

ONTARIO POWER GENERATION INC.
CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2017



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). 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, 2017. 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 (signed)

President and Chief Executive Officer

Ken Hartwick (signed)

*Chief Financial Officer and Senior Vice
President – Finance*

March 8, 2018

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, 2017 and 2016, 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 control 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 control 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 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 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, 2017 and 2016, 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 8, 2018

Ernst & Young LLP (signed)

Chartered Professional Accountants,
Licensed Public Accountants

CONSOLIDATED STATEMENTS OF INCOME

Years Ended December 31 <i>(millions of dollars except where noted)</i>	2017	2016
Revenue	5,158	5,653
Fuel expense	689	727
Gross margin	4,469	4,926
Operations, maintenance and administration	2,824	2,747
Depreciation and amortization (Note 4)	679	1,257
Accretion on fixed asset removal and nuclear waste management liabilities (Note 8)	960	929
Earnings on nuclear fixed asset removal and nuclear waste management funds (Note 8)	(801)	(746)
Earnings from Fair Hydro Trust (Note 17)	(1)	-
Income from investments subject to significant influence	(38)	(37)
Property taxes	40	46
Restructuring	-	6
	3,663	4,202
Income before other gains, interest and income taxes	806	724
Other gains (Note 4)	379	17
Income before interest and income taxes	1,185	741
Net interest expense (Note 6)	95	120
Income before income taxes	1,090	621
Income tax expense (Note 9)	209	168
Net income	881	453
Net income attributable to the Shareholder	860	436
Net income attributable to non-controlling interest	21	17
Basic and diluted earnings per share (dollars) (Note 15)	3.35	1.70

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Years Ended December 31 <i>(millions of dollars)</i>	2017	2016
Net income	881	453
Other comprehensive (loss) income, net of income taxes (Note 10)		
Actuarial loss on remeasurement of liabilities for pension and other post-employment benefits ¹	(23)	(6)
Reclassification to income of amounts related to pension and other post-employment benefits ²	10	12
Reclassification to income of losses on derivatives designated as cash flow hedges ³	18	19
Unrealized loss on available-for-sale securities ⁴	(8)	(1)
Other comprehensive (loss) income for the year	(3)	24
Comprehensive income	878	477
Comprehensive income attributable to the Shareholder	857	460
Comprehensive income attributable to non-controlling interest	21	17

¹ Net of income tax recovery of \$7 million and \$2 million for 2017 and 2016, respectively.

² Net of income tax expenses of \$3 million and \$4 million for 2017 and 2016, respectively.

³ Net of income tax expenses of \$2 million for each of 2017 and 2016.

⁴ Net of income tax recovery of \$2 million and nil for 2017 and 2016, respectively.

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years Ended December 31 <i>(millions of dollars)</i>	2017	2016
Operating activities		
Net income	881	453
Adjust for non-cash items:		
Depreciation and amortization <i>(Note 4)</i>	679	1,257
Accretion on fixed asset removal and nuclear waste management liabilities	960	929
Earnings on nuclear fixed asset removal and nuclear waste management funds	(801)	(746)
Pension and other post-employment benefit costs <i>(Note 11)</i>	412	464
Deferred income taxes	19	(36)
Mark-to-market on derivative instruments <i>(Note 12)</i>	(3)	3
Provision for used nuclear fuel and low and intermediate level nuclear waste	116	118
Regulatory assets and liabilities	(558)	(170)
Provision for materials and supplies	33	42
Other gains	(371)	-
Other	1	(25)
	1,368	2,289
Contributions to nuclear fixed asset removal and nuclear waste management funds <i>(Note 8)</i>	-	(150)
Expenditures on fixed asset removal and nuclear waste management	(313)	(275)
Reimbursement of eligible expenditures on nuclear fixed asset removal and nuclear waste management	79	70
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans	(322)	(363)
Expenditures on restructuring	(4)	(6)
Distributions received from investments subject to significant influence	50	52
Net changes to other long-term assets and liabilities	32	20
Net changes to non-cash working capital balances <i>(Note 18)</i>	54	180
Cash flow provided by operating activities	944	1,817
Investing activities		
Acquisition of Fair Hydro Trust financing receivables <i>(Note 19)</i>	(1,179)	-
Purchase of available-for-sale securities	-	(213)
Proceeds from deposit note	70	110
Net proceeds from sale of property, plant and equipment	484	-
Investment in property, plant and equipment and intangible assets	(1,853)	(1,816)
Cash flow used in investing activities	(2,478)	(1,919)
Financing activities		
Issuance of Class A shares <i>(Note 14)</i>	519	-
Issuance of OPG long-term debt <i>(Note 6)</i>	1,301	334
Repayment of OPG long-term debt	(1,103)	(273)
Issuance of Fair Hydro Trust long-term debt <i>(Note 6)</i>	601	-
Distribution to non-controlling interest	(15)	(14)
Capital contribution from non-controlling interest	19	-
Issuance of short-term debt	1,960	3,108
Repayment of short-term debt	(1,700)	(3,331)
Cash flow provided by (used in) financing activities	1,582	(176)
Net increase (decrease) in cash and cash equivalents	48	(278)
Cash and cash equivalents, beginning of year	186	464
Cash and cash equivalents, end of year	234	186

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 <i>(millions of dollars)</i>	2017	2016
Assets		
Current assets		
Cash and cash equivalents ¹	234	186
Available-for-sale securities	188	212
Receivables from related parties <i>(Note 19)</i>	369	429
Nuclear fixed asset removal and nuclear waste management funds <i>(Note 8)</i>	23	24
Fuel inventory	309	310
Materials and supplies	103	100
Prepaid expenses	192	198
Other current assets	146	298
	1,564	1,757
Property, plant and equipment <i>(Note 4)</i>	29,950	29,315
Less: accumulated depreciation	8,628	9,317
	21,322	19,998
Intangible assets <i>(Note 4)</i>	565	503
Less: accumulated amortization	432	404
	133	99
Other assets		
Nuclear fixed asset removal and nuclear waste management funds <i>(Note 8)</i>	16,701	15,960
Financing receivables <i>(Note 19)</i>	1,179	-
Long-term materials and supplies	355	345
Regulatory assets <i>(Note 5)</i>	7,231	5,855
Investments subject to significant influence <i>(Note 20)</i>	309	321
Other long-term assets	28	37
	25,803	22,518
	48,822	44,372

¹ Includes \$4 million restricted for Fair Hydro Trust purposes as at December 31, 2017 (December 31, 2016 – nil).

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 <i>(millions of dollars)</i>	2017	2016
Liabilities		
Current liabilities		
Accounts payable and accrued charges	1,228	1,164
Short-term debt (Note 7)	260	2
Deferred revenue due within one year	12	12
Long-term debt due within one year (Note 6)	398	1,103
Income taxes payable	80	123
	1,978	2,404
Long-term debt (Note 6)	5,921	4,417
Other liabilities		
Fixed asset removal and nuclear waste management liabilities (Note 8)	20,421	19,484
Pension liabilities (Note 11)	3,423	3,012
Other post-employment benefit liabilities (Note 11)	3,092	2,897
Long-term accounts payable and accrued charges	252	213
Deferred revenue	351	298
Deferred income taxes (Note 9)	879	829
Regulatory liabilities (Note 5)	594	310
	29,012	27,043
Equity		
Common shares ¹ (Note 14)	5,126	5,126
Class A shares ² (Note 14)	519	-
Retained earnings	6,396	5,534
Accumulated other comprehensive loss (Note 10)	(295)	(295)
Equity attributable to the Shareholder	11,746	10,365
Equity attributable to non-controlling interest (Note 22)	165	143
Total equity	11,911	10,508
	48,822	44,372

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

² 12,217,616 Class A shares outstanding at a stated value of \$519 million as at December 31, 2017 (December 31, 2016 – nil).

Commitments and Contingencies (Notes 6, 9, 11 and 16)

See accompanying notes to the consolidated financial statements

On behalf of the Board of Directors:

Bernard Lord (signed)
Board Chair

M. George Lewis (signed)
Director

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY

Years Ended December 31 <i>(millions of dollars)</i>	2017	2016
Common shares (Note 14)	5,126	5,126
Class A shares (Note 14)		
Balance at beginning of year	-	-
Issuance of Class A shares	519	-
Balance at end of year	519	-
Retained earnings		
Balance at beginning of year	5,534	5,098
Net income attributable to the Shareholder	860	436
Reclassification of non-controlling interest on change in ownership interest (Note 22)	2	-
Balance at end of year	6,396	5,534
Accumulated other comprehensive loss, net of income taxes		
Balance at beginning of year	(295)	(319)
Other comprehensive (loss) income	(3)	24
Reclassification of non-controlling interest on change in ownership interest (Note 22)	3	-
Balance at end of year	(295)	(295)
Equity attributable to the Shareholder	11,746	10,365
Equity attributable to non-controlling interest		
Balance at beginning of year	143	140
Equity contribution from non-controlling interest (Note 22)	21	-
Reclassification of non-controlling interest on change in ownership interest (Note 22)	(5)	-
Distribution to non-controlling interest	(15)	(14)
Income attributable to non-controlling interest	21	17
Balance at end of year	165	143
Total equity	11,911	10,508

See accompanying notes to the consolidated financial statements

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2017 and 2016

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).

