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2016, S&P Global Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

OPG intends to continue to access the capital markets, where appropriate, to obtain cost effective financing for future generation development projects. The Company also continues to evaluate arrangements that would appropriately support its financing needs and capital expenditure programs. OPG's liquidity and capital resources are discussed under the section, *Liquidity and Capital Resources.*

Pursue Business Growth Opportunities

OPG pursues commercially-based business growth opportunities through investments in its core generation portfolio, as well as emerging renewable energy project opportunities. OPG's growth strategy considers the Company's financial position and anticipated future changes in the generating fleet, including the eventual end of Pickering commercial operations. The growth strategy is also informed by industry, technological, environmental, social, and economic external factors. Growth opportunities are evaluated using financial and risk-based analyses as well as strategic considerations.

OPG's core business growth strategy focuses on the renewal and expansion of the Company's generation portfolio of nuclear, hydroelectric and thermal generating assets in Ontario, including the redevelopment and expansion of existing sites and potential new developments. The strategy leverages OPG's operating and project development expertise as well as the Company's existing diverse physical asset base. OPG considers acquisition opportunities as they arise, taking into account operating synergies, strategic benefits, financial returns and risk profile. OPG's current major generation development projects and asset life extension initiatives are discussed under the headings, *Operational Excellence* and *Project Excellence* in the *Core Business and Strategy* section.

OPG seeks to continue to expand beyond its core generation business through investments in innovation and emergent low-carbon technologies, including selective solar generation, energy storage, micro-grid, electric vehicle infrastructure and other development. OPG is also considering longer-term growth paths that include broader electricity sector opportunities, within and outside Ontario. Growth opportunities may be pursued in partnership with other commercial entities where appropriate synergies exist and are aligned with OPG's business objectives.

In March 2016, Nanticoke Solar LP was selected, through the first phase of the IESO's LRP program, to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. The partnership and the IESO executed a 20-year LRP contract in March 2016, which formalized the terms and conditions for the development and operation of the new solar facility. In September 2016, the Government of Ontario suspended the second phase of the LRP program, which does not impact the project.

From October 2016 to December 2016, the Government of Ontario conducted a consultation process to update its LTEP. OPG made a formal submission as part of the consultation as it relates to OPG's core generation business and growth opportunities. The Ontario Ministry of Energy has indicated that the development of the updated LTEP, scheduled to be published in 2017, will balance the principles of affordability, reliability, clean energy, community and Indigenous engagement, as well as conservation and demand management. OPG's business growth opportunities may be affected by the results of the 2017 LTEP.

Social Licence

As the largest, publicly-owned electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations. OPG's commitment to safety is discussed under the heading, *Workplace and Public Safety* in the *Core Business and Strategy* section.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish relationships with Indigenous communities based on a foundation of respect for their languages, customs, and political, social and cultural organizations. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, and other joint projects. Recent examples of partnerships include the Peter Sutherland Sr. GS in partnership with the Taykwa Tagamou Nation, the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River, and two recently completed shoreline remediation projects. The Whitesand First Nation, working closely with OPG, completed a project to remediate nearly two kilometers of shoreline in 2016, while the Long Lake #58 First Nation undertook the management of a five-year shoreline remediation project. OPG also has been engaging proactively with Indigenous communities regarding the Company's nuclear operations, including both regularly scheduled meetings and an outreach effort in connection with OPG's proposed L&ILW DGR and the re-licensing of the PWMF and the WWMF. In November 2016, OPG was recognized for its ongoing commitment to engaging local Indigenous communities with the CEA's 2016 Sustainable Electricity award for Leadership in External Collaboration and Partnerships.

OPG is committed to being an open, transparent, and accountable company. With operations across Ontario, OPG works to maintain public trust with stakeholders by engaging site communities, sharing information, and being transparent about performance. In addition, OPG's operations are subject to extensive regulatory oversight, with public participation, by the CNSC, the OEB, and other bodies.

As part of its commitment to environmental sustainability, OPG works with community partners to support regional ecosystems and biodiversity. In 2016, OPG continued efforts to protect and restore habitat, promote biodiversity education and awareness, and help the recovery of species at risk. In addition, OPG helps contributes to the well-being of its host communities through the Company's Corporate Citizenship Program (CCP), which supports

charitable and non-profit grassroots initiatives in the areas of environment, education, and community, which includes support for including Indigenous initiatives. In 2016, OPG's CCP provided support to over 850 initiatives, of which 87 were Indigenous.

Further details regarding OPG's commitment to sustainable development, including information regarding the Company's environmental, social and economic performance and initiatives, are provided in OPG's 2015 Sustainability Report available on the Company's website at www.opg.com.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of revenue requirement and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's application for new base regulated prices submitted to the OEB in May 2016 is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its May 2016 application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

Until the OEB's decision on OPG's application is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In large part, this is due to the expected year-over-year reduction in nuclear electricity generation resulting from the full year effect of the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined based on a production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision's issuance could have a significant impact on OPG's financial results during 2017. The application for new regulated prices is further discussed in the *Highlights* section under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. Combined with the expiry of rate riders in effect during 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment, as expected, OPG anticipates this to result in lower cash flow from operations and lower Adjusted FFO Interest Coverage ratio in 2017, compared to 2016. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements. In addition, the expected reduction in nuclear generation as a result of the planned outages at Darlington GS is expected to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Other factors that may impact the Enterprise TGC include potential hydroelectric generation losses due to surplus baseload generation conditions and planned capital expenditures.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, variance accounts include those related to the revenue impact of variability in water flows and SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Pursuant to the Settlement Agreement, these and all other applicable existing variance and deferral accounts have been approved to continue once new regulated prices take effect. Considering the impacts of these accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. **[MONITOR]**

OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to ESAs with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major development projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI, which, in the short term, can be volatile and cause fluctuations in the Company's income. This volatility has been partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account. OPG is exposed to rate of return risk for the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodologies for the Nuclear Liabilities.

As OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle liabilities per the most recently approved ONFA reference plan, the volatility of earnings on the Nuclear Segregated Funds reflected in net income is reduced when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at December 31, 2016, the Decommissioning Segregated Fund was overfunded by 21 percent, and the Used Fuel Segregated Fund was marginally overfunded by less than one percent, relative to the liabilities per the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future, which would increase earnings volatility. The 2017 ONFA Reference Plan is discussed in the *Highlights* section, under the heading *Recent Developments.* The accounting for the Nuclear Segregated Funds is discussed in the section *Critical Accounting Policies*, under the heading *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

KEY OPERATING AND FINANCIAL PERFORMANCE INDICATORS

OPG evaluates the performance of its generating stations using a number of key indicators. Key operating performance indicators aligned with corporate strategic imperatives are measures of production reliability, cost effectiveness, environmental performance, and safety performance. Certain of the measures used vary depending on the generating technology. The key financial performance indicators evaluate the Company's financial performance at the enterprise level.

In 2016, OPG adopted Enterprise TGC per MWh as an enterprise-wide measure of operational cost effectiveness. Concurrently, OPG adopted Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets and no longer reports Hydroelectric OM&A expense per MWh. The new performance measures, together with Nuclear TGC per MWh, provide the Company with a single, consistent method of evaluating cost effectiveness across the organization.

Enterprise TGC, Nuclear TGC, Hydroelectric TGC, ROE Excluding AOCI, and the FFO Adjusted Interest Coverage ratio discussed below are not measurements in accordance with US GAAP. They should not be considered as alternative measures to net income or any other measure of performance under US GAAP. However, OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the

Company's strategic imperatives and related objectives. The definition and calculation of Enterprise TGC per MWh, Nuclear TGC per MWh, Hydroelectric TGC per MWh, ROE Excluding AOCI and FFO Adjusted Interest Coverage are found in the section, *Supplementary Non-GAAP Financial Measures*.

Enterprise Total Generating Cost per MWh

Enterprise TGC per MWh is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Nuclear Total Generating Cost per MWh

Nuclear TGC per MWh is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts and expenses ancillary to OPG's nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Hydroelectric Total Generating Cost per MWh

Hydroelectric TGC per MWh is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Nuclear Unit Capability Factor

OPG's nuclear stations are baseload facilities and are not designed for fluctuating production levels to meet peaking demand. The nuclear Unit Capability Factor is a key measure of nuclear station performance. It measures the amount of energy that the unit(s) generated over a period of time, adjusted for externally imposed constraints such as transmission or demand limitations, as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. Capability factors are primarily affected by planned and unplanned outages. By industry definition, capability factors exclude production losses beyond plant management's control, such as grid-related unavailability. The nuclear Unit Capability Factor also excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS is excluded from the measure effective October 15, 2016, when the unit was taken offline as part of the Darlington Refurbishment project.

Hydroelectric Availability

OPG's hydroelectric stations operate as baseload, intermediate, or peaking stations. Hydroelectric Availability is a measure of the reliability of a hydroelectric generating unit. It represents the percentage of time the generating unit is capable of providing service, whether or not it is actually generating electricity, compared to the total time for the respective period.

Thermal Equivalent Forced Outage Rate

Equivalent Forced Outage Rate (EFOR) is an index of the reliability of a generating unit at OPG's thermal stations. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its objective to deliver value to the Shareholder. ROE Excluding AOCI is defined as net income attributable to the Shareholder for the period divided by average equity attributable to the Shareholder excluding AOCI for that period, and is measured over a period of 12 months.

Funds from Operations Adjusted Interest Coverage

The FFO Adjusted Interest Coverage ratio is an indicator of OPG's ability to meet interest obligations from operating cash flow and is consistent with the Company's objective of ensuring availability of cost effective funding. The FFO Adjusted Interest Coverage ratio is defined as FFO before interest divided by adjusted interest expense, and is measured over a period of 12 months.

Other Key Indicators

In addition to production reliability, cost effectiveness, and financial performance indicators, OPG has identified certain environmental and safety performance measures. These measures are discussed under the section, *Core Business, Strategy and Outlook*.

BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary

services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power and other facilities, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to the passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel L&ILW, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Power lease arrangement and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because OPG's costs associated with the Nuclear Liabilities have been included by the OEB in the determination of regulated prices for production from the Pickering and Darlington nuclear generating stations, in accordance with the methodologies applied since the OEB's 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. Brighton Beach operates under an energy conversion agreement between Brighton Beach and Shell Energy North America (Canada) Inc, and the PEC station is operated under the terms of an Accelerated Clean Energy Supply contract with the IESO. OPG's share of the in-service

generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of trading activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the United States (US) market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets, with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and Nanticoke generating stations' sites.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**3,481**	3,245
Fuel expense	**315**	301
Gross margin	**3,166**	2,944
Operations, maintenance and administration	**2,210**	2,196
Depreciation and amortization	**925**	717
Property taxes	**26**	26
Income before other loss, interest, and income taxes	**5**	5
Other loss	**1**	3
Income before interest and income taxes	**4**	2

Income before interest and income taxes from the segment increased to $4 million in 2016, compared to $2 million in 2015. The improvement in earnings of $2 million was primarily due to higher electricity generation in 2016, compared to 2015, which increased revenue from the nuclear base regulated price. The increase in revenue was largely offset by higher OM&A expenses, higher fuel expense, and higher depreciation and amortization expense, excluding amortization expense related to regulatory balances, in 2016, compared to 2015.

Higher nuclear production of 1.1 TWh in 2016, compared to 2015, was primarily due to the planned four-unit VBO in 2015 and a decrease in the number of unplanned outages at the Darlington GS in 2016. This was partially offset by the impact of the increased number of unplanned outage days at the Pickering GS in 2016, and the removal from service of Unit 2 of the Darlington GS in October 2016 as part of the Darlington Refurbishment project.

The increase in OM&A expenses of $14 million in 2016 reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium prices and

higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million primarily due to new assets in service in 2016.

A decrease in non-electricity generation revenue in 2016, compared to 2015, also partially offset the increase in segment earnings. The lower non-electricity generation revenue was mainly attributable to lower detritiation services revenue and lower isotope sales in 2016 and an insurance recovery recognized in 2015.

A higher OEB-authorized rate rider of $10.84/MWh effective from July 1, 2015 to the end of 2016 contributed to the increase in segment revenue in 2016, compared to 2015. In the first half of 2015, OPG received a rate rider of $1.33/MWh. As the rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this increase in revenue was largely offset by an increase in amortization expense related to the regulatory balances.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2016 and 2015 were as follows:

	2016	2015
Unit Capability Factor *(%)* [1]		
Darlington GS	**89.5**	76.9
Pickering GS	**75.2**	79.4

[1] The nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS increased in 2016, compared to 2015, primarily due to the four-unit VBO completed during 2015. In addition, a lower number of unplanned outage days at the Darlington GS during 2016, compared to 2015, also contributed to the improvement in the Unit Capability Factor.

The decrease in the Unit Capability Factor at the Pickering GS in 2016, compared to 2015, was primarily due to a higher number of unplanned outage days at the station in 2016, as a result of emergent discovery work during planned outages.

The definition of the nuclear Unit Capability Factor is found under the heading, *Key Operating and Financial Performance Indicators.*

Regulated – Nuclear Waste Management Segment

	2016	2015
Revenue	**138**	122
Operations, maintenance and administration	**146**	132
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**912**	880
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Loss before interest and income taxes	**(174)**	(186)

Earnings from the segment improved by $12 million in 2016 compared to 2015. The improvement was primarily due to higher earnings from the Nuclear Segregated Funds, partially offset by an increase in accretion expense on the Nuclear Liabilities.

The improvement in Nuclear Segregated Funds earnings was primarily due to an increase in the Used Fuel Segregated Fund earnings due to higher CPI-adjusted rate of return guaranteed by the Province for funding related to the initial 2.23 million used fuel bundles. Pursuant to the ONFA, the guaranteed annual rate of return for that portion of the Used Fuel Segregated Fund is set at 3.25 percent plus the change in the Ontario CPI. This increase in

Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the 2017 ONFA Reference Plan. The 2017 ONFA Reference Plan was approved by the Province in December 2016, and is discussed in the section, *Highlights* under the heading, *Recent Developments*. The accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section. The Nuclear Segregated Funds earnings are reported net of the impact of the Bruce Lease Net Revenue Variance Account.

The higher accretion expense on the Nuclear Liabilities during 2016, compared to 2015, reflected an upward adjustment in the liabilities recognized in December 2015 related to the revised accounting assumptions for the estimated useful lives of OPG's nuclear generating stations. The increased accretion expense was partially offset by the impact of the Bruce Lease Net Revenues Variance Account. The changes in the assumed estimated useful lives of the nuclear stations and the related adjustment to Nuclear Liabilities are discussed further in the section, *Balance Sheet Highlights* under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account*.

Regulated – Hydroelectric Segment

(millions of dollars)	**2016**	**2015**
Revenue [1]	**1,527**	1,619
Fuel expense	**353**	345
Gross margin	**1,174**	1,274
Operations, maintenance and administration	**325**	340
Depreciation and amortization	**225**	282
Property tax	**1**	1
Income before other (income) loss, interest and income taxes	**623**	651
Other (income) loss	**(19)**	3
Income before interest and income taxes	**642**	648

[1] During 2016 and 2015, the Regulated – Hydroelectric segment revenue included incentive payments of $14 million and $26 million, respectively, related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $6 million in 2016, compared to 2015, was primarily due to lower hydroelectric incentive mechanism payments and the income impact of OEB-approved variance accounts. The lower payments under the hydroelectric incentive mechanism were primarily due to the reservoir refurbishment outage at the Sir Adam Beck Pump GS during 2016. The decrease in segment income was partially offset by a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to OPG's December 2014 motion. The decrease in segment income also was partially offset by a year-over-year decrease in OM&A expenses, primarily due to higher costs incurred in 2015 for shoreline remediation work.

The decrease in segment revenues due to the lower OEB-authorized rate rider in 2016, compared to 2015, was largely offset by a corresponding decrease in amortization expense related to the regulatory balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	2016	**2015**
Hydroelectric Availability *(%)*	**89.0**	91.2

The Hydroelectric Availability decreased during 2016, compared to 2015, primarily due to the planned reservoir refurbishment project at the Sir Adam Beck Pump GS. The project was completed in February 2017.

The definition of Hydroelectric Availability is found under the heading, *Key Operating and Financial Performance Indicators*.

Contracted Generation Portfolio Segment

(millions of dollars)	2016	2015
Revenue	**573**	535
Fuel expense	**58**	39
Gross margin	**515**	496
Operations, maintenance and administration	**178**	185
Depreciation and amortization	**75**	72
Accretion on fixed asset removal liabilities	**9**	8
Property taxes	**7**	7
Income from investments subject to significant influence	**(37)**	(39)
Income before other loss, interest, and income taxes	**283**	263
Other loss	**1**	1
Income before interest and income taxes	**282**	262

Income before interest and income taxes increased by $20 million during 2016, compared to 2015. The increase primarily resulted from the higher gross margin, due to increased revenues from the Lower Mattagami River generating stations, the Lennox GS, and the Atikokan GS. Higher revenue from the Lennox GS was primarily due to increased market demand. The increase in revenue from the Atikokan GS reflected the support provided to the electricity system in northwestern Ontario as a result of an outage at a local transformer station from late July 2016 to early September 2016. The year-over-year increase in segment revenue was also due to a provision made in 2015 related to an IESO audit.

The Hydroelectric Availability and the Thermal EFOR for the Contracted Generation Portfolio segment were as follows:

	2016	2015
Hydroelectric Availability *(%)*	**77.3**	88.6
Thermal EFOR *(%)*	**1.6**	11.2

Lower Hydroelectric Availability during 2016, compared to 2015, was primarily due to a higher number of planned outage days at the Kipling and Harmon generating stations on the Lower Mattagami River. During 2016, headgate replacements were made at certain units of the Kipling GS and Harmon GS. In addition, a runner upgrade and rehabilitation work was completed at Unit 2 of the Harmon GS. The lower thermal EFOR in 2016, compared to 2015, was primarily due to an outage in 2015 to perform repair work at the Lennox GS.

The definitions of Hydroelectric Availability and Thermal EFOR are found under the heading, *Key Operating and Financial Performance Indicators*.

Services, Trading, and Other Non-Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**68**	73
Fuel expense	**1**	2
Gross margin	**67**	71
Operations, maintenance and administration	**22**	48
Depreciation and amortization	**32**	29
Accretion on fixed asset removal liabilities	**8**	7
Property taxes	**12**	11
Restructuring	**6**	6
Loss before other loss, interest, and income taxes	**(13)**	(30)
Other loss	**-**	7
Loss before interest and income taxes	**(13)**	(37)

Segment earnings improved by $24 million in 2016 compared to 2015. The losses incurred by the segment in 2015 and 2016 largely reflect the costs associated with the Nanticoke and Lambton generating stations prior to OPG's decisions, in 2015 and November 2016, respectively, to proceed with the stations' decommissioning. These losses are partially offset by OPG's trading activities.

The improvement in earnings in 2016 primarily reflected higher OM&A expenses in 2015, including those incurred related to the Nanticoke GS prior to OPG's decision to proceed with the station's decommissioning, and a provision made in 2015 related to an IESO audit. The year-over-year decrease in OM&A expenses also reflected reduced work programs at the Lambton GS during 2016 due to lower staffing levels used to preserve the station. The preservation activities were discontinued after the announcement to decommission the station. Expenditures incurred in connection with decommissioning activities for the Nanticoke and Lambton generating stations are charged against a previously established decommissioning provision.

During each of 2016 and 2015, OPG recorded a charge against earnings to adjust the scrap value estimates for the Lambton GS. In 2016, this adjustment was offset by dividend income earned from OPG's investment in Hydro One shares, which contributed to the year-over-year improvement in earnings.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies; to undertake major projects; to fund long-term obligations such as contributions to the pension fund; to make payments under the OPEB plans; to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds; and to service and repay long-term debt.

Changes in cash and cash equivalents for 2016 and 2015 are as follows:

(millions of dollars)	**2016**	**2015**
Cash and cash equivalents, beginning of period	**464**	610
Cash flow provided by operating activities	**1,705**	1,465
Cash flow used in investing activities	**(1,807)**	(1,553)
Cash flow used in financing activities	**(176)**	(58)
Net decrease	**(278)**	(146)
Cash and cash equivalents, end of period	**186**	464

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details under the heading, *Overview of Results* in the section, *Highlights*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities in 2016 was $1,807 million, compared to $1,553 million in 2015. The increase was primarily due to higher expenditures on the Darlington Refurbishment project as it transitioned to execution phase, and the acquisition of nine million common shares of Hydro One in April 2016. The increase in cash flow used in investing activities in 2016, compared to 2015, was partially offset by the investment of proceeds from a long-term debt issuance in support of the Peter Sutherland Sr. GS project into a structured deposit note in 2015, and the subsequent receipt of proceeds from this investment on staggered maturity dates throughout 2016. The final maturity date of the deposit note is in April 2017. The acquisition of the Hydro One shares is discussed under the heading *Recent Developments* in the *Highlights* section, as well as in Note 3 of the Company's 2016 audited consolidated financial statements.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, sustaining capital investments across the generating fleet, and hydroelectric development projects including the expansion of the Ranney Falls GS and the completion of Peter Sutherland Sr. GS.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended the expiry date of both tranches from May 2020 to May 2021. As at December 31, 2016, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this

agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plan.

As at December 31, 2016, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As of December 31, 2016, there were outstanding borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

As at December 31, 2016, OPG's long-term debt outstanding was $5,534 million, including $1,103 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes is x.xx percent and x.xx percent, respectively. **[MONITOR]**

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, were as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Other Commitments

Collective Agreements

As of December 31, 2016, OPG had approximately 9,270 regular employees. Most of OPG's regular employees are represented by two unions:

- **The PWU** – This union represents approximately 5,070 OPG employees or approximately 55 percent of OPG's regular workforce as at December 31, 2016. Union membership includes operators, technicians, skilled trades, clerical, and security personnel. The current collective agreement between OPG and the PWU has a three-year term, expiring on March 31, 2018.
- **The Society** – This union represents approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce as at December 31, 2016. Union membership includes supervisors, professional engineers, scientists, and other professionals. The current collective agreement between OPG and The Society has a three-year term, expiring on December 31, 2018.

In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights at OPG facilities. These bargaining rights are established either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. All of these collective agreements currently have multi-year terms, expiring on April 30, 2020.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's audited consolidated financial position using selected balance sheet data as at December 31:

(millions of dollars)	**2016**	**2015**
Property, plant and equipment – net	**20,002**	20,595
The decrease was primarily due to a reduction in asset retirement costs of approximately $1,570 million in 2016 as a result of a reduction in the estimates for the Nuclear Liabilities to reflect the 2017 ONFA Reference Plan cost estimates. The decrease was partially offset by capital expenditures on the Darlington Refurbishment and other projects, net of depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**15,984**	15,136
The increase was primarily due to earnings on the Nuclear Segregated Funds and contributions to the Used Fuel Segregated Fund, partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded to the lower underlying obligations reflected in the updated ONFA reference plan and reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Available-for-sale securities	**212**	-
The balance as at December 31, 2016 represents the fair value of the nine million Hydro One shares acquired in April 2016, as discussed under the heading *Recent Developments* in the *Highlights* Section.		
Regulatory assets and liabilities – net *(current and non-current portions)*	**5,545**	5,808
The decrease was primarily due to the amortization of regulatory balances recovered through rate riders in effect during 2016 and an increase in regulatory liabilities resulting from a change in the estimated useful lives of OPG's nuclear stations at the end of 2015, as discussed under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account* below. This was partially offset by amounts deferred in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and other variance and deferral accounts during the year.		
Short-term debt	**2**	225
The decrease was due to the maturity of external commercial paper outstanding under LME's commercial paper program.		
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169
The decrease was primarily due to a reduction of approximately $1,570 million in the estimates for the Nuclear Liabilities at the end of 2016 to reflect the 2017 ONFA Reference Plan cost estimates, partially offset by accretion expense during the year.		
Pension liabilities	**3,012**	2,597
The increase was primarily due to the re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as discussed in the section, *Changes In Accounting Policies* under the heading, *Pension and Other Post-Employment Benefits.*		

Impact of Changes in Station End-of-Life Dates Deferral Account

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense arising from the changes in the estimated useful lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG has recognized a regulatory liability of $71 million related to the balance in the deferral account. Together with the Bruce Lease Net Revenues Variance Account discussed below, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account offset the decrease in depreciation expense in 2016, compared to 2015, as a result of the changes in estimated useful lives of OPG's nuclear stations effective December 31, 2015.

The changes to the estimated useful lives of OPG's nuclear generating station effective December 31, 2015, for accounting purposes, were as follows:

- the average service lives of the Bruce A GS and Bruce B GS were extended from 2048 to 2052 and from 2019 to 2061, respectively, to reflect the estimated end-of-life dates reflected in the updated refurbishment agreement between the IESO and Bruce Power, which was announced in December 2015
- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015
- the average service life of the Pickering GS was extended by less than one year.

To reflect the above changes, OPG recognized a total increase of $2,330 million in the Nuclear Liabilities and a corresponding increase in the related asset retirement costs, effective December 31, 2015. These increases were primarily due to the changes in the estimated useful life of the Bruce B GS. The nuclear asset retirement obligations (ARO) associated with the Pickering GS and Darlington GS was impacted by the changes to the Bruce nuclear generating stations' useful lives because the costs of the fleet-wide waste management programs are shared by all of OPG's nuclear stations based on used nuclear fuel and waste volumes. Consistent with the changes in the end-of-life dates for the Bruce nuclear generating stations and the December 2015 amendments to the Bruce Lease in connection with the Province's endorsement of Bruce Power's refurbishment plans, the term of the Bruce Lease for accounting purposes also was extended, in line with the refurbishment plans for these stations.

The impact of the above changes on OPG's revenues and costs related to the Bruce nuclear generating stations effective January 1, 2016 is recorded in the Bruce Lease Net Revenues Variance Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's consolidated financial statements or are recorded in the Company's consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

Guarantees

As part of normal business, OPG and certain of its subsidiaries and joint ventures enter into various agreements to provide financial or performance assurance to third parties. Such agreements include guarantees, standby Letters of Credit and surety bonds. For more details on OPG's guarantees, refer to Note 15 of OPG's audited consolidated financial statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies, including the impact of major recent accounting pronouncements, are outlined in Note 3 of the audited consolidated financial statements. Certain of these policies are recognized as critical accounting policies by virtue of the subjective and complex judgments and estimates required around matters that are inherently uncertain and could result in materially different amounts being reported under different conditions or assumptions. The critical accounting policies and estimates that affect OPG's US GAAP consolidated financial statements are highlighted below.

Exemptive Relief for Reporting under US GAAP

As required by *Ontario Regulation 395/11,* as amended, under the FAA, OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG has also received exemptive relief from the OSC from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board (IASB) for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

As a result of OPG's 2011 decision to adopt US GAAP, as required by the FAA regulation, OPG's earlier plan to convert to IFRS, effective January 1, 2012, was discontinued. OPG had substantively completed its IFRS conversion project, which included separate diagnostic, development, and implementation phases, when it suspended the project. If a future transition to IFRS for the purposes of OPG's consolidated financial statements is required, conversion work can be effectively restarted with sufficient lead time to evaluate and conclude on changes that occurred subsequent to the decision to suspend the project. OPG continues to monitor the IASB's current standard-setting project related to entities with rate-regulated activities and is evaluating alternatives with respect to the Company's future financial reporting.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the OEB.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998*, the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the

future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05.* The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures for its pension and OPEB plans. It is the Company's position that this decision by the OEB did not constitute a change in the basis of OPG's rate recovery of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices, or in an OEB-authorized deferral or variance account for future recovery, as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account to record the difference between OPG's actual pension and OPEB costs for the regulated business determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million, which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the above noted consultation process.

See Notes 3, 5, 8, 9, and 11 of OPG's 2016 audited consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or payable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its rate regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and in respect of investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

The Company has recognized net deferred income tax liabilities of $829 million as at December 31, 2016 (2015 – $880 million).

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset, based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

The accounting estimates related to end-of-life assumptions for PP&E and intangible assets require significant management judgment, including consideration of various operating, technological, and other factors. OPG reviews the estimated useful lives for its PP&E and intangible assets on a regular basis.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

Various assumptions and accounting estimates are required to determine whether an impairment loss should be recognized and, if so, the value of such loss. This includes factors such as short-term and long-term forecasts of prices for electricity generation under applicable revenue mechanisms, the demand for and supply of electricity, inflation, fuel prices, capital and operating expenditures, and estimated useful service lives of the assets.

The carrying value of investments accounted for under the equity method are reviewed for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Segregated Funds based on approved ONFA reference plans. Costs for L&ILW management and used fuel storage incurred during station operation are not funded by the Nuclear Segregated Funds. They are funded through the Company's operating cash flow or other sources of liquidity.

Decommissioning Segregated Fund

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the earnings it recognizes in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded.

The amount due to the Province in respect of the Decommissioning Segregated Fund could be reduced in subsequent periods in the event that the fund earns less than is target rate of return, a new ONFA reference plan is approved with a higher underlying liability, or the amount of the underfunding in the Used Fuel Segregated Fund increases.

When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets.

Used Fuel Segregated Fund

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined in the ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return on the Used Fuel Segregated Fund and the actual market return determined based on the fair value of the fund's assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount OPG would pay to, or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions attributed to the used fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province has the right at any time to access the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. Accordingly, when the Used Fuel Segregated Fund is overfunded, OPG limits the earnings it recognizes int he consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the underlying liability based on the most recently approved ONFA reference plan. In accordance with the ONFA, OPG does not have a right to direct any amounts from the Used Fuel Segregated Fund to the Decommissioning Segregated Fund.

Provincial Guarantee

In accordance with the *Nuclear Safety and Control Act* (Canada), the CNSC requires OPG to have sufficient funds available to discharge the current nuclear waste management and nuclear decommissioning liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the CNSC, on behalf of OPG, for any shortfall between the CNSC financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee equal to 0.5 percent of the amount of the Provincial Guarantee. The

current value of the Provincial Guarantee of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016. The CNSC process requires the CNSC financial guarantee requirement to be updated once every five years. OPG is currently updating the CNSC financial quarantee requirement for the 2018-2022 period and expects to file it with the CNSC in the first half of 2017. **[MONITOR]**

Pension and Other Post-Employment Benefits

The determination of OPG's pension and OPEB costs and obligations is based on accounting policies and assumptions, as discussed below.

Accounting Policy

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor) for each plan is amortized over the expected average remaining service life of the employees covered by the plan, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on its consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation, on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net

of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as amortization components of pension and OPRB costs as described above.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Accounting Assumptions

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost, and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses.

The discount rates, which are representative of the AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. In 2016 and prior years, benefit costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. A lower discount rate increases the benefit obligations and increases benefit costs. The weighted-average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

Starting in 2017, OPG expects to change the method used to estimate the current service and interest cost components of pension and OPEB costs. OPG expects to adopt a full yield curve approach in the estimation of these components of pension and OPEB cost by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Making this change will improve the correlation between projected benefit cash flows and the corresponding yield curve spot rates, and provide a more precise measurement of service and interest costs. This change does not affect the measurement of the total benefit obligations, as the change in the current service and interest components of the costs from the previous method will be offset by a corresponding change in the actuarial (gain) loss recorded in AOCI. OPG will account for this change as a change in estimate, prospectively starting in 2017. With an upward sloping yield curve and the pattern of OPG's estimated future benefit cash flows, the adoption of the full yield curve approach is expected to materially lower OPG's current service and interest cost components, reducing the overall pension and OPEB costs in the initial years following adoption.

The expected rate of return on plan assets is determined based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined under the heading, *Contractual and Commercial Commitments,* in the section *Liquidity and Capital Resources*. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation and assumptions as at December 31, 2016. As part of the valuation, the plans' demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The deficit for the registered pension plan, for accounting purposes, increased from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

Asset Retirement Obligation

OPG recognized ARO for fixed asset removal and nuclear waste management liabilities, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The ARO is comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating plant facilities and other facilities. Costs are expected to be incurred for activities such as preparation for safe storage and safe storage of nuclear stations, dismantlement, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel bundles and L&ILW material. The liabilities associated with the decommissioning of the nuclear generating stations and the long-term management of used nuclear fuel comprise the most significant amounts of the total obligation.

The nuclear decommissioning liability includes the estimated costs of closing the nuclear stations after the end of their service lives, which includes preparation and placement of the stations into a safe state condition followed by an assumed 30-year safe store period prior to station dismantlement and site restoration. Activities associated with the placement of stations into a safe state condition include de-fueling and de-watering of the nuclear reactors. Under the terms of the lease agreement with Bruce Power and as required by the CNSC, OPG is responsible for the nuclear waste management and nuclear decommissioning obligations associated with the Bruce nuclear generating stations. Pursuant to the lease agreement, Bruce Power must return the two Bruce stations to OPG together, in a de-fueled and de-watered state. These de-watering and de-fueling costs are not part of OPG's ARO.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the obligation for these costs include an L&ILW DGR facility to be constructed and operated by OPG, as discussed under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section. To estimate the liability for nuclear used fuel management, OPG has adopted an approach consistent with the Adaptive Phased Management concept approved by the Government of

Canada, which assumes a deep geologic repository or the long-term management of Canada's nuclear used fuel waste. The NWMO is responsible for the design and implementation of Canada's plan for the long-term management of used nuclear fuel.

The following costs are recognized as a liability on OPG's consolidated balance sheets:

- the present value of the costs of decommissioning the nuclear and thermal production facilities and other facilities after the end of their useful lives
- the present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed lives of the stations
- the present value of the variable cost portion of nuclear waste management programs taking into account waste volumes generated to date.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs including construction of assumed waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, decommissioning strategy, and the technology employed may result in significant changes to the value of the accrued liabilities. With programs of such long-term duration and the evolving technology to handle nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the costs for these programs. These costs may increase or decrease over time.

The estimates for the Nuclear Liabilities are reviewed on an ongoing basis as part of the overall nuclear waste management program. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically, at least once every five years, in line with the required ONFA reference plan update process. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of a net increase in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of a net decrease in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets.

The most recent comprehensive update of the baseline cost estimates for the Nuclear Liabilities is contained in the approved 2017 ONFA Reference Plan, and was completed in the fourth quarter of 2016. The update resulted in a decrease of approximately $1,570 million in the Nuclear Liabilities as at December 31, 2016, which was determined using a discount rate of 4.95 percent. The overall reduction in OPG's nuclear waste management and nuclear decommissioning obligations was due mainly to a decrease in cost estimates to reflect a proposed new, more cost effective container design and engineered barrier concept to house used nuclear fuel for disposal, updated cost escalation rates for all programs, and a later expected in-service date for the NWMO's planned deep geologic repository for the long-term permanent disposal of Canada's used nuclear fuel. These decreases were partly offset by higher cost estimates related to decommissioning activities, primarily due to an improved definition of work required during the preparation for safe storage after station shutdown and a higher volume of waste expected to be generated during decommissioning. Cost escalation rates used to estimate future undiscounted cash flows reflected in the December 31, 2016 adjustment to the Nuclear Liabilities ranged from 2.0 percent to 3.4 percent.

Commented [AJ1]: Was the discount rate not 5.15%

The December 31, 2016 adjustment to the Nuclear Liabilities and associated asset retirement costs did not impact OPG's income for 2016. The estimated impact of this adjustment on 2017 expenses, before the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account, includes a decrease to depreciation expense of approximately $8 million, a decrease to accretion expense of approximately $78 million, and a combined decrease in used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as they are expected to be largely offset by

the OEB approved variance and deferral accounts, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to Ontario Regulation 53/05. It records the revenue requirement impact associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years.

The liability for nuclear fixed asset removal and nuclear waste management on a present value basis as at December 31, 2016 was $19,103 million (2015 – $19,792 million). As at December 31, 2016, the undiscounted cash flows of expenditures for OPG's Nuclear Liabilities in 2016 dollars are as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Expenditures for nuclear fixed asset removal and nuclear waste management [1]	354	360	386	429	465	39,296	41,290

[1] The majority of the expenditures are expected to be reimbursed by the Nuclear Segregated Funds established by the ONFA. Any contributions required under the ONFA are not included in these undiscounted cash flows. Accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The liability for non-nuclear fixed asset removal was $381 million as at December 31, 2016 (2015 – $377 million). This liability primarily represents the present value of estimated costs of decommissioning OPG's thermal generating stations at the end of their service lives. The liability reflects third party cost estimates based on an in-depth review of plant sites and an assessment of required clean-up and restoration activities. For the purpose of measuring the liability, asset removal activities are assumed to take place approximately over the next one to 15 years. The amount of undiscounted estimated future cash flows associated with the thermal liabilities is approximately $500 million. With the decisions taken in 2015 and 2016 to decommission the Nanticoke and Lambton generating stations, respectively, OPG expects to review the decommissioning liability estimates for these sites. Any adjustments as a result of a change in the liability estimates for these stations will be recorded in net income in the period of change.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model.

The fair value of financial assets and liabilities for which quoted prices in an active market are available, including exchange traded derivatives and other financial instruments, are determined directly from those quoted market prices.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the

use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that may affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If the valuation technique or model is not based on observable market data, specific valuation techniques are used, primarily based on recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

OPG's use of financial instruments exposes the Company to certain risks, including credit risk, foreign currency risk and interest rate risk. A discussion of how OPG manages these and other risks is found under the section, *Risk Management*.

Variable Interest Entities

OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated. As at December 31, 2016, PSS Generating Station Limited Partnership was classified as a variable interest entity because it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership. Refer to Note 3 of OPG's 2016 audited consolidated financial statements for further details.

Recent Accounting Pronouncements

The recent US GAAP accounting pronouncements related to revenue recognition, leases, and financial instruments are described below. Other recent accounting pronouncements applicable to OPG are outlined in Note 3 of the audited consolidated financial statements.

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact that the new standard will have on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

RISK MANAGEMENT

Overview

OPG faces various risks that could significantly impact the achievement of its strategic imperatives. The objective of risk management is to identify and mitigate these risks, and to preserve and increase the value of the Shareholder's investment in the Company.

Risk Governance Structure

The Audit and Risk Committee of OPG's Board of Directors assists the Board of Directors in fulfilling its oversight responsibilities for matters relating to the identification and management of the Company's key business risks. An Executive Risk Committee (ERC), which is comprised of business unit leaders and the Chief Risk & Audit Executive (CRAE), assists the Audit and Risk Committee in fulfilling its governance and oversight responsibilities related to OPG's risk management activities.

Risk Management Activities

OPG faces a wide array of risks as a result of its business operations. OPG's Enterprise Risk Management (ERM) framework is designed to identify and evaluate risks on the basis of their potential impact on the Company's capacity to achieve specific strategic imperatives and business plan objectives.

A centralized ERM group led by the CRAE coordinates the quarterly risk management reporting activities. The activities begin with business units identifying, reviewing, and assessing risks that could prevent achievement of their objectives. The ERM group reviews, validates, and consolidates this information and prioritizes risks based on their potential to impact OPG's overall strategic imperatives. The ERM group also assesses external developments that may have implications on the corporate risk profile and facilitates the identification and assessment of emerging risks. The ERC then reviews and validates significant changes in the top risks that may impact OPG's ability to achieve its strategic imperatives, as well as any emerging risks that have been identified. The results of the ERC review and significant changes in the enterprise risk profile are reviewed by the Audit and Risk Committee.

In order to maintain an appropriate balance between risk and return, senior management sets limits for the market risk, credit risk and energy trading activities of the Company. Senior management also establishes risk management policies and processes to ensure compliance with such limits.

The key risks to OPG's strategic imperatives are briefly described below.

Risks to Achieving Operational Excellence

OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance.

Operational risks are the risks inherent in the operation of electricity generating facilities. These risks can lead to interruptions in the operations of generating stations affecting future production. The operational risks of a station are generally a function of its age, human performance, and the technology used.

Nuclear Generating Stations

Operating an aging nuclear fleet exposes OPG to unique risks such as unplanned outages, an increase in operating costs, and risks associated with nuclear waste management operations.

Operating nuclear stations exposes OPG to unique risks, such as greater-than-anticipated deterioration of station components and systems, risks associated with the nuclear industry, supply chain and vendor quality, risks related to the handling, storage and disposal of nuclear waste, and the risk of a nuclear accident. The primary implications of these risks include additional safety requirements, potentially lower than expected generation and revenues, and potentially higher operating costs.

The uncertainty associated with production by OPG's Canadian Deuterium Uranium nuclear generating units is primarily driven by the condition of station components and systems, which are all subject to the effects of aging. Fuel channels are expected to be the most life-limiting component affecting station end-of-life. Another significant factor identified to date includes degradation of primary heat transport pump motors at the Darlington GS. Additionally, there are fuel handling performance challenges at both the Darlington GS and Pickering GS. To respond to these risks, OPG continues to monitor performance, implement extensive inspection and maintenance programs, identify corrective actions and undertake projects required to operate reliably and within design parameters.

Deterioration of station components may progress in an unexpected manner, resulting in the need to increase monitoring, conduct extensive repairs, or undertake additional remedial measures. To maintain a safe operating margin, a nuclear unit could be derated resulting in reduced generation. When an unexpected condition first appears, a specific monitoring program is established. The primary impact of these conditions on OPG is an increase in the long-term cost of operations. The associated mitigation may create additional outage work, increasing the number of outages or extending planned outages.

Pickering Extended Operations to 2024

In January 2016, the Province of Ontario announced its approval of OPG's plan to pursue the continued safe and reliable operation of the Pickering GS to 2024. Under OPG's plan, all six operating units at the Pickering GS would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The current operating licence for the Pickering GS, which expires in August 2018, was issued in 2013 assuming that the station would shut down in 2020.

Inability to achieve Pickering extended operations as planned would result in a reduction of OPG's future generation revenue and cash flows and lead to the advancement of shutdown and station decommissioning expenditures.

Risk factors for continued operation of the Pickering units include the discovery of unexpected conditions, equipment failures, the state of critical plant components that are reaching end-of-life, and a requirement for significant plant modifications. To mitigate these risks, OPG continues to undertake a number of activities, including the following:

- work to confirm achievability of fuel channel life necessary to enable extended operations
- component condition assessments to identify the work required to support the extended operation of the station
- modification of the operating and maintenance strategy to support continued operation of the station.

Over the remaining lifespan of the station, risks such as performance of the fuel handling system, challenges with parts procurement, and a shortage of qualified human resources may challenge operational excellence at the Pickering GS. OPG is addressing these risks by taking appropriate actions, including undertaking fuel handling reliability improvements, equipment modifications and targeted investments in plant systems and components, supply chain initiatives, and developing workforce planning and resourcing strategies.

Nuclear Waste Management

The process of generating electricity by nuclear generating stations produces nuclear waste. As required by the CNSC, OPG is accountable for the management of used fuel and L&ILW, and decommissioning of its nuclear stations and waste management facilities, including the stations on lease to Bruce Power. Currently, there are no licenced facilities in Canada for the permanent disposal of nuclear used fuel or L&ILW. The risks to OPG's proposed L&ILW DGR for the safe long-term management of L&ILW are discussed below, under the heading, *Deep Geologic Repository for Low and Intermediate Level Waste* in the section *Risks to Achieving Project Excellence*.

The NWMO has developed a process for moving forward with Adaptive Phased Management as the long-term solution for Canada's nuclear fuel waste. The Adaptive Phased Management plan contemplates the eventual long-term permanent disposal of radioactive nuclear fuel waste in a deep geologic repository. The NWMO is in the process of undertaking a multi-year site selection process for the used fuel deep geologic repository.

In the interim, OPG is storing and managing L&ILW at the WWMF site and used fuel at its nuclear generating station sites.

Nuclear Regulatory Requirements

The uncertainty associated with nuclear regulatory requirements is primarily driven by plant aging, changes to technical codes, and challenges raised by the public at regulatory hearings, particularly in the areas of safety, environment and emergency preparedness. Addressing these requirements could add to the cost of operations, and in some instances, may result in a reduction or elimination of the productive capacity of a station, earlier than planned replacement of a station component or additional requirements for waste management. Additionally, the operations of nuclear stations are often directly impacted by circumstances or events that occur at other nuclear stations globally. These circumstances or events may lead to CNSC regulatory changes with a significant impact on the cost and future operation of OPG's nuclear fleet.

In December 2015, the CNSC granted the station a 10-year operating licence, valid until November 30, 2025. The new licence spans most of the planned duration of the Darlington Refurbishment project, which provides greater regulatory stability and reduces regulatory risk. As discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Nuclear Operations*, the plan to extend Pickering operations to 2024 is subject to the CNSC's approval of the Pickering licence renewal application and other regulatory requirements as set out by the CNSC.

In January 2014, the federal government introduced Bill C-22 which contains a new *Nuclear Liability and Compensation Act* (NLCA). This bill received Royal Assent in February 2015, and the NLCA came into effect on January 1, 2017. The NLCA requires all operators of nuclear generating stations in Canada to maintain specified amounts of nuclear liability insurance purchased from a federal government approved insurer or other equivalent forms of financial security approved by the federal government. The NLCA increases OPG's nuclear liability limit from $75 million to an initial $650 million, with successive annual increases to $750 million, $850 million, and $1 billion. OPG has met this requirement for the $650 million liability limit required by the NLCA for 2017 and is assessing the availability and premium cost of coverage for the $750 million liability limit required for 2018.

Hydroelectric Generating Stations

OPG's hydroelectric generation is exposed to risks associated with water flows, the age of plant and equipment,surplus baseload generation conditions, and dam safety requirements.

The extent to which OPG can operate its hydroelectric generation facilities depends upon the availability of water. Significant variability in weather, including impacts of climate change, could affect water flows. For OPG's regulated hydroelectric generation, the financial impact of variability in electricity production due to differences between the forecast water conditions underpinning the hydroelectric regulated prices and the actual water conditions are captured in an OEB-approved regulatory variance account.

OPG's hydroelectric generating stations have an average age of approximately 80 years, with the majority of the hydroelectric generating equipment being over 50 years old. The condition of the equipment and civil components resulting from the age of these components requires OPG to plan potentially significant work to mitigate risks to the reliability of some hydroelectric generating stations. OPG manages these risks by performing inspection and maintenance of critical components and by reviewing mitigating actions. In addition, OPG conducts detailed engineering reviews and station condition assessments on an ongoing basis. These reviews and assessments help to identify future work required to sustain and, as appropriate, upgrade a station.

SBG has, and will continue to be, an issue in Ontario when electricity supply exceeds demand. To manage SBG conditions, the IESO may require OPG to reduce hydroelectric generation and spill water. A regulatory variance account authorized by the OEB helps to mitigate the financial impact of spill due to SBG conditions for OPG's regulated hydroelectric generating stations. The Company anticipates a declining trend in SBG for its hydroelectric assets due to reduced nuclear availability resulting from the refurbishment of the Darlington GS, future refurbishment of the Bruce generating stations, and the eventual shutdown of the Pickering GS.

The hydroelectric business operates 238 dams across Ontario. Dam safety legislation does not currently exist in the province. Technical guidelines which were published by the MNRF represent the government standards for dam safety. In general, OPG's practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the MNRF technical guidelines. OPG continues to develop a new risk-informed approach in cooperation with the MNRF to prioritize the outcomes of dam safety assessments. OPG could eventually incur additional costs for certain dams that it operates in order to comply with any new requirements.

People and Culture

OPG's operations could be affected if skilled human resources are not available or aligned with its talent requirements.

The development of new leaders and retention of staff in critical roles across OPG is a key factor to OPG's success. Another success factor is related to the effective transfer of knowledge from those in critical positions throughout the organization to future leaders. The risk associated with the alignment and/or availability of skilled and experienced resources continues to exist for OPG in specific areas, including leadership and project management positions. To mitigate this risk, OPG continues to focus on succession planning, leadership development and knowledge management programs to improve the capability of its workforce. There is also a continued risk of a mismatch between attrition levels and the resource requirements to meet OPG's future business needs.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification, which requires a long-term outlook to workforce planning.

To mitigate the above risks, OPG is developing an organization-wide workforce planning and resourcing strategies and has established ongoing monitoring processes to reassess risks, challenges and opportunities related to staffing on a regular basis. OPG expects to meet the human resource needs of the business by developing existing employees and hiring in specific areas, while continuing to leverage attrition through realignment of work and streamlining of processes, where appropriate.

As of December 31, 2016, approximately 90 percent of OPG's regular labour force was represented by a union. OPG's current collective agreements with the PWU and The Society expire on March 31, 2018 and December 31, 2018, respectively, while all 19 collective agreements with craft unions expire on April 30, 2020. As a result of these agreements, OPG considers the likelihood of a labour disruption in the near future to be significantly reduced.

Health and Safety

OPG's operations involve inherent occupational safety risks and hazards.

OPG's operations involve inherent occupational safety risks and hazards that could impact the achievement of the Company's health and safety goals. OPG is committed to continuous improvement and achievement of its ultimate goal of zero injuries through a formal enterprise-wide safety management system, integrated at the operating site level, and by continuing to foster a strong health and safety culture among its employees and contractors. The safety management system serves to focus the Company on proactively managing safety risks and hazard exposures to employees and contractors. In 2016, OPG launched the organization-wide "iCare Enough to Act" initiative aimed at renewing employees' and contractors' commitments to their own and each other's safety and well-being.

Cyber Security

OPG's ability to operate effectively is, in part, dependent on the efficient operation and management of the Company's complex information technology and industrial control systems in a secure, vigilant, and resilient manner that minimizes cyber risks. Cyber security incidents may have an adverse impact on OPG's reputation, energy production, and public and employee safety.

Cyber security incidents have been on the rise for the past few years and this trend is only expected to intensify as organizations' reliance on technology increases. OPG has strategies in place to prepare for, respond to, and recover from cyber security incidents. OPG continuously monitors, assesses, and improves the effectiveness of its strategies and program considering leading industry practices and remains proactive in information and intelligence sharing to learn and adapt to the changing cyber environment.

As a registered Ontario market participant, OPG is accountable to comply with all applicable reliability obligations. Within the context of the Ontario regulatory framework, OPG is a registered generator, and is responsible for complying with the associated reliability standards. These standards apply to the relevant Bulk Electric System (BES) elements specified under North American Electric Reliability Corporation (NERC) and the relevant Bulk Power System (BPS) facilities as determined by the Northeast Power Coordinating Council. In addition, OPG's nuclear cyber assets are subject to CNSC licensing conditions and regulatory requirements. For other cyber assets not subject to applicable regulatory requirements, OPG has adopted a risk-based approach based on the National Institute of Standards and Technology Cybersecurity Framework to manage its cyber security.

To mitigate cyber risks, OPG's cyber security program focuses on educating employees, contractors, and vendors, improving processes, and upgrading technology infrastructure. In particular, OPG's program focuses on the following:

1. Complying with regulatory requirements and applicable laws
2. Improving its cyber security protection and detection capabilities to reduce known or potential exposures by engaging the services of external experts to evaluate the security of its information technology infrastructure and controls
3. Adopting industry leading practices to reduce third party cyber security risks through enhanced vendor risk assessments, introducing cyber security requirements into commercial agreements, and enhanced governance
4. Improving and exercising its incident response, recovery capability, and business continuity plans to minimize the business impact of an incident
5. Increasing the cyber security awareness and training level of its workforce through mandatory annual cyber security awareness training, specialized training for cyber specialists, social engineering tests, and periodic company-wide communications on relevant cyber security topics.

The oversight responsibility of the Audit and Risk Committee of OPG's Board of Directors over the Company's risk management activities includes the review of a semi-annual update from management on the Company's cyber security position and programs.

Suppliers

Non-performance by strategic suppliers or an inability to diversify the supplier base could adversely impact operating and project performance, financial results and reputation of OPG.

OPG's ability to operate effectively is in part dependent upon timely access to equipment, materials, and service suppliers. Loss of key equipment, materials, and service suppliers, particularly for the nuclear business, could affect OPG's ability to operate effectively and/or to execute major development projects or other capital investment programs. OPG mitigates this risk, to the extent possible, through contract negotiations, contract terms, vendor monitoring, diversification of supplier base, and business continuity plans.

Business Continuity and Emergency Management

Natural, technological or human-caused hazards may impact OPG's business continuity.

OPG is exposed to potential or actual incidents or developments resulting from extreme temperatures, precipitation, wind conditions or other natural disasters, and technological or human-caused hazards; to significant events against which it is not fully insured or indemnified; or to parties that fail to meet their indemnification obligations. These incidents have the potential to disrupt operations resulting in decreased generation revenue or additional costs to repair damages and restore operations.

OPG's business continuity program provides a framework to build resilience into critical business processes by facilitating development of risk response plans and business continuity exercises. OPG's emergency management

program is designed to ensure that the Company can manage an emergency in a timely and effective manner. OPG's plans and implementation procedures identify immediate response actions to be taken to protect the health and safety of employees and the public, and to limit the impact of the crisis on site security, production capability, and the environment. The program elements are designed to meet legal and regulatory requirements.

Risks to Achieving Project Excellence

The risks associated with the cost, schedule, technical and contractor performance aspects of the major projects could adversely impact OPG's financial performance and its corporate reputation.

OPG is undertaking several capital intensive projects with significant investments. There may be an adverse effect on the Company if it is unable to: obtain necessary approvals; raise the necessary funds; effectively manage the projects on time and on budget; or fully recover capital costs and earn an appropriate return on investment in a timely manner. These projects may also have a significant impact on OPG's borrowing capacity and credit rating. Some projects may be ultimately reassessed as being uneconomic. The risks associated with OPG's current major projects are described below.

Darlington Refurbishment

OPG is responsible for the management of the Darlington Refurbishment project, including the project's budget and schedule, and continues to systematically manage all of the risks associated with the project through robust risk management practices. There are financial and reputational risk exposures for OPG if actual costs exceed the budget or if OPG does not meet the project schedule. In addition, failure to achieve the objectives of the refurbishment project may result in future forced outages and more complex planned outages, potentially impacting the post-refurbishment performance or useful life of the station. Failure to carry out the refurbishment of the first unit as planned may result in not proceeding with the refurbishment of the remaining units, which, together with the end of commercial operations at the Pickering GS, could result in most of OPG's nuclear units shutting down by the early to mid 2020s.

There are a number of specific risks that OPG is managing and mitigating in relation to the Darlington Refurbishment project, which include OPG and vendor performance risks, delay or productivity risks, financial risks related to escalation of costs, technical risks such as equipment conditions resulting in additional scope, and execution risks such as failure to manage foreign material exclusion from the heat transport system that could lead to post refurbishment operational risks.

To mitigate the above risks and to build on major lessons learned from other nuclear refurbishments and large scale, complex projects, OPG engaged in an extensive five-year project planning phase in order to determine the project scope, rigorously estimate costs in keeping with best practices, and incorporate lessons learned from other nuclear refurbishments. In order to fully define the scope and material requirements for the project, the planning phase included the completion of detailed designs before proceeding with the execution of the unit refurbishments. Further risk mitigation has been implemented through the construction of a full scale model training reactor, which allows for simulations and training for unit refurbishment execution tasks.

A large portion of the costs for the Darlington Refurbishment project is being paid to contractors and suppliers, including vendors that will engineer, procure, and construct components of the project. There is a risk that, as the volume of work increases significantly, vendor capability, capacity, and performance shortfalls may impact project objectives and deliverables. OPG's risk management strategy aims to ensure that contractors are held accountable and appropriate off-ramps are in place. In mitigating its overall financial risk, OPG utilizes a contracting strategy that aims to share the risk with key vendors in a cost effective manner, where appropriate. There is also an increased risk of contractor initiated safety events, which may impact OPG's reputation. Mitigating actions include collaborative execution phase planning, an enhanced human performance program, active risk management, increased field presence by supervisory staff, and assisting vendors in removing barriers to work. OPG also is managing other

ongoing risks that could potentially impact the project, including those related to continuity of skilled leaders within OPG and its vendor partners, as well as the availability of technical resources to support the project through execution.

Independent, third-party oversight has been established for the execution phase of the project, for both the project executive team and OPG's Board of Directors. The Ontario Ministry of Energy has also retained an external advisor to provide oversight of the project, reporting to the Minister of Energy.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG, with the support of Bruce County municipalities, is proposing to construct and operate a deep geologic repository as the preferred solution for the safe long-term management of L&ILW. While broad local community support for the proposed L&ILW DGR is stable, there are pockets of opposition. OPG is currently awaiting a decision on the EA for the project by the federal Minister of Environment and Climate Change, before the issuance of the site preparation and construction licence may proceed. There is a risk of delay to the EA approval and/or the issuance of the site preparation and construction licence from potential political or legal challenges. OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR.

Other Development Projects

Projects that are in the initial development stages are subject to schedule delays or possible cancellation due to unforeseen delays in receiving permits or approvals, or establishing sufficient certainty regarding project cost recovery through revenue mechanisms, which may involve various external stakeholders. OPG attempts to mitigate these risks through early involvement and regular communication with applicable government agencies, close consultation with external stakeholders and ongoing monitoring of contractor compliance relative to permits. Projects in the execution phase are subject to inherent risks related to performance against approved budgets and schedules. Mitigating activities for the risks include performing detailed engineering designs before proceeding with execution, engaging qualified and experienced vendors, and effectively monitoring and controlling performance.

Development projects also could be faced with increasing costs for equipment and construction that could impact their economic viability. OPG continuously monitors such trends in costs in order to identify emerging issues and seeks to manage and limit cost increases through contracting strategies, where possible.

Risks to Maintaining Financial Strength

Risks related to rate regulation, financial markets, and long-term obligations could significantly impact OPG's financial performance. The Company is also exposed to risks such as weak electricity demand, displacement of generation by competitors and financial risk associated with energy trading.

There is a risk that future regulated prices will not allow OPG to consistently achieve financial performance that is commensurate with that of a commercial enterprise. OPG is exposed to a number of other significant financial risks, many of which arise due to decreasing demand for electricity, competing energy sources, OPG's exposure to volatility in commodity and equity markets and interest rate fluctuations. This includes the Company's pension and OPEB obligations and costs that are impacted by market and interest rate fluctuations. OPG manages this complex array of risks with a view to reduce the uncertainty and/or mitigate the potential unfavourable impact on the Company's financial results.

Rate Regulation

Significant uncertainties remain regarding the outcome of rate and generic proceedings impacting OPG's rate regulated operations.

There is an inherent risk that regulated prices established by the OEB may not provide for the recovery of all actual costs that will be incurred by OPG's regulated operations or allow the regulated operations to earn an appropriate

rate of return. This could occur if, in setting regulated prices, the OEB makes adjustments to forecasts submitted by OPG, if actual production and costs significantly differ from the forecasts approved by the OEB, or if OPG is unable to achieve additional efficiencies to meet the OEB-approved stretch factors included in regulated prices under incentive ratemaking. Differences between OPG's actual and forecast production and costs could be due to factors such as outages or project execution risks. In providing evidence in support of its applications for regulated prices, OPG aims to clearly demonstrate to the OEB that the costs for the regulated operations are reasonable, being prudently incurred and should be fully recovered.

Certain differences between elements of OEB-approved revenue requirements and OPG's actual results are recorded in OEB-approved variance and deferral accounts for future review by the OEB, including a number of the variance and deferral accounts that are subject to an OEB prudence review. There is inherent uncertainty associated with the outcomes of future proceedings for the clearance of these balances.

Proposed Incentive Regulation Ratemaking Methodologies

In May 2016, OPG submitted a 5-year application to the OEB for new regulated prices effective January 1, 2017, on the basis of an incentive regulation rate making methodology for the hydroelectric operations and a custom incentive regulation ratemaking framework for the nuclear operations. If accepted by the OEB, both approaches would result in greater decoupling of OPG's revenues for the regulated operations from their costs. The OEB's decision on OPG's application is expected in the second half of 2017.

Effective Date of New Regulated Prices

There are inherent uncertainties regarding the effective date that the OEB will establish for the new regulated prices. OPG has requested January 1, 2017 as the effective date. The OEB's decision on the effective date and the timing of the decision issuance could have a significant impact on OPG's 2017 results. Until the OEB's decision is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017.

Nuclear Rate Smoothing Proposal

Consistent with *Ontario Regulation 53/05*, OPG's May 2016 application includes a nuclear rate smoothing proposal, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. There is an inherent risk that the magnitude of the deferral ordered by the OEB will result in regulated prices that do not provide sufficient cash flow to the Company for meeting its financial objectives in an optimal manner, including ensuring sufficient liquidity, cost effectively funding the Darlington Refurbishment project and other expenditures, and maintaining the Company's investment grade credit rating. Maintaining adequate levels of credit metrics will support OPG's investment grade credit rating. As such, OPG has advanced credit metrics as a key criterion for the OEB to apply in determining the smoothed nuclear base rates.

Recovery of Pension and OPEB Costs

The OEB is currently conducting a consultation in the gas and electricity sectors to develop standard principles to guide the OEB's review of pension and OPEB costs for rate-regulated utilities, including establishing appropriate regulatory mechanisms for cost recovery. The OEB's November 2014 decision establishing OPG's existing regulated prices indicated that a change in the recovery methodology for OPG's pension and OPEB costs from the accrual basis, if required, would be addressed in OPG's next rate proceeding, having been informed by the outcome of the OEB's generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The decision also stated that the future recovery, if any, of amounts recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account authorized by that decision also would be subject to the outcome of the generic proceeding. As such, the outcome of the current consultation could have a material impact on OPG's ability to recover the balance in

the Pension & OPEB Cash Versus Accrual Differential Deferral Account and full pension and OPEB costs in the future. This would have significant adverse implications on OPG's future financial results. OPG is participating in the OEB consultation and has advanced its position in support of the appropriateness of using the accrual basis for cost recovery purposes.

Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds

Changes in cost estimates or strategies for nuclear waste management and nuclear facilities decommissioning obligations could impact OPG's future contributions to the Nuclear Segregated Funds to cover these obligations.