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 also has 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*. The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a US Securities and Exchange Commission registrant.

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.

The Company is in the process of applying for a further extension of this exemptive relief beyond January 1, 2019.

All dollar amounts are presented in Canadian dollars, unless otherwise noted. Certain 2016 comparative amounts have been reclassified from financial statements previously presented to conform to the 2017 consolidated financial statement presentation.

3. SIGNIFICANT ACCOUNTING POLICIES AND ESTIMATES

Consolidation

The consolidated financial statements of the Company include the accounts of OPG and its majority-owned subsidiaries, and variable interest entities (VIEs) 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 GS (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.

Nuclear Waste Management Organization

In 2002, OPG and other Canadian nuclear waste producers established a separately incorporated Nuclear Waste Management Organization (NWMO) in accordance with the *Nuclear Fuel Waste Act* (Canada) (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 Canada. 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 in accordance with the NFWA. OPG provides over 90 percent of the 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 intercompany transactions, are consolidated.

Fair Hydro Trust

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan aimed at reducing electricity bills for all residential, farm, small businesses and other eligible consumers (Specified Consumers) in the province by refinancing a portion of the Global Adjustment over a longer period of time. 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. On June 1, 2017, the *Ontario Fair Hydro Plan Act, 2017* (the Fair Hydro Act or the Act) received Royal Assent and the associated general regulation came into force in June 2017. Pursuant to the Act, effective May 1, 2017, the Independent Electricity System Operator (IESO) began to defer a portion of the Global Adjustment costs. The Act allows for the IESO to transfer a portion of the deferred balance to a financing entity that would fund the deferral in exchange for an irrevocable right to recover the balance and associated financing and other costs from Specified Consumers in the future (Investment Interest). The legislation appointed OPG as the Financial Services Manager under the Act and conveyed upon the Financial Services Manager statutory obligations, including the creation of one or more financing entities that may acquire an Investment Interest from the IESO.

In December 2017, the Fair Hydro Trust (the Trust) was established as a separate entity to be the financing entity contemplated by the Fair Hydro Act. The majority unitholder and beneficiary of the Trust is a wholly owned subsidiary of OPG. Immediately after the Trust's establishment, OPG entered into a management agreement with the Trust which provides OPG with the powers and duties of managing the Trust, including determining whether to acquire Investment Interest from the IESO, negotiating and executing all agreements, fulfilling all reporting requirements, and administering all of the Trust's day-to-day activities.

In order for the Trust to finance the acquisition of Investment Interest from the IESO, it incurs senior debt from capital markets and subordinated debt from OPG. The Trust's investment attracts financing amounts and other related fees. The Trust has minimal equity at risk to finance its activities. As part of the funding structure of the Trust, concurrent with every issuance of senior debt, it is expected that OPG will purchase subordinated debt of the Trust in an aggregate amount not to exceed 49 percent of the Trust's total outstanding debt. The subordination level may vary over time, but must be at least equal to 35 percent of the Trust's total outstanding debt. Approximately

90 percent of the amount of subordinated debt purchased by OPG is expected to be funded through equity injections in OPG by the Province, with the remainder being funded from OPG's available funds.

OPG exercises control over the key activities of the Trust. Management has concluded that OPG holds a variable interest in the Trust, of which OPG is the primary beneficiary, due to the obligation to absorb losses through ownership of the Trust's subordinated debt. Accordingly, the applicable amounts in the accounts of the Trust, after elimination of intercompany transactions, are consolidated.

PSS Generating Station LP

PSS Generating Station LP (PSS) is a limited partnership between OPG, Coral Rapids Power Corporation (CRP) and PSS Generating Station Inc. (PSS GS Inc.), a corporation owned by CRP and OPG. The principal business of the partnership is the development, construction, ownership, operation and maintenance of the 28-megawatt (MW) 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.

During the year ended December 31, 2017, PSS achieved commercial operations recognizing income and eliminating its deficit. Therefore, PSS has met the criteria of having sufficient equity to finance its activities and ceased being classified as a VIE. Since OPG is the primary beneficiary of PSS, it continues to consolidate PSS.

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 end of the reporting period, 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 estimate 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) and associated asset retirement costs capitalized as part of property, plant and equipment (PP&E), income taxes (including deferred income taxes), contingencies, regulatory assets and regulatory liabilities, valuation of investments in segregated funds, depreciation and amortization expenses 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

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 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, 2017, the amortization periods of PP&E and intangible assets are as follows:

Nuclear generating stations and major components	5 to 74 years ¹
Hydroelectric generating stations and major components	10 to 100 years
Thermal generating stations and major components	5 to 50 years
Administration and service facilities	10 to 50 years
Computers – declining balance	12% to 40% per year
Major application software	5 years
Service equipment	5 to 10 years

¹ As at December 31, 2017, the end of station life for depreciation purposes for the Darlington, Pickering, Bruce A and Bruce B nuclear generating stations ranged between 2022 and 2061. Major components are depreciated over the lesser of the station life and the life of the components.

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 economic factors. OPG reviews the estimated useful lives for its PP&E and intangible assets, including end-of-life assumptions for major generating assets, on a regular basis.

For nuclear generating stations operated by OPG, establishing station end-of-life assumptions primarily involves an assessment of operating lives of major life-limiting components such as fuel channel assemblies, taking into account expectations of future ability to economically operate and as appropriate refurbish the station for continued use. Expected operating lives of major life-limiting components are established through technical assessments of their fitness-for-service. Expectations of future ability to operate the station may be affected by operating licence requirements, ability to recover capital, operating and decommissioning costs, and government policy, among other factors.

Although there is a link between the age of a hydroelectric facility and the capital investment required to maintain that facility, age does not generally establish an overall upper limit on the expected useful life of a hydroelectric generating station. Regular maintenance and the replacement of specific components typically allow hydroelectric stations to operate for very long periods. An estimated useful life not exceeding 100 years is used by OPG to depreciate dams and other major hydroelectric station structures.

Station end-of-life assumptions for thermal generating stations are established based on operating life expectations of major station components and expectations of future ability to economically operate the station taking into consideration available revenue mechanisms.

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 values 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 54 hydroelectric generating stations and the Pickering and Darlington nuclear generating stations (collectively, prescribed facilities or regulated facilities). 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 Ontario 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 but for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and regulatory liabilities recognized by the Company relate to variance and deferral accounts (regulatory accounts) authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. 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 measurement of these regulatory assets and regulatory 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 regulatory 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.

Regulatory assets and regulatory 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.

In addition to regulatory assets and regulatory liabilities for variance and deferral accounts, OPG recognizes regulatory assets and regulatory liabilities for unamortized amounts recorded in accumulated other comprehensive income (AOCI) in respect of pension and OPEB obligations, deferred income taxes, and differences between interim regulated prices charged to customers during an interim rate period and final regulated prices authorized or to be authorized by the OEB for that period, to reflect the expected recovery or repayment of these amounts through future regulated prices to be 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, and assumptions made with respect to final regulated prices to be authorized by the OEB for the interim rate period. Regulatory assets and regulatory liabilities for differences between interim regulated prices charged to customers during an interim period rate and final regulated prices authorized or to be authorized by the OEB for that period 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 regulatory liability balances are classified as non-current on the consolidated balance sheets.

The regulatory asset recognized by the Company 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.

Since November 1, 2014, the OEB has limited amounts for pension and OPEB costs included in the approved revenue requirements and regulated prices to the regulated business portion of the Company's cash expenditures for its pension and OPEB plans. The difference between actual pension and OPEB costs determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's actual cash expenditures for these plans is captured in the OEB-authorized Pension & OPEB Cash Versus Accrual Differential Deferral Account for future consideration by the OEB.

In 2017, the OEB issued a report outlining the guiding principles and policy for recovery mechanisms of pension and OPEB costs of rate regulated utilities in the Ontario electricity and natural gas sectors. 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 OEB's report and the OEB's December 28, 2017 decision on OPG's application for new regulated prices require OPG to continue to record differences between pension and OPEB accrual costs and cash payments in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, until such time as the OEB decides on the approval and implementation of resumption of the accrual basis of recovery for OPG. The OEB's December 28, 2017 decision stated that the OEB expects OPG to file an application in 2018 comprising the disposition of the next set of variance and deferral account balances that includes OPG's proposal for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and for the method of recovery to be used for pension and OPEB amounts going forward.

It is the Company's position that the OEB's November 2014 and December 2017 decisions on OPG's applications for regulated prices and the OEB's 2017 report in this area do not constitute a change in the basis of OPG's rate recovery of pension and OPEB costs. 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 regulatory account for future recovery, as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts and also has recognized a regulatory asset for the balance of the Pension & OPEB Cash Versus Accrual Differential Deferral Account discussed further in Note 5.