As required by the CNSC, OPG is responsible for the management of used nuclear fuel and L&ILW and the decommissioning of its nuclear stations and waste management facilities. The cost estimates for OPG's nuclear waste management and decommissioning obligations are based on multiple underlying assumptions and estimates that are inherently uncertain and may evolve over time. The assumptions include station end-of-life dates, waste volumes, waste disposal methods, the timing of construction of assumed waste disposal facilities, waste packaging systems, decommissioning strategy, and financial indicators. To address the inherent uncertainty, OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates at least once every five years, in line with the required ONFA Reference Plan update process.

The most recent comprehensive update of the nuclear waste management and decommissioning obligations was performed as part the 2017 ONFA Reference Plan approved by the Province in December 2016. An approved ONFA Reference Plan determines OPG's contributions to the Nuclear Segregated Funds. The changes in contribution levels are impacted by changes in the values of the Nuclear Segregated Funds as well as changes in the associated nuclear waste management and nuclear facilities decommissioning obligations. Based on the 2017 ONFA Reference Plan, no contributions are currently required to the Nuclear Segregated Funds. Contributions may be required in the future should the Nuclear Segregated Funds be in an underfunded position relative to the funding requirement of a new approved reference plan.

Financial Markets

The market value of investments held by OPG's Nuclear Segregated Funds and registered pension plan could be significantly affected by changes in various market factors such as equity prices, interest rates, inflation, and commodity prices.

Nuclear Segregated Funds Market Risk

Investments in the Nuclear Segregated Funds are allocated to certain asset classes including fixed income securities, domestic and international equity securities, pooled funds, infrastructure, agriculture and real estate. These funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, in order to fund the expenditures associated with the long-term management of used fuel and L&ILW after station shutdown, and the decommissioning of OPG's nuclear stations and waste management facilities. The rates of return earned on these segregated funds are subject to various factors including the current and future financial market conditions, which are inherently uncertain. The asset mix of the funds is determined jointly by OPG and the Province in accordance with the ONFA.

For the Used Fuel Segregated Fund, the Province guarantees the annual rate of return at 3.25 percent plus the change in the Ontario CPI, as defined by the ONFA, for the portion of the fund attributed to the first 2.23 million nuclear fuel bundles. As such, a change in the portion of the fund's value attributed to the first 2.23 million bundles impacts OPG's earnings to the extent of changes in the Ontario CPI. OPG is subject to the market risk for the investment of funds set aside in the Used Fuel Segregated Fund for incremental bundles in excess of 2.23 million.

In accordance with the cost recovery methodology established by the OEB, the performance of the portion of the Nuclear Segregated Funds attributed to the nuclear generating stations leased to Bruce Power has been subject to the Bruce Lease Net Revenues Variance Account. The variance account partially mitigates rate of return risk related to the Nuclear Segregated Funds, as it captures the differences between actual and forecast earnings from the Nuclear Segregated Funds related to these stations. Forecast earnings are those approved by the OEB in setting nuclear regulated prices. OPG is exposed to rate of return risk related to the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodology. The income statement impact of rate of return risk is reduced when the Nuclear Segregated Funds are in a fully funded position.

Post-Employment Benefit Obligations Risk

OPG's post-employment benefit obligations include pension, group life insurance, health care benefits, and LTD benefits. OPG's post-employment benefit obligations and costs, and pension plan contributions could be materially affected in the future by numerous factors, including: changes in discount rates, inflation rates, and other actuarial assumptions; future investment returns; experience gains and losses; the funded status of the pension plans; changes in benefits; changes in the regulatory environment including potential changes to the *Pension Benefits Act* (Ontario); changes in OPG's operations; and the measurement uncertainty incorporated into the actuarial valuation process.

The OPG registered pension plan, which covers most of OPG's employees and retirees, is a contributory defined benefit plan that is indexed to inflation. Contributions to the OPG registered pension plan are determined by actuarial valuations, which are filed with the appropriate regulatory authorities at least every three years. The most recent actuarial valuation of the OPG registered pension plan, covering the three-year period to the end of 2018, was completed as of January 1, 2016. There is an inherent risk that future actuarial valuations could increase OPG's funding requirements due to market and economic-related conditions. A significant decline in the financial markets could trigger an immediate requirement to update the actuarial valuation based on declines in the funded status. OPG continues to assess the requirements for contributions to the registered pension plan, including the timing of future actuarial valuations. The next actuarial valuation of the OPG registered plan must have an effective date no later than January 1, 2019. OPG's OPEB obligations are not funded and the associated employee benefits are paid from cash flow provided by operating activities or other sources of liquidity.

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017	2018	2019
Estimated fuel requirements hedged[1]	75%	76%	65%

[1] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars (USD). To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at December 31, 2016, OPG had total foreign exchange contracts outstanding with a notional value of USD $9 million.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. During 2016, the VaR utilization ranged between nil and $1.5 million, compared to between nil and $1.5 million in 2015.

Credit

Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

The Company's credit risk exposure is a function of its electricity sales, trading and hedging activities, treasury activities including investing, and commercial transactions with various suppliers of goods and services. OPG's credit risk exposure relating to electricity sales is considered low as the majority of sales are through the IESO-administered spot market. The IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market.

Other major components of OPG's credit risk exposure include those associated with vendors that are contracted to provide services or products. OPG manages its exposure to various suppliers or counterparties by evaluating their financial condition and ensuring that the Company holds appropriate collateral or other forms of security.

The following table summarizes OPG's credit exposure to all counterparties from electricity transactions and trading as at December 31, 2016:

Credit Rating [1]	Number of Counterparties [2]	Potential Exposure [3] *(million of dollars)*	Potential Exposure for Largest Counterparties: Number of Counterparties	Potential Exposure for Largest Counterparties: Counterparty Exposure *(millions of*
Investment grade	11	11	5	9
IESO[4]	1	421	1	422
Total	12	432	6	431

[1] Credit ratings are based on OPG's own analysis, taking into consideration external rating agency analysis where available, as well as recognizing explicit credit support provided through parental guarantees, Letters of Credit or other forms of security.

[2] OPG's counterparties are defined on the basis of individual master agreements.

[3] Potential exposure is OPG's statistical assessment of maximum exposure over the life of each transaction at a 95 percent confidence interval.

[4] Credit exposure is an estimate of the receivable amount arising from OPG's electricity sales into the IESO market. The credit exposure and associated receivable vary each month based on electricity sales. The monthly receivable from the IESO is typically paid to OPG in the subsequent month as per the IESO payment schedule.

Liquidity

Rising liquidity requirements can impact OPG's capital investment projects and ability to meet financial obligations.

OPG operates in a capital intensive business. Significant financial resources are required to fund major development and other capital improvement projects, including the Darlington Refurbishment project. In addition, the Company has other significant disbursement requirements including pension contributions, payments towards OPEB and other benefit plans, expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, debt maturities with the OEFC, and investments in new generating capacity and other business growth opportunities. OPG must ensure that it has the financial capacity and sufficient access to cost effective financing sources to fund its capital requirements and other disbursements. In support of this objective, OPG utilizes multiple sources and forecasts availability of funds, actively monitors funding requirements, and is focused on maintaining its investment grade credit rating. A discussion of corporate liquidity is included under the section, *Liquidity and Capital Resources*.

Contracted Generation

OPG may incur costs if its contracted generating assets do not meet performance targets as specified in the ESAs with the IESO or other long-term contracts. There is also a risk that, upon expiry, subsequent ESAs may not be available.

The Company's generating stations operating under ESAs with the IESO or other long-term contracts are subject to availability and production targets specified in their respective contracts. OPG could incur charges and other costs if these facilities fail to operate at required capacity or production levels, as required. This risk is mitigated through the implementation of maintenance, capital investment and other programs, as appropriate.

OPG's owned and co-owned thermal generating stations operate under ESAs with the IESO or other long-term agreements. In December 2016, the Ontario and Quebec governments signed an electricity trade agreement that will allow Ontario to import up to 2 TWh of hydroelectric power from Quebec annually from 2017 to 2023. This is expected to replace some gas-fired generation in Ontario. While OPG expects that its thermal generating stations will continue to provide capacity to the market over the term of the respective agreements, there is a risk that, upon expiry of the current agreements, subsequent contracts for these stations may not be available or may not be available on financially viable terms.

Ontario Electricity Market

Ontario electricity market conditions could impact OPG's revenue and operations.

OPG's revenue can be impacted by external factors related to the electricity market including: the entrance of new participants into the Ontario market; the competitive actions of market participants; Ontario electricity demand; changes in the regulatory environment; and wholesale electricity prices in the interconnected markets.

The structure of the Ontario electricity market is subject to regulation and market rules, changes to which may affect OPG's revenue. The Province, the IESO, the OEB, or another entity or regulatory body may change or institute regulations or rules that can impact OPG's capability to generate revenue or ability to recover appropriate costs and earn a return on the assets.

Ownership by the Province

OPG's commitment to maximize the return on the Shareholder's investment in the Company may compete with the obligation of the Shareholder to respond to a broad range of matters in its role as the Government of Ontario.

The Province owns all of OPG's issued and outstanding common shares. Accordingly, the Province, as represented by the Ontario Ministry of Energy, has the authority to make appointments to OPG's Board of Directors. OPG could be subject to Shareholder direction, under Section 108 of the OBCA, that can directly influence major decisions including those related to project development, timing and strategy of applications for regulated prices, asset divestitures, financing and capital structure, that could require OPG to undertake activities that result in increased expenditures, or that reduce revenues or cash flows relative to the business activities or strategies that would have otherwise been undertaken. In addition, the obligation of OPG's Shareholder to respond to a broad range of matters in its role as the Government of Ontario may compete with OPG's commitment to maximize the return on the Shareholder's investment in the Company. This includes, but is not limited to, the Province's response to mitigate the impact of rising electricity prices on consumers.

Government Legislation and Regulation Change

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on the Company's operations and financial position.

OPG's core business and strategy may be impacted by changes in federal and provincial legislation and regulations. Matters that are subject to regulation include, among others, rate regulation, electricity generating operations, nuclear waste management and nuclear decommissioning, and taxation. Regulatory bodies may change or enact regulations or rules, such as new nuclear fitness for duty requirements, that could increase OPG's costs, decrease OPG's revenue, or limit the Company's ability to recover appropriate costs or earn a return on the assets.

Since legal requirements are subject to change and to interpretation, OPG is unable to predict the impact of such changes on the Company and its operations. To mitigate legislative risks, OPG continues to monitor and actively engage with the federal and provincial governments in order to determine if future legislation will impact the Company.

Risks to Maintaining Social Licence

OPG is exposed to risks associated with its social licence and public profile due to changes in the opinions of various stakeholders, including local communities, Ontario customers, government agencies, and Indigenous Communities. Additionally, inability to achieve operational excellence and project excellence safely and reliably and to maintain financial strength could impact OPG's social licence.

Maintaining public trust and meeting stakeholders and Indigenous communities' expectations are critical to OPG's success. OPG focuses on building and maintaining its social licence and corporate reputation through safe, reliable,

environmentally-responsible operations as well as corporate citizenship initiatives across the province. The inability to maintain safe, reliable operations could negatively impact OPG's reputation and result in a loss of public support.

OPG has transparent governance practices and works continuously towards effective communication and consultation with Indigenous communities and stakeholders. Efforts to reinforce OPG's social licence include various media campaigns that highlight the Company's contribution as a clean power generator with a commitment to safety, environment and community partnerships. OPG undertakes various assurance and risk management activities to effectively manage the risks to its social licence and corporate reputation. Issue management and response plans are developed to address specific concerns as they arise.

Indigenous Communities

The quality of OPG's relationships and the outcome of negotiations with Indigenous communities may impact OPG's project and financial performance, as well as its social licence to operate.

OPG may be subject to claims by Indigenous communities. These claims stem from projects and generation development related to the operations of OPG and historic operations of OPG's predecessor company, Ontario Hydro, which may have impacted the Aboriginal and/or Treaty rights of Indigenous communities.

OPG has an Indigenous Relations Policy, which sets out the Company's commitment to proactively build and maintain positive relationships with Indigenous communities. OPG has been successful in resolving a number of past grievances by Indigenous communities. However, the outcome of the ongoing and any future negotiations depends on a number of factors, including legislation and regulations and precedents created by court rulings, which are subject to change over time. OPG pursues generation-related developments in partnerships with Indigenous communities on the basis of long-term mutually beneficial commercial arrangements.

Environmental Risks

OPG may be subject to orders or charges if it is not in compliance with applicable environmental laws. Changes in environmental regulatory requirements can result in existing operations being in a state of non-compliance, a potential inability to comply, and potential costs and liabilities for OPG.

Changes to environmental laws could create compliance risks and result in potential liabilities that may be addressed by the installation of control technologies, development of new processes, allowances or offsets, or constraints on electricity production. A failure to comply with applicable environmental laws may result in enforcement actions, including the potential for orders or charges. In addition, some of OPG's activities have the potential to impair natural habitat, damage aquatic or terrestrial plant and wildlife, or cause contamination to land or water that may require remediation. There is also a risk that OPG may incur additional costs to meet heritage conservation program requirements under the *Ontario Heritage Act*.

Potential environmental regulatory changes being managed as risks by the Company include electricity production constraints and water flow management requirements to protect fish and fish habitat, expanded fish passage requirements, and lower drinking and ground water tritium concentration standards. These changes could impact plant operations and increase costs. OPG continues to monitor and address risks associated with changes to environmental laws and regulatory requirements. There were no significant changes to environmental legislation applicable to OPG during 2016.

OPG recognizes that efforts are required to plan for the effects of climate change and has identified climate change adaptation as a strategic issue for the company. OPG monitors developments in climate science, adaptation activities, and potential changes to policy and regulatory requirements. OPG continues to work with stakeholders to better define adaptation requirements through analysis and understanding of climate change impacts on watersheds and electricity supply and demand. Once adaptation requirements are better known, a risk-based analysis will help OPG determine the extent of efforts it will undertake to reduce the impact of climate change on its operations.

A carbon cap and trade program became effective in Ontario in January 2017. The program is not expected to have a material adverse economic impact on OPG due to the Company's low GHG emitting generating fleet. Further details can be found under the heading, *Environmental Performance*, in the section, *Core Business, Strategy and Outlook*.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		2015	
(millions of dollars)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**15**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,070**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

Management, including the President and Chief Executive Officer (President and CEO) and the Chief Financial Officer (CFO), are responsible for maintaining Disclosure Controls and Procedures (DC&P) and Internal Controls over Financial Reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements in accordance with US GAAP.

There were no other changes in OPG's ICOFR during the year ended December 31, 2016 that have materially affected or are reasonably likely to materially affect OPG's ICOFR.

Management, including the President and CEO and the CFO, concluded that, as of December 31, 2016, OPG's DC&P and ICOFR (as defined in National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings*) were effective.

FOURTH QUARTER

Discussion of Results

(millions of dollars) (unaudited)	Three Months Ended December 31 2016	2015
Revenue	**1,388**	1,312
Fuel expense	**186**	175
Gross margin	**1,202**	1,137
Operations, maintenance and administration	**686**	788
Depreciation and amortization	**316**	354
Accretion on fixed asset removal and nuclear waste management liabilities	**233**	223
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(126)**	(169)
Income from investments subject to significant influence	**(9)**	(9)
Property taxes	**11**	11
Restructuring	**6**	5
Income (loss) before other loss, interest, and income taxes	**85**	(66)
Other loss	**6**	12
Income (loss) before interest and income taxes	**79**	(78)
Net interest expense	**28**	44
Income (loss) before income taxes	**51**	(122)
Income tax expense (recovery)	**59**	(22)
Net loss	**(8)**	(100)
Net loss attributable to the Shareholder	**(13)**	(101)
Net income attributable to non-controlling interest	**5**	1

Net loss attributable to the Shareholder for the fourth quarter was $13 million, compared to a net loss of $101 million for the same quarter in 2015.

Income before interest and income taxes was $79 million during the fourth quarter of 2016, an increase of $157 million compared to loss before interest and income taxes of $78 million during the same period in 2015. The following summarizes the significant factors which caused the variance:

Significant factors that increased income before other loss, interest and income taxes:

- Lower number of outage days increased nuclear generation by 2.2 TWh during the fourth quarter in 2016, compared to the same period in 2015, primarily due to the four-unit Darlington VBO that was completed on October 30, 2015 and a lower number of unplanned outage days at the Darlington GS. The increase in nuclear generation resulted in an increase in revenue from the nuclear base regulated price of approximately $130 million.
- Lower OM&A expenses of $77 million in the Regulated – Nuclear Generation segment primarily due to increased outage activities in 2015, including the Darlington VBO.

Significant factors that decreased income before other loss, interest and income taxes:

- Decrease in earnings from the Nuclear Segregated Funds of $43 million during the fourth quarter of 2016, compared to the same quarter in 2015, mainly due to an accounting adjustment recorded during the fourth quarter of 2016 to limit the funds asset values recognized on OPG's consolidated balance sheet to the lower underlying obligations as reflected in the 2017 ONFA Reference Plan.
- Higher accretion expense of $10 million, reflecting the increase in the Nuclear Liabilities recognized in December 2015 in connection with the changes in the estimated useful life assumptions for OPG's nuclear stations, net of the impact of the Bruce Lease Net Revenues Variance Account.

The increase in income tax expense during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets in 2016.

Average Sales Prices

The average sales price for the Regulated – Nuclear Generation segment during the fourth quarter of 2016 was 6.9 ¢/kWh, compared to 7.0 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of an OEB-authorized nuclear rate rider of $1.33/MWh related to the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment during the fourth quarter of 2016 was 4.5 ¢/kWh, compared to 4.8 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of a rate rider of $6.04 per MWh related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014.

The income impact of changes in revenue from rate riders was largely offset by changes in amortization expense related to regulatory balances.

Electricity Generation

OPG's electricity generation for the three months ended December 31, 2016 and 2015 was as follows:

	Three Months Ended December 31	
(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**11.0**	8.8
Regulated – Hydroelectric	**6.7**	7.3
Contracted Generation Portfolio [1]	**0.6**	0.7
Total OPG electricity generation	**18.3**	16.8
Total electricity generation by all other generators in Ontario [2]	**18.9**	19.6

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The increase in OPG's electricity generation of 1.5 TWh during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher electricity generation of 2.2 TWh from the Regulated – Nuclear Generation segment as a result of fewer outage days at the Darlington GS during the fourth quarter of 2016, which was primarily due to the Darlington VBO that occurred during the fourth quarter of 2015. The increase in generation was partially offset by reduced generation from the Regulated – Hydroelectric Segment of 0.6 TWh, primarily due to lower water flows in eastern Ontario during the fourth quarter of 2016.

Ontario's electricity demand as reported by the IESO was 33.2 TWh during the fourth quarter of 2016, compared to 32.7 TWh during the fourth quarter of 2015.

Liquidity and Capital Resources

Cash flow provided by operating activities during the three months ended December 31, 2016 was $437 million, compared to $111 million for the same period in 2015. The increase in cash flow was primarily due to higher generation revenue receipts, lower pension plan contributions and lower OM&A expenditures during the fourth quarter of 2016. Higher generation revenue receipts reflected higher nuclear generation in the fourth quarter of 2016, compared to the same period in 2015.

Cash flow used in investing activities during the three months ended December 31, 2016 was $497 million, compared to $571 million during the same period in 2015. The decrease was primarily due to partial maturity, in the fourth quarter of 2016, of a structured deposit note invested in the fourth quarter of 2015, partially offset by higher expenditures for the Darlington Refurbishment project. The deposit note invested proceeds from the long-term debt issued in support of the Peter Sutherland Sr. GS project in October 2015.

Cash flow used by financing activities during the three months ended December 31, 2016 was $180 million, compared to cash flow provided in financing activities of $356 million for the same period in 2015. The decrease in cash flow provided by financing activities was due to the net repayment of short-term notes and lower net issuance of long-term debt in the fourth quarter of 2016.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected annual financial information for the last three years and financial information for each of the eight most recently completed quarters. This information is derived from OPG's unaudited interim consolidated financial statements and the audited consolidated financial statements, and has been prepared in accordance with US GAAP.

Annual Financial Information

(millions of dollars – except where noted)	**2016**	**2015**	**2014**
Revenue	**5,653**	5,476	4,963
Income before extraordinary item attributable to the Shareholder	**436**	402	561
Net income attributable to the Shareholder	**436**	402	804
Net income per common share before extraordinary item *(dollars)*	**$1.70**	$1.57	$2.19
Net income per common share *(dollars)*	**$1.70**	$1.57	$3.14
Total assets	**44,372**	44,250	41,645
Total long-term liabilities	**31,460**	32,404	30,483
Common shares outstanding *(millions)*	**256.3**	256.3	256.3

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**2016 Quarters Ended**				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	**1,388**	**1,400**	**1,387**	**1,478**	**5,653**
Net (loss) income	**(8)**	**198**	**135**	**128**	**453**
Less: Net income attributable to non-controlling interest	**5**	**4**	**3**	**5**	**17**
Net (loss) income attributable to the Shareholder	**(13)**	**194**	**132**	**123**	**436**
Per common share, attributable to the Shareholder *(dollars)*	**($0.05)**	**$0.76**	**$0.51**	**$0.48**	**$1.70**

Quarterly Financial Information

(millions of dollars – except where noted) (unaudited)	2015 Quarters Ended				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	1,312	1,426	1,383	1,355	5,476
Net (loss) income	(100)	85	193	239	417
Less: Net income attributable to non-controlling interest	1	5	4	5	15
Net (loss) income attributable to the Shareholder	(101)	80	189	234	402
Per common share, attributable to the Shareholder *(dollars)*	($0.39)	$0.31	$0.74	$0.91	$1.57

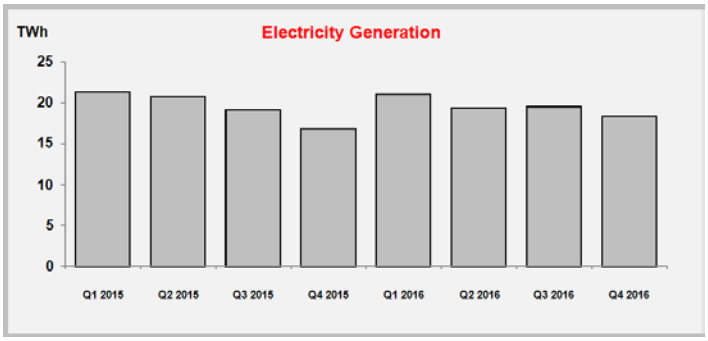
Trends

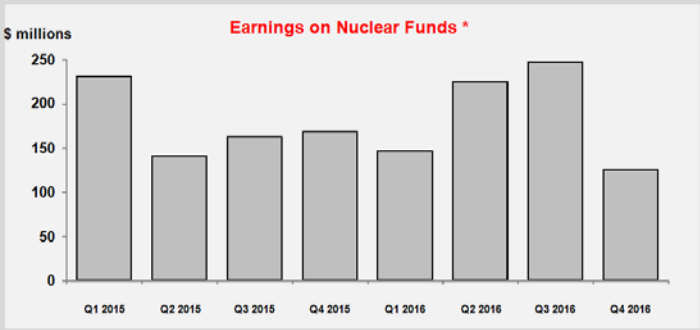
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues are higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of foregone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington VBO, which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items which affected net income (loss) in certain quarters above are described below:

- A gain of $22 million recorded during the first quarter of 2016 reflecting the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to Niagara Tunnel project expenditures.
- Lower earnings of $16 million during the first quarter of 2015, compared to the same quarter in 2016, in the Contracted Generation Portfolio segment, primarily as a result of a provision made in that quarter related to an IESO audit.
- Higher OM&A expenses of $105 million for the Regulated – Nuclear Generation segment during the first half of 2016, compared to the same period in 2015, primarily resulting from an increase in planned outage activities and the timing of planned outage activities during the year.
- Lower OM&A expenses of $91 million for the Regulated – Nuclear Generation segment during the last half of 2016, compared to the same period in 2015, primarily as a result of the VBO at the Darlington GS in the third and fourth quarters of 2015.

Additional information about OPG, including its audited consolidated financial statements and notes thereto, can be found on SEDAR at www.sedar.com.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow from operations, or any other measure in accordance with US GAAP, but as an indicator of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period.

ROE Excluding AOCI is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**436**	402
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,442**	10,023
ROE Excluding AOCI *(percent)*	**4.2**	4.0

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
FFO before interest		
Cash flow provided by operating activities	**1,705**	1,465
Add: Interest paid	**269**	269
Less: Interest capitalized to fixed and intangible assets	**(141)**	(102)
Add: Changes to non-cash working capital balances	**(68)**	100
FFO before interest	**1,765**	1,732
Adjusted interest expense		
Net interest expense	**120**	180
Add: Interest income	**7**	9
Add: Interest capitalized to fixed and intangible assets	**141**	102
Add: Interest related to regulatory assets and liabilities	**30**	2
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**45**	53
Adjusted interest expense	**343**	346
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.0

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Enterprise TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Enterprise TGC		
Total OM&A expenses	**2,747**	2,783
Total fuel expense	**727**	687
Total capital expenditures	**1,704**	1,376
Less: Darlington Refurbishment capital and non-capital costs	**(1,022)**	(707)
Less: Other generation development project capital and OM&A costs	**(162)**	(197)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**62**	250
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(55)
Add: Hydroelectric gross revenue charge due to electricity foregone due to SBG conditions	**49**	34
Less: OM&A expenses ancillary to electricity generation business	**(24)**	(27)
Other adjustments	**(25)**	(46)
	3,989	4,098
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**78.2**	78.0
Add: Electricity generation foregone due to SBG conditions	**4.7**	3.2
	82.9	81.2
Enterprise TGC per MWh *($/MWh)* [1]	**48.10**	**50.46**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Nuclear TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**2,210**	2,196
Regulated – Nuclear Generation fuel expense	**315**	301
Regulated – Nuclear Generation capital expenditures	**1,338**	1,023
Less: Darlington Refurbishment capital and OM&A costs	**(1,022)**	(708)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**81**	230
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(62)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(6)**	(6)
Other adjustments	**(8)**	(28)
	2,841	2,946
Nuclear electricity generation *(TWh)*	**45.6**	44.5
Nuclear TGC per MWh *($/MWh)* [1]	**62.30**	66.20

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Hydroelectric TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**325**	340
Regulated – Hydroelectric Generation fuel expense	**353**	345
Contracted Generation Portfolio OM&A expenses	**178**	185
Contracted Generation Portfolio fuel expense	**58**	39
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**333**	311
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(158)**	(197)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(177)**	(163)
(Less) Add: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(24)**	18
Add: Hydroelectric gross revenue charge and water rental payments due to electricity generation foregone due to SBG conditions	**49**	34
Other adjustments	**(1)**	-
	936	912
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**29.5**	30.4
Contracted Generation Portfolio electricity generation	**3.1**	3.1
Add: Hydroelectric electricity generation foregone due to SBG conditions	**4.7**	3.2
Less: Non-hydroelectric electricity generation of the Contracted Generation Portfolio	**(0.7)**	(0.6)
	36.6	36.1
Hydroelectric TGC per MWh *($/MWh)*[1]	**25.57**	25.26

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

For further information, please contact: Investor Relations 416-592-6700

1-866-592-6700

investor.relations@opg.com

Media Relations 416-592-4008

1-877-592-4008

www.opg.com

www.sedar.com

From: Gadi Mayman
To: Ronald Kwan; Nancy Kennedy (MOHLTC); Scott Nelms (ENERGY)
Subject: Re: Draft Global Adjustment disclosure for OPG
Date: Thursday, March 02, 2017 8:33:44 PM

Is it 25% on average, as is written in the first paragraph, or is it 25% for the typical consumer?

From: Ronald Kwan
Sent: Thursday, March 2, 2017 7:49 PM
To: Gadi Mayman; Nancy Kennedy (MOHLTC); Scott Nelms (ENERGY)
Subject: FW: Draft Global Adjustment disclosure for OPG

Hi Gadi, Nancy, Scott,

Did you see the proposed disclosure below?

Ron

From: Ronald Kwan
Sent: March-02-17 7:48 PM
To: John Kim <John.Kim@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: Draft Global Adjustment disclosure for OPG

Hi,

A few suggested edits below.

Ron

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 per cent on average for all residential consumers in the province. As part of the Plan, the Province has proposed refinancing a portion of total electricity system Global Adjustment costs over a longer time period for regulated price plan eligible customers (e.g., residential , farm, small businesses). According to the Plan, the Province intends to introduce legislation that would, if passed, enable the IESO and OPG to work together to undertake this financing. The Global Adjustment portion of the total price of electricity in the province is administered by the IESO. The Global Adjustment includes the difference between Ontario's electricity market clearing price used to dispatch generation and the prices paid to contracted and regulated generators in the province, and the cost of conservation and demand management programs. Virtually all generators in Ontario have bilateral contracts with the IESO that provide for payments that are different from the market clearing price of electricity, while the prices for all of OPG's nuclear and a majority of its hydroelectric generation are set by the OEB. OPG intends to work with the Province and the IESO as part of the refinancing proposal.

From: John Kim
Sent: March-02-17 2:01 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: FW: Draft Global Adjustment disclosure for OPG

Hi Ron,

I have no issue with the paragraph for the reason that it is largely consistent with the backgrounder.

Thanks,

John.

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: Thursday, March 02, 2017 1:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: Draft Global Adjustment disclosure for OPG

Hi John and Ronald,

We are proposing to include the following language regarding the Global Adjustment refinancing portion of the Ontario's Fair Hydro Plan into OPG's 2016 MD&A and AIF.

We will be mailing the relevant documents to our Board today. Your comments will be appreciated. Please let us know if you have questions.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 per cent on average for all residential consumers in the province. As part of the Plan, the Province has proposed refinancing a portion of total electricity system Global Adjustment costs over a longer time period for residential consumers. According to the Plan, the Province intends to introduce legislation that would, if passed, enable the IESO and OPG to work together to undertake this financing. The Global Adjustment portion of the total price of electricity in the province is administered by the IESO. The Global Adjustment includes the difference between Ontario's electricity market clearing price used to dispatch generation and the prices paid to contracted and regulated generators in the province, and the cost of conservation and demand management programs. Virtually all generators in Ontario have bilateral contracts with the IESO that provide for payments that are different from the market clearing price of electricity, while the prices for all of OPG's nuclear and most of its hydroelectric generation are set by the OEB. OPG intends to work with the Province and the IESO as part of the refinancing proposal.

Regards,

Philip

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy (Acting)| Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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From: John Kim
To: Ronald Kwan
Cc: Deena Padamadan; Francisco Chinchon; Bruno Amara
Subject: Re: OPG Q1 2017 Submission to Province
Date: Tuesday, May 02, 2017 6:28:19 PM

Thanks....will review and send back. Logging in now

On May 2, 2017, at 6:26 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi John,
>
> Just skimmed it. A few small edits -- a copy edit and a bit of wording edits under the Ontario FHP.
>
> Ron
>
> ---
>
> **From:** Deena Padamadan
> **Sent:** May-02-17 16:23
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Subject:** FW: OPG Q1 2017 Submission to Province
>
> Hi Ron,
>
> Please see attached for your review. This version includes the edits from SIFB (already sent yesterday to you at 2:45pm yesterday) plus a few edits from EFB.
> For timing, this is due EoD today.
>
> Thanks,
> Deena
>
> ---
>
> **From:** John Kim
> **Sent:** Tuesday, May 02, 2017 4:04 PM
> **To:** Deena Padamadan <Deena.Padamadan@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
> **Subject:** RE: OPG Q1 2017 Submission to Province
>
> Hi Deena,
>
> Some very minor edits.
>
> John
>
> ---
>
> **From:** John Kim
> **Sent:** Tuesday, May 02, 2017 1:26 PM
> **To:** Deena Padamadan <Deena.Padamadan@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
> **Subject:** RE: OPG Q1 2017 Submission to Province
>
> Thanks for the reminder. Will get back to you on this.