Revenue Recognition

All of OPG's electricity generation is offered into the real-time energy spot market administered by the 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 include base regulated prices and, as applicable, rate riders for the recovery or repayment of approved variance and deferral account balances. The revenues from the regulated hydroelectric facilities are also subject to the OEB-approved hydroelectric incentive mechanism. This 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 base regulated prices in effect during the period January 1, 2016 to May 31, 2017 were established by the OEB's November 2014 decision and December 2014 order, using a forecast cost-of-service rate-setting methodology based on the OEB-approved revenue requirements, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities for 2014 and 2015 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 variance and deferral account rate riders in effect during 2016 were established by the OEB in its October 2015 order on OPG's application to recover balances in most of the Company's authorized variance and deferral accounts as at December 31, 2014.

On December 28, 2017, the OEB issued its decision on OPG's May 2016 application for new regulated prices for the 2017–2021 period. The OEB set an effective date for the new regulated prices of June 1, 2017. The decision included the OEB's findings with respect to ratemaking methodologies for the prescribed facilities, the basis for inputs into the hydroelectric incentive ratemaking formula, and the elements of the nuclear revenue requirement.

Pursuant to the decision, the new base regulated prices will be determined on an incentive ratemaking methodology for the hydroelectric facilities and under a custom incentive regulation framework for the nuclear facilities. For the hydroelectric facilities, the new base regulated prices for each of the years 2017 to 2021 will be determined using a formula that annually escalates the previously approved regulated prices, subject to some adjustments, based on an industry-specific weighted inflation factor less a stretch factor adjustment. For the nuclear facilities, the new base regulated prices will be determined under a rate smoothing approach that defers a portion of the approved nuclear revenue requirement for future collection in the Rate Smoothing Deferral Account authorized by the OEB pursuant to *Ontario Regulation 53/05*, with the objective of making changes in OPG's production-weighted average nuclear and hydroelectric regulated price more stable year over year. The nuclear revenue requirement for each of the years 2017 to 2021 is based on the OEB-approved forecast of operating costs as reduced by a stretch factor amount, and a return on rate base. The difference between the non-deferred portion of the nuclear revenue requirement calculated by multiplying the nuclear base regulated price determined under rate smoothing and the OEB-approved forecast of OPG's nuclear electricity production for the year, and the total approved nuclear revenue requirement for that year determines the portion of the revenue requirement deferred for future collection in the Rate Smoothing Deferral Account. Amounts recorded in the Rate Smoothing Deferral Account are recognized as adjustments to revenue.

In January 2018, OPG submitted a draft payment amounts order to the OEB that proposed nuclear base regulated prices for each year of the 2017–2021 period based on the December 2017 decision's findings, including a rate smoothing proposal, and calculated the hydroelectric base regulated prices for 2017 and 2018 based on OEB-published inputs into the approved ratemaking formula. In the fourth quarter of 2017, OPG recorded net revenue in respect of the June 1, 2017 to December 31, 2017 interim period and a corresponding increase in net regulatory assets based on the draft payment amounts order that represents management's best estimate of the impact of the new base regulated prices and rate smoothing approach on the 2017 fiscal year.

See Note 5 for further information on the OEB's decision on OPG's May 2016 application for new regulated prices and the Rate Smoothing Deferral Account.

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, 2017, 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.

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 on 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 \$15 million were netted against revenue in 2017 (2016 – \$19 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. 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, in accordance with the terms stipulated in the respective contracts.

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 OM&A expenses. Variable expenses relating to low and intermediate level radioactive waste (L&ILW) 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 changes in the estimated amount or timing of the underlying future cash flows, with resulting changes in the related asset retirement costs capitalized as part of the carrying amount of the related fixed assets in service. 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. 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 in service. 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 has established and sets aside funds in 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 and certain costs of used fuel storage incurred after the nuclear stations are shut down, while the Decommissioning Segregated Fund was established to fund the costs of nuclear fixed asset removal and long-term L&ILW management, and certain costs of used fuel storage incurred after the nuclear stations are shut down. OPG's funding obligations and resulting contributions to the Nuclear Segregated Funds are determined based on periodically updated reference plans approved by the Province under the ONFA. 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 real assets portfolio, using appropriate valuation techniques as outlined in Note 13, with realized and unrealized gains and losses recognized in OPG's consolidated statements of income.

Financing Receivables

OPG's financing receivables consist of the current and irrevocable right of the Fair Hydro Trust to collect payments from Specified Consumers in the future in accordance with the Fair Hydro Act and associated general regulation. These amounts are measured at the transaction price entered into with the IESO on market terms upon acquisition and subsequently measured on an amortized cost basis. The basis of amortization follows the effective interest method.

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.

Available-for-Sale 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). Gains and losses are realized and included in net income when the securities 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 for which specific provisions have already been made, such as the Nuclear Liabilities, 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 statement 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 postretirement 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 the funded status of its defined benefit plans on the consolidated balance sheets. 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 taxes 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 refundable to customers through the Income and Other Taxes Variance Account and the SR&ED ITC 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 Estimates

Useful Lives of Nuclear Long-Lived Assets

In the fourth quarter of 2017, OPG revised the accounting assumptions for the estimated useful life of the Pickering GS for the purposes of calculating depreciation. Effective December 31, 2017, the average service life of the Pickering GS was extended from an end-of-life date of December 31, 2020 for all six operating units to December 31, 2022 for Units 1 and 4 and December 31, 2024 for Units 5 to 8. The change in the useful life reflected completion of technical assessments that provided sufficient confidence in the programs and provisions in place to assure fitness-for-service of key life-limiting fuel channel components of the station, in line with the station's planned commercial operation period to 2024. This evaluation was consistent with the safety case reflected in OPG's operating licence renewal application for the Pickering GS submitted to the Canadian Nuclear Safety Commission (CNSC) in 2017. Although the current five-year operating licence for the station expires on August 31, 2018, based on the evidence and documentation submitted to the CNSC, OPG believes it is well positioned to obtain a licence renewal that would support continued commercial operation of the Pickering GS to 2024. The change to the estimated service life of the Pickering GS has been reflected in an increase to the estimate of the Nuclear Liabilities of \$188 million as at

December 31, 2017, with a corresponding increase in the carrying value of the Pickering GS fixed asset balance.

The change in the Pickering GS accounting end-of-life assumptions did not impact OPG's net income in 2017. Excluding the impact of regulatory accounts, the change in the accounting end-of-life assumptions inclusive of the associated change in the Nuclear Liabilities is expected to decrease depreciation expense by approximately \$77 million in 2018. Regulatory accounts, including a new deferral account proposed by OPG in an application to the OEB on December 29, 2017, are expected to offset the decrease in depreciation expense, beginning on January 1, 2018. Pending its review of this application, the OEB issued an order on January 31, 2018 establishing the proposed deferral account on an interim basis to allow OPG to begin recording amounts in the account as of January 1, 2018.

Non-Nuclear Fixed Asset Removal Liability Estimate

OPG updated the estimate of the liabilities for non-nuclear fixed asset removal as at December 31, 2017. As at December 31, 2017, OPG recognized a decrease in the non-nuclear fixed asset removal liabilities of approximately \$30 million relating to thermal stations, resulting in a net decrease in asset retirement costs of \$18 million capitalized as part of the carrying value of PP&E for the operating stations and a gain of \$12 million recognized in net income in the fourth quarter of 2017 related to the Nanticoke and Lambton generating stations that are no longer in use and have been fully depreciated. For the operating sites, the updated estimates were based on a review of required decommissioning, clean-up and restoration activities, underlying economic assumptions, and anticipated timing of these activities in line with current accounting end-of-life assumptions. For the Nanticoke and Lambton sites, the update was based on the estimated cost of executing current decommissioning plans.

Pension and Other Post-Employment Benefits

Effective January 1, 2017, OPG changed the approach 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 approach used in 2016 and prior years, these components of pension and OPEB costs were calculated using the same single equivalent discount rates as reflected in the calculation of the benefit obligations. This change in the approach was accounted for prospectively, as a change in estimate. The resulting reduction in 2017 pension and OPEB costs was approximately \$135 million. 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 accounts authorized by the OEB. This change does not affect the measurement of the total benefit obligations, as the change in the current service and interest cost components from the previous approach is offset by a corresponding change in the actuarial gain or loss recorded in AOCI.

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario (FSCO) in September 2017 with an effective date of January 1, 2017. The annual funding requirements in accordance with the new actuarial valuation are outlined in Note 16. As part of the valuation, the plan's demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries. Using these updated demographic assumptions and demographic data as at January 1, 2017 consistent with the new funding valuation for the registered pension plan, OPG also conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2017. The results of this valuation were reflected in the 2017 year-end obligations reflecting appropriate assumptions for accounting purposes as at December 31, 2017.

The discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2017 was approximately 3.6 percent. This represents a decrease compared to the discount rate of approximately 3.9 percent that was used to determine the obligations as at December 31, 2016.

The deficit for the registered pension plan, for accounting purposes, increased from \$2,693 million as at December 31, 2016 to \$3,081 million as at December 31, 2017. This increase was largely due to a remeasurement of the liabilities at the end of 2017 reflecting lower discount rates, partially offset by the excess of actual returns on the pension plan assets over interest costs on the liabilities during the year.

The projected benefit obligations for OPEB plans increased from \$2,992 million as at December 31, 2016 to \$3,190 million as at December 31, 2017. This increase was largely due to a remeasurement of the liabilities at the end of 2017 reflecting a decrease in the discount rates, partially offset by the updated, lower per capita health care claims costs assumption as part of the 2017 actuarial valuation.

As at December 31, 2017, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled \$4,148 million (2016 – \$3,668 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2017 and 2016 are as follows:

<i>(millions of dollars)</i>	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
	2017	2016	2017	2016	2017	2016
Net actuarial gain not yet subject to amortization due to use of market-related values	(418)	(570)	-	-	-	-
Net actuarial loss not subject to amortization due to use of the corridor	1,735	1,619	36	34	299	267
Net actuarial loss subject to amortization	2,333	2,238	80	72	79	3
Unamortized net actuarial loss	3,650	3,287	116	106	378	270
Unamortized past service costs	-	-	-	-	4	5

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2017 as follows:

<i>(millions of dollars)</i>	Registered Pension Plans ¹	Supplementary Pension Plans ¹	Other Post-Employment Benefits ¹
Expected long-term rate of return			
0.25% increase	(32)	n/a	n/a
0.25% decrease	32	n/a	n/a
Discount rate			
0.25% increase	(56)	(1)	(2)
0.25% decrease	59	1	13
Inflation ²			
0.25% increase	98	1	-
0.25% decrease	(91)	(1)	-
Salary increases			
0.25% increase	22	3	-
0.25% decrease	(20)	(2)	-
Health care cost trend rate			
1% increase	n/a	n/a	77
1% decrease	n/a	n/a	(29)

n/a – change in assumption not applicable.

¹ Excludes the impact of regulatory accounts.

² With a corresponding change in the salary increase assumption

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.

OPG has assessed the impact of the standard on accounting for the Company's revenue streams and consolidated financial statements. OPG's major revenue streams include generation revenue from regulated prices established by the OEB and revenue from generation assets under long-term contractual arrangements with the IESO. OPG has substantially completed its analyses of the impact of Topic 606 on all of its revenue streams, and has not identified any material differences in the timing or amount of revenue recognition.

The Company will apply the new revenue standard in its 2018 first quarter interim financial statements and is in the process of evaluating the additional disclosures required under the new standard.

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 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. As at December 31, 2017, a cumulative loss of \$9 million on OPG's AFS securities was recorded in AOCI, and will be reclassified to opening retained earnings effective January 1, 2018. There are no other significant differences to OPG's consolidated financial statements upon adoption of the new standard.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842) to replace existing lease accounting guidance under Topic 840. The update includes comprehensive changes to existing guidance, 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.

Under the current guidance related to the new leasing standard, 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 of the period of adoption. Under this method, Topic 842 would effectively be implemented by recognizing any adjustments stemming from the transition as of the beginning of the earliest comparative period presented in the entity's financial statements. Full retrospective application is prohibited. In January 2018, the FASB issued a proposed ASU (ASU 2018-200) wherein entities would be able to utilize an additional optional transition method of recording the cumulative impact of adopting the new lease standard as an adjustment to opening balances in the initial period of adoption, with comparative periods continuing to be presented in accordance with Topic 840, including disclosures. The Company will continue to monitor the status of this proposed ASU.

The FASB also issued ASU No. 2018-01, *Land Easement Practical Expedient for Transition to Topic 842* in January 2018. The amendments therein allow an entity to choose not to evaluate under Topic 842 land easements that exist or expired before the entity's adoption of the new leasing standard and that were not previously accounted for as leases under Topic 840.

The Company continues to implement and execute a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups in order to evaluate and implement the new standard. The working groups are represented by cross functional finance and non-finance stakeholders and will support the financial and operational implementation of the standard. The Company continues to evaluate the impact of the new leasing 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 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 will not have a material impact on OPG's consolidated financial statements, as OPG currently capitalizes only the service cost component of postretirement benefits costs. Additionally, OPG already includes the service cost component of postretirement benefit costs with other compensation costs, within the OM&A expenses line item in the consolidated statements of income, and does not show a subtotal of income from operations. As such, the new guidance will not affect the presentation of OPG's consolidated financial statements.

4. PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND DEPRECIATION AND AMORTIZATION

PP&E as at December 31 consist of the following:

<i>(millions of dollars)</i>	2017	2016
Nuclear generating stations	11,985	11,057
Regulated hydroelectric generating stations	9,566	9,430
Contracted generation portfolio generating stations	3,935	3,751
Other property, plant and equipment	372	1,595
Construction in progress	4,092	3,482
	29,950	29,315
Less: accumulated depreciation		
Generating stations	8,480	7,948
Other property, plant and equipment	148	1,369
	8,628	9,317
	21,322	19,998

Construction in progress as at December 31 consists of the following:

<i>(millions of dollars)</i>	2017	2016
Darlington Refurbishment	3,507	2,563
Peter Sutherland Sr. GS	17	236
Other	568	683
	4,092	3,482

Interest capitalized to construction in progress during 2017 was \$162 million (2016 – \$141 million), at an average rate of five percent (2016 – five percent).

Intangible assets as at December 31 consist of the following:

<i>(millions of dollars)</i>	2017	2016
Nuclear generating stations	122	122
Regulated hydroelectric generating stations	6	7
Contracted generation portfolio generating stations	5	4
Computer software and other intangible assets	393	350
Development in progress	39	20
	565	503
Less: accumulated amortization		
Generating stations	123	120
Computer software and other intangible assets	309	284
	432	404
	133	99

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:

<i>(millions of dollars)</i>	2017	2016
Depreciation	649	602
Amortization of intangible assets	30	27
Amounts recognized in regulatory variance and deferral accounts	-	26
Amortization of regulatory assets and liabilities (Note 5)	-	602
	679	1,257

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. The sale was completed in April 2017 with a gain on sale of \$283 million, which is net of tax effects of \$95 million, recognized in net income during the year ended December 31, 2017. The pre-tax gain on sale was recorded as an item of Other gains in the 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. The amount of designated proceeds to be transferred into the Consolidated Revenue Fund is expected to approximate the after-tax gain on sale. The transfer is expected to take place as early as in the first quarter of 2018, following a special dividend authorized by OPG's Board of Directors in March 2018.

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 has entered into a purchase and sale agreement with a purchaser, with the sale scheduled to close in March 2018. 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. The Lakeview GS site assets were fully depreciated prior to initiating an active program to locate a buyer.

5. REGULATORY ASSETS AND LIABILITIES

Through its March 2017 approval of a partial settlement agreement reached by OPG and intervenors on a limited set of issues in OPG's May 2016 application for new regulated prices for the 2017–2021 period (Settlement Agreement) and its December 2017 decision on the application, the OEB approved OPG's request to recover amounts totalling \$305 million related to previously recorded variance and deferral account balances, without adjustments. These approved amounts relate to the December 31, 2015 balances in all of the Company's OEB-authorized regulatory accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment for these accounts in 2016. In its draft payment amounts order submitted to the OEB in January 2018, OPG proposed that the approved regulatory account amounts be recovered over a three-year period of 2019 to 2021. The final recovery period will be determined by the OEB through the payment amounts order process. During 2017, OPG did not recover or repay any variance and deferral account balances and did not record any amortization related to regulatory assets and regulatory liabilities for these accounts.

During 2016, OPG recorded amortization of regulatory assets and liabilities for the variance and deferral account balances approved for disposition by the OEB's October 2015 order, on a straight-line basis, based on recovery or repayment periods authorized by that order.

The OEB's approval of the Settlement Agreement provided for the continuation of all applicable previously existing variance and deferral accounts effective June 1, 2017. Consistent with the effective date of the OEB's December 2017 decision, for the period from January 1, 2016 to May 31, 2017, OPG recognized regulatory assets and regulatory liabilities for additions recorded in these accounts pursuant to the OEB's previous decisions and orders, relative to amounts reflected in the cost-of-service regulated prices in effect prior to June 1, 2017. For the period from June 1, 2017 to December 31, 2017, OPG recognized regulatory assets and regulatory liabilities for additions recorded in these accounts consistent with the OEB's December 2017 decision and OPG's January 2018 draft payment amounts order submission.

Where authorized by the OEB, OPG recorded interest on unamortized balances in the variance and deferral accounts at the OEB-prescribed interest rate of 1.10 percent per annum during the period from January 1, 2016 to September 30, 2017 and 1.50 percent per annum during the fourth quarter of 2017.