John

From: Deena Padamadan
Sent: Tuesday, May 02, 2017 1:20 PM
To: John Kim <John.Kim@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Subject: RE: OPG Q1 2017 Submission to Province

Hi Bruno & John,

Checking in if EFB has any edits on this, as it's due EoD today.

Thanks,
Deena

From: Francisco Chinchon
Sent: Monday, May 01, 2017 2:45 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Subject: RE: OPG Q1 2017 Submission to Province

Hi,

We have a few relatively minor edits, in particular, with respect to the sale of the OPG HQ. Also, note they are updating the figure to $280M after tax.

Thanks,

Francisco

From: Ronald Kwan
Sent: Friday, April 28, 2017 5:06 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Subject: FW: OPG Q1 2017 Submission to Province

Hi,

Please review.

Thanks,
Ron

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: April-28-17 17:04
To: 'Shruti.Talwar@ontario.ca' <Shruti.Talwar@ontario.ca>; Sunita Chander (ENERGY)

<Sunita.Chander@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>
Subject: OPG Q1 2017 Submission to Province

Hi All,

Please find attached OPG's draft Q1 2017 Management's Discussion and Analysis (MD&A) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, May 2nd**.

These documents will be filed with the Ontario Securities Commission on **Friday, May 12th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q1 2017 MD&A:

Highlights	
Recent Developments	MD&A p.9-11
Darlington Refurbishment	MD&A p.9; 13-14
Ontario's Fair Hydro Plan	MD&A p.10
Peter Sutherland Sr. GS project	MD&A p.9, 13

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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<Q1 2017 MDA - DRAFT - PROVINCE MAILING_CEFD edit v4.docx>

From: Francisco Chinchon
To: Ronald Kwan
Cc: Gavin He
Subject: Re: OPG Q2 2017 Submission to Province
Date: Wednesday, August 02, 2017 8:21:30 PM

Hi,

We did review the HQ sections. They are consistent with the material provided by OPG so far. I'm also okay with the proposed edits.

Thanks,

Francisco

On Aug 2, 2017, at 7:20 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
>
> Some small suggestions.
>
> Also, has EFB reviewed the cited OEB report on pensions and OPEB ("On May 18, 2017, the OEB issued a report on the regulatory treatment of pension and OPEB costs")?
>
> And on p.11 of the MD&A, why the suggestion on broadening the scope – from implementing "this financing" to "the Ontario Fair Hydro Plan"?
>
> Please review some suggested edits on p.17 – do they work?
>
> We should have some qs&as ready wrt the disclosure on the OPG HQ premises and associated parking facility. And is SIFB okay with the disclosure detail provided?
>
> I did not really review the FS document, though I tweaked your comment on SPFB`s issue.
>
> It might be good if Linda Smith or CMD reviews the latter part of note 10 of the financials on the types of investments in the ONFA funds.
>
> Thanks,
> Ron
>
> ---
>
> **From:** Gavin He
> **Sent:** August-01-17 13:28
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** John Kim <John.Kim@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
> **Subject:** FW: OPG Q2 2017 Submission to Province
>
> Hi Ron,

Please find attached the proposed edits from EFB and SPFB.

SPFB only has one comment on the FS on page 27, and below is the additional details on their comment.

Please note that comments are due back to OPG today.

Regards,
Gavin He

From: Karim Javeri
Sent: Tuesday, August 01, 2017 11:48 AM
To: Gavin He <Gavin.He@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>
Subject: Re: OPG Q2 2017 Submission to Province

Hi Gavin,

The documents look fine except for a description regarding PSS in the F/S on page 27, to which we've added a comment in the attached markup. The document states that OPG is a general partner and CRP is only a limited partner when they are in fact both part of the GP and LP. We have alluded to the need to verify the structure in the comment but since our knowledge of this project comes from our engagement with PSS as stakeholders in ALGP, we do not want to propose any direct edits without Ron's consent. We were hoping you could share this context with Ron along with your consolidated edits on the documents.

Thanks

<image001.jpg>
Regards,

Karim

From: Ronald Kwan
Sent: Friday, July 28, 2017 5:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: FW: OPG Q2 2017 Submission to Province

Hi All,

Please review, and note the timeline.

John, does FTD need to review any particular sections?

Ron

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: July-28-17 17:13
To: 'Shruti.Talwar@ontario.ca' <Shruti.Talwar@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>; DYKXHOORN Sandra -STAKEREL <sandra.dykxhoorn@opg.com>
Subject: OPG Q2 2017 Submission to Province

Hi All,

Please find attached OPG's draft Q2 2017 Financial Results Press Release, Management's Discussion and Analysis (MD&A), and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, Aug 1st**.

These documents will be filed with the Ontario Securities Commission on **Friday, August 11th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q2 2017 MD&A:

Highlights	
Recent Developments	MD&A p.10-12
Darlington Refurbishment	MD&A p.14-15
Ontario's Fair Hydro Plan	MD&A p.11
Sale of Head Office Premises	MD&A p.11

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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<Q2 2017 DRAFT OPG FS - VP MAILING_CEFD_v2.docx>

<Q2 2017 DRAFT MDA - VP MAILING_CEFD_v3.docx>

From: John Kim
To: Ronald Kwan
Cc: Francisco Chinchon; Emily Kerr; Gavin He
Subject: Re: OPG Q2 2017 Submission to Province
Date: Friday, July 28, 2017 7:45:24 PM

Hi Ron,

Will take a look and share with FTD if any contents touch on their interest this weekend.

John

Sent from my iPhone

> On Jul 28, 2017, at 5:30 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> Hi All,
>
> Please review, and note the timeline.
>
> John, does FTD need to review any particular sections?
>
> Ron
>
> From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
> Sent: July-28-17 17:13
> To: 'Shruti.Talwar@ontario.ca' <Shruti.Talwar@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>; DYKXHOORN Sandra -STAKEREL <sandra.dykxhoorn@opg.com>
> Subject: OPG Q2 2017 Submission to Province
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> MD&A p.14-15

>
> Ontario’s Fair Hydro Plan
>
> MD&A p.11
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>
> Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation
> 700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com<mailto:philip.ho@opg.com>
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> <Q2 2017 DRAFT MDA - VP MAILING.docx>
> <2017 Q2 DRAFT PR - VP MAILING.docx>
> <Q2 2017 DRAFT OPG FS - VP MAILING.docx>

From: Ronald Kwan
To: Francisco Chinchon
Cc: Gavin He
Subject: Re: OPG Q2 2017 Submission to Province
Date: Wednesday, August 02, 2017 9:55:30 PM

Thanks Francisco.

Ron

On Aug 2, 2017, at 8:21 PM, Francisco Chinchon <Francisco.Chinchon@ofina.on.ca> wrote:

> Hi,
>
> We did review the HQ sections. They are consistent with the material provided by OPG so far. I'm also okay with the proposed edits.
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>
> Francisco
>
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> >
> > ---
> >
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> > **Sent:** August-01-17 13:28
> > **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> > **Cc:** John Kim <John.Kim@ofina.on.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
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Gavin He

From: Karim Javeri
Sent: Tuesday, August 01, 2017 11:48 AM
To: Gavin He <Gavin.He@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>
Subject: Re: OPG Q2 2017 Submission to Province

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Regards,

Karim

From: Ronald Kwan
Sent: Friday, July 28, 2017 5:31 PM
To: John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: FW: OPG Q2 2017 Submission to Province

Hi All,

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John, does FTD need to review any particular sections?

Ron

From: HO Philip -FIN & C CTRL [mailto:philip.ho@opg.com]
Sent: July-28-17 17:13
To: 'Shruti.Talwar@ontario.ca' <Shruti.Talwar@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: MAK Ricky -FIN & C CTRL <ricky.mak@opg.com>; DYKXHOORN Sandra -STAKEREL <sandra.dykxhoorn@opg.com>
Subject: OPG Q2 2017 Submission to Province

Hi All,

Please find attached OPG's draft Q2 2017 Financial Results Press Release, Management's Discussion and Analysis (MD&A), and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Tuesday, Aug 1st**.

These documents will be filed with the Ontario Securities Commission on **Friday, August 11th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Philip Ho – philip.ho@opg.com.

To assist the review process, the following are the key items in the Q2 2017 MD&A:

Highlights	
Recent Developments	MD&A p.10-12
Darlington Refurbishment	MD&A p.14-15
Ontario's Fair Hydro Plan	MD&A p.11
Sale of Head Office Premises	MD&A p.11

Philip Ho, CPA, CA | Senior Manager, External Reporting & Accounting Policy | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | Phone: (416) 592-3320| E-mail: philip.ho@opg.com

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<Q2 2017 DRAFT OPG FS - VP MAILING_CEFD_v2.docx>

<Q2 2017 DRAFT MDA - VP MAILING_CEFD_v3.docx>

From: Ronald Kwan
To: Francisco Chinchon; Darren Scanlan
Cc: John Kim; Gavin He
Subject: Re: OPG Q4 2016 submission to Province
Date: Wednesday, March 01, 2017 10:37:13 PM
Attachments: Q4 2016 MDA_DRAFT_PROVINCE MAILING_comment-v2.docx

Hi,

On the Trillium Trust wording on p.15, would it be reasonable to suggest some wording edits?

Ron

From: Gavin He
Sent: February 27, 2017 6:31 PM
To: Ronald Kwan
Cc: Francisco Chinchon; Darren Scanlan; John Kim
Subject: FW: OPG Q4 2016 submission to Province

Hi Ron,

Please see below comments from SIFB. Also, SIFB noted that:

OPG seems to be carrying the H1 shares as "available for sale securities". If I am reading things correctly, they are carrying the shares at FMV, with changes recognized in AOCL. However, they also note the following future changes in accounting:

"In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements."

Please note that comments are due back to OPG today.

Thanks,
Gavin He

From: Ronald Kwan
Sent: Thursday, February 16, 2017 2:05 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Subject: Fw: OPG Q4 2016 submission to Province

Hi,

Note the disclosure on the head office building sale on p. 14 of the MD&A and similarly in the F/S. And note the planned filing date of March 10.

Please review that and the ONFA and Hydro one shares related materials.

Thanks,
Ron

From: DYKXHOORN Sandra -CORPRELCOMM <sandra.dykxhoorn@opg.com>
Sent: February 15, 2017 9:14 AM
To: John Kim; Ronald Kwan; 'Talwar, Shruti (ENERGY)'; Sunita Chander (ENERGY)
Cc: CHENG Alec -FIN & C CTRL; HO Philip -FIN & C CTRL
Subject: OPG Q4 2016 submission to Province

Good morning,

Please find attached OPG's draft Q4 2016 News Release, Management's Discussion and Analysis (MD&A), Annual Information Form (AIF) and Financial Statements for the Province's review.

We would greatly appreciate comments on the above **no later than Monday, February 27th**.

These documents will be filed with the Ontario Securities Commission on **Friday, March 10th** following OPG's Board of Directors meeting.

Kindly forward all comments directly to Sandra Dykxhoorn (copy to Alec Cheng – alec.cheng@opg.com and Philip Ho – philip.ho@opg.com).

To assist the review process, the following are the key items in the Q4 2016 MD&A:

Highlights Recent Developments	MD&A p.11-16
Darlington Refurbishment	MD&A p.11-12; 24-25
Peter Sutherland Sr. GS project	MD&A p.25
Outlook – OEB application on OPG's results, impact of ONFA update on Nuclear Segregated Funds earnings, and the expected income and cash flow trends for 2017	MD&A p.30-31

Sandra Dykxhoorn | Acting Director, Provincial Relations | Ontario Power Generation
700 University Avenue, Toronto ON M5G 1X6 | p: (416) 592-2887 | c: (416) 571-4366 | sandra.dykxhoorn@opg.com

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ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

DECEMBER 31, 2016

[DRAFT]

2016 YEAR-END REPORT

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ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the audited consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the year ended December 31, 2016. OPG's consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. The Ontario Securities Commission (OSC) approved an exemption that allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the heading, *Exemptive Relief for Reporting under US GAAP,* in the section *Critical Accounting Policies and Estimates.* This MD&A is dated March 10, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act (Ontario)* (OBCA) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at December 31, 2016, OPG's electricity generation portfolio had an in-service capacity of 16,177 megawatts (MW). OPG operates two nuclear generating stations, 65 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report.

All of OPG's owned and co-owned generating facilities are located in Ontario.

OPG's Reporting Structure

The composition of OPG's reportable business segments is as follows:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

OPG receives regulated prices for electricity generated from most of its hydroelectric facilities and all of the nuclear facilities that it operates (collectively, prescribed facilities or regulated facilities). This includes the following facilities:

- the six hydroelectric generating stations prescribed for rate regulation prior to 2014, as follows:
    - Sir Adam Beck 1, 2 and Pump hydroelectric generating stations
    - DeCew Falls 1 and 2 hydroelectric generating stations
    - R.H. Saunders hydroelectric GS
- the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014
- Pickering Nuclear GS (Pickering GS)
- Darlington Nuclear GS (Darlington GS).

The operating results related to these regulated facilities are described under the Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, and Regulated – Hydroelectric segments. For the remainder of OPG's operating generating facilities, the operating results are described under the Contracted Generation Portfolio segment. A description of all OPG's segments is provided under the section, *Business Segments*.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of December 31 was as follows:

(MW)	**2016**	**2015**
Regulated – Nuclear Generation [1]	**5,728**	6,606
Regulated – Hydroelectric	**6,421**	6,428
Contracted Generation Portfolio [2]	**4,028**	4,021
Total	**16,177**	17,055

[1] The in-service generating capacity as of December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

The total in-service capacity as at December 31, 2016 decreased by 878 MW compared to 2015. The decrease was primarily due to the commencement of the refurbishment of the first Darlington GS unit, Unit 2, which was taken offline in mid-October 2016. In addition, during 2016, the capacity of the regulated hydroelectric units at the Abitibi Canyon GS and the Sir Adam Beck 1 GS was reduced to reflect unit limit capability. This decrease in in-service capacity was partially offset by an increase in capacity of the Contracted Generation Portfolio segment, reflecting the completion of an upgrade and rehabilitation of Unit 2 of the Harmon hydroelectric GS during 2016.

REVENUE MECHANISMS FOR REGULATED AND NON-REGULATED GENERATION

Regulated Generation

The OEB sets the prices for electricity generated from OPG's regulated nuclear and regulated hydroelectric facilities. The following are the OEB-authorized regulated prices for electricity generated from these facilities:

	2016	**2015**	
($/MWh)		**January 1 to June 30**	**July 1 to December 31**
Regulated – Nuclear Generation			
Base regulated price	**59.29**	59.29	59.29
Rate riders	**10.84** [1]	1.33	12.17 [1]
	70.13	60.62	71.46
Regulated – Hydroelectric			
Hydroelectric generating stations prescribed for rate regulation prior to 2014			
Base regulated price	**40.20**	40.20	40.20
Rate riders	**3.19** [1]	6.04	9.23 [1]
	43.39	46.24	49.43
Hydroelectric generating stations prescribed for rate regulation effective in 2014			
Base regulated price	**41.93**	41.93	41.93
Rate rider	**3.19** [1]	-	3.19 [1]
	45.12	41.93	45.12

[1] The increase in the 2015 rate riders effective July 1, 2015 was implemented by the OEB effective October 1, 2015. As such, the OEB authorized interim period rate riders for the period from October 1, 2015 to December 31, 2016 to allow for the recovery of the increase in the riders for the period from July 1, 2015 to September 30, 2015. The revenue from the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The nuclear interim period rate rider was $2.17 per megawatt hour (MWh) and the regulated hydroelectric interim period rate rider was $0.64/MWh. These interim period rate riders have not been included in the above table. All rate riders in effect during 2016 expired on December 31, 2016.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements for the 2014 to 2015 period, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base for OPG represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital.

In accordance with *Ontario Regulation 53/05* under the *Ontario Energy Board Act, 1998*, OPG's nuclear regulated prices are reduced by the amount of OPG's revenues, net of costs, from leasing the Bruce nuclear generating stations to Bruce Power. As directed by the OEB, OPG's revenues and costs related to the Bruce nuclear generating stations are determined in accordance with US GAAP for the purposes of establishing OPG's nuclear regulated prices and are subject to the Bruce Lease Net Revenues Variance Account in accordance with *Ontario Regulation 53/05*. This includes OPG's costs related to its obligations for nuclear waste management and nuclear facilities decommissioning associated with the Bruce nuclear generating stations and the corresponding portion of earnings on the nuclear fixed asset removal and nuclear waste management segregated funds (Nuclear Segregated Funds) established pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province.

Rate riders for OPG are established to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts. Variance and deferral accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The rate riders in effect during 2015 included those established by the OEB's December 2014 order for the period from January 1, 2015 to December 31, 2015, as well as those authorized by the OEB's October 2015 order on OPG's 2014 application to recover the December 31, 2014 variance and deferral account balances, for the period from July 1, 2015 December 31, 2016. The rate riders in effect during 2016 were those authorized by the October 2015 order.

Non-Regulated Generation

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements (ESAs) with the Independent Electricity System Operator (IESO). Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO was substituted as the counterparty of ESAs and other agreements that were previously executed with the OPA.

During 2016, ESAs were in effect for the following thermal generating facilities:

- Lennox GS: Capacity provided by, and production from, the station are subject to an ESA for the period from January 1, 2013 to September 30, 2022
- Atikokan GS: Capacity provided by, and production from, the station are subject to a 10-year ESA expiring in July 2024
- Thunder Bay GS: Capacity provided by, and production from, the station are subject to a 5-year ESA expiring in January 2020.

In addition, long-term hydroelectric ESAs are in place for the following facilities, with expiry dates for currently operating stations ranging from 2059 to 2064:

- Lac Seul and Ear Falls generating stations
- Healey Falls GS
- Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations
- Little Long, Harmon, Smoky Falls, and Kipling generating stations (collectively the Lower Mattagami River generating stations)

- Peter Sutherland Sr. GS which is being commissioned. **[MONITOR]** Payments under this ESA will commence when the station achieves commercial operation. Further details on the Peter Sutherland Sr. GS project are found under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's operating results for 2016 and 2015.

(millions of dollars – except where noted)	**2016**	**2015**
Revenue	**5,653**	5,476
Fuel expense	**727**	687
Gross margin	**4,926**	4,789
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (income) loss, interest, and income taxes	**724**	703
Other (income) loss	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense	**120**	180
Income before income taxes	**621**	509
Income tax expense	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest [1]	**17**	15
Electricity production (TWh) [2]	**78.2**	78.0
Cash flow		
Cash flow provided by operating activities	**1,705**	1,465

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $436 million for 2016, an increase of $34 million compared to 2015. Income before interest and income taxes was $741 million for 2016, an increase of $52 million compared to 2015.

The following summarizes the significant factors which contributed to the variance:

Significant factors that increased income before interest and income taxes:

- Higher generation of 1.1 terawatt hours (TWh) from the Regulated – Nuclear generation segment, resulting in an increase in revenue of $65 million from the nuclear base regulated price. The year-over-year increase

in revenue from the higher nuclear rate riders in effect during the first half of 2016, compared to the same period in 2015, was primarily offset by an increase in the amortization expense related to regulatory balances.

- Higher earnings on the Nuclear Segregated Funds of $42 million, primarily due to a higher rate of return on the portion of the Used Fuel Segregated Fund that is subject to a consumer price index (CPI) adjusted rate of return guarantee by the Province pursuant to the ONFA. This increase in Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the updated ONFA reference plan, approved by the Province in December 2016
- Increase in earnings from the Services, Trading, and Other Non-Generation segment of $24 million, primarily due to lower operations, maintenance and administration (OM&A) expenses
- A gain of $22 million recorded during the first quarter of 2016, reflecting the OEB's January 2016 decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices
- Increase in earnings of $20 million from the Contracted Generation Portfolio segment, mainly as a result of an increase in the gross margin due to higher revenues from the Lower Mattagami River generating stations, the Lennox GS and the Atikokan GS.

Significant factors that reduced income before interest and income taxes:

- Higher financing expense of $32 million, which represents an increase in the present value of the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities). The financing expense, known as accretion expense, is added to the Nuclear Liabilities balance over time
- A decrease in nuclear non-electricity revenue of $21 million, primarily due to a decrease in nuclear detritiation services revenue and lower isotope sales
- Higher OM&A expenses, fuel expense and depreciation expense for the Regulated – Nuclear Generation segment. The increase in OM&A expenses of $14 million reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium costs and higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million, primarily due to new assets in service in 2016. The increase in amortization expense related to regulatory balances was largely offset by the increase in nuclear revenue related to rate riders
- Lower earnings before other gains from the Regulated – Hydroelectric segment of $28 million, primarily due to lower hydroelectric incentive mechanism revenue and the income impact of OEB-approved variance accounts.

Net interest expense decreased by $60 million in 2016, compared to 2015, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project and a higher amount of interest costs deferred in regulatory variance and deferral accounts.

Income tax expense increased by $76 million in 2016, compared to 2015, primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. Significant factors which contributed to the higher income during 2016, compared to 2015, are discussed above. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	**2016**	**2015**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**4**	2
Regulated – Hydroelectric	**642**	648
Contracted Generation Portfolio	**282**	262
Total electricity generation business segments	**928**	912
Regulated – Nuclear Waste Management	**(174)**	(186)
Services, Trading, and Other Non-Generation	**(13)**	(37)
	741	689

Electricity Generation

Electricity generation for 2016 and 2015 was as follows:

(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**45.6**	44.5
Regulated – Hydroelectric	**29.5**	30.4
Contracted Generation Portfolio [1]	**3.1**	3.1
Total OPG electricity generation	**78.2**	78.0
Total electricity generation by other generators in Ontario [2]	**72.7**	76.1

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The higher electricity generation from the Regulated – Nuclear Generation segment in 2016 was primarily a result of a lower number of non-refurbishment outage days at the Darlington GS due to the planned Vacuum Building Outage (VBO) in 2015 and a decrease in unplanned outages at the station in 2016. The VBO is a unique outage to inspect and maintain specific safety and other systems common to all four units of the station. The 2015 VBO required the shutdown of the four units for 47 days. Vacuum building outages are currently required every 12 years at the Darlington GS. The year-over-year increase in electricity generation was partially offset by a decrease in generation from the Pickering GS, primarily due to an increase in the number of unplanned outage days, and the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment beginning on October 15, 2016.

Lower electricity generation from the Regulated – Hydroelectric generating segment was primarily due to a higher volume of water spilled as a result of higher SBG conditions during 2016.

Electricity generation from the Contracted Generation Portfolio segment was 3.1 TWh for each of 2016 and 2015. Electricity generation in 2016 reflected higher production from the Lennox and Atikokan generating stations, primarily due to increased market demand. The increase was offset by a higher volume of water spilled at the contracted hydroelectric stations as a result of higher SBG conditions during 2016, and transmission system constraints in northeastern Ontario in 2016. **[CONFIRM]**

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Ontario's electricity demand as reported by the IESO was 137.0 TWh in each of 2016 and 2015, which excludes electricity exports out of the province.

Baseload generation supply surplus in Ontario was more prevalent in 2016 than in 2015, mainly due to higher water flows in the province during 2016 and limitations on the export of surplus power out of the province, primarily due to transmission constraints in the state of New York. Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric and nuclear stations and other grid-connected renewable resources. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. During 2016 and 2015, OPG lost 4.7 TWh and 3.2 TWh of hydroelectric generation due to SBG conditions, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions in 2016 and 2015 was offset by a regulatory variance account authorized by the OEB. OPG did not forego any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The regulated prices authorized by the OEB for electricity generated from OPG's nuclear and regulated hydroelectric generating stations are discussed in the section *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment during 2016 was 6.9 cents per kilowatt hour (¢/kWh), compared to 6.5 ¢/kWh during 2015. The average sales price in 2016 reflected the higher OEB-authorized nuclear rate rider of $10.84/MWh for recovery of variance and deferral account balances in effect during the year. The average sales price for the Regulated – Hydroelectric segment was 4.4 ¢/kWh, compared to 4.7 ¢/kWh during 2015. The decrease was primarily due to a lower rate rider in effect during 2016 related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years.

As such, the year-over-year changes in revenue from rate riders were largely offset by changes in amortization expense related to regulatory balances.

Cash Flow from Operations

Cash flow provided by operating activities for 2016 was $1,705 million, compared to $1,465 million for 2015. The increase in cash flow provided by operating activities for 2016, compared to 2015, was primarily due to higher generation revenue receipts reflecting higher nuclear rate riders and higher nuclear generation in 2016. The increase in cash flow was also due to lower pension plan contributions in 2016 reflecting an updated actuarial valuation of the OPG registered pension plan. The increase in cash flow was partially offset by higher OM&A expenditures during 2016, compared to 2015, and the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to the period from January 1, 2015 to December 4, 2015. The rebate was made pursuant to a provision under the lease agreement for the Bruce nuclear generating stations. This provision was eliminated effective December 4, 2015 as part of the 2015 amendments to the lease agreement.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. The FFO Adjusted Interest Coverage was 5.1 times for 2016, compared to 5.0 times for 2015. The modest increase in the FFO Adjusted Interest Coverage in 2016 reflected an increase in FFO before interest for 2016, compared to 2015, as a result of the year-over-year increase in cash flow provided by operating activities.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for 2016 was 4.2 percent, compared to 4.0 percent for 2015. ROE Excluding AOCI increased for 2016, compared to 2015, primarily due to higher net income attributable to the Shareholder. OPG's ROE Excluding AOCI reflects regulated prices established by the OEB in 2014. These prices were lower than requested by OPG based on submitted forecast cost and production levels, which has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

ROE Excluding AOCI also reflects the relatively higher equity component in the Company's capital structure, compared to the deemed capital structure used by the OEB in determining OPG's regulated prices. The OEB establishes the allowed return on OPG's investment in regulated assets, which represent the majority of the Company's operations, using the OEB's generic prescribed rate of return and an OPG-specific deemed capital structure. In setting the regulated prices in 2014, the OEB applied a deemed capital structure of 45 percent equity and 55 percent debt. OPG's actual capital structure (excluding AOCI) contains approximately 65 percent equity. The higher equity component in OPG's actual capital structure, compared to the deemed capital structure applied by the OEB, results in a reduced actual ROE Excluding AOCI. In its application for new regulated prices filed with the OEB in May 2016, OPG is seeking an increase in the deemed capital structure to 49 percent equity and 51 percent debt. For further discussion on OPG's application, refer to the heading *Recent Developments* in the section *Highlights*.

Enterprise Total Generating Cost per MWh

The Enterprise Total Generating Cost (TGC) per MWh was $48.10 for the year ended December 31, 2016, compared to $50.46 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses, excluding the impact of regulatory variance and deferral accounts, and higher electricity generation as adjusted for foregone generation due to SBG conditions during 2016.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $62.30 for the year ended December 31, 2016, compared to $66.20 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses excluding the impact of regulatory variance and deferral accounts, and higher electricity generation during 2016.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $25.57 for the year ended December 31, 2016, which was comparable to $25.26 for the same period in 2015.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow from operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in

January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The unit is scheduled to be returned to service in the first quarter of 2020. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

In April 2016, the Federal Court of Appeal unanimously dismissed the request by certain intervenors for a judicial review of the 2013 Environmental Assessment (EA) decision for the Darlington Refurbishment project by the Canadian Nuclear Safety Commission (CNSC) and Fisheries and Oceans Canada. The EA decision had confirmed that, taking into account identified mitigation measures, the project was not likely to cause significant adverse environmental effects. In dismissing the appeal, the Federal Court of Appeal determined that there were no gaps in the EA, that there was nothing unreasonable about the discretionary determinations made by the responsible authorities, and that the intervenors' arguments were not borne out by the evidence. OPG was also awarded its costs of the appeal, as the successful party.

The Darlington Refurbishment project is discussed further under the heading, *Project Excellence* in the *Core Business, Strategy and Outlook* section.

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. For the first time since OPG's prescribed assets became subject to rate regulation, the new prices are expected to be determined on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. Rate-setting under incentive regulation is typically more formulaic and involves greater de-coupling of a regulated entity's allowed revenues or prices from its costs than under a cost-of-service rate-setting methodology.

For the hydroelectric facilities, OPG's May 2016 application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021 based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production.

The proposed nuclear revenue requirements reflect OPG's plans to pursue Pickering extended operations until 2024, as well as the projected impact of the scheduled return to service of the first refurbished Darlington unit in the first quarter of 2020. OPG is also seeking an increase in the deemed capital structure applied to its total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt applied by the OEB in setting the existing regulated prices.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG's application incorporates a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved nuclear revenue requirements in a deferral account for future collection, with a view of making more stable year-over-year changes in OPG's nuclear regulated prices for the period from January 1, 2017 to the end of the Darlington Refurbishment project. The regulation stipulates that the deferral account will record interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually, and that the OEB shall authorize recovery of the balance in the account on a straight line basis over a period not to exceed 10 years following the end of the Darlington Refurbishment project. OPG expects to recognize the deferred amounts as income in the period to which the approved revenue requirements relate.

OPG's application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the

Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment in 2016 through rate riders in effect to December 31, 2016. The application also requests the continuation of all applicable existing variance and deferral accounts. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed in the section *Critical Accounting Policies and Estimates,* under the heading, *Rate Regulated Accounting.*

In December 2016, the OEB issued an order granting OPG's request to declare the existing base regulated prices interim, effective January 1, 2017. This preserves the OEB's ability to make new regulated prices effective as early as January 1, 2017, which would allow OPG to recover the difference between the approved new regulated prices and the existing prices for the period between the effective date of the new regulated prices and their implementation date based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017, following a public proceeding. The public proceeding is in progress, with the oral hearing portion having commenced in February 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

In February 2017, the OEB approved a settlement agreement reached by OPG and intervenors on certain limited elements of OPG's application (Settlement Agreement). Among other elements, the Settlement Agreement accepts a number of year-end 2015 variance and deferral account balances totaling $419 million, allows for continuation of all applicable existing variance and deferral accounts, and confirms methodologies for calculating amounts to be recorded in most of the continuing accounts once new regulated prices take effect, as proposed by OPG. The balances of, and methodologies for recording future amounts in the Nuclear Liability Deferral Account, the Bruce Lease Net Revenues Variance Account and the Capacity Refurbishment Variance Account are excluded from the Settlement Agreement. The agreement also results in approval of OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017-2021 period. The Settlement Agreement does not impact OPG's 2016 financial results. **[MONITOR]**

OEB's Decision on OPG's December 2014 Motion

In January 2016, the OEB issued its decision on OPG's December 2014 motion asking the OEB to review and vary the parts of its November 2014 decision related to the disallowance of the Niagara Tunnel project expenditures, and the application of the 2013 regulatory tax loss to reduce the 2014/2015 revenue requirement. In its decision, the OEB reversed a portion of the original disallowance of the Niagara Tunnel project expenditures, and upheld the original tax loss decision. In the first quarter of 2016, OPG recorded a gain of $22 million to recognize the expected future recovery from customers of the portion of the disallowance reversed by the OEB's motion decision.