The regulatory assets and liabilities recorded as at December 31 are as follows:

<i>(millions of dollars)</i>	2017	2016
Regulatory assets		
<i>Variance and deferral accounts authorized by the OEB</i>		
Pension and OPEB Cost Variance Account	716	716
Pension & OPEB Cash Versus Accrual Differential Deferral Account	614	497
Hydroelectric Surplus Baseload Generation Variance Account	360	210
Bruce Lease Net Revenues Variance Account	121	95
Other variance and deferral accounts	124	107
	1,935	1,625
Interim Period Revenue Shortfall	544	-
Pension and OPEB Regulatory Asset (<i>Note 11</i>)	3,855	3,392
Deferred Income Taxes	897	838
Total regulatory assets	7,231	5,855
Regulatory liabilities		
<i>Variance and deferral accounts authorized by the OEB</i>		
Hydroelectric Water Conditions Variance Account	150	51
Pension & OPEB Cash Payment Variance Account	140	58
Changes in Station End-of-Life Dates Deferral Account	103	71
Other variance and deferral accounts	201	130
Total regulatory liabilities	594	310

The changes in the regulatory assets and liabilities during 2017 and 2016 are as follows:

<i>(millions of dollars)</i>	Pension and OPEB Cost Variance	Pension & OPEB Cash vs Accrual Differential	Hydro-electric Surplus Baseload Generation Variance	Bruce Lease Net Revenues Variance	Hydro-electric Water Conditions Variance	Pension & OPEB Cash Variance	Changes in Station End-of-Life Dates Deferral	Other Variance and Deferral (net)	Interim Period Revenue Shortfall	Pension and OPEB Regulatory Asset	Deferred Income Taxes
Net regulatory assets (liabilities) January 1, 2016	865	315	114	95	(23)	28	-	260	-	3,362	792
Increase (decrease)	-	182	126	143	(33)	(86)	(71)	-	-	30	46
Interest	-	-	2	-	(1)	-	-	1	-	-	-
Amortization	(149)	-	(32)	(143)	6	-	-	(284)	-	-	-
Net regulatory assets (liabilities) December 31, 2016	716	497	210	95	(51)	(58)	(71)	(23)	-	3,392	838
Increase (decrease)	-	117	146	25	(98)	(81)	(32)	(52)	544	463	59
Interest	-	-	4	1	(1)	(1)	-	(2)	-	-	-
Net regulatory assets (liabilities) December 31, 2017	716	614	360	121	(150)	(140)	(103)	(77)	544	3,855	897

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 and December 2017 decisions, the OEB determined that the pension and OPEB amounts reflected in OPG's regulated prices established by these decisions effective November 1, 2014 and June 1, 2017, respectively, 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 for the regulated business. As such, the OEB has ordered the Pension and OPEB Cost Variance Account to record only amortization since November 1, 2014, as applicable.

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 commencing July 1, 2015 by the OEB's October 2015 order. Consistent with the October 2015 order, regulatory amounts to be recovered pursuant to the OEB's 2017 decisions included one-sixth of the previously approved 10/12 portion of the Pension and OPEB Cost Variance Account balance as at December 31, 2012 and one-third of the previously approved amounts recorded in the account in 2013 and 2014.

Pension & OPEB Cash Versus Accrual Differential Deferral Account

The Pension & OPEB Cash Versus Accrual Differential Deferral Account was originally established by the OEB's November 2014 decision and December 2014 order and was continued by the OEB's 2017 decisions. 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, 2017 represents the excess of costs calculated using the accrual basis over the cash basis for the period from November 1, 2014 to December 31, 2017. As discussed in Note 3, the Company has recognized the amount set aside in the deferral account as a regulatory asset. The OEB's December 2017 decision stated that the OEB expects OPG to file an application in the 2018 calendar year comprising the disposition of the next set of variance and deferral account balances that includes OPG's proposal for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and for the method of recovery of pension and OPEB amounts to be used going forward.

In accordance with US GAAP requirements, OPG recognizes a regulatory asset for the OPEB portion of deferred costs recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account to the extent that the recovery of these costs commences within five years and is completed in full within 20 years of the period in which the costs were incurred, provided that the pattern of recovery within these constraints does not result in rate increases for a future year that is higher than the previous year.

Hydroelectric Surplus Baseload Generation Variance Account

The Hydroelectric Surplus Baseload Generation Variance Account records the impact of forgone production at OPG's regulated hydroelectric facilities due to surplus baseload generation conditions.

Variance and deferral account balances approved for disposition by the OEB's 2017 decisions included amounts recorded in this variance account during 2015.

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 the two nuclear generating stations on lease to Bruce Power in the determination of the regulated prices for production from OPG's regulated nuclear facilities. Based on *Ontario Regulation 53/05* requirements, the OEB has established a variance account that captures differences between OPG's actual revenues and costs related to these stations and the corresponding forecasts included in approved nuclear regulated prices, including the costs associated with OPG's Nuclear Liabilities and the earnings from the portion of the Nuclear Segregated Funds related to the Bruce stations.

The OEB had previously ordered the portion of the balance in the Bruce Lease Net Revenues Variance Account related to the impact of the derivative liability then embedded in the terms of the lease agreement between OPG and Bruce Power related to the Bruce nuclear generating stations (Bruce Lease) 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 authorized amounts to be recovered from customers for the derivative liability on this basis, over the period to the end of 2016. 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 the Bruce Lease Net Revenues Variance Account. Amounts collected from customers for the derivative liability for periods after its reversal are subject to refund in the future and have been recognized as a regulatory liability as part of the variance account balance.

The regulatory asset balance for the Bruce Lease Net Revenues Variance Account as at December 31, 2017 reflects a net amount of \$190 million recoverable from customers for non-derivative variances recorded in 2015 through 2017, which is partially offset by a liability of \$69 million to customers for amounts recovered for the derivative liability since its reversal in December 2015. Non-derivative amounts recorded during 2016 and 2017 included those arising from the adjustment to the Nuclear Liabilities and related changes to the estimated service lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015 and the adjustment to the Nuclear Liabilities effective December 31, 2016 resulting from the ONFA reference plan update process.

Variance and deferral account balances approved for disposition by the OEB's 2017 decisions included non-derivative amounts recorded in the Bruce Lease Net Revenues Variance Account during 2015 as well as amounts refundable to customers in respect of the derivative liability.

Interim Period Revenue Shortfall

The Interim Period Revenue Shortfall regulatory asset as at December 31, 2017 reflects an estimate of the revenue shortfall arising from the difference between previously approved regulated prices that continued to be charged to customers for OPG's nuclear and regulated hydroelectric generation for the June 1, 2017 to December 31, 2017 interim period and new regulated prices to be authorized by the OEB for that period as part of the final payment amounts order process. OPG recognized the Interim Period Revenue Shortfall regulatory asset and a corresponding increase to revenue in the fourth quarter of 2017 to reflect management's best estimate of new regulated prices based on the OEB's December 2017 decision, being the regulated prices proposed by OPG in its January 2018 submission of the draft payment amounts order to the OEB.

The December 2017 decision determined that OPG will recover the interim period revenue shortfall for the period between June 1, 2017 and the implementation date of the new regulated prices through prospective rate riders, over a period to be determined as part of the payment amounts order process. OPG's draft payment amounts order proposed a three-year recovery period of 2019 to 2021 for the revenue shortfall.

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. For further details, refer to Note 3 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 regulatory 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 regulatory liability for the amount of deferred income taxes expected to be included in future regulated prices and recovered from, or paid to customers. Income taxes are discussed in Note 9.

Hydroelectric Water Conditions 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.

Variance and deferral account balances approved for disposition by the OEB's 2017 decision included amounts recorded in this variance account during 2015.

Pension & OPEB Cash Payment Variance Account

The Pension & OPEB Payment Variance Account was originally established by the OEB's November 2014 decision and December 2014 order and was continued by the OEB's 2017 decisions. The account records the difference between OPG's actual contributions to its registered pension plan and expenditures on its OPEB and supplementary pension plan plans for the regulated business, and such forecast amounts reflected in the regulated prices.

Variance and deferral account balances approved for disposition by the OEB's 2017 decisions included the balance in this variance account as of December 31, 2015.

Changes in Station End-of-Life Dates Deferral Account

The Changes in Station End-of-Life Dates Deferral Account was established by the OEB effective January 1, 2016 in response to an application by OPG for an accounting order to establish a new deferral account to record the revenue requirement impact on the Pickering and Darlington nuclear generating stations of changes to the Nuclear Liabilities and depreciation expense arising from extensions in the estimated useful lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015. These impacts were not reflected in the regulated prices in effect prior to June 1, 2017. The deferral account recorded these impacts until the effective date for new regulated prices of June 1, 2017 established by the OEB's December 2017 decision. The new regulated prices will reflect the impacts of the above changes in Nuclear Liabilities and depreciation expense.

Nuclear Liability Deferral Account

Pursuant to *Ontario Regulation 53/05*, the OEB has authorized the Nuclear Liability Deferral Account 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. Effective January 1, 2017, the Province approved the 2017–2021 ONFA reference plan (2017 ONFA Reference Plan). As the regulated prices in effect prior to June 1, 2017 did not reflect the impact of the 2017 ONFA Reference Plan, OPG recorded an increase in the regulatory asset for the Nuclear Liability Deferral Account during the period from January 1, 2017 to May 31, 2017. The new regulated prices effective June 1, 2017 will reflect the impact of the 2017 ONFA Reference Plan.

Components of the increase in the regulatory asset for the deferral account recorded during the years ended December 31, with reductions (increases) to corresponding expenses, are summarized as follows:

<i>(millions of dollars)</i>	2017	2016
Fuel expense	(1)	-
Low and intermediate level waste management variable expenses ¹	2	2
Depreciation expense	10	-
Return on rate base ²	(6)	-
Income taxes	11	-
	16	2

¹ Amount was recorded as a reduction to OM&A expenses.

² Amount was recorded as an increase to accretion on fixed asset removal and nuclear waste management liabilities.

Rate Smoothing Deferral Account

The Rate Smoothing Deferral Account was established by the OEB's December 2017 decision pursuant to *Ontario Regulation 53/05*. The deferral account records, for future recovery, a portion of the annual OEB-approved revenue requirements for OPG's nuclear facilities during the period from January 1, 2017 to the end of the Darlington Refurbishment project. *Ontario Regulation 53/05* requires the deferred portion of nuclear revenue requirement to be determined in a manner that makes changes in OPG's production-weighted average nuclear and hydroelectric regulated price more stable year over year. Per the regulation, the Rate Smoothing Deferral Account records interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually. The regulation requires the OEB to authorize recovery of the balance in the account on a straight-line basis over a period not to exceed ten years following the end of the Darlington Refurbishment project.

Ontario Regulation 53/05 requires the OEB to determine the revenue requirements for OPG's nuclear facilities on a five-year basis for the ten-year period beginning on January 1, 2017. The portion of the approved revenue

requirement recorded in the Rate Smoothing Deferral Account each year is to be determined by the OEB on a five-year basis during this ten-year period.

OPG recognizes positive amounts deferred under rate smoothing and recorded in the Rate Smoothing Deferral Account as an increase in the regulatory asset for the deferral account and an increase in revenue in the period to which the underlying approved revenue requirement relates. Negative amounts determined under rate smoothing and recorded in the Rate Smoothing Deferral Account are correspondingly recorded as a regulatory liability for the deferral account and a decrease to revenue.

OPG recorded a regulatory liability of \$63 million for the Rate Smoothing Deferral Account in the fourth quarter of 2017. Inclusive of interest payable of \$1 million, this amount reflects management's best estimate of the impact of rate smoothing for 2017. The estimate reflects OPG's rate smoothing proposal submitted to the OEB in January 2018 as part of the draft payment amounts order. OPG's proposal was developed in accordance with *Ontario Regulation 53/05* and the OEB's direction in the December 2017 decision.

Other Variance and Deferral Accounts

Regulatory assets

As at December 31, 2017 and 2016, regulatory assets for Other variance and deferral accounts included amounts for the Nuclear Liability Deferral Account, the Nuclear Deferral and Variance Over/Under Recovery Variance Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Development Variance Account, and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account. As at December 31, 2017, these regulatory assets also included the Fitness for Duty Deferral Account.

The Nuclear Deferral and Variance Over/Under Recovery Variance Account and the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account record any shortfall or over-recovery of the approved variance and deferral account balances due to differences between actual and forecast nuclear and regulated hydroelectric production, respectively.

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 Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account was established pursuant to the OEB's January 2016 decision on OPG's motion that requested the OEB to review and vary parts of its November 2014 decision, including the disallowed Niagara Tunnel project capital costs. The variance account captures the revenue requirement impact of the portion of the original disallowance reversed by the OEB's January 2016 decision.

The Fitness for Duty Deferral Account was established by the OEB's December 2017 decision, effective June 1, 2017. The account records OPG's costs related to implementing the CNSC's new fitness for duty requirements.

Regulatory liabilities

As at December 31, 2017 and 2016, regulatory liabilities for Other variance and deferral accounts included amounts for the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account, the Hydroelectric Incentive Mechanism Variance Account, and the Capacity Refurbishment Variance Account. As at December 31, 2017, these regulatory liabilities also included the Rate Smoothing Deferral Account and the SR&ED ITC Variance Account.

The Ancillary Services Net Revenue Variance Account has been 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.

Pursuant to *Ontario Regulation 53/05*, the Capacity Refurbishment Variance 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, 2017 includes cost variances related to the refurbishment of the Darlington GS, life extension initiatives at the Pickering GS, and other projects.

The SR&ED ITC Variance Account was established by the OEB's December 2017 decision, effective June 1, 2017. The account records the income tax expense impact for the nuclear facilities as a result of differences between actual Scientific Research & Experimental Development investment tax credits earned by OPG and such forecast amounts reflected in the regulated prices.

Variance and deferral account balances approved for disposition by the OEB's 2017 decisions included amounts recorded in the applicable Other variance and deferral accounts during 2015.

6. LONG-TERM DEBT AND NET INTEREST EXPENSE

Long-term debt consists of the following as at December 31: ¹

<i>(millions of dollars)</i>	2017	2016
Notes payable to the OEFC ²		
Senior Notes		
bear interest at rates ranging from 3.12% to 5.44%; maturity dates ranging from 2018 to 2047	3,195	3,295
Medium Term Note Program ²		
Senior Notes		
3.32% due 2027	500	-
UMH Energy Partnership ³		
Senior Notes		
7.86% due 2041	181	184
PSS Generating Station Limited Partnership ⁴		
Senior Notes		
4.90% due 2067	245	245
Lower Mattagami Energy Limited Partnership ⁵		
Senior Notes		
bear interest at rates ranging from 2.40% to 5.26%; maturity dates ranging from 2021 to 2052	1,595	1,795
Fair Hydro Trust ⁶		
Senior Notes		
2.32% due 2019	601	-
Other	19	15
	6,336	5,534
Less: bond issuance fees	(17)	(14)
Less: due within one year	(398)	(1,103)
Long-term debt	5,921	4,417

¹ The interest rates disclosed reflect the effective interest rate of the debt, except for the Fair Hydro Trust senior notes, which reflect the weighted average interest rate during the period the notes were outstanding from December 21, 2017 to December 31, 2017.

² These notes are direct unsecured obligations of OPG and rank *pari passu* with all other OPG's unsecured and unsecured obligations.

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, and are recourse to OPG until the recourse release date. These notes rank *pari passu* to the senior notes from the OEFC and Medium Term Note program. 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.

⁶ The notes were issued under an \$800 million two-year revolving warehouse facility and are secured by the assets of the Fair Hydro Trust.

In June 2016, OPG entered into a \$700 million general corporate credit facility agreement with the OEFC, with an expiry date of December 31, 2017. During 2017, the agreement was amended, with the credit facility increased to \$2,350 million and the expiry date extended to December 31, 2018. As of December 31, 2017, there were outstanding long-term borrowings of \$800 million under this credit facility.

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. In August 2017, OPG issued senior notes payable to the OEFC totalling \$100 million and maturing in August 2047. The effective interest rate and coupon interest rate of these notes was 3.86 percent. In September 2017, OPG issued senior notes payable to the OEFC totalling \$400 million and maturing in September 2047. The effective interest rate and coupon interest rate of these notes was 4.07 percent.

In October 2017, OPG issued \$500 million of senior notes payable under a Medium Term Note Program. The notes bear a coupon interest rate of 3.32 percent and an effective rate of 3.43 percent, payable semi-annually until maturity in October 2027. The offering was made under OPG's \$2 billion short form base shelf prospectus filed in September 2017.

In 2015, PSS 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, 2017, the deposit note had matured.

In December 2017, the Fair Hydro Trust entered into an \$800 million revolving warehouse facility agreement with an expiry date of December 2019. As at December 31, 2017, there were outstanding senior notes of \$601 million under this facility, which were used to finance 51 percent of the Trust's funding requirement for the acquisition of the first tranche of Investment Interest from the IESO in December 2017. The outstanding balance of the revolving warehouse credit facility has been classified as long-term debt as at December 31, 2017 reflecting the contractual terms of the facility agreement. Interest incurred on this debt is recorded within earnings from Fair Hydro Trust in the consolidated statements of income.

In February 2018, the Fair Hydro Trust issued \$500 million of senior notes payable with a coupon interest rate of 3.36 percent and an effective interest rate of 3.44 percent, payable semi-annually until maturity on May 15, 2033. The proceeds were used to repay the majority of the outstanding balance of the revolving warehouse facility issued by the Trust in December 2017.

The following table summarizes the net interest expense for the years ended December 31:

<i>(millions of dollars)</i>	2017	2016
Interest on long-term debt ¹	289	290
Interest on short-term debt	7	8
Interest income	(9)	(7)
Interest capitalized to property, plant and equipment and intangible assets	(162)	(141)
Interest related to regulatory assets and liabilities ²	(30)	(30)
Net interest expense	95	120

¹ Excludes interest on Fair Hydro Trust senior debt.

² Includes interest to recognize the cost of financing related to regulatory 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.

Interest paid in 2017 was \$258 million (2016 – \$269 million), of which \$251 million (2016 – \$261 million) relates to interest paid on long-term debt.