The original disallowance of the Niagara Tunnel project expenditures resulted in a write-off of $77 million that was charged to operations in 2014. The original tax loss decision resulted in a reduction of the 2014/2015 revenue requirement by approximately $70 million. As OPG's financial results have previously reflected the effect of the OEB's original tax loss decision, the motion decision on the tax loss did not impact OPG's 2016 financial results.

Ontario Nuclear Funds Agreement Reference Plan Update

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for nuclear waste management and nuclear facilities decommissioning as at December 31, 2016 was finalized as part of the required process to update the reference plan under the ONFA. As at December 31, 2016, the update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities with a corresponding decrease to the asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear facilities decommissioning at least once every five years, in line with the required ONFA reference plan update process.

The updated estimate of the obligations was reflected in a new ONFA reference plan, for years 2017 to 2021, which was approved by the Province in December 2016, effective January 1, 2017 (the 2017 ONFA Reference Plan). Based on the lower life cycle liability estimates per the 2017 ONFA Reference Plan, starting in 2017, OPG is not currently required to make overall contributions to the Used Fuel Segregated Fund or the Decommissioning Segregated Fund established under the ONFA. Prior to 2017, OPG made contributions to the Used Fuel Segregated Fund every year, including a one-time special payment in earlier years, as required by the ONFA. These contributions reflected ONFA requirements to fund the majority of the underlying used fuel liability by the end of the estimated useful lives of the nuclear stations in effect at OPG's inception in 1999, resulting in significantly higher contributions to the Used Fuel Segregated Fund in the earlier years of OPG's existence. OPG has not been required to make contributions to the Decommissioning Segregated Fund, which was fully funded at its inception and at the time of every subsequent approved ONFA reference plan. Contributions to either or both funds may be required in the future should the funds be in an underfunded position when a new reference plan is prepared. Such may be the case as a result of variability in asset performance due to volatility inherent in financial markets and Ontario CPI changes. Future contribution levels are also dependent on changes in cost estimates and planning assumptions used to establish the underlying obligations in subsequent ONFA reference plans.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of the new regulated prices. In accordance with *Ontario Regulation 53/05*, the OEB is required to ensure that OPG recovers the revenue requirement impact of its nuclear waste management and nuclear decommissioning liabilities arising from the current approved ONFA reference plan. For further discussion on the accounting for Nuclear Liabilities, refer to the section, *Critical Accounting Policies* under the heading, *Asset Retirement Obligation*.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the amount due to the Province. This accounting adjustment represented the overfunded position of Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 relative to the value of the corresponding present value life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province as OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and as any excess funding in the Nuclear Segregated Funds upon termination of the ONFA accrues to the Province. Of the $88 million reduction in Nuclear Segregated Funds earnings, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

For further discussion of the accounting for the Nuclear Segregated Funds, refer to the section, *Critical Accounting Policies* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*. For further discussion of OPG's risks with respect to nuclear waste management and nuclear decommissioning obligations and Nuclear Segregated Funds, refer to the section, *Risk Management* under the headings, *Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds* and *Financial Markets*.

Shareholder Declaration and Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that required the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. The assets are reported under the Services, Trading and Other Non-Generation segment. An active program to locate a buyer for these real estate assets was initiated in October 2016, and a purchase and sale agreement was executed in December 2016. The sale is expected to be completed during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be

recognized upon completion of the transaction. Pursuant to the December 2015 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer ~~a portion of the~~ proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario, an asset reported under the Services, Trading and Other Non-Generation segment. OPG is currently in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer ~~a portion of the~~ proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund.

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business.

Contract Award for Nanticoke Solar Facility

In March 2016, Nanticoke Solar LP, then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation, was selected through the first phase of the IESO's Large Renewable Procurement (LRP) program to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands in Haldimand County, Ontario. The LRP program was a competitive bidding process for procuring large renewable energy projects in Ontario. In March 2016, Nanticoke Solar LP and the IESO executed a 20-year LRP contract, which formalized the terms and conditions for the development and operation of the new solar facility. In the first quarter of 2017 **[MONITOR]**, OPG purchased SECCLP's interests in Nanticoke Solar LP and is working to obtain approvals and permits required to enable the commencement of construction planned for the first half of 2018.

The 20-year term of the LRP contract takes effect once the station achieves commercial operation, which is expected in the first quarter of 2019. For further discussion, refer to the section, *Core Business, Strategy and Outlook* under the heading, *Project Excellence*.

Decommissioning of the Lambton GS

In November 2016, the Company announced the decommissioning of the Lambton GS, which ceased coal-fired generation in 2013, as it was determined that continuing to preserve the station beyond 2016 for future conversion was no longer economically feasible. OPG is currently developing a decommissioning plan for the Lambton GS, which will ensure that the station is closed safely, securely, and in an environmentally responsible manner.

Canadian Nuclear Safety Commission Safety Rating for the Pickering GS and the Darlington GS

The CNSC publishes an annual report on the safety performance of Canada's nuclear power plants. The report assesses how well plant operators are meeting regulatory requirements and program expectations in the areas of operational performance, safety analysis, radiation protection, waste management and conventional health and safety. In its 2015 annual report, the CNSC gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". The Pickering GS received this rating for the first time, while the Darlington GS achieved the rating for the seventh year in a row.

Acquisition of Hydro One Limited Shares

In April 2016, OPG acquired nine million common shares of Hydro One Limited (Hydro One) at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. OPG paid the same price as other investors in the offering. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union (PWU) and The Society of Energy Professional (The Society) renewed in 2015. Changes to these agreements included increases to employee pension plan contributions and provisions for existing employees represented by the

PWU and The Society with eligibility to annually receive common shares of Hydro One for up to 15 years starting in the third year of the respective agreements, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service. The shares acquired in the April 2016 transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

CORE BUSINESS, STRATEGY AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

OPG's four key strategic imperatives are as follows:

- Operational Excellence
- Project Excellence
- Financial Strength
- Social Licence.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Workplace Safety and Public Safety

Workplace safety and public safety are fundamental core values at OPG. OPG is committed to operating all of its facilities in a safe, secure, and reliable manner that minimizes risks to a reasonably achievable level. Safety is an overriding priority in all activities performed at OPG's generating and other facilities, and all employees and contractors are expected to conduct themselves in manner that ensures workplace safety and public safety in line with the Company's safety culture.

In the area of workplace safety, OPG is committed to achieving excellent safety performance through continuous improvement and a strong safety culture, with the ultimate goal of zero injuries. OPG utilizes an integrated health and safety management system and set of operational risk control procedures to ensure continued monitoring of health and safety performance and to support continuous learning and improvement in this area. Overall, OPG's workplace safety performance has been one of the best amongst its comparator Canadian electrical utilities. In 2016, OPG received the Canadian Electricity Association (CEA) President's Gold Award recognizing three consecutive years, 2013 to 2015, of sustained top quartile safety performance within the comparator group.

Workplace safety performance is measured using two primary indicators at OPG, All Injury Rate (AIR) and Accident Severity Rate (ASR). OPG's AIR and ASR results for employee workplace safety were as follows for the year ended December 31:

	2016	2015
AIR *(injuries per 200,000 hours worked)*	**0.56**	0.39
ASR *(days lost per 200,000 hours)*	**2.59**	0.50

In 2016, OPG's AIR and ASR safety performance was worse than in 2015. OPG's analysis of the underlying events indicated that major contributors to the injuries and near misses included inadequate situational awareness and

attention to detail, and suboptimal risk-based decisions, rather than missing or inadequate standards or programs. OPG is implementing a number of initiatives to target the injury trends based on the analysis of the safety events, with a focus on the use of human performance tools including increased field supervisory oversight, situational awareness, communication, and procedural use and adherence.

In 2016, OPG launched an organization-wide "iCare Enough to Act" initiative aimed at renewing employees' commitment to their own and each other's safety and well-being. Plans to further strengthen safety as a foundational element of the Company's values-based culture are being developed through leadership forums and other engagement activities.

Contractors are required to conduct work safely at OPG sites. In support of this requirement, OPG utilizes an independent contractor pre-qualification process, provides on-site safety support for many of OPG's major projects, and works with contract partners to improve their health and safety programs to meet OPG's requirements. To further strengthen contractors' safety performance, in 2016, OPG updated its contractor's safety requirements and related governance, and implemented additional oversight and field monitoring to ensure ongoing compliance. In the past eight years, OPG has consistently shown a better than average Construction Contractor AIR as compared to the Health and Safety Association Contractor AIR, a metric of construction contractor safety performance across Ontario.

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for those individuals who live or work near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), which is an international unit of radiation dose measurement. For 2015, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.5 μSv and 1.2 μSv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000 μSv. While the public doses from OPG's nuclear operations for the 2016 operating year will not be finalized until the second quarter of 2017, they are not expected to differ significantly from the 2015 levels.

In June 2016 and August 2016, the CNSC released sampling results from its independent environmental monitoring program, which confirmed that the public and the environment around OPG's nuclear generating stations continued to be safe. Also in 2016, the CNSC published its 2015 annual report on the safety performance of Canada's nuclear power plants, which gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". For further details, refer to the CNSC safety rating discussion under the heading, *Recent Developments* in the *Highlights* section.

OPG remains committed to high standards of public safety on waterways around hydroelectric dams and generating stations. A Dam Safety Review Panel comprised of internationally recognized experts has previously concluded that OPG's dam and public safety program is comparable with international best practices in a number of areas related to maintaining safe dam operations. OPG continues to develop a new risk-informed approach on behalf of the Ontario Ministry of Natural Resources and Forestry (MNRF) to prioritize and manage risks identified through dam safety assessments. In 2016, OPG continued its water safety campaign with a series of public service announcements illustrating the danger of water near hydroelectric dams and hydroelectric generating stations.

Electricity Generation Production and Reliability

Key strategic initiatives in support of operational excellence, specific to each of OPG's core generating operations, are discussed below. Generation and reliability performance for 2016 is discussed by operating segment in the section, *Discussion of Operating Results by Business Segment*.

Nuclear Operations

OPG is pursuing a number of strategic initiatives aimed at the continued safe and reliable operation of the Pickering GS and targeting top performance at the Darlington GS.

OPG's nuclear operations are regularly benchmarked against top performing nuclear facilities around the world. This allows OPG to identify, develop and implement initiatives to further improve performance. During 2016, OPG participated in two World Association of Nuclear Operators (WANO) peer evaluations to compare its stations against standards of excellence through an in-depth, objective review by an international panel of industry experts. In May 2016, OPG hosted a WANO peer evaluation for the Darlington GS. The review maintained Darlington's excellent standing as one of the top performing nuclear plants in the world. In September 2016, OPG hosted a team of experts from the International Atomic Energy Agency at the Pickering GS to conduct a standard Operational Safety Review Team mission. The team conducted an in-depth review of performance and adherence to international safety standards. A report on the mission is expected to be released in the second quarter of 2017.

In January 2016, OPG announced its plan to pursue continued safe and reliable operation of the Pickering GS beyond 2020. OPG's objective is to maximize the operating life of the Pickering units. Under OPG's current plan, all six operating units at the station would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The Province announced its approval of OPG's plan to pursue continued operation of the Pickering GS beyond 2020 up to 2024 in January 2016. Extending operations at the Pickering GS will provide continued employment to approximately 3,000 regular employees at OPG, and will help reduce approximately 17 million tonnes of carbon dioxide emissions, which is the equivalent to removing 3.4 million cars from Ontario's roads.

As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will achieve the additional life necessary to operate to 2024. OPG is also conducting component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently established as the end of 2020, are expected to be reassessed when OPG's further technical work confirms the longer fuel channel life and the units' fitness to operate beyond 2020, taking into account the requirement for the CNSC's approval, discussed below.

OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. OPG has started work on the Pickering licence renewal application, which is expected to be filed in mid-2017 for the CNSC's approval in 2018. The requested licence renewal spans the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. A Periodic Safety Review and an Integrated Implementation Plan (IIP) for the station will be submitted to the CNSC as part of the application.

OPG strives to operate and maintain its nuclear facilities to optimize equipment, performance, availability and electricity generation, while improving the reliability and predictability of the fleet. Improved equipment reliability generally results in fewer generation interruptions. OPG continues to make investments in the performance of the Pickering GS, with a focus on improving plant reliability and maximizing the value of the asset through implementing equipment modifications and fuel handling reliability improvements, reducing equipment maintenance backlogs, and completing critical and high priority work.

Nuclear inspection and testing programs are largely driven by maintenance and regulatory requirements, and are designed to ensure that equipment is performing safely and reliably. Execution of this and other outage work continues to be a high priority. As part of its commitment to operational excellence, OPG continues to focus on improving the planning, execution, monitoring, and reporting of outage work.

Work continues to ensure the integration of life cycle management and refurbishment programs at the Darlington GS. This includes developing staffing strategies to support both ongoing station operations and the refurbishment project, planning and incorporating pre-requisite work for the refurbishment into the station's work schedule, and identifying life cycle and aging management work to sustain safe and reliable station operations for the next three decades.

OPG's longer-term efforts are aimed at positioning the Darlington GS for industry leading operating and cost performance.

Delivering solutions that provide the best combination of safety, cost and effectiveness, as well as establishing challenging financial targets based on comprehensive benchmarking continues to be a vital part of OPG's strategy to improve performance of the nuclear business unit. Financial and staffing targets continue to be reviewed and adjusted where necessary to reduce operating costs, while ensuring safety is not compromised.

In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications will be presented to the CNSC at a public hearing in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018.

Hydroelectric Operations

The objectives of OPG's hydroelectric operations include operating and maintaining the generating facilities in an efficient and cost-effective manner, while enhancing their reliability and availability. OPG continues to evaluate and implement plans to increase capacity, maintain and improve performance, and extend the operating life of its hydroelectric generating assets.

OPG's plans for its existing hydroelectric generating stations are accomplished through multi-year capital investment and other programs, including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers, and controls. The aim of OPG's runner replacement and upgrade program is to increase hydroelectric station capacity by leveraging efficiency enhancements in runner design. Where economical and practical, OPG pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations. Over the next three years, OPG plans to increase the total capacity of its hydroelectric generating fleet by approximately 135 MW, which, in addition to the runner replacement and upgrade program, includes the Peter Sutherland Sr. GS project and the Ranney Falls GS projects. Both of these projects are discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Project Excellence*. OPG is also planning to repair, rehabilitate, or replace a number of aging civil hydroelectric structures.

As part of its commitment to operational excellence, OPG continues to make investments in its existing hydroelectric generating fleet. During 2016, OPG continued to execute a number of projects, including:

- Completion of major equipment overhauls and rehabilitation work on Unit 5 of the Sir Adam Beck Pump GS, and Unit 2 of the Whitedog Falls GS
- Completion of a runner upgrade, headgate replacement and rehabilitation of Unit 2 of the Harmon GS
- Completion of headgate replacement at Units 1 and 2 of the Kipling GS
- Completion of concrete rehabilitation of the main dam at Chats Falls GS
- Continued work on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 5 of the DeCew Falls 1 GS, Unit 1 of the Harmon GS, and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.

OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS. **[MONITOR]**

Thermal Operations

OPG's thermal operations consist of biomass-fuelled generating units at each of Atikokan GS and Thunder Bay GS, and the oil/gas dual-fuelled Lennox GS.

These stations, which operate as peaking facilities, provide Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements and enable the system to accommodate the expansion of Ontario's renewable generation portfolio. The continued operation of these stations during the initial years of the refurbishment of the Darlington GS and Bruce nuclear facilities is expected to provide Ontario with over 2,000 MW of peaking generation.

During the third quarter of 2016, the Atikokan and Thunder Bay generating stations provided renewable generation when called upon to meet system requirements while utility maintenance was being conducted on a local transformer station. As a result of utility maintenance, the Atikokan GS operated continuously from late July 2016 to early September 2016, while the Thunder Bay GS operated as needed. To meet the increased demand for biomass fuels at Atikokan GS, OPG coordinated the acceleration of biomass fuel deliveries with suppliers while continuing to operate the plant safely.

As part of OPG's ongoing strategy to reduce costs and increase efficiency, the operations of the Company's hydroelectric and thermal assets have been combined into one organization. OPG continues to evaluate opportunities to consolidate departments within the stations and across regions.

Thermal stations that are no longer available to generate electricity are included in the Services, Trading and Other Non-Generation segment once they are removed from service. This includes the Lambton GS and Nanticoke GS sites, which ceased coal-fired generation in 2013. In 2015, OPG announced the decommissioning of the Nanticoke GS, as it could not commercially support continued preservation costs.

In November 2016, OPG announced the decommissioning of the Lambton GS, as further discussed in the section, *Highlights* under the heading, *Recent Developments*. OPG is currently developing decommissioning plans for the Lambton and Nanticoke generating stations, which will ensure that they are closed safely, securely and in an environmentally responsible manner. The decommissioning plan for the Nanticoke GS will accommodate the construction and operation of the Nanticoke solar facility. The costs of decommissioning the stations will be charged to a previously established decommissioning provision. OPG expects to review the decommissioning provision estimates for these sites in 2017.

Environmental Performance

OPG's Environmental Policy states that "OPG shall meet all legal requirements and any environmental commitments that it makes, with the objective of exceeding these legal requirements where it makes business sense". This policy commits OPG to:

- establish and maintain an environmental management system (EMS)
- work to prevent or mitigate adverse effects on the environment with a long-term objective of continual improvement
- manage sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern.

In 2016, OPG maintained the ISO 14001 registration of its company-wide EMS. Within the EMS, OPG has planning, operational control, and monitoring programs to manage the Company's positive and negative impacts on the environment. Significant environmental aspects of OPG's operations include: spills, chemical and thermal emissions to water, water flow and level changes, radioactive emissions, low and intermediate level radioactive waste (L&ILW), wildlife habitat, displacement of fossil fuels, and fish impingement and entrainment. Further details regarding OPG's environmental risks can be found in the section, *Risk Management* under the heading, *Environmental Risk*.

Environmental performance targets are set as part of the annual business planning process. OPG met or outperformed its 2016 targets for spills, environmental infractions, and carbon-14 emissions to air. An increase in the volume of waste generated from work activities at the Darlington GS and preparation for the Darlington Refurbishment project led to a higher than expected volume of L&ILW produced in 2016. Performance for tritium

emissions to air and water during 2016 remained less than one percent of the regulatory limit. There were no significant environmental events during 2016.

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. The program requirements are expected to result in increased fuel costs for some OPG-owned and co-owned generating facilities. Fuel costs for these stations are generally recovered from the electricity market. With OPG's low GHG emitting fleet, the program is not expected to have a material adverse financial impact on the Company. OPG has established the necessary processes to comply with the cap and trade program requirements.

OPG is monitoring actions being taken by the Government of Ontario and the Government of Canada to reduce GHG emission levels and transition to a low-carbon economy. In support of efforts to mitigate climate change, the Company continues to evaluate and implement plans to increase the generation capacity of its hydroelectric generating fleet, where economic, and invest in other low-carbon technologies.

OPG communicates its environmental performance internally to employees and to external stakeholders, including the Ontario Ministry of the Environment and Climate Change, Environment and Climate Change Canada, the CNSC, and local communities. Details of OPG's environmental performance and initiatives to fulfill the Company's Environmental Policy can be found in OPG's 2015 Sustainability Report, available on the Company's website at www.opg.com.

Improving Efficiency and Reducing Costs

As part of its commitment to operational excellence, OPG remains focused on reducing costs by pursuing efficiency and productivity improvements across operating business units and support functions, while ensuring that there is no adverse impact on the safety, reliability and environmental sustainability of the Company's operations. This includes streamlining of processes, simplifying governance, upgrading information technology, optimizing service delivery models, and, where appropriate, leveraging attrition to achieve human resource targets aligned with business requirements. Initiatives to improve cost performance and organizational capability are being implemented at the enterprise and business unit level.

To drive efficiency and performance improvement, the Company continues to leverage a more scalable, centre-led organizational model. In 2016, the reduction in OPG's regular headcount from ongoing operations, since the beginning of 2011, reached over 2,800. Improving organizational performance and building on these efficiency gains remains a key priority for the Company. OPG continues to review its cost structure, identify cost improvement strategies and embed an outcomes-driven culture that reinforces low cost, efficiency, and organizational agility as part of business decision-making. In order to enhance the overall focus on productivity, in 2016 OPG adopted Enterprise TGC per MWh as a measure of OPG's overall organizational cost performance and Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets, in addition to the existing Nuclear TGC per MWh measure. Further details regarding these measures are included in the sections, *Highlights, Key Operating and Financial Performance Indicators* and *Supplemental Non-GAAP Measures*.

People and Culture

A well trained and engaged workforce is fundamental to the achievement of OPG's strategic imperatives. To succeed in a demanding business environment, OPG is focused on building a diverse, healthy, engaged workforce and fostering a culture of collaboration, accountability and innovation. OPG also continues to communicate and

implement the values and behaviours expected from its employees in order to maintain a strong focus on safety, performance excellence, continuous improvement, and corporate citizenship.

The Company continues to focus on improving the capability of its workforce through leadership development, knowledge management, diversity and inclusion programs, and hiring in key areas. Ability to secure the right talent mix in order to effectively meet the Company's immediate and longer term business needs on a timely basis is supported through workforce planning, resourcing and on-boarding strategies, both to acquire external talent into the organization and to develop existing employees. The goal of workforce planning and resourcing strategies is to ensure that the Company's workforce is diverse and has the right skill set and capability for the safe and effective operation of the generating facilities and successful delivery of major projects, including the refurbishment of the Darlington GS. These strategies are being designed to take into account anticipated staffing requirements to the end of planned commercial operations of the Pickering GS, through to the end of the planned period to de-fuel, de-water and place the station in a safe state condition.

As part of the strategy to develop and engage employees and to build leadership talent, the Company has an active succession planning program with a focus on accelerating development. OPG also has a talent management monitoring process to proactively assess staffing risks, challenges and opportunities. Since 2015, OPG offers a company-wide high-potential leadership development program to qualified internal candidates. This 18-month cross-functional, competitive-entry program is designed to identify and develop candidates for future leadership positions while they are still relatively early in their career.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification. In addition to maintaining its internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners and educational institutions to meet the required level of qualification. Training delivery models are evaluated for effectiveness and efficiency.

Effective January 1, 2017, OPG implemented a new Executive Compensation Program that is compliant with *Ontario Regulation 304/16: Executive Compensation Framework*, introduced in September 2016. The regulation sets out how all employers designated under the *Broader Public Sector Executive Compensation Act, 2014*, including OPG, must establish and post compensation programs for executives. The program must include the compensation philosophy, salary and performance-related pay caps, comparative analysis details, and a description of other elements of compensation. OPG's new Executive Compensation Program, which applies to employees at the Vice President level and higher, is designed to provide compensation that is at the 50th percentile of the market and focused on at-risk, performance based pay. The program will better enable OPG to attract, align and retain the executive talent critical to delivering Shareholder and customer value, while ensuring continued safe and reliable operations.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. OPG also continues to plan and execute maintenance and capital improvement projects related to its existing assets. OPG strives for excellence in the planning and delivery of all projects across the Company.

OPG's vision for project excellence is to be an industry leader in project management capability and performance. As part of its commitment to project excellence, OPG continues to enhance and streamline its approach to project planning and execution, with the goal of delivering all projects safely, on time, on budget, and with high quality. Achieving project excellence at OPG involves, among other things, putting in place a common, scalable project delivery model across all business units, establishing qualified project management teams, optimizing contracting strategies, engaging qualified and experienced vendors, and effectively monitoring and controlling performance. The status updates for OPG's major projects as of December 31, 2016 are outlined below.

Project	Capital	Approved	Expected

(millions of dollars)	expenditures Year-to-date	Life-to-date	budget	in-service date	Current status
Darlington Refurbishment	1,019	3,185	12,800 [1]	First unit - 2020 Last unit - 2026	The refurbishment of Unit 2 commenced in October 2016, as planned. De-fueling of Unit 2, the first critical path activity, was completed in January 2017, ahead of schedule. The project is tracking on budget. See update below.
Peter Sutherland Sr. Hydroelectric GS	141	236	300	2017	Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, ahead of the originally planned schedule. **[MONITOR]** See update below.
Sir Adam Beck Pump GS Reservoir Refurbishment	39	46	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget. See update below.
Ranney Falls Hydroelectric GS	2	3	77 **[MONITOR]**	2019	Project design work was completed in 2016 and construction is expected to commence in 2017. See update below. **[MONITOR]**
Nanticoke Solar Facility	1	1			Project definition work is in progress and construction is planned to commence in the first half of 2018. See update below.
Deep Geologic Repository for L&ILW	9 [2]	195 [2]			OPG has completed the additional studies required by the Canadian Environmental Assessment Agency (CEAA) and the federal Minister of Environment and Climate Change and submitted this information in December 2016. See update below.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the Darlington GS by approximately 30 years. The Darlington Refurbishment project is a multi-phase program comprising the following five major sub-projects:

- **Retube and Feeder Replacement (RFR)**, which includes the removal and replacement of fuel channel assemblies and feeder tubes in each reactor

- **Turbines and Generators**, which consists of inspections and repairs of turbine generator sets and the replacement of analog control systems with digital control systems
- **De-fuelling and Fuel Handling**, which involves the de-fuelling of the reactors and the refurbishment of the fuel handling equipment
- **Steam Generators**, which includes mechanical cleaning, water lancing, and inspection and maintenance work on the generators
- **Balance of Plant**, which consists of work on smaller projects to replace or repair certain other station components.

In January 2016, the Government of Ontario's support for the Darlington Refurbishment project was affirmed through the Ontario Minister of Energy's announcement endorsing OPG's plan to refurbish the four Darlington units at a total project budget of $12.8 billion, including capitalized interest and escalation. The Province's announcement followed the approval of the project budget and schedule by OPG's Board of Directors in November 2015. The refurbishment of the last unit is scheduled to be completed by 2026. OPG's current operating licence for the Darlington GS spans most of the planned duration of the Darlington Refurbishment project, expiring in November 2025.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget with de-fuelling, the first critical path activity, completed ahead of schedule.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. *Ontario Regulation 53/05* requires the OEB to accept the need for the Darlington Refurbishment project in light of Ontario's 2013 Long-Term Energy Plan (LTEP) and the related policy of the Province endorsing the need for nuclear refurbishment. It also requires the OEB to ensure that OPG recovers capital and non-capital costs and firm financial commitments in respect of the Darlington Refurbishment project, if the OEB is satisfied that the costs were prudently incurred and that the firm financial commitments were prudently made.

A number of pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, in support of the execution phase of the project have been completed, with the remaining projects continuing to track for completion in line with the refurbishment execution schedule.

All major contracts for the Darlington Refurbishment project that OPG expected to award were in place prior to proceeding with the Unit 2 refurbishment. This included the RFR execution phase contract awarded in January 2016 and valued at approximately $2.75 billion for work to be executed on all four units. All of the major contracts contain suspension and termination provisions.

Other key activities related to the project in 2016 included the following:

- Fabrication of the major reactor components including fuel channels and feeder tubes is in progress, with the first set of feeder tubes delivered in the fourth quarter of 2016. The remaining components have planned deliveries tracking in line with the project schedule.
- The specialized tooling for removal and replacement of feeder tubes and fuel channel assemblies in each reactor was delivered to OPG's reactor training and mock-up facility in the second quarter of 2016, as planned, and testing of the tooling has been completed.

- All 28 storage tanks have been installed in the Heavy Water Storage and Drum Handling Facility, which will provide storage and processing capability for the removal of heavy water from the units during refurbishment, as well as for continued station operations.
- The RFR Island Support Annex was completed in February 2016. The facility houses RFR field preparatory, contractor management, and project oversight activities.

In addition to the de-fuelling of the Unit 2 reactor completed in January 2017, milestones for the Darlington Refurbishment project in 2017 include:

- Completion of reactor vault preparation activities to support RFR work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Third Emergency Power Generator and Containment Filtered Venting System safety enhancement projects, which were originally scheduled to be placed in-service in 2016. Remediation measures are in progress and OPG expects both projects to be placed in-service during the first quarter of 2017. These delays will not impact the overall Darlington Refurbishment project schedule, as neither of the two projects is on the critical path.
- Completion of the Re-tube Waste Processing Building and the Heavy Water Storage and Drum Handling Facility.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of the second unit, Unit 3, at the Darlington GS and is entering into associated commitments to procure major components that require long-lead times. As of December 31, 2016, $31 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Peter Sutherland Sr. Hydroelectric GS

The project to construct the 28 MW Peter Sutherland Sr. hydroelectric GS is in the process of testing and commissioning the turbine and generator units, as well as operator training and document turnover. Work also continues on demobilization efforts, as well as site reclamation. Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. **[MONITOR]** The project is tracking within the approved budget of $300 million.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The construction work on the project included installation of a partial new liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

During 2016, OPG completed project design work for the construction of an additional 10 MW single-unit powerhouse on the existing Ranney Falls GS site. The new unit will replace an existing unit that reached its end of life in 2014. Capital expenditures for project definition work completed as of December 31, 2016 were $3 million. OPG plans to commence construction work in 2017, with an expected in-service date in the fourth quarter of 2019 and a budget of $77 million. **[MONITOR]**

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS and adjacent lands is planned to commence in the first half of 2018. It is expected to be completed in early 2019. Capital expenditures for project definition work completed as of December 31, 2016 were $1 million.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In August 2015, OPG responded to the CEAA's list of potential environmental conditions relating to the JRP report. In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and the impact on environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization (NWMO) were located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following a review by the CEAA and a period of public comment, an EA Decision Statement by the Minister is expected by the third quarter of 2017. Based on the information submitted to the Minister, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

In 2013, OPG suspended design activities on the project pending receipt of a site preparation and construction licence. If the decision on the EA is positive, the licensing process will resume. Upon receipt of the site preparation and construction licence, OPG will complete detailed design and development of a project schedule and a budget. In parallel, OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The approval of OPG's Board of Directors must also be obtained in order to proceed with construction. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

New Nuclear Units

The 2013 LTEP also indicated that the Ontario Ministry of Energy would work with OPG to maintain the site preparation licence granted by the CNSC in relation to the potential construction of these reactors. As such, OPG has been undertaking activities required to support the CNSC Power Reactor Site Preparation Licence and the

Darlington New Nuclear Project EA. The JRP Report on the EA had concluded that the project was not likely to cause significant adverse environmental effects, given mitigation. In April 2016, the Supreme Court of Canada dismissed the application for leave to appeal filed by the parties that had challenged the Darlington New Nuclear Project EA through a judicial review, concluding the litigation on the matter. The CNSC site preparation licence expires in 2022.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth. Inherent in this priority are three objectives:

- Increase revenue, reduce costs and achieve appropriate return
- Ensure availability of cost effective funding for operational needs, generation development projects and long-term obligations
- Pursue opportunities to expand the existing core business and capitalize on new growth paths.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In line with its commercial mandate, OPG is focused on increasing revenue and achieving an appropriate rate of return on the Shareholder's investment, while taking into account the impact on Ontario electricity customers.