The total net book value of the pledged assets of PSS, UMH Energy Partnership, Lower Mattagami Energy Limited Partnership (LME), and Lower Mattagami Limited Partnership against their debt as at December 31, 2017 was \$3,645 million (2016 – \$3,510 million).

The total net book value of the secured assets of the Fair Hydro Trust pledged in favour of specified creditors of the Trust, including the senior debtholders and OPG in its capacity as subordinated debtholder and Financial Services Manager of the Trust, was \$1,190 million as at December 31, 2017.

7. SHORT-TERM DEBT

OPG maintains a \$1 billion revolving committed bank credit facility, which is divided into two \$500 million multi-year term tranches. During 2017, OPG renewed and extended the expiry date of both tranches to May 2022. There were no amounts outstanding under the bank credit facility. There was \$100 million of commercial paper outstanding under OPG's commercial paper program as at December 31, 2017. The commercial paper program is used to provide short-term funding for the Company, at interest rates of approximately one percent and for less than one year in duration.

As at December 31, 2017, LME maintained a \$400 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 2022 and a \$100 million tranche maturing in August 2018. As at December 31, 2017, there was \$160 million of commercial paper outstanding under LME's commercial paper program. A letter of credit of \$55 million was issued in July 2017 and remains outstanding as at December 31, 2017 under the first tranche of LME's credit facility.

As at December 31, 2017, OPG maintained \$25 million of short-term, uncommitted overdraft facilities and \$468 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, 2017, a total of \$390 million of Letters of Credit had been issued under these facilities. This included \$353 million for the supplementary pension plans, \$36 million for general corporate purposes, and \$1 million related to the operation of the PEC.

The Company's short-term, uncommitted credit facilities include 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 December 31, 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 December 31, 2017, total Letters of Credit of \$15 million had been issued under these facilities.

8. NUCLEAR FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT FUNDS AND 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 December 31, consist of the following:

<i>(millions of dollars)</i>	2017	2016
Liability for nuclear used fuel management	11,970	11,292
Liability for nuclear decommissioning and nuclear low and intermediate level waste management	8,107	7,811
Liability for non-nuclear fixed asset removal	344	381
Fixed asset removal and nuclear waste management liabilities	20,421	19,484

The changes in the fixed asset removal and nuclear waste management liabilities for the years ended December 31 are as follows:

<i>(millions of dollars)</i>	2017	2016
Liabilities, beginning of year	19,484	20,169
Increase in liabilities due to accretion ¹	974	1,024
Decrease in liabilities resulting from the ONFA reference plan update	-	(1,567)
Increase in liabilities reflecting changes to the estimated useful lives of nuclear generating stations <i>(Note 3)</i>	188	-
Decrease in liabilities reflecting changes in the estimate of liabilities for thermal generating stations <i>(Note 3)</i>	(30)	-
Increase in liabilities due to nuclear used fuel and nuclear expenses and other expenses ¹	118	133
Liabilities settled by expenditures on fixed asset removal and nuclear waste management during the year	(313)	(275)
Liabilities, end of year	20,421	19,484

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 and safe storage of the 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 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 Liabilities is contained in the 2017–2021 ONFA reference plan, which was finalized and approved by the Province in the fourth quarter of 2016 (2017 ONFA Reference Plan). The update resulted in a decrease of approximately \$1,570 million in the Nuclear Liabilities as at December 31, 2016.

As discussed in Note 3, OPG recognized an increase in the Nuclear Liabilities of \$188 million as at December 31, 2017 to reflect the changes in the estimated useful life of the Pickering GS. The increase in the liabilities was determined by discounting the net incremental future cash flows at 2.94 percent.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2017, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning activities are projected to occur over approximately the next 80 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 assumed 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 liabilities. With programs of this long-term duration and the evolving technology to handle the 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.

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 as specified in the NFWA. 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 an approach consistent with the Adaptive Phased Management concept approved by the Government of Canada, which assumes a deep geologic repository (DGR) 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 be de-watered and de-fuelled immediately after the station has ceased operations and thereafter 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 to be owned and operated by OPG. Agreement was previously reached with local municipalities for OPG to develop a DGR for the long-term management of L&ILW adjacent to OPG's Western Waste Management Facility in Kincardine, Ontario. The environmental assessment process for the proposed DGR is continuing.

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 following a review of plant sites and an assessment of required clean-up and restoration activities. For the purposes of measuring the non-nuclear fixed asset removal liability, thermal asset removal activities are assumed to take place approximately over the next one to 15 years.

As discussed in Note 3, OPG updated the fixed asset removal liabilities for the thermal generating stations as at December 31, 2017. The resulting decrease in the liabilities of \$30 million as at December 31, 2017 was determined by discounting the net decrease in future cash flows using weighted average discount rates ranging from 3.41 percent to 5.58 percent reflected in the existing liability.

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 life cycle obligation for nuclear decommissioning and long-term nuclear waste management. The Used Fuel Segregated Fund and the Decommissioning Segregated Fund were established under

the ONFA for this purpose. OPG makes contributions to the Nuclear Segregated Funds based on the approved ONFA reference plan in effect. ONFA reference plans are subject to approval by the Province.

Since inception, OPG has been making quarterly payments to the Used Fuel Segregated Fund over the assumed lives of its nuclear generating stations, as specified in the ONFA, including contributions to the Ontario NFWA Trust (NFWA Trust) established by OPG pursuant to the NFWA. The NFWA Trust forms part of the Used Fuel Segregated Fund, with any OPG contributions to the Used Fuel Segregated Fund, as well as any portion of the fund currently not in the NFWA Trust, being able to be applied towards the NFWA Trust's annual contribution requirements pursuant to the NFWA. Required funding of the Used Fuel Segregated Fund for 2017 was nil (2016 – \$150 million). ONFA requirements have resulted in the majority of the underlying used fuel management obligation being funded through OPG contributions over the initial estimated useful lives of the nuclear generating stations assumed in the ONFA, which did not reflect subsequent extensions to the nuclear station lives to reflect refurbishment and life extension decisions.

OPG has not been required to make contributions to the Decommissioning Segregated Fund, which was fully funded at its inception through an initial contribution made by the OEFC, an agency of the Province, and, taking into account asset performance and changes in underlying funding obligation over time, at the time of every subsequent approved ONFA reference plan.

The 2017 ONFA Reference Plan was approved by the Province in December 2016, with an effective date of January 1, 2017. Based on the funded status of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund reflecting the life cycle liability estimates per the 2017 ONFA Reference Plan, no overall contributions to either fund 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.

The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge its existing nuclear waste management and nuclear facilities decommissioning obligations. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the 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, if any, of the Provincial Guarantee. The value of the Provincial Guarantee amount in effect through to the end of 2017 was \$1,551 million. Based on this guarantee amount, OPG paid a guarantee fee of \$8 million to the Province for each of 2017 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

Under the ONFA, OPG is wholly responsible for cost estimate changes and investment returns in the Decommissioning Segregated Fund. As at December 31, 2017 and 2016, the Decommissioning Segregated Fund was in an overfunded position.

Upon termination of the ONFA, the Province has the sole right to any excess funds in the Decommissioning Segregated Fund, which is the excess of the fair market value of the fund's assets over the underlying estimated future costs, as per the most recently approved ONFA reference plan. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the fund earnings recognized in the consolidated financial statements by recording an amount due to the Province, such that the asset recognized for the fund on the consolidated balance

sheet 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 in the Decommissioning Segregated Fund 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 a marginally overfunded position as at December 31, 2017 and 2016. As a result, OPG recognized a due to the Province amount such that the Decommissioning Segregated Fund asset on the consolidated balance sheet as at December 31, 2017 and 2016 was limited to the value of the underlying funding liability per the 2017 ONFA Reference Plan. This 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, a new ONFA reference plan is approved with a higher underlying funding liability, or the Used Fuel Segregated Fund changes to an underfunded status. When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets.

When the Decommissioning Segregated Fund is in an overfunded status of less than 120 percent, OPG recognizes its annual earnings on the fund 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 underlying funding liability. The same treatment is applied to the Decommissioning Segregated Fund when it is in an overfunded status of greater than 120 percent, if the Used Fuel Segregated Fund is fully funded.

Used Fuel Segregated Fund

OPG is responsible for cost increases in the funding liability for used fuel waste management under the ONFA, subject to specified graduated liability thresholds, pursuant to which the Province limits OPG's total financial exposure for the first 2.23 million nuclear used fuel bundles at approximately \$15.7 billion in present value dollars as at December 31, 2017. The graduated liability thresholds do not apply to used fuel bundles beyond the 2.23 million threshold.

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 that would be paid to or received from the Province if the committed return were to be settled as at the consolidated balance sheets date. The 2.23 million threshold represents the estimated total life cycle fuel bundles based on the initial estimated useful lives of the nuclear stations assumed in the ONFA.