In order to achieve the above objectives with respect to the regulated operations, OPG is focused on clearly demonstrating in its rate applications to the OEB that the costs required to operate and invest in the assets are reasonable and being prudently incurred, and should be fully recovered, and that the Shareholder's investment in these assets should earn an appropriate rate of return. OPG's existing base regulated prices, which came into effect in November 2014, were lower than requested by OPG based on its forecast costs. This has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

To improve the financial strength of the regulated operations going forward, OPG has been focused on providing appropriate, transparent evidence in support of its OEB rate requests, aligning organizational resources to support an effective rate application process, and continuing to identify opportunities for further efficiencies in the Company's cost structure. To date, OPG's focus on cost reduction and efficiency improvement initiatives has resulted in significant changes across the Company. This includes over $1 billion in cumulative savings realized across the Company since the beginning of 2011 from reductions in ongoing operations regular headcount through Business Transformation and other initiatives. OPG's cost and productivity improvement efforts are discussed further under the heading, *Operational Excellence*.

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. The OEB's decision on the application, including the effective date of the approved new regulated prices, is expected in the second half of 2017. Consistent with *Ontario Regulation 53/05*, OPG incorporated a nuclear rate smoothing proposal into its application, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impact on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the deemed capital structure applied to the regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent

debt. If approved, this would improve OPG's return on Shareholder's investment. Further details on OPG's rate application can be found under the heading, *Recent Developments* in the *Highlights* section.

For generation development projects that do not form a part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements prior to proceeding with the project. In line with this strategy, most of OPG's non-regulated operating facilities and assets under construction are subject to ESAs with the IESO. Based on these agreements, OPG expects its non-regulated generation operations, reported under the Contracted Generation Portfolio segment, to continue to provide a generally stable level of earnings and cash flow going forward.

OPG's capital structure currently reflects lower levels of debt than the deemed capital structure reflected in the Company's existing or proposed regulated prices. OPG is evaluating strategies to enhance Shareholder returns by optimizing the Company's capital structure through better alignment with the deemed capital structure, taking into account the overall financial strength of the Company and the potential impact on the Company's investment grade credit rating.

Ensure Availability of Cost Effective Funding

OPG actively monitors its funding requirements and forecasts availability of funds to ensure that it can meet the Company's operational needs, project commitments and long-term obligations. OPG utilizes multiple sources of funds, including funds from operations, commercial paper, securitization of assets, letters of credit, credit facilities, long-term corporate debt, and private placement project financing. The Company's financing strategy leverages the strength of its balance sheet to obtain cost effective long-term corporate debt. OPG also accesses the capital markets for private placement project financing, secured by the assets of the project, where the characteristics of the project support such financing. Maintaining an investment grade credit rating is critical to OPG's ability to access cost effective financing.

In April 2016, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2016, S&P Global Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

OPG intends to continue to access the capital markets, where appropriate, to obtain cost effective financing for future generation development projects. The Company also continues to evaluate arrangements that would appropriately support its financing needs and capital expenditure programs. OPG's liquidity and capital resources are discussed under the section, *Liquidity and Capital Resources.*

Pursue Business Growth Opportunities

OPG pursues commercially-based business growth opportunities through investments in its core generation portfolio, as well as emerging renewable energy project opportunities. OPG's growth strategy considers the Company's financial position and anticipated future changes in the generating fleet, including the eventual end of Pickering commercial operations. The growth strategy is also informed by industry, technological, environmental, social, and economic external factors. Growth opportunities are evaluated using financial and risk-based analyses as well as strategic considerations.

OPG's core business growth strategy focuses on the renewal and expansion of the Company's generation portfolio of nuclear, hydroelectric and thermal generating assets in Ontario, including the redevelopment and expansion of existing sites and potential new developments. The strategy leverages OPG's operating and project development expertise as well as the Company's existing diverse physical asset base. OPG considers acquisition opportunities as they arise, taking into account operating synergies, strategic benefits, financial returns and risk profile. OPG's current major generation development projects and asset life extension initiatives are discussed under the headings, *Operational Excellence* and *Project Excellence* in the *Core Business and Strategy* section.

OPG seeks to continue to expand beyond its core generation business through investments in innovation and emergent low-carbon technologies, including selective solar generation, energy storage, micro-grid, electric vehicle infrastructure and other development. OPG is also considering longer-term growth paths that include broader electricity sector opportunities, within and outside Ontario. Growth opportunities may be pursued in partnership with other commercial entities where appropriate synergies exist and are aligned with OPG's business objectives.

In March 2016, Nanticoke Solar LP was selected, through the first phase of the IESO's LRP program, to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. The partnership and the IESO executed a 20-year LRP contract in March 2016, which formalized the terms and conditions for the development and operation of the new solar facility. In September 2016, the Government of Ontario suspended the second phase of the LRP program, which does not impact the project.

From October 2016 to December 2016, the Government of Ontario conducted a consultation process to update its LTEP. OPG made a formal submission as part of the consultation as it relates to OPG's core generation business and growth opportunities. The Ontario Ministry of Energy has indicated that the development of the updated LTEP, scheduled to be published in 2017, will balance the principles of affordability, reliability, clean energy, community and Indigenous engagement, as well as conservation and demand management. OPG's business growth opportunities may be affected by the results of the 2017 LTEP.

Social Licence

As the largest, publicly-owned electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations. OPG's commitment to safety is discussed under the heading, *Workplace and Public Safety* in the *Core Business and Strategy* section.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish relationships with Indigenous communities based on a foundation of respect for their languages, customs, and political, social and cultural organizations. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, and other joint projects. Recent examples of partnerships include the Peter Sutherland Sr. GS in partnership with the Taykwa Tagamou Nation, the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River, and two recently completed shoreline remediation projects. The Whitesand First Nation, working closely with OPG, completed a project to remediate nearly two kilometers of shoreline in 2016, while the Long Lake #58 First Nation undertook the management of a five-year shoreline remediation project. OPG also has been engaging proactively with Indigenous communities regarding the Company's nuclear operations, including both regularly scheduled meetings and an outreach effort in connection with OPG's proposed L&ILW DGR and the re-licensing of the PWMF and the WWMF. In November 2016, OPG was recognized for its ongoing commitment to engaging local Indigenous communities with the CEA's 2016 Sustainable Electricity award for Leadership in External Collaboration and Partnerships.

OPG is committed to being an open, transparent, and accountable company. With operations across Ontario, OPG works to maintain public trust with stakeholders by engaging site communities, sharing information, and being transparent about performance. In addition, OPG's operations are subject to extensive regulatory oversight, with public participation, by the CNSC, the OEB, and other bodies.

As part of its commitment to environmental sustainability, OPG works with community partners to support regional ecosystems and biodiversity. In 2016, OPG continued efforts to protect and restore habitat, promote biodiversity education and awareness, and help the recovery of species at risk. In addition, OPG helps contributes to the well-being of its host communities through the Company's Corporate Citizenship Program (CCP), which supports

charitable and non-profit grassroots initiatives in the areas of environment, education, and community, which includes support for including Indigenous initiatives. In 2016, OPG's CCP provided support to over 850 initiatives, of which 87 were Indigenous.

Further details regarding OPG's commitment to sustainable development, including information regarding the Company's environmental, social and economic performance and initiatives, are provided in OPG's 2015 Sustainability Report available on the Company's website at www.opg.com.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of revenue requirement and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's application for new base regulated prices submitted to the OEB in May 2016 is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its May 2016 application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

Until the OEB's decision on OPG's application is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In large part, this is due to the expected year-over-year reduction in nuclear electricity generation resulting from the full year effect of the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined based on a production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision's issuance could have a significant impact on OPG's financial results during 2017. The application for new regulated prices is further discussed in the *Highlights* section under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. Combined with the expiry of rate riders in effect during 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment, as expected, OPG anticipates this to result in lower cash flow from operations and lower Adjusted FFO Interest Coverage ratio in 2017, compared to 2016. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements. In addition, the expected reduction in nuclear generation as a result of the planned outages at Darlington GS is expected to negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Other factors that may impact the Enterprise TGC include potential hydroelectric generation losses due to surplus baseload generation conditions and planned capital expenditures.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, variance accounts include those related to the revenue impact of variability in water flows and SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Pursuant to the Settlement Agreement, these and all other applicable existing variance and deferral accounts have been approved to continue once new regulated prices take effect. Considering the impacts of these accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. **[MONITOR]**

OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to ESAs with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major development projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI, which, in the short term, can be volatile and cause fluctuations in the Company's income. This volatility has been partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account. OPG is exposed to rate of return risk for the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodologies for the Nuclear Liabilities.

As OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value life cycle liabilities per the most recently approved ONFA reference plan, the volatility of earnings on the Nuclear Segregated Funds reflected in net income is reduced when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at December 31, 2016, the Decommissioning Segregated Fund was overfunded by 21 percent, and the Used Fuel Segregated Fund was marginally overfunded by less than one percent, relative to the liabilities per the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future, which would increase earnings volatility. The 2017 ONFA Reference Plan is discussed in the *Highlights* section, under the heading *Recent Developments.* The accounting for the Nuclear Segregated Funds is discussed in the section *Critical Accounting Policies*, under the heading *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

KEY OPERATING AND FINANCIAL PERFORMANCE INDICATORS

OPG evaluates the performance of its generating stations using a number of key indicators. Key operating performance indicators aligned with corporate strategic imperatives are measures of production reliability, cost effectiveness, environmental performance, and safety performance. Certain of the measures used vary depending on the generating technology. The key financial performance indicators evaluate the Company's financial performance at the enterprise level.

In 2016, OPG adopted Enterprise TGC per MWh as an enterprise-wide measure of operational cost effectiveness. Concurrently, OPG adopted Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets and no longer reports Hydroelectric OM&A expense per MWh. The new performance measures, together with Nuclear TGC per MWh, provide the Company with a single, consistent method of evaluating cost effectiveness across the organization.

Enterprise TGC, Nuclear TGC, Hydroelectric TGC, ROE Excluding AOCI, and the FFO Adjusted Interest Coverage ratio discussed below are not measurements in accordance with US GAAP. They should not be considered as alternative measures to net income or any other measure of performance under US GAAP. However, OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the

Company's strategic imperatives and related objectives. The definition and calculation of Enterprise TGC per MWh, Nuclear TGC per MWh, Hydroelectric TGC per MWh, ROE Excluding AOCI and FFO Adjusted Interest Coverage are found in the section, *Supplementary Non-GAAP Financial Measures*.

Enterprise Total Generating Cost per MWh

Enterprise TGC per MWh is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Nuclear Total Generating Cost per MWh

Nuclear TGC per MWh is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts and expenses ancillary to OPG's nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Hydroelectric Total Generating Cost per MWh

Hydroelectric TGC per MWh is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Nuclear Unit Capability Factor

OPG's nuclear stations are baseload facilities and are not designed for fluctuating production levels to meet peaking demand. The nuclear Unit Capability Factor is a key measure of nuclear station performance. It measures the amount of energy that the unit(s) generated over a period of time, adjusted for externally imposed constraints such as transmission or demand limitations, as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. Capability factors are primarily affected by planned and unplanned outages. By industry definition, capability factors exclude production losses beyond plant management's control, such as grid-related unavailability. The nuclear Unit Capability Factor also excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS is excluded from the measure effective October 15, 2016, when the unit was taken offline as part of the Darlington Refurbishment project.

Hydroelectric Availability

OPG's hydroelectric stations operate as baseload, intermediate, or peaking stations. Hydroelectric Availability is a measure of the reliability of a hydroelectric generating unit. It represents the percentage of time the generating unit is capable of providing service, whether or not it is actually generating electricity, compared to the total time for the respective period.

Thermal Equivalent Forced Outage Rate

Equivalent Forced Outage Rate (EFOR) is an index of the reliability of a generating unit at OPG's thermal stations. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its objective to deliver value to the Shareholder. ROE Excluding AOCI is defined as net income attributable to the Shareholder for the period divided by average equity attributable to the Shareholder excluding AOCI for that period, and is measured over a period of 12 months.

Funds from Operations Adjusted Interest Coverage

The FFO Adjusted Interest Coverage ratio is an indicator of OPG's ability to meet interest obligations from operating cash flow and is consistent with the Company's objective of ensuring availability of cost effective funding. The FFO Adjusted Interest Coverage ratio is defined as FFO before interest divided by adjusted interest expense, and is measured over a period of 12 months.

Other Key Indicators

In addition to production reliability, cost effectiveness, and financial performance indicators, OPG has identified certain environmental and safety performance measures. These measures are discussed under the section, *Core Business, Strategy and Outlook*.

BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary

services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power and other facilities, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to the passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel L&ILW, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Power lease arrangement and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because OPG's costs associated with the Nuclear Liabilities have been included by the OEB in the determination of regulated prices for production from the Pickering and Darlington nuclear generating stations, in accordance with the methodologies applied since the OEB's 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. Brighton Beach operates under an energy conversion agreement between Brighton Beach and Shell Energy North America (Canada) Inc, and the PEC station is operated under the terms of an Accelerated Clean Energy Supply contract with the IESO. OPG's share of the in-service

generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of trading activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the United States (US) market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets, with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and preservation costs related to the Lambton and Nanticoke generating stations' sites.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**3,481**	3,245
Fuel expense	**315**	301
Gross margin	**3,166**	2,944
Operations, maintenance and administration	**2,210**	2,196
Depreciation and amortization	**925**	717
Property taxes	**26**	26
Income before other loss, interest, and income taxes	**5**	5
Other loss	**1**	3
Income before interest and income taxes	**4**	2

Income before interest and income taxes from the segment increased to $4 million in 2016, compared to $2 million in 2015. The improvement in earnings of $2 million was primarily due to higher electricity generation in 2016, compared to 2015, which increased revenue from the nuclear base regulated price. The increase in revenue was largely offset by higher OM&A expenses, higher fuel expense, and higher depreciation and amortization expense, excluding amortization expense related to regulatory balances, in 2016, compared to 2015.

Higher nuclear production of 1.1 TWh in 2016, compared to 2015, was primarily due to the planned four-unit VBO in 2015 and a decrease in the number of unplanned outages at the Darlington GS in 2016. This was partially offset by the impact of the increased number of unplanned outage days at the Pickering GS in 2016, and the removal from service of Unit 2 of the Darlington GS in October 2016 as part of the Darlington Refurbishment project.

The increase in OM&A expenses of $14 million in 2016 reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium prices and

higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory balances, increased by $12 million primarily due to new assets in service in 2016.

A decrease in non-electricity generation revenue in 2016, compared to 2015, also partially offset the increase in segment earnings. The lower non-electricity generation revenue was mainly attributable to lower detritiation services revenue and lower isotope sales in 2016 and an insurance recovery recognized in 2015.

A higher OEB-authorized rate rider of $10.84/MWh effective from July 1, 2015 to the end of 2016 contributed to the increase in segment revenue in 2016, compared to 2015. In the first half of 2015, OPG received a rate rider of $1.33/MWh. As the rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this increase in revenue was largely offset by an increase in amortization expense related to the regulatory balances.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2016 and 2015 were as follows:

	2016	2015
Unit Capability Factor *(%)* [1]		
Darlington GS	**89.5**	76.9
Pickering GS	**75.2**	79.4

[1] The nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS increased in 2016, compared to 2015, primarily due to the four-unit VBO completed during 2015. In addition, a lower number of unplanned outage days at the Darlington GS during 2016, compared to 2015, also contributed to the improvement in the Unit Capability Factor.

The decrease in the Unit Capability Factor at the Pickering GS in 2016, compared to 2015, was primarily due to a higher number of unplanned outage days at the station in 2016, as a result of emergent discovery work during planned outages.

The definition of the nuclear Unit Capability Factor is found under the heading, *Key Operating and Financial Performance Indicators.*

Regulated – Nuclear Waste Management Segment

	2016	2015
Revenue	**138**	122
Operations, maintenance and administration	**146**	132
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**912**	880
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Loss before interest and income taxes	**(174)**	(186)

Earnings from the segment improved by $12 million in 2016 compared to 2015. The improvement was primarily due to higher earnings from the Nuclear Segregated Funds, partially offset by an increase in accretion expense on the Nuclear Liabilities.

The improvement in Nuclear Segregated Funds earnings was primarily due to an increase in the Used Fuel Segregated Fund earnings due to higher CPI-adjusted rate of return guaranteed by the Province for funding related to the initial 2.23 million used fuel bundles. Pursuant to the ONFA, the guaranteed annual rate of return for that portion of the Used Fuel Segregated Fund is set at 3.25 percent plus the change in the Ontario CPI. This increase in

Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying obligations reflected in the 2017 ONFA Reference Plan. The 2017 ONFA Reference Plan was approved by the Province in December 2016, and is discussed in the section, *Highlights* under the heading, *Recent Developments*. The accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section. The Nuclear Segregated Funds earnings are reported net of the impact of the Bruce Lease Net Revenue Variance Account.

The higher accretion expense on the Nuclear Liabilities during 2016, compared to 2015, reflected an upward adjustment in the liabilities recognized in December 2015 related to the revised accounting assumptions for the estimated useful lives of OPG's nuclear generating stations. The increased accretion expense was partially offset by the impact of the Bruce Lease Net Revenues Variance Account. The changes in the assumed estimated useful lives of the nuclear stations and the related adjustment to Nuclear Liabilities are discussed further in the section, *Balance Sheet Highlights* under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account*.

Regulated – Hydroelectric Segment

(millions of dollars)	**2016**	**2015**
Revenue [1]	**1,527**	1,619
Fuel expense	**353**	345
Gross margin	**1,174**	1,274
Operations, maintenance and administration	**325**	340
Depreciation and amortization	**225**	282
Property tax	**1**	1
Income before other (income) loss, interest and income taxes	**623**	651
Other (income) loss	**(19)**	3
Income before interest and income taxes	**642**	648

[1] During 2016 and 2015, the Regulated – Hydroelectric segment revenue included incentive payments of $14 million and $26 million, respectively, related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $6 million in 2016, compared to 2015, was primarily due to lower hydroelectric incentive mechanism payments and the income impact of OEB-approved variance accounts. The lower payments under the hydroelectric incentive mechanism were primarily due to the reservoir refurbishment outage at the Sir Adam Beck Pump GS during 2016. The decrease in segment income was partially offset by a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to OPG's December 2014 motion. The decrease in segment income also was partially offset by a year-over-year decrease in OM&A expenses, primarily due to higher costs incurred in 2015 for shoreline remediation work.

The decrease in segment revenues due to the lower OEB-authorized rate rider in 2016, compared to 2015, was largely offset by a corresponding decrease in amortization expense related to the regulatory balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	2016	**2015**
Hydroelectric Availability *(%)*	**89.0**	91.2

The Hydroelectric Availability decreased during 2016, compared to 2015, primarily due to the planned reservoir refurbishment project at the Sir Adam Beck Pump GS. The project was completed in February 2017.

The definition of Hydroelectric Availability is found under the heading, *Key Operating and Financial Performance Indicators*.

Contracted Generation Portfolio Segment

(millions of dollars)	2016	2015
Revenue	**573**	535
Fuel expense	**58**	39
Gross margin	**515**	496
Operations, maintenance and administration	**178**	185
Depreciation and amortization	**75**	72
Accretion on fixed asset removal liabilities	**9**	8
Property taxes	**7**	7
Income from investments subject to significant influence	**(37)**	(39)
Income before other loss, interest, and income taxes	**283**	263
Other loss	**1**	1
Income before interest and income taxes	**282**	262

Income before interest and income taxes increased by $20 million during 2016, compared to 2015. The increase primarily resulted from the higher gross margin, due to increased revenues from the Lower Mattagami River generating stations, the Lennox GS, and the Atikokan GS. Higher revenue from the Lennox GS was primarily due to increased market demand. The increase in revenue from the Atikokan GS reflected the support provided to the electricity system in northwestern Ontario as a result of an outage at a local transformer station from late July 2016 to early September 2016. The year-over-year increase in segment revenue was also due to a provision made in 2015 related to an IESO audit.

The Hydroelectric Availability and the Thermal EFOR for the Contracted Generation Portfolio segment were as follows:

	2016	2015
Hydroelectric Availability *(%)*	**77.3**	88.6
Thermal EFOR *(%)*	**1.6**	11.2

Lower Hydroelectric Availability during 2016, compared to 2015, was primarily due to a higher number of planned outage days at the Kipling and Harmon generating stations on the Lower Mattagami River. During 2016, headgate replacements were made at certain units of the Kipling GS and Harmon GS. In addition, a runner upgrade and rehabilitation work was completed at Unit 2 of the Harmon GS. The lower thermal EFOR in 2016, compared to 2015, was primarily due to an outage in 2015 to perform repair work at the Lennox GS.

The definitions of Hydroelectric Availability and Thermal EFOR are found under the heading, *Key Operating and Financial Performance Indicators*.

Services, Trading, and Other Non-Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**68**	73
Fuel expense	**1**	2
Gross margin	**67**	71
Operations, maintenance and administration	**22**	48
Depreciation and amortization	**32**	29
Accretion on fixed asset removal liabilities	**8**	7
Property taxes	**12**	11
Restructuring	**6**	6
Loss before other loss, interest, and income taxes	**(13)**	(30)
Other loss	**-**	7
Loss before interest and income taxes	**(13)**	(37)

Segment earnings improved by $24 million in 2016 compared to 2015. The losses incurred by the segment in 2015 and 2016 largely reflect the costs associated with the Nanticoke and Lambton generating stations prior to OPG's decisions, in 2015 and November 2016, respectively, to proceed with the stations' decommissioning. These losses are partially offset by OPG's trading activities.

The improvement in earnings in 2016 primarily reflected higher OM&A expenses in 2015, including those incurred related to the Nanticoke GS prior to OPG's decision to proceed with the station's decommissioning, and a provision made in 2015 related to an IESO audit. The year-over-year decrease in OM&A expenses also reflected reduced work programs at the Lambton GS during 2016 due to lower staffing levels used to preserve the station. The preservation activities were discontinued after the announcement to decommission the station. Expenditures incurred in connection with decommissioning activities for the Nanticoke and Lambton generating stations are charged against a previously established decommissioning provision.

During each of 2016 and 2015, OPG recorded a charge against earnings to adjust the scrap value estimates for the Lambton GS. In 2016, this adjustment was offset by dividend income earned from OPG's investment in Hydro One shares, which contributed to the year-over-year improvement in earnings.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies; to undertake major projects; to fund long-term obligations such as contributions to the pension fund; to make payments under the OPEB plans; to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds; and to service and repay long-term debt.

Changes in cash and cash equivalents for 2016 and 2015 are as follows:

(millions of dollars)	**2016**	**2015**
Cash and cash equivalents, beginning of period	**464**	610
Cash flow provided by operating activities	**1,705**	1,465
Cash flow used in investing activities	**(1,807)**	(1,553)
Cash flow used in financing activities	**(176)**	(58)
Net decrease	**(278)**	(146)
Cash and cash equivalents, end of period	**186**	464

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details under the heading, *Overview of Results* in the section, *Highlights*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities in 2016 was $1,807 million, compared to $1,553 million in 2015. The increase was primarily due to higher expenditures on the Darlington Refurbishment project as it transitioned to execution phase, and the acquisition of nine million common shares of Hydro One in April 2016. The increase in cash flow used in investing activities in 2016, compared to 2015, was partially offset by the investment of proceeds from a long-term debt issuance in support of the Peter Sutherland Sr. GS project into a structured deposit note in 2015, and the subsequent receipt of proceeds from this investment on staggered maturity dates throughout 2016. The final maturity date of the deposit note is in April 2017. The acquisition of the Hydro One shares is discussed under the heading *Recent Developments* in the *Highlights* section, as well as in Note 3 of the Company's 2016 audited consolidated financial statements.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, sustaining capital investments across the generating fleet, and hydroelectric development projects including the expansion of the Ranney Falls GS and the completion of Peter Sutherland Sr. GS.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended the expiry date of both tranches from May 2020 to May 2021. As at December 31, 2016, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this

agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plan.

As at December 31, 2016, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As of December 31, 2016, there were outstanding borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

As at December 31, 2016, OPG's long-term debt outstanding was $5,534 million, including $1,103 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes is x.xx percent and x.xx percent, respectively. **[MONITOR]**

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, were as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Other Commitments

Collective Agreements

As of December 31, 2016, OPG had approximately 9,270 regular employees. Most of OPG's regular employees are represented by two unions:

- **The PWU** – This union represents approximately 5,070 OPG employees or approximately 55 percent of OPG's regular workforce as at December 31, 2016. Union membership includes operators, technicians, skilled trades, clerical, and security personnel. The current collective agreement between OPG and the PWU has a three-year term, expiring on March 31, 2018.
- **The Society** – This union represents approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce as at December 31, 2016. Union membership includes supervisors, professional engineers, scientists, and other professionals. The current collective agreement between OPG and The Society has a three-year term, expiring on December 31, 2018.

In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights at OPG facilities. These bargaining rights are established either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. All of these collective agreements currently have multi-year terms, expiring on April 30, 2020.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's audited consolidated financial position using selected balance sheet data as at December 31:

(millions of dollars)	**2016**	**2015**
Property, plant and equipment – net	**20,002**	20,595
The decrease was primarily due to a reduction in asset retirement costs of approximately $1,570 million in 2016 as a result of a reduction in the estimates for the Nuclear Liabilities to reflect the 2017 ONFA Reference Plan cost estimates. The decrease was partially offset by capital expenditures on the Darlington Refurbishment and other projects, net of depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**15,984**	15,136
The increase was primarily due to earnings on the Nuclear Segregated Funds and contributions to the Used Fuel Segregated Fund, partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded to the lower underlying obligations reflected in the updated ONFA reference plan and reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Available-for-sale securities	**212**	-
The balance as at December 31, 2016 represents the fair value of the nine million Hydro One shares acquired in April 2016, as discussed under the heading *Recent Developments* in the *Highlights* Section.		
Regulatory assets and liabilities – net *(current and non-current portions)*	**5,545**	5,808
The decrease was primarily due to the amortization of regulatory balances recovered through rate riders in effect during 2016 and an increase in regulatory liabilities resulting from a change in the estimated useful lives of OPG's nuclear stations at the end of 2015, as discussed under the heading, *Impact of Changes in Station End-of-Life Dates Deferral Account* below. This was partially offset by amounts deferred in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and other variance and deferral accounts during the year.		
Short-term debt	**2**	225
The decrease was due to the maturity of external commercial paper outstanding under LME's commercial paper program.		
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169
The decrease was primarily due to a reduction of approximately $1,570 million in the estimates for the Nuclear Liabilities at the end of 2016 to reflect the 2017 ONFA Reference Plan cost estimates, partially offset by accretion expense during the year.		
Pension liabilities	**3,012**	2,597
The increase was primarily due to the re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as discussed in the section, *Changes In Accounting Policies* under the heading, *Pension and Other Post-Employment Benefits.*		

Impact of Changes in Station End-of-Life Dates Deferral Account

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense arising from the changes in the estimated useful lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG has recognized a regulatory liability of $71 million related to the balance in the deferral account. Together with the Bruce Lease Net Revenues Variance Account discussed below, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account offset the decrease in depreciation expense in 2016, compared to 2015, as a result of the changes in estimated useful lives of OPG's nuclear stations effective December 31, 2015.

The changes to the estimated useful lives of OPG's nuclear generating station effective December 31, 2015, for accounting purposes, were as follows:

- the average service lives of the Bruce A GS and Bruce B GS were extended from 2048 to 2052 and from 2019 to 2061, respectively, to reflect the estimated end-of-life dates reflected in the updated refurbishment agreement between the IESO and Bruce Power, which was announced in December 2015
- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015
- the average service life of the Pickering GS was extended by less than one year.

To reflect the above changes, OPG recognized a total increase of $2,330 million in the Nuclear Liabilities and a corresponding increase in the related asset retirement costs, effective December 31, 2015. These increases were primarily due to the changes in the estimated useful life of the Bruce B GS. The nuclear asset retirement obligations (ARO) associated with the Pickering GS and Darlington GS was impacted by the changes to the Bruce nuclear generating stations' useful lives because the costs of the fleet-wide waste management programs are shared by all of OPG's nuclear stations based on used nuclear fuel and waste volumes. Consistent with the changes in the end-of-life dates for the Bruce nuclear generating stations and the December 2015 amendments to the Bruce Lease in connection with the Province's endorsement of Bruce Power's refurbishment plans, the term of the Bruce Lease for accounting purposes also was extended, in line with the refurbishment plans for these stations.

The impact of the above changes on OPG's revenues and costs related to the Bruce nuclear generating stations effective January 1, 2016 is recorded in the Bruce Lease Net Revenues Variance Account.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's consolidated financial statements or are recorded in the Company's consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

Guarantees

As part of normal business, OPG and certain of its subsidiaries and joint ventures enter into various agreements to provide financial or performance assurance to third parties. Such agreements include guarantees, standby Letters of Credit and surety bonds. For more details on OPG's guarantees, refer to Note 15 of OPG's audited consolidated financial statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies, including the impact of major recent accounting pronouncements, are outlined in Note 3 of the audited consolidated financial statements. Certain of these policies are recognized as critical accounting policies by virtue of the subjective and complex judgments and estimates required around matters that are inherently uncertain and could result in materially different amounts being reported under different conditions or assumptions. The critical accounting policies and estimates that affect OPG's US GAAP consolidated financial statements are highlighted below.

Exemptive Relief for Reporting under US GAAP

As required by *Ontario Regulation 395/11,* as amended, under the FAA, OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG has also received exemptive relief from the OSC from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board (IASB) for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

As a result of OPG's 2011 decision to adopt US GAAP, as required by the FAA regulation, OPG's earlier plan to convert to IFRS, effective January 1, 2012, was discontinued. OPG had substantively completed its IFRS conversion project, which included separate diagnostic, development, and implementation phases, when it suspended the project. If a future transition to IFRS for the purposes of OPG's consolidated financial statements is required, conversion work can be effectively restarted with sufficient lead time to evaluate and conclude on changes that occurred subsequent to the decision to suspend the project. OPG continues to monitor the IASB's current standard-setting project related to entities with rate-regulated activities and is evaluating alternatives with respect to the Company's future financial reporting.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the OEB.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998*, the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the

future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05.* The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures for its pension and OPEB plans. It is the Company's position that this decision by the OEB did not constitute a change in the basis of OPG's rate recovery of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices, or in an OEB-authorized deferral or variance account for future recovery, as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account to record the difference between OPG's actual pension and OPEB costs for the regulated business determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million, which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the above noted consultation process.

See Notes 3, 5, 8, 9, and 11 of OPG's 2016 audited consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or payable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its rate regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and in respect of investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

The Company has recognized net deferred income tax liabilities of $829 million as at December 31, 2016 (2015 – $880 million).

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset, based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

The accounting estimates related to end-of-life assumptions for PP&E and intangible assets require significant management judgment, including consideration of various operating, technological, and other factors. OPG reviews the estimated useful lives for its PP&E and intangible assets on a regular basis.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

Various assumptions and accounting estimates are required to determine whether an impairment loss should be recognized and, if so, the value of such loss. This includes factors such as short-term and long-term forecasts of prices for electricity generation under applicable revenue mechanisms, the demand for and supply of electricity, inflation, fuel prices, capital and operating expenditures, and estimated useful service lives of the assets.

The carrying value of investments accounted for under the equity method are reviewed for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Segregated Funds based on approved ONFA reference plans. Costs for L&ILW management and used fuel storage incurred during station operation are not funded by the Nuclear Segregated Funds. They are funded through the Company's operating cash flow or other sources of liquidity.

Decommissioning Segregated Fund

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Segregated Fund. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the earnings it recognizes in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded.

The amount due to the Province in respect of the Decommissioning Segregated Fund could be reduced in subsequent periods in the event that the fund earns less than is target rate of return, a new ONFA reference plan is approved with a higher underlying liability, or the amount of the underfunding in the Used Fuel Segregated Fund increases.

When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets.

Used Fuel Segregated Fund

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined in the ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return on the Used Fuel Segregated Fund and the actual market return determined based on the fair value of the fund's assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount OPG would pay to, or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions attributed to the used fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province has the right at any time to access the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. Accordingly, when the Used Fuel Segregated Fund is overfunded, OPG limits the earnings it recognizes int he consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the underlying liability based on the most recently approved ONFA reference plan. In accordance with the ONFA, OPG does not have a right to direct any amounts from the Used Fuel Segregated Fund to the Decommissioning Segregated Fund.

Provincial Guarantee

In accordance with the *Nuclear Safety and Control Act* (Canada), the CNSC requires OPG to have sufficient funds available to discharge the current nuclear waste management and nuclear decommissioning liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the CNSC, on behalf of OPG, for any shortfall between the CNSC financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee equal to 0.5 percent of the amount of the Provincial Guarantee. The

current value of the Provincial Guarantee of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016. The CNSC process requires the CNSC financial guarantee requirement to be updated once every five years. OPG is currently updating the CNSC financial quarantee requirement for the 2018-2022 period and expects to file it with the CNSC in the first half of 2017. **[MONITOR]**

Pension and Other Post-Employment Benefits

The determination of OPG's pension and OPEB costs and obligations is based on accounting policies and assumptions, as discussed below.

Accounting Policy

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor) for each plan is amortized over the expected average remaining service life of the employees covered by the plan, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on its consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation, on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net

of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as amortization components of pension and OPRB costs as described above.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Accounting Assumptions

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost, and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses.

The discount rates, which are representative of the AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. In 2016 and prior years, benefit costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. A lower discount rate increases the benefit obligations and increases benefit costs. The weighted-average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

Starting in 2017, OPG expects to change the method used to estimate the current service and interest cost components of pension and OPEB costs. OPG expects to adopt a full yield curve approach in the estimation of these components of pension and OPEB cost by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. Making this change will improve the correlation between projected benefit cash flows and the corresponding yield curve spot rates, and provide a more precise measurement of service and interest costs. This change does not affect the measurement of the total benefit obligations, as the change in the current service and interest components of the costs from the previous method will be offset by a corresponding change in the actuarial (gain) loss recorded in AOCI. OPG will account for this change as a change in estimate, prospectively starting in 2017. With an upward sloping yield curve and the pattern of OPG's estimated future benefit cash flows, the adoption of the full yield curve approach is expected to materially lower OPG's current service and interest cost components, reducing the overall pension and OPEB costs in the initial years following adoption.

The expected rate of return on plan assets is determined based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined under the heading, *Contractual and Commercial Commitments,* in the section *Liquidity and Capital Resources*. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation and assumptions as at December 31, 2016. As part of the valuation, the plans' demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The deficit for the registered pension plan, for accounting purposes, increased from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

Asset Retirement Obligation

OPG recognized ARO for fixed asset removal and nuclear waste management liabilities, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The ARO is comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating plant facilities and other facilities. Costs are expected to be incurred for activities such as preparation for safe storage and safe storage of nuclear stations, dismantlement, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel bundles and L&ILW material. The liabilities associated with the decommissioning of the nuclear generating stations and the long-term management of used nuclear fuel comprise the most significant amounts of the total obligation.

The nuclear decommissioning liability includes the estimated costs of closing the nuclear stations after the end of their service lives, which includes preparation and placement of the stations into a safe state condition followed by an assumed 30-year safe store period prior to station dismantlement and site restoration. Activities associated with the placement of stations into a safe state condition include de-fueling and de-watering of the nuclear reactors. Under the terms of the lease agreement with Bruce Power and as required by the CNSC, OPG is responsible for the nuclear waste management and nuclear decommissioning obligations associated with the Bruce nuclear generating stations. Pursuant to the lease agreement, Bruce Power must return the two Bruce stations to OPG together, in a de-fueled and de-watered state. These de-watering and de-fueling costs are not part of OPG's ARO.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the obligation for these costs include an L&ILW DGR facility to be constructed and operated by OPG, as discussed under the heading, *Project Excellence* in the *Core Business, Strategy, and Outlook* section. To estimate the liability for nuclear used fuel management, OPG has adopted an approach consistent with the Adaptive Phased Management concept approved by the Government of

Canada, which assumes a deep geologic repository or the long-term management of Canada's nuclear used fuel waste. The NWMO is responsible for the design and implementation of Canada's plan for the long-term management of used nuclear fuel.

The following costs are recognized as a liability on OPG's consolidated balance sheets:

- the present value of the costs of decommissioning the nuclear and thermal production facilities and other facilities after the end of their useful lives
- the present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed lives of the stations
- the present value of the variable cost portion of nuclear waste management programs taking into account waste volumes generated to date.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs including construction of assumed waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, decommissioning strategy, and the technology employed may result in significant changes to the value of the accrued liabilities. With programs of such long-term duration and the evolving technology to handle nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the costs for these programs. These costs may increase or decrease over time.

The estimates for the Nuclear Liabilities are reviewed on an ongoing basis as part of the overall nuclear waste management program. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically, at least once every five years, in line with the required ONFA reference plan update process. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of a net increase in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of a net decrease in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets.

The most recent comprehensive update of the baseline cost estimates for the Nuclear Liabilities is contained in the approved 2017 ONFA Reference Plan, and was completed in the fourth quarter of 2016. The update resulted in a decrease of approximately $1,570 million in the Nuclear Liabilities as at December 31, 2016, which was determined using a discount rate of 4.95 percent. The overall reduction in OPG's nuclear waste management and nuclear decommissioning obligations was due mainly to a decrease in cost estimates to reflect a proposed new, more cost effective container design and engineered barrier concept to house used nuclear fuel for disposal, updated cost escalation rates for all programs, and a later expected in-service date for the NWMO's planned deep geologic repository for the long-term permanent disposal of Canada's used nuclear fuel. These decreases were partly offset by higher cost estimates related to decommissioning activities, primarily due to an improved definition of work required during the preparation for safe storage after station shutdown and a higher volume of waste expected to be generated during decommissioning. Cost escalation rates used to estimate future undiscounted cash flows reflected in the December 31, 2016 adjustment to the Nuclear Liabilities ranged from 2.0 percent to 3.4 percent.

Commented [AJ1]: Was the discount rate not 5.15%

The December 31, 2016 adjustment to the Nuclear Liabilities and associated asset retirement costs did not impact OPG's income for 2016. The estimated impact of this adjustment on 2017 expenses, before the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account, includes a decrease to depreciation expense of approximately $8 million, a decrease to accretion expense of approximately $78 million, and a combined decrease in used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million. Under the current OEB-approved cost recovery methodologies, these changes also are not expected to materially affect OPG's income in 2017, as they are expected to be largely offset by

the OEB approved variance and deferral accounts, until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to Ontario Regulation 53/05. It records the revenue requirement impact associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years.

The liability for nuclear fixed asset removal and nuclear waste management on a present value basis as at December 31, 2016 was $19,103 million (2015 – $19,792 million). As at December 31, 2016, the undiscounted cash flows of expenditures for OPG's Nuclear Liabilities in 2016 dollars are as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Expenditures for nuclear fixed asset removal and nuclear waste management [1]	354	360	386	429	465	39,296	41,290

[1] The majority of the expenditures are expected to be reimbursed by the Nuclear Segregated Funds established by the ONFA. Any contributions required under the ONFA are not included in these undiscounted cash flows. Accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The liability for non-nuclear fixed asset removal was $381 million as at December 31, 2016 (2015 – $377 million). This liability primarily represents the present value of estimated costs of decommissioning OPG's thermal generating stations at the end of their service lives. The liability reflects third party cost estimates based on an in-depth review of plant sites and an assessment of required clean-up and restoration activities. For the purpose of measuring the liability, asset removal activities are assumed to take place approximately over the next one to 15 years. The amount of undiscounted estimated future cash flows associated with the thermal liabilities is approximately $500 million. With the decisions taken in 2015 and 2016 to decommission the Nanticoke and Lambton generating stations, respectively, OPG expects to review the decommissioning liability estimates for these sites. Any adjustments as a result of a change in the liability estimates for these stations will be recorded in net income in the period of change.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model.

The fair value of financial assets and liabilities for which quoted prices in an active market are available, including exchange traded derivatives and other financial instruments, are determined directly from those quoted market prices.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the

use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that may affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If the valuation technique or model is not based on observable market data, specific valuation techniques are used, primarily based on recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

OPG's use of financial instruments exposes the Company to certain risks, including credit risk, foreign currency risk and interest rate risk. A discussion of how OPG manages these and other risks is found under the section, *Risk Management*.

Variable Interest Entities

OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated. As at December 31, 2016, PSS Generating Station Limited Partnership was classified as a variable interest entity because it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership. Refer to Note 3 of OPG's 2016 audited consolidated financial statements for further details.

Recent Accounting Pronouncements

The recent US GAAP accounting pronouncements related to revenue recognition, leases, and financial instruments are described below. Other recent accounting pronouncements applicable to OPG are outlined in Note 3 of the audited consolidated financial statements.

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact that the new standard will have on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which $1 million has been recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

RISK MANAGEMENT

Overview

OPG faces various risks that could significantly impact the achievement of its strategic imperatives. The objective of risk management is to identify and mitigate these risks, and to preserve and increase the value of the Shareholder's investment in the Company.

Risk Governance Structure

The Audit and Risk Committee of OPG's Board of Directors assists the Board of Directors in fulfilling its oversight responsibilities for matters relating to the identification and management of the Company's key business risks. An Executive Risk Committee (ERC), which is comprised of business unit leaders and the Chief Risk & Audit Executive (CRAE), assists the Audit and Risk Committee in fulfilling its governance and oversight responsibilities related to OPG's risk management activities.

Risk Management Activities

OPG faces a wide array of risks as a result of its business operations. OPG's Enterprise Risk Management (ERM) framework is designed to identify and evaluate risks on the basis of their potential impact on the Company's capacity to achieve specific strategic imperatives and business plan objectives.

A centralized ERM group led by the CRAE coordinates the quarterly risk management reporting activities. The activities begin with business units identifying, reviewing, and assessing risks that could prevent achievement of their objectives. The ERM group reviews, validates, and consolidates this information and prioritizes risks based on their potential to impact OPG's overall strategic imperatives. The ERM group also assesses external developments that may have implications on the corporate risk profile and facilitates the identification and assessment of emerging risks. The ERC then reviews and validates significant changes in the top risks that may impact OPG's ability to achieve its strategic imperatives, as well as any emerging risks that have been identified. The results of the ERC review and significant changes in the enterprise risk profile are reviewed by the Audit and Risk Committee.

In order to maintain an appropriate balance between risk and return, senior management sets limits for the market risk, credit risk and energy trading activities of the Company. Senior management also establishes risk management policies and processes to ensure compliance with such limits.

The key risks to OPG's strategic imperatives are briefly described below.

Risks to Achieving Operational Excellence

OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance.

Operational risks are the risks inherent in the operation of electricity generating facilities. These risks can lead to interruptions in the operations of generating stations affecting future production. The operational risks of a station are generally a function of its age, human performance, and the technology used.

Nuclear Generating Stations

Operating an aging nuclear fleet exposes OPG to unique risks such as unplanned outages, an increase in operating costs, and risks associated with nuclear waste management operations.

Operating nuclear stations exposes OPG to unique risks, such as greater-than-anticipated deterioration of station components and systems, risks associated with the nuclear industry, supply chain and vendor quality, risks related to the handling, storage and disposal of nuclear waste, and the risk of a nuclear accident. The primary implications of these risks include additional safety requirements, potentially lower than expected generation and revenues, and potentially higher operating costs.

The uncertainty associated with production by OPG's Canadian Deuterium Uranium nuclear generating units is primarily driven by the condition of station components and systems, which are all subject to the effects of aging. Fuel channels are expected to be the most life-limiting component affecting station end-of-life. Another significant factor identified to date includes degradation of primary heat transport pump motors at the Darlington GS. Additionally, there are fuel handling performance challenges at both the Darlington GS and Pickering GS. To respond to these risks, OPG continues to monitor performance, implement extensive inspection and maintenance programs, identify corrective actions and undertake projects required to operate reliably and within design parameters.

Deterioration of station components may progress in an unexpected manner, resulting in the need to increase monitoring, conduct extensive repairs, or undertake additional remedial measures. To maintain a safe operating margin, a nuclear unit could be derated resulting in reduced generation. When an unexpected condition first appears, a specific monitoring program is established. The primary impact of these conditions on OPG is an increase in the long-term cost of operations. The associated mitigation may create additional outage work, increasing the number of outages or extending planned outages.

Pickering Extended Operations to 2024

In January 2016, the Province of Ontario announced its approval of OPG's plan to pursue the continued safe and reliable operation of the Pickering GS to 2024. Under OPG's plan, all six operating units at the Pickering GS would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The current operating licence for the Pickering GS, which expires in August 2018, was issued in 2013 assuming that the station would shut down in 2020.

Inability to achieve Pickering extended operations as planned would result in a reduction of OPG's future generation revenue and cash flows and lead to the advancement of shutdown and station decommissioning expenditures.

Risk factors for continued operation of the Pickering units include the discovery of unexpected conditions, equipment failures, the state of critical plant components that are reaching end-of-life, and a requirement for significant plant modifications. To mitigate these risks, OPG continues to undertake a number of activities, including the following:

- work to confirm achievability of fuel channel life necessary to enable extended operations
- component condition assessments to identify the work required to support the extended operation of the station
- modification of the operating and maintenance strategy to support continued operation of the station.

Over the remaining lifespan of the station, risks such as performance of the fuel handling system, challenges with parts procurement, and a shortage of qualified human resources may challenge operational excellence at the Pickering GS. OPG is addressing these risks by taking appropriate actions, including undertaking fuel handling reliability improvements, equipment modifications and targeted investments in plant systems and components, supply chain initiatives, and developing workforce planning and resourcing strategies.

Nuclear Waste Management

The process of generating electricity by nuclear generating stations produces nuclear waste. As required by the CNSC, OPG is accountable for the management of used fuel and L&ILW, and decommissioning of its nuclear stations and waste management facilities, including the stations on lease to Bruce Power. Currently, there are no licenced facilities in Canada for the permanent disposal of nuclear used fuel or L&ILW. The risks to OPG's proposed L&ILW DGR for the safe long-term management of L&ILW are discussed below, under the heading, *Deep Geologic Repository for Low and Intermediate Level Waste* in the section *Risks to Achieving Project Excellence*.

The NWMO has developed a process for moving forward with Adaptive Phased Management as the long-term solution for Canada's nuclear fuel waste. The Adaptive Phased Management plan contemplates the eventual long-term permanent disposal of radioactive nuclear fuel waste in a deep geologic repository. The NWMO is in the process of undertaking a multi-year site selection process for the used fuel deep geologic repository.

In the interim, OPG is storing and managing L&ILW at the WWMF site and used fuel at its nuclear generating station sites.

Nuclear Regulatory Requirements

The uncertainty associated with nuclear regulatory requirements is primarily driven by plant aging, changes to technical codes, and challenges raised by the public at regulatory hearings, particularly in the areas of safety, environment and emergency preparedness. Addressing these requirements could add to the cost of operations, and in some instances, may result in a reduction or elimination of the productive capacity of a station, earlier than planned replacement of a station component or additional requirements for waste management. Additionally, the operations of nuclear stations are often directly impacted by circumstances or events that occur at other nuclear stations globally. These circumstances or events may lead to CNSC regulatory changes with a significant impact on the cost and future operation of OPG's nuclear fleet.

In December 2015, the CNSC granted the station a 10-year operating licence, valid until November 30, 2025. The new licence spans most of the planned duration of the Darlington Refurbishment project, which provides greater regulatory stability and reduces regulatory risk. As discussed in the section, *Core Business, Strategy and Outlook*, under the heading, *Nuclear Operations*, the plan to extend Pickering operations to 2024 is subject to the CNSC's approval of the Pickering licence renewal application and other regulatory requirements as set out by the CNSC.

In January 2014, the federal government introduced Bill C-22 which contains a new *Nuclear Liability and Compensation Act* (NLCA). This bill received Royal Assent in February 2015, and the NLCA came into effect on January 1, 2017. The NLCA requires all operators of nuclear generating stations in Canada to maintain specified amounts of nuclear liability insurance purchased from a federal government approved insurer or other equivalent forms of financial security approved by the federal government. The NLCA increases OPG's nuclear liability limit from $75 million to an initial $650 million, with successive annual increases to $750 million, $850 million, and $1 billion. OPG has met this requirement for the $650 million liability limit required by the NLCA for 2017 and is assessing the availability and premium cost of coverage for the $750 million liability limit required for 2018.

Hydroelectric Generating Stations

OPG's hydroelectric generation is exposed to risks associated with water flows, the age of plant and equipment,surplus baseload generation conditions, and dam safety requirements.

The extent to which OPG can operate its hydroelectric generation facilities depends upon the availability of water. Significant variability in weather, including impacts of climate change, could affect water flows. For OPG's regulated hydroelectric generation, the financial impact of variability in electricity production due to differences between the forecast water conditions underpinning the hydroelectric regulated prices and the actual water conditions are captured in an OEB-approved regulatory variance account.

OPG's hydroelectric generating stations have an average age of approximately 80 years, with the majority of the hydroelectric generating equipment being over 50 years old. The condition of the equipment and civil components resulting from the age of these components requires OPG to plan potentially significant work to mitigate risks to the reliability of some hydroelectric generating stations. OPG manages these risks by performing inspection and maintenance of critical components and by reviewing mitigating actions. In addition, OPG conducts detailed engineering reviews and station condition assessments on an ongoing basis. These reviews and assessments help to identify future work required to sustain and, as appropriate, upgrade a station.

SBG has, and will continue to be, an issue in Ontario when electricity supply exceeds demand. To manage SBG conditions, the IESO may require OPG to reduce hydroelectric generation and spill water. A regulatory variance account authorized by the OEB helps to mitigate the financial impact of spill due to SBG conditions for OPG's regulated hydroelectric generating stations. The Company anticipates a declining trend in SBG for its hydroelectric assets due to reduced nuclear availability resulting from the refurbishment of the Darlington GS, future refurbishment of the Bruce generating stations, and the eventual shutdown of the Pickering GS.

The hydroelectric business operates 238 dams across Ontario. Dam safety legislation does not currently exist in the province. Technical guidelines which were published by the MNRF represent the government standards for dam safety. In general, OPG's practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the MNRF technical guidelines. OPG continues to develop a new risk-informed approach in cooperation with the MNRF to prioritize the outcomes of dam safety assessments. OPG could eventually incur additional costs for certain dams that it operates in order to comply with any new requirements.

People and Culture

OPG's operations could be affected if skilled human resources are not available or aligned with its talent requirements.

The development of new leaders and retention of staff in critical roles across OPG is a key factor to OPG's success. Another success factor is related to the effective transfer of knowledge from those in critical positions throughout the organization to future leaders. The risk associated with the alignment and/or availability of skilled and experienced resources continues to exist for OPG in specific areas, including leadership and project management positions. To mitigate this risk, OPG continues to focus on succession planning, leadership development and knowledge management programs to improve the capability of its workforce. There is also a continued risk of a mismatch between attrition levels and the resource requirements to meet OPG's future business needs.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification, which requires a long-term outlook to workforce planning.

To mitigate the above risks, OPG is developing an organization-wide workforce planning and resourcing strategies and has established ongoing monitoring processes to reassess risks, challenges and opportunities related to staffing on a regular basis. OPG expects to meet the human resource needs of the business by developing existing employees and hiring in specific areas, while continuing to leverage attrition through realignment of work and streamlining of processes, where appropriate.

As of December 31, 2016, approximately 90 percent of OPG's regular labour force was represented by a union. OPG's current collective agreements with the PWU and The Society expire on March 31, 2018 and December 31, 2018, respectively, while all 19 collective agreements with craft unions expire on April 30, 2020. As a result of these agreements, OPG considers the likelihood of a labour disruption in the near future to be significantly reduced.

Health and Safety

OPG's operations involve inherent occupational safety risks and hazards.

OPG's operations involve inherent occupational safety risks and hazards that could impact the achievement of the Company's health and safety goals. OPG is committed to continuous improvement and achievement of its ultimate goal of zero injuries through a formal enterprise-wide safety management system, integrated at the operating site level, and by continuing to foster a strong health and safety culture among its employees and contractors. The safety management system serves to focus the Company on proactively managing safety risks and hazard exposures to employees and contractors. In 2016, OPG launched the organization-wide "iCare Enough to Act" initiative aimed at renewing employees' and contractors' commitments to their own and each other's safety and well-being.

Cyber Security

OPG's ability to operate effectively is, in part, dependent on the efficient operation and management of the Company's complex information technology and industrial control systems in a secure, vigilant, and resilient manner that minimizes cyber risks. Cyber security incidents may have an adverse impact on OPG's reputation, energy production, and public and employee safety.

Cyber security incidents have been on the rise for the past few years and this trend is only expected to intensify as organizations' reliance on technology increases. OPG has strategies in place to prepare for, respond to, and recover from cyber security incidents. OPG continuously monitors, assesses, and improves the effectiveness of its strategies and program considering leading industry practices and remains proactive in information and intelligence sharing to learn and adapt to the changing cyber environment.

As a registered Ontario market participant, OPG is accountable to comply with all applicable reliability obligations. Within the context of the Ontario regulatory framework, OPG is a registered generator, and is responsible for complying with the associated reliability standards. These standards apply to the relevant Bulk Electric System (BES) elements specified under North American Electric Reliability Corporation (NERC) and the relevant Bulk Power System (BPS) facilities as determined by the Northeast Power Coordinating Council. In addition, OPG's nuclear cyber assets are subject to CNSC licensing conditions and regulatory requirements. For other cyber assets not subject to applicable regulatory requirements, OPG has adopted a risk-based approach based on the National Institute of Standards and Technology Cybersecurity Framework to manage its cyber security.

To mitigate cyber risks, OPG's cyber security program focuses on educating employees, contractors, and vendors, improving processes, and upgrading technology infrastructure. In particular, OPG's program focuses on the following:

1. Complying with regulatory requirements and applicable laws
2. Improving its cyber security protection and detection capabilities to reduce known or potential exposures by engaging the services of external experts to evaluate the security of its information technology infrastructure and controls
3. Adopting industry leading practices to reduce third party cyber security risks through enhanced vendor risk assessments, introducing cyber security requirements into commercial agreements, and enhanced governance
4. Improving and exercising its incident response, recovery capability, and business continuity plans to minimize the business impact of an incident
5. Increasing the cyber security awareness and training level of its workforce through mandatory annual cyber security awareness training, specialized training for cyber specialists, social engineering tests, and periodic company-wide communications on relevant cyber security topics.

The oversight responsibility of the Audit and Risk Committee of OPG's Board of Directors over the Company's risk management activities includes the review of a semi-annual update from management on the Company's cyber security position and programs.

Suppliers

Non-performance by strategic suppliers or an inability to diversify the supplier base could adversely impact operating and project performance, financial results and reputation of OPG.

OPG's ability to operate effectively is in part dependent upon timely access to equipment, materials, and service suppliers. Loss of key equipment, materials, and service suppliers, particularly for the nuclear business, could affect OPG's ability to operate effectively and/or to execute major development projects or other capital investment programs. OPG mitigates this risk, to the extent possible, through contract negotiations, contract terms, vendor monitoring, diversification of supplier base, and business continuity plans.

Business Continuity and Emergency Management

Natural, technological or human-caused hazards may impact OPG's business continuity.

OPG is exposed to potential or actual incidents or developments resulting from extreme temperatures, precipitation, wind conditions or other natural disasters, and technological or human-caused hazards; to significant events against which it is not fully insured or indemnified; or to parties that fail to meet their indemnification obligations. These incidents have the potential to disrupt operations resulting in decreased generation revenue or additional costs to repair damages and restore operations.

OPG's business continuity program provides a framework to build resilience into critical business processes by facilitating development of risk response plans and business continuity exercises. OPG's emergency management

program is designed to ensure that the Company can manage an emergency in a timely and effective manner. OPG's plans and implementation procedures identify immediate response actions to be taken to protect the health and safety of employees and the public, and to limit the impact of the crisis on site security, production capability, and the environment. The program elements are designed to meet legal and regulatory requirements.

Risks to Achieving Project Excellence

The risks associated with the cost, schedule, technical and contractor performance aspects of the major projects could adversely impact OPG's financial performance and its corporate reputation.

OPG is undertaking several capital intensive projects with significant investments. There may be an adverse effect on the Company if it is unable to: obtain necessary approvals; raise the necessary funds; effectively manage the projects on time and on budget; or fully recover capital costs and earn an appropriate return on investment in a timely manner. These projects may also have a significant impact on OPG's borrowing capacity and credit rating. Some projects may be ultimately reassessed as being uneconomic. The risks associated with OPG's current major projects are described below.

Darlington Refurbishment

OPG is responsible for the management of the Darlington Refurbishment project, including the project's budget and schedule, and continues to systematically manage all of the risks associated with the project through robust risk management practices. There are financial and reputational risk exposures for OPG if actual costs exceed the budget or if OPG does not meet the project schedule. In addition, failure to achieve the objectives of the refurbishment project may result in future forced outages and more complex planned outages, potentially impacting the post-refurbishment performance or useful life of the station. Failure to carry out the refurbishment of the first unit as planned may result in not proceeding with the refurbishment of the remaining units, which, together with the end of commercial operations at the Pickering GS, could result in most of OPG's nuclear units shutting down by the early to mid 2020s.

There are a number of specific risks that OPG is managing and mitigating in relation to the Darlington Refurbishment project, which include OPG and vendor performance risks, delay or productivity risks, financial risks related to escalation of costs, technical risks such as equipment conditions resulting in additional scope, and execution risks such as failure to manage foreign material exclusion from the heat transport system that could lead to post refurbishment operational risks.

To mitigate the above risks and to build on major lessons learned from other nuclear refurbishments and large scale, complex projects, OPG engaged in an extensive five-year project planning phase in order to determine the project scope, rigorously estimate costs in keeping with best practices, and incorporate lessons learned from other nuclear refurbishments. In order to fully define the scope and material requirements for the project, the planning phase included the completion of detailed designs before proceeding with the execution of the unit refurbishments. Further risk mitigation has been implemented through the construction of a full scale model training reactor, which allows for simulations and training for unit refurbishment execution tasks.

A large portion of the costs for the Darlington Refurbishment project is being paid to contractors and suppliers, including vendors that will engineer, procure, and construct components of the project. There is a risk that, as the volume of work increases significantly, vendor capability, capacity, and performance shortfalls may impact project objectives and deliverables. OPG's risk management strategy aims to ensure that contractors are held accountable and appropriate off-ramps are in place. In mitigating its overall financial risk, OPG utilizes a contracting strategy that aims to share the risk with key vendors in a cost effective manner, where appropriate. There is also an increased risk of contractor initiated safety events, which may impact OPG's reputation. Mitigating actions include collaborative execution phase planning, an enhanced human performance program, active risk management, increased field presence by supervisory staff, and assisting vendors in removing barriers to work. OPG also is managing other

ongoing risks that could potentially impact the project, including those related to continuity of skilled leaders within OPG and its vendor partners, as well as the availability of technical resources to support the project through execution.

Independent, third-party oversight has been established for the execution phase of the project, for both the project executive team and OPG's Board of Directors. The Ontario Ministry of Energy has also retained an external advisor to provide oversight of the project, reporting to the Minister of Energy.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG, with the support of Bruce County municipalities, is proposing to construct and operate a deep geologic repository as the preferred solution for the safe long-term management of L&ILW. While broad local community support for the proposed L&ILW DGR is stable, there are pockets of opposition. OPG is currently awaiting a decision on the EA for the project by the federal Minister of Environment and Climate Change, before the issuance of the site preparation and construction licence may proceed. There is a risk of delay to the EA approval and/or the issuance of the site preparation and construction licence from potential political or legal challenges. OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR.

Other Development Projects

Projects that are in the initial development stages are subject to schedule delays or possible cancellation due to unforeseen delays in receiving permits or approvals, or establishing sufficient certainty regarding project cost recovery through revenue mechanisms, which may involve various external stakeholders. OPG attempts to mitigate these risks through early involvement and regular communication with applicable government agencies, close consultation with external stakeholders and ongoing monitoring of contractor compliance relative to permits. Projects in the execution phase are subject to inherent risks related to performance against approved budgets and schedules. Mitigating activities for the risks include performing detailed engineering designs before proceeding with execution, engaging qualified and experienced vendors, and effectively monitoring and controlling performance.

Development projects also could be faced with increasing costs for equipment and construction that could impact their economic viability. OPG continuously monitors such trends in costs in order to identify emerging issues and seeks to manage and limit cost increases through contracting strategies, where possible.

Risks to Maintaining Financial Strength

Risks related to rate regulation, financial markets, and long-term obligations could significantly impact OPG's financial performance. The Company is also exposed to risks such as weak electricity demand, displacement of generation by competitors and financial risk associated with energy trading.

There is a risk that future regulated prices will not allow OPG to consistently achieve financial performance that is commensurate with that of a commercial enterprise. OPG is exposed to a number of other significant financial risks, many of which arise due to decreasing demand for electricity, competing energy sources, OPG's exposure to volatility in commodity and equity markets and interest rate fluctuations. This includes the Company's pension and OPEB obligations and costs that are impacted by market and interest rate fluctuations. OPG manages this complex array of risks with a view to reduce the uncertainty and/or mitigate the potential unfavourable impact on the Company's financial results.

Rate Regulation

Significant uncertainties remain regarding the outcome of rate and generic proceedings impacting OPG's rate regulated operations.

There is an inherent risk that regulated prices established by the OEB may not provide for the recovery of all actual costs that will be incurred by OPG's regulated operations or allow the regulated operations to earn an appropriate

rate of return. This could occur if, in setting regulated prices, the OEB makes adjustments to forecasts submitted by OPG, if actual production and costs significantly differ from the forecasts approved by the OEB, or if OPG is unable to achieve additional efficiencies to meet the OEB-approved stretch factors included in regulated prices under incentive ratemaking. Differences between OPG's actual and forecast production and costs could be due to factors such as outages or project execution risks. In providing evidence in support of its applications for regulated prices, OPG aims to clearly demonstrate to the OEB that the costs for the regulated operations are reasonable, being prudently incurred and should be fully recovered.

Certain differences between elements of OEB-approved revenue requirements and OPG's actual results are recorded in OEB-approved variance and deferral accounts for future review by the OEB, including a number of the variance and deferral accounts that are subject to an OEB prudence review. There is inherent uncertainty associated with the outcomes of future proceedings for the clearance of these balances.

Proposed Incentive Regulation Ratemaking Methodologies

In May 2016, OPG submitted a 5-year application to the OEB for new regulated prices effective January 1, 2017, on the basis of an incentive regulation rate making methodology for the hydroelectric operations and a custom incentive regulation ratemaking framework for the nuclear operations. If accepted by the OEB, both approaches would result in greater decoupling of OPG's revenues for the regulated operations from their costs. The OEB's decision on OPG's application is expected in the second half of 2017.

Effective Date of New Regulated Prices

There are inherent uncertainties regarding the effective date that the OEB will establish for the new regulated prices. OPG has requested January 1, 2017 as the effective date. The OEB's decision on the effective date and the timing of the decision issuance could have a significant impact on OPG's 2017 results. Until the OEB's decision is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017.

Nuclear Rate Smoothing Proposal

Consistent with *Ontario Regulation 53/05*, OPG's May 2016 application includes a nuclear rate smoothing proposal, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. There is an inherent risk that the magnitude of the deferral ordered by the OEB will result in regulated prices that do not provide sufficient cash flow to the Company for meeting its financial objectives in an optimal manner, including ensuring sufficient liquidity, cost effectively funding the Darlington Refurbishment project and other expenditures, and maintaining the Company's investment grade credit rating. Maintaining adequate levels of credit metrics will support OPG's investment grade credit rating. As such, OPG has advanced credit metrics as a key criterion for the OEB to apply in determining the smoothed nuclear base rates.

Recovery of Pension and OPEB Costs

The OEB is currently conducting a consultation in the gas and electricity sectors to develop standard principles to guide the OEB's review of pension and OPEB costs for rate-regulated utilities, including establishing appropriate regulatory mechanisms for cost recovery. The OEB's November 2014 decision establishing OPG's existing regulated prices indicated that a change in the recovery methodology for OPG's pension and OPEB costs from the accrual basis, if required, would be addressed in OPG's next rate proceeding, having been informed by the outcome of the OEB's generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The decision also stated that the future recovery, if any, of amounts recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account authorized by that decision also would be subject to the outcome of the generic proceeding. As such, the outcome of the current consultation could have a material impact on OPG's ability to recover the balance in

the Pension & OPEB Cash Versus Accrual Differential Deferral Account and full pension and OPEB costs in the future. This would have significant adverse implications on OPG's future financial results. OPG is participating in the OEB consultation and has advanced its position in support of the appropriateness of using the accrual basis for cost recovery purposes.

Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds

Changes in cost estimates or strategies for nuclear waste management and nuclear facilities decommissioning obligations could impact OPG's future contributions to the Nuclear Segregated Funds to cover these obligations.

As required by the CNSC, OPG is responsible for the management of used nuclear fuel and L&ILW and the decommissioning of its nuclear stations and waste management facilities. The cost estimates for OPG's nuclear waste management and decommissioning obligations are based on multiple underlying assumptions and estimates that are inherently uncertain and may evolve over time. The assumptions include station end-of-life dates, waste volumes, waste disposal methods, the timing of construction of assumed waste disposal facilities, waste packaging systems, decommissioning strategy, and financial indicators. To address the inherent uncertainty, OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates at least once every five years, in line with the required ONFA Reference Plan update process.

The most recent comprehensive update of the nuclear waste management and decommissioning obligations was performed as part the 2017 ONFA Reference Plan approved by the Province in December 2016. An approved ONFA Reference Plan determines OPG's contributions to the Nuclear Segregated Funds. The changes in contribution levels are impacted by changes in the values of the Nuclear Segregated Funds as well as changes in the associated nuclear waste management and nuclear facilities decommissioning obligations. Based on the 2017 ONFA Reference Plan, no contributions are currently required to the Nuclear Segregated Funds. Contributions may be required in the future should the Nuclear Segregated Funds be in an underfunded position relative to the funding requirement of a new approved reference plan.

Financial Markets

The market value of investments held by OPG's Nuclear Segregated Funds and registered pension plan could be significantly affected by changes in various market factors such as equity prices, interest rates, inflation, and commodity prices.

Nuclear Segregated Funds Market Risk

Investments in the Nuclear Segregated Funds are allocated to certain asset classes including fixed income securities, domestic and international equity securities, pooled funds, infrastructure, agriculture and real estate. These funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, in order to fund the expenditures associated with the long-term management of used fuel and L&ILW after station shutdown, and the decommissioning of OPG's nuclear stations and waste management facilities. The rates of return earned on these segregated funds are subject to various factors including the current and future financial market conditions, which are inherently uncertain. The asset mix of the funds is determined jointly by OPG and the Province in accordance with the ONFA.

For the Used Fuel Segregated Fund, the Province guarantees the annual rate of return at 3.25 percent plus the change in the Ontario CPI, as defined by the ONFA, for the portion of the fund attributed to the first 2.23 million nuclear fuel bundles. As such, a change in the portion of the fund's value attributed to the first 2.23 million bundles impacts OPG's earnings to the extent of changes in the Ontario CPI. OPG is subject to the market risk for the investment of funds set aside in the Used Fuel Segregated Fund for incremental bundles in excess of 2.23 million.

In accordance with the cost recovery methodology established by the OEB, the performance of the portion of the Nuclear Segregated Funds attributed to the nuclear generating stations leased to Bruce Power has been subject to the Bruce Lease Net Revenues Variance Account. The variance account partially mitigates rate of return risk related to the Nuclear Segregated Funds, as it captures the differences between actual and forecast earnings from the Nuclear Segregated Funds related to these stations. Forecast earnings are those approved by the OEB in setting nuclear regulated prices. OPG is exposed to rate of return risk related to the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodology. The income statement impact of rate of return risk is reduced when the Nuclear Segregated Funds are in a fully funded position.

Post-Employment Benefit Obligations Risk

OPG's post-employment benefit obligations include pension, group life insurance, health care benefits, and LTD benefits. OPG's post-employment benefit obligations and costs, and pension plan contributions could be materially affected in the future by numerous factors, including: changes in discount rates, inflation rates, and other actuarial assumptions; future investment returns; experience gains and losses; the funded status of the pension plans; changes in benefits; changes in the regulatory environment including potential changes to the *Pension Benefits Act* (Ontario); changes in OPG's operations; and the measurement uncertainty incorporated into the actuarial valuation process.

The OPG registered pension plan, which covers most of OPG's employees and retirees, is a contributory defined benefit plan that is indexed to inflation. Contributions to the OPG registered pension plan are determined by actuarial valuations, which are filed with the appropriate regulatory authorities at least every three years. The most recent actuarial valuation of the OPG registered pension plan, covering the three-year period to the end of 2018, was completed as of January 1, 2016. There is an inherent risk that future actuarial valuations could increase OPG's funding requirements due to market and economic-related conditions. A significant decline in the financial markets could trigger an immediate requirement to update the actuarial valuation based on declines in the funded status. OPG continues to assess the requirements for contributions to the registered pension plan, including the timing of future actuarial valuations. The next actuarial valuation of the OPG registered plan must have an effective date no later than January 1, 2019. OPG's OPEB obligations are not funded and the associated employee benefits are paid from cash flow provided by operating activities or other sources of liquidity.

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017	2018	2019
Estimated fuel requirements hedged[1]	75%	76%	65%

[1] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars (USD). To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at December 31, 2016, OPG had total foreign exchange contracts outstanding with a notional value of USD $9 million.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. During 2016, the VaR utilization ranged between nil and $1.5 million, compared to between nil and $1.5 million in 2015.

Credit

Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

The Company's credit risk exposure is a function of its electricity sales, trading and hedging activities, treasury activities including investing, and commercial transactions with various suppliers of goods and services. OPG's credit risk exposure relating to electricity sales is considered low as the majority of sales are through the IESO-administered spot market. The IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market.

Other major components of OPG's credit risk exposure include those associated with vendors that are contracted to provide services or products. OPG manages its exposure to various suppliers or counterparties by evaluating their financial condition and ensuring that the Company holds appropriate collateral or other forms of security.

The following table summarizes OPG's credit exposure to all counterparties from electricity transactions and trading as at December 31, 2016:

Credit Rating [1]	Number of Counterparties [2]	Potential Exposure [3] *(million of dollars)*	Potential Exposure for Largest Counterparties: Number of Counterparties	Potential Exposure for Largest Counterparties: Counterparty Exposure *(millions of*
Investment grade	11	11	5	9
IESO[4]	1	421	1	422
Total	12	432	6	431

[1] Credit ratings are based on OPG's own analysis, taking into consideration external rating agency analysis where available, as well as recognizing explicit credit support provided through parental guarantees, Letters of Credit or other forms of security.

[2] OPG's counterparties are defined on the basis of individual master agreements.

[3] Potential exposure is OPG's statistical assessment of maximum exposure over the life of each transaction at a 95 percent confidence interval.

[4] Credit exposure is an estimate of the receivable amount arising from OPG's electricity sales into the IESO market. The credit exposure and associated receivable vary each month based on electricity sales. The monthly receivable from the IESO is typically paid to OPG in the subsequent month as per the IESO payment schedule.

Liquidity

Rising liquidity requirements can impact OPG's capital investment projects and ability to meet financial obligations.

OPG operates in a capital intensive business. Significant financial resources are required to fund major development and other capital improvement projects, including the Darlington Refurbishment project. In addition, the Company has other significant disbursement requirements including pension contributions, payments towards OPEB and other benefit plans, expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, debt maturities with the OEFC, and investments in new generating capacity and other business growth opportunities. OPG must ensure that it has the financial capacity and sufficient access to cost effective financing sources to fund its capital requirements and other disbursements. In support of this objective, OPG utilizes multiple sources and forecasts availability of funds, actively monitors funding requirements, and is focused on maintaining its investment grade credit rating. A discussion of corporate liquidity is included under the section, *Liquidity and Capital Resources*.

Contracted Generation

OPG may incur costs if its contracted generating assets do not meet performance targets as specified in the ESAs with the IESO or other long-term contracts. There is also a risk that, upon expiry, subsequent ESAs may not be available.

The Company's generating stations operating under ESAs with the IESO or other long-term contracts are subject to availability and production targets specified in their respective contracts. OPG could incur charges and other costs if these facilities fail to operate at required capacity or production levels, as required. This risk is mitigated through the implementation of maintenance, capital investment and other programs, as appropriate.

OPG's owned and co-owned thermal generating stations operate under ESAs with the IESO or other long-term agreements. In December 2016, the Ontario and Quebec governments signed an electricity trade agreement that will allow Ontario to import up to 2 TWh of hydroelectric power from Quebec annually from 2017 to 2023. This is expected to replace some gas-fired generation in Ontario. While OPG expects that its thermal generating stations will continue to provide capacity to the market over the term of the respective agreements, there is a risk that, upon expiry of the current agreements, subsequent contracts for these stations may not be available or may not be available on financially viable terms.

Ontario Electricity Market

Ontario electricity market conditions could impact OPG's revenue and operations.

OPG's revenue can be impacted by external factors related to the electricity market including: the entrance of new participants into the Ontario market; the competitive actions of market participants; Ontario electricity demand; changes in the regulatory environment; and wholesale electricity prices in the interconnected markets.

The structure of the Ontario electricity market is subject to regulation and market rules, changes to which may affect OPG's revenue. The Province, the IESO, the OEB, or another entity or regulatory body may change or institute regulations or rules that can impact OPG's capability to generate revenue or ability to recover appropriate costs and earn a return on the assets.

Ownership by the Province

OPG's commitment to maximize the return on the Shareholder's investment in the Company may compete with the obligation of the Shareholder to respond to a broad range of matters in its role as the Government of Ontario.

The Province owns all of OPG's issued and outstanding common shares. Accordingly, the Province, as represented by the Ontario Ministry of Energy, has the authority to make appointments to OPG's Board of Directors. OPG could be subject to Shareholder direction, under Section 108 of the OBCA, that can directly influence major decisions including those related to project development, timing and strategy of applications for regulated prices, asset divestitures, financing and capital structure, that could require OPG to undertake activities that result in increased expenditures, or that reduce revenues or cash flows relative to the business activities or strategies that would have otherwise been undertaken. In addition, the obligation of OPG's Shareholder to respond to a broad range of matters in its role as the Government of Ontario may compete with OPG's commitment to maximize the return on the Shareholder's investment in the Company. This includes, but is not limited to, the Province's response to mitigate the impact of rising electricity prices on consumers.

Government Legislation and Regulation Change

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on the Company's operations and financial position.

OPG's core business and strategy may be impacted by changes in federal and provincial legislation and regulations. Matters that are subject to regulation include, among others, rate regulation, electricity generating operations, nuclear waste management and nuclear decommissioning, and taxation. Regulatory bodies may change or enact regulations or rules, such as new nuclear fitness for duty requirements, that could increase OPG's costs, decrease OPG's revenue, or limit the Company's ability to recover appropriate costs or earn a return on the assets.

Since legal requirements are subject to change and to interpretation, OPG is unable to predict the impact of such changes on the Company and its operations. To mitigate legislative risks, OPG continues to monitor and actively engage with the federal and provincial governments in order to determine if future legislation will impact the Company.

Risks to Maintaining Social Licence

OPG is exposed to risks associated with its social licence and public profile due to changes in the opinions of various stakeholders, including local communities, Ontario customers, government agencies, and Indigenous Communities. Additionally, inability to achieve operational excellence and project excellence safely and reliably and to maintain financial strength could impact OPG's social licence.

Maintaining public trust and meeting stakeholders and Indigenous communities' expectations are critical to OPG's success. OPG focuses on building and maintaining its social licence and corporate reputation through safe, reliable,

environmentally-responsible operations as well as corporate citizenship initiatives across the province. The inability to maintain safe, reliable operations could negatively impact OPG's reputation and result in a loss of public support.

OPG has transparent governance practices and works continuously towards effective communication and consultation with Indigenous communities and stakeholders. Efforts to reinforce OPG's social licence include various media campaigns that highlight the Company's contribution as a clean power generator with a commitment to safety, environment and community partnerships. OPG undertakes various assurance and risk management activities to effectively manage the risks to its social licence and corporate reputation. Issue management and response plans are developed to address specific concerns as they arise.

Indigenous Communities

The quality of OPG's relationships and the outcome of negotiations with Indigenous communities may impact OPG's project and financial performance, as well as its social licence to operate.

OPG may be subject to claims by Indigenous communities. These claims stem from projects and generation development related to the operations of OPG and historic operations of OPG's predecessor company, Ontario Hydro, which may have impacted the Aboriginal and/or Treaty rights of Indigenous communities.

OPG has an Indigenous Relations Policy, which sets out the Company's commitment to proactively build and maintain positive relationships with Indigenous communities. OPG has been successful in resolving a number of past grievances by Indigenous communities. However, the outcome of the ongoing and any future negotiations depends on a number of factors, including legislation and regulations and precedents created by court rulings, which are subject to change over time. OPG pursues generation-related developments in partnerships with Indigenous communities on the basis of long-term mutually beneficial commercial arrangements.

Environmental Risks

OPG may be subject to orders or charges if it is not in compliance with applicable environmental laws. Changes in environmental regulatory requirements can result in existing operations being in a state of non-compliance, a potential inability to comply, and potential costs and liabilities for OPG.

Changes to environmental laws could create compliance risks and result in potential liabilities that may be addressed by the installation of control technologies, development of new processes, allowances or offsets, or constraints on electricity production. A failure to comply with applicable environmental laws may result in enforcement actions, including the potential for orders or charges. In addition, some of OPG's activities have the potential to impair natural habitat, damage aquatic or terrestrial plant and wildlife, or cause contamination to land or water that may require remediation. There is also a risk that OPG may incur additional costs to meet heritage conservation program requirements under the *Ontario Heritage Act*.

Potential environmental regulatory changes being managed as risks by the Company include electricity production constraints and water flow management requirements to protect fish and fish habitat, expanded fish passage requirements, and lower drinking and ground water tritium concentration standards. These changes could impact plant operations and increase costs. OPG continues to monitor and address risks associated with changes to environmental laws and regulatory requirements. There were no significant changes to environmental legislation applicable to OPG during 2016.

OPG recognizes that efforts are required to plan for the effects of climate change and has identified climate change adaptation as a strategic issue for the company. OPG monitors developments in climate science, adaptation activities, and potential changes to policy and regulatory requirements. OPG continues to work with stakeholders to better define adaptation requirements through analysis and understanding of climate change impacts on watersheds and electricity supply and demand. Once adaptation requirements are better known, a risk-based analysis will help OPG determine the extent of efforts it will undertake to reduce the impact of climate change on its operations.

A carbon cap and trade program became effective in Ontario in January 2017. The program is not expected to have a material adverse economic impact on OPG due to the Company's low GHG emitting generating fleet. Further details can be found under the heading, *Environmental Performance*, in the section, *Core Business, Strategy and Outlook*.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		2015	
(millions of dollars)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**15**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,070**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

Management, including the President and Chief Executive Officer (President and CEO) and the Chief Financial Officer (CFO), are responsible for maintaining Disclosure Controls and Procedures (DC&P) and Internal Controls over Financial Reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements in accordance with US GAAP.

There were no other changes in OPG's ICOFR during the year ended December 31, 2016 that have materially affected or are reasonably likely to materially affect OPG's ICOFR.

Management, including the President and CEO and the CFO, concluded that, as of December 31, 2016, OPG's DC&P and ICOFR (as defined in National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings*) were effective.

FOURTH QUARTER

Discussion of Results

(millions of dollars) (unaudited)	Three Months Ended December 31 2016	2015
Revenue	**1,388**	1,312
Fuel expense	**186**	175
Gross margin	**1,202**	1,137
Operations, maintenance and administration	**686**	788
Depreciation and amortization	**316**	354
Accretion on fixed asset removal and nuclear waste management liabilities	**233**	223
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(126)**	(169)
Income from investments subject to significant influence	**(9)**	(9)
Property taxes	**11**	11
Restructuring	**6**	5
Income (loss) before other loss, interest, and income taxes	**85**	(66)
Other loss	**6**	12
Income (loss) before interest and income taxes	**79**	(78)
Net interest expense	**28**	44
Income (loss) before income taxes	**51**	(122)
Income tax expense (recovery)	**59**	(22)
Net loss	**(8)**	(100)
Net loss attributable to the Shareholder	**(13)**	(101)
Net income attributable to non-controlling interest	**5**	1

Net loss attributable to the Shareholder for the fourth quarter was $13 million, compared to a net loss of $101 million for the same quarter in 2015.

Income before interest and income taxes was $79 million during the fourth quarter of 2016, an increase of $157 million compared to loss before interest and income taxes of $78 million during the same period in 2015. The following summarizes the significant factors which caused the variance:

Significant factors that increased income before other loss, interest and income taxes:

- Lower number of outage days increased nuclear generation by 2.2 TWh during the fourth quarter in 2016, compared to the same period in 2015, primarily due to the four-unit Darlington VBO that was completed on October 30, 2015 and a lower number of unplanned outage days at the Darlington GS. The increase in nuclear generation resulted in an increase in revenue from the nuclear base regulated price of approximately $130 million.
- Lower OM&A expenses of $77 million in the Regulated – Nuclear Generation segment primarily due to increased outage activities in 2015, including the Darlington VBO.

Significant factors that decreased income before other loss, interest and income taxes:

- Decrease in earnings from the Nuclear Segregated Funds of $43 million during the fourth quarter of 2016, compared to the same quarter in 2015, mainly due to an accounting adjustment recorded during the fourth quarter of 2016 to limit the funds asset values recognized on OPG's consolidated balance sheet to the lower underlying obligations as reflected in the 2017 ONFA Reference Plan.
- Higher accretion expense of $10 million, reflecting the increase in the Nuclear Liabilities recognized in December 2015 in connection with the changes in the estimated useful life assumptions for OPG's nuclear stations, net of the impact of the Bruce Lease Net Revenues Variance Account.

The increase in income tax expense during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher income before income taxes and lower amount of tax expense deferred in regulatory assets in 2016.

Average Sales Prices

The average sales price for the Regulated – Nuclear Generation segment during the fourth quarter of 2016 was 6.9 ¢/kWh, compared to 7.0 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of an OEB-authorized nuclear rate rider of $1.33/MWh related to the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment during the fourth quarter of 2016 was 4.5 ¢/kWh, compared to 4.8 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of a rate rider of $6.04 per MWh related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014.

The income impact of changes in revenue from rate riders was largely offset by changes in amortization expense related to regulatory balances.

Electricity Generation

OPG's electricity generation for the three months ended December 31, 2016 and 2015 was as follows:

	Three Months Ended December 31	
(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**11.0**	8.8
Regulated – Hydroelectric	**6.7**	7.3
Contracted Generation Portfolio [1]	**0.6**	0.7
Total OPG electricity generation	**18.3**	16.8
Total electricity generation by all other generators in Ontario [2]	**18.9**	19.6

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The increase in OPG's electricity generation of 1.5 TWh during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher electricity generation of 2.2 TWh from the Regulated – Nuclear Generation segment as a result of fewer outage days at the Darlington GS during the fourth quarter of 2016, which was primarily due to the Darlington VBO that occurred during the fourth quarter of 2015. The increase in generation was partially offset by reduced generation from the Regulated – Hydroelectric Segment of 0.6 TWh, primarily due to lower water flows in eastern Ontario during the fourth quarter of 2016.

Ontario's electricity demand as reported by the IESO was 33.2 TWh during the fourth quarter of 2016, compared to 32.7 TWh during the fourth quarter of 2015.

Liquidity and Capital Resources

Cash flow provided by operating activities during the three months ended December 31, 2016 was $437 million, compared to $111 million for the same period in 2015. The increase in cash flow was primarily due to higher generation revenue receipts, lower pension plan contributions and lower OM&A expenditures during the fourth quarter of 2016. Higher generation revenue receipts reflected higher nuclear generation in the fourth quarter of 2016, compared to the same period in 2015.

Cash flow used in investing activities during the three months ended December 31, 2016 was $497 million, compared to $571 million during the same period in 2015. The decrease was primarily due to partial maturity, in the fourth quarter of 2016, of a structured deposit note invested in the fourth quarter of 2015, partially offset by higher expenditures for the Darlington Refurbishment project. The deposit note invested proceeds from the long-term debt issued in support of the Peter Sutherland Sr. GS project in October 2015.

Cash flow used by financing activities during the three months ended December 31, 2016 was $180 million, compared to cash flow provided in financing activities of $356 million for the same period in 2015. The decrease in cash flow provided by financing activities was due to the net repayment of short-term notes and lower net issuance of long-term debt in the fourth quarter of 2016.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected annual financial information for the last three years and financial information for each of the eight most recently completed quarters. This information is derived from OPG's unaudited interim consolidated financial statements and the audited consolidated financial statements, and has been prepared in accordance with US GAAP.

Annual Financial Information

(millions of dollars – except where noted)	**2016**	**2015**	**2014**
Revenue	**5,653**	5,476	4,963
Income before extraordinary item attributable to the Shareholder	**436**	402	561
Net income attributable to the Shareholder	**436**	402	804
Net income per common share before extraordinary item *(dollars)*	**$1.70**	$1.57	$2.19
Net income per common share *(dollars)*	**$1.70**	$1.57	$3.14
Total assets	**44,372**	44,250	41,645
Total long-term liabilities	**31,460**	32,404	30,483
Common shares outstanding *(millions)*	**256.3**	256.3	256.3

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**2016 Quarters Ended**				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	**1,388**	**1,400**	**1,387**	**1,478**	**5,653**
Net (loss) income	**(8)**	**198**	**135**	**128**	**453**
Less: Net income attributable to non-controlling interest	**5**	**4**	**3**	**5**	**17**
Net (loss) income attributable to the Shareholder	**(13)**	**194**	**132**	**123**	**436**
Per common share, attributable to the Shareholder *(dollars)*	**($0.05)**	**$0.76**	**$0.51**	**$0.48**	**$1.70**

Quarterly Financial Information

(millions of dollars – except where noted) (unaudited)	2015 Quarters Ended				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	1,312	1,426	1,383	1,355	5,476
Net (loss) income	(100)	85	193	239	417
Less: Net income attributable to non-controlling interest	1	5	4	5	15
Net (loss) income attributable to the Shareholder	(101)	80	189	234	402
Per common share, attributable to the Shareholder *(dollars)*	($0.39)	$0.31	$0.74	$0.91	$1.57

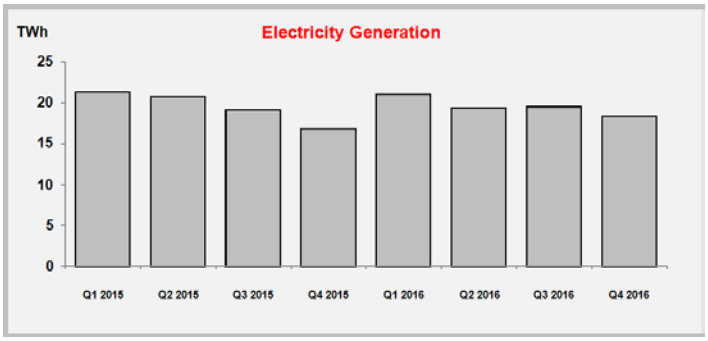
Trends

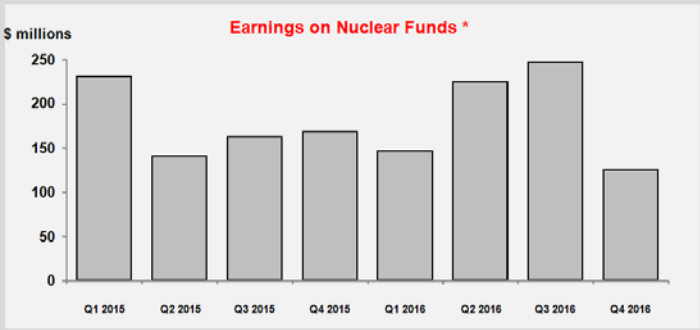
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues are higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of foregone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington VBO, which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items which affected net income (loss) in certain quarters above are described below:

- A gain of $22 million recorded during the first quarter of 2016 reflecting the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to Niagara Tunnel project expenditures.
- Lower earnings of $16 million during the first quarter of 2015, compared to the same quarter in 2016, in the Contracted Generation Portfolio segment, primarily as a result of a provision made in that quarter related to an IESO audit.
- Higher OM&A expenses of $105 million for the Regulated – Nuclear Generation segment during the first half of 2016, compared to the same period in 2015, primarily resulting from an increase in planned outage activities and the timing of planned outage activities during the year.
- Lower OM&A expenses of $91 million for the Regulated – Nuclear Generation segment during the last half of 2016, compared to the same period in 2015, primarily as a result of the VBO at the Darlington GS in the third and fourth quarters of 2015.

Additional information about OPG, including its audited consolidated financial statements and notes thereto, can be found on SEDAR at www.sedar.com.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow from operations, or any other measure in accordance with US GAAP, but as an indicator of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period.

ROE Excluding AOCI is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**436**	402
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,442**	10,023
ROE Excluding AOCI *(percent)*	**4.2**	4.0

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
FFO before interest		
Cash flow provided by operating activities	**1,705**	1,465
Add: Interest paid	**269**	269
Less: Interest capitalized to fixed and intangible assets	**(141)**	(102)
Add: Changes to non-cash working capital balances	**(68)**	100
FFO before interest	**1,765**	1,732
Adjusted interest expense		
Net interest expense	**120**	180
Add: Interest income	**7**	9
Add: Interest capitalized to fixed and intangible assets	**141**	102
Add: Interest related to regulatory assets and liabilities	**30**	2
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**45**	53
Adjusted interest expense	**343**	346
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.0

(3) **Enterprise Total Generating Cost per MWh** is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation plus electricity generation foregone due to SBG conditions during the period.

Enterprise TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Enterprise TGC		
Total OM&A expenses	**2,747**	2,783
Total fuel expense	**727**	687
Total capital expenditures	**1,704**	1,376
Less: Darlington Refurbishment capital and non-capital costs	**(1,022)**	(707)
Less: Other generation development project capital and OM&A costs	**(162)**	(197)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**62**	250
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(55)
Add: Hydroelectric gross revenue charge due to electricity foregone due to SBG conditions	**49**	34
Less: OM&A expenses ancillary to electricity generation business	**(24)**	(27)
Other adjustments	**(25)**	(46)
	3,989	4,098
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**78.2**	78.0
Add: Electricity generation foregone due to SBG conditions	**4.7**	3.2
	82.9	81.2
Enterprise TGC per MWh *($/MWh)* [1]	**48.10**	**50.46**

[1] Amounts may not calculate due to rounding.

(4) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Nuclear TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**2,210**	2,196
Regulated – Nuclear Generation fuel expense	**315**	301
Regulated – Nuclear Generation capital expenditures	**1,338**	1,023
Less: Darlington Refurbishment capital and OM&A costs	**(1,022)**	(708)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**81**	230
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(62)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(6)**	(6)
Other adjustments	**(8)**	(28)
	2,841	2,946
Nuclear electricity generation *(TWh)*	**45.6**	44.5
Nuclear TGC per MWh *($/MWh)* [1]	**62.30**	66.20

[1] Amounts may not calculate due to rounding.

(5) **Hydroelectric Total Generating Cost per MWh** is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation foregone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Hydroelectric TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**325**	340
Regulated – Hydroelectric Generation fuel expense	**353**	345
Contracted Generation Portfolio OM&A expenses	**178**	185
Contracted Generation Portfolio fuel expense	**58**	39
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**333**	311
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(158)**	(197)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(177)**	(163)
(Less) Add: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(24)**	18
Add: Hydroelectric gross revenue charge and water rental payments due to electricity generation foregone due to SBG conditions	**49**	34
Other adjustments	**(1)**	-
	936	912
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**29.5**	30.4
Contracted Generation Portfolio electricity generation	**3.1**	3.1
Add: Hydroelectric electricity generation foregone due to SBG conditions	**4.7**	3.2
Less: Non-hydroelectric electricity generation of the Contracted Generation Portfolio	**(0.7)**	(0.6)
	36.6	36.1
Hydroelectric TGC per MWh *($/MWh)*[1]	**25.57**	25.26

[1] Amounts may not calculate due to rounding.

(6) **Gross margin** is defined as revenue less fuel expense**.**

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