As prescribed under the ONFA, OPG's contributions for fuel bundles in excess of 2.23 million are not subject to the rate of return guaranteed by the Province, 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, which is the excess of the fair market value of the Used Fuel Segregated Fund assets over the estimated future costs, as per the most recently approved ONFA reference plan. Neither OPG nor the Province has a right to direct any amounts from the Used Fuel Segregated Fund to the Decommissioning Segregated Fund. Therefore, when the Used Fuel Segregated Fund is overfunded, OPG limits the earnings it recognizes by recording an amount

due to the Province, such that the asset recognized for the fund on the consolidated balance sheets is equal to the cost estimate of the funding liability per the most recently approved ONFA reference plan. This results in OPG recognizing annual earnings on the fund at 3.25 percent plus the long-term Ontario CPI specified in the most recently approved ONFA reference plan, which is the rate of growth in the underlying funding liability, when the fund is overfunded.

As at December 31, 2017 and 2016, the Used Fuel Segregated Fund was marginally overfunded based on the 2017 ONFA Reference Plan, and OPG recognized a due to the Province amount such that the asset recognized for the fund was limited to the value of the underlying funding liability. This payable to the Province may be reduced in subsequent periods in the event that the Used Fuel 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 underlying funding liability.

Nuclear Segregated Funds

The nuclear fixed asset removal and nuclear waste management funds as at December 31 consist of the following:

<i>(millions of dollars)</i>	Fair Value	
	2017	2016
Decommissioning Segregated Fund	9,099	8,317
Due to Province – Decommissioning Segregated Fund	(1,933)	(1,477)
	7,166	6,840
Used Fuel Segregated Fund ¹	12,087	11,082
Due to Province – Used Fuel Segregated Fund	(2,529)	(1,938)
	9,558	9,144
Total Nuclear Segregated Funds	16,724	15,984
Less: current portion	23	24
Non-current Nuclear Segregated Funds	16,701	15,960

¹ The NFWA Trust represents \$3,882 million as at December 31, 2017 (2016 – \$3,688 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:

<i>(millions of dollars)</i>	Fair Value	
	2017	2016
Cash and cash equivalents and short-term investments	227	354
Real assets	2,357	1,989
Pooled funds	1,713	1,329
Marketable equity securities	10,457	9,503
Fixed income securities	6,405	6,181
Net receivables/payables	27	43
	21,186	19,399
Due to Province	(4,462)	(3,415)
	16,724	15,984

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, 2017 and 2016 are summarized as follows:

<i>(millions of dollars)</i>	2017		Total
	Decommissioning Segregated Fund	Used Fuel Segregated Fund	
Historical cost	7,327	9,902	17,229
Gross unrealized gains (losses)			
Aggregate appreciation	1,789	2,188	3,977
Aggregate depreciation	(134)	(180)	(314)
Foreign exchange	117	177	294
Due to Province	9,099 (1,933)	12,087 (2,529)	21,186 (4,462)
Total fair value	7,166	9,558	16,724
Less: current portion	5	18	23
Non-current fair value	7,161	9,540	16,701

<i>(millions of dollars)</i>	2016		Total
	Decommissioning Segregated Fund	Used Fuel Segregated Fund	
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
Due to Province	8,317 (1,477)	11,082 (1,938)	19,399 (3,415)
Total fair value	6,840	9,144	15,984
Less: current portion	8	16	24
Non-current fair value	6,832	9,128	15,960

Net realized and unrealized gains or losses from investments for the years ended December 31, 2017 and 2016 are summarized as follows:

<i>(millions of dollars)</i>	2017		Total
	Decommissioning Segregated Fund	Used Fuel Segregated Fund	
Net realized gains			
Realized gains excluding foreign exchange	198	245	443
Realized foreign exchange gains	54	65	119
Net realized gains	252	310	562
Net unrealized gains			
Unrealized gains excluding foreign exchange	494	666	1,160
Unrealized foreign exchange losses	(143)	(178)	(321)
Net unrealized gains	351	488	839

<i>(millions of dollars)</i>	2016		Total
	Decommissioning Segregated Fund	Used Fuel Segregated Fund	
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

The change in the Nuclear Segregated Funds for the years ended December 31 is as follows:

<i>(millions of dollars)</i>	Fair Value	
	2017	2016
Decommissioning Segregated Fund, beginning of year	6,840	6,549
Increase in fund due to return on investments	807	505
Decrease in fund due to reimbursement of eligible expenditures	(25)	(22)
Increase in due to Province	(456)	(192)
Decommissioning Segregated Fund, end of year	7,166	6,840
Used Fuel Segregated Fund, beginning of year	9,144	8,587
Increase in fund due to contributions made	-	150
Increase in fund due to return on investments	1,059	690
Decrease in fund due to reimbursement of eligible expenditures	(54)	(48)
Increase in due to Province	(591)	(235)
Used Fuel Segregated Fund, end of year	9,558	9,144

The earnings from the Nuclear Segregated Funds during 2017 and 2016 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:

<i>(millions of dollars)</i>	2017	2016
Decommissioning Segregated Fund	351	313
Used Fuel Segregated Fund	468	455
Bruce Lease Net Revenues Variance Account	(18)	(22)
Earnings on nuclear fixed asset removal and nuclear waste management funds	801	746

9. INCOME TAXES

OPG follows the liability method of accounting for income taxes. The Company records an offsetting regulatory asset or regulatory 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:

<i>(millions of dollars)</i>	2017	2016
Income before income taxes	1,090	621
Combined Canadian federal and provincial statutory enacted income tax rates	26.5%	26.5%
Statutory income tax rates applied to accounting income	289	165
(Decrease) increase in income taxes resulting from:		
Income tax (recovery) expense deferred in regulatory assets and regulatory liabilities	(20)	65
Scientific Research and Experimental Development investment tax credits	(47)	(48)
Manufacturing and processing credit	(16)	(9)
Other	3	(5)
	(80)	3
Income tax expense	209	168
Effective rate of income taxes	19.2%	27.0%

Significant components of the income tax expense are presented in the table below:

<i>(millions of dollars)</i>	2017	2016
Current income tax expense	190	204
Deferred income tax expense (recovery)	19	(36)
Income tax expense	209	168

The income tax effects of temporary differences that give rise to deferred income tax assets and liabilities as at December 31 are as follows:

<i>(millions of dollars)</i>	2017	2016
Deferred income tax assets:		
Fixed asset removal and nuclear waste management liabilities	5,096	4,861
Other assets and liabilities	2,057	1,813
	7,153	6,674
Deferred income tax liabilities:		
Property, plant and equipment and intangible assets	(1,923)	(1,807)
Nuclear fixed asset removal and nuclear waste management funds	(4,181)	(3,996)
Other assets and liabilities	(1,928)	(1,700)
	(8,032)	(7,503)
Net deferred income tax liabilities	(879)	(829)

During 2017, OPG recorded an increase in the deferred income tax liability for income taxes that is expected to be recovered through regulated prices charged to customers of \$59 million (2016 – \$46 million). Since these deferred income taxes are expected to be recovered 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 2017 and 2016 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:

<i>(millions of dollars)</i>	2017	2016
January 1:		
Deferred income tax liabilities on temporary differences related to regulated operations	627	592
Deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liabilities	211	200
	838	792
Changes during the year:		
Increase in deferred income tax liabilities on temporary differences related to regulated operations	44	35
Increase in deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liabilities	15	11
Balance as at December 31	897	838

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:

<i>(millions of dollars)</i>	2017	2016
Unrecognized tax benefits, beginning of year	77	72
Additions based on tax positions related to the current year	21	19
Additions for tax positions of prior years	-	2
Reductions for tax positions of prior years	(20)	(16)
Unrecognized tax benefits, end of year	78	77

As at December 31, 2017, OPG's unrecognized tax benefits were \$78 million (2016 – \$77 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, 2017, OPG had recorded interest on unrecognized tax benefits of \$8 million (2016 – \$8 million). OPG considers its significant tax jurisdiction to be Canada. OPG remains subject to income tax examination for years after 2013.

OPG paid \$195 million in income taxes, net of tax refunds, during 2017 (2016 – \$98 million).

10. 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:

<i>(millions of dollars)</i>	2017			
	Unrealized Gains and Losses on Cash Flow Hedges	Pension and OPEB	Available-for- sale Securities	Total
AOCL, beginning of year	(87)	(207)	(1)	(295)
Actuarial loss on remeasurement of liabilities for pension and OPEB	-	(23)	-	(23)
Unrealized loss on available-for-sale securities	-	-	(8)	(8)
Amounts reclassified from AOCL	18	10	-	28
Other comprehensive income (loss) for the year	18	(13)	(8)	(3)
Reclassification of non-controlling interest on change in ownership interest (Note 22)	3	-	-	3
AOCL, end of year	(66)	(220)	(9)	(295)

<i>(millions of dollars)</i>	2016			
	Unrealized Gains and Losses on Cash Flow Hedges	Pension and OPEB	Available-for- sale Securities	Total
AOCL, beginning of year	(106)	(213)	-	(319)
Actuarial loss on remeasurement of liabilities for pension and OPEB	-	(6)	-	(6)
Unrealized loss on available-for-sale securities	-	-	(1)	(1)
Amounts reclassified from AOCL	19	12	-	31
Other comprehensive income (loss) for the year	19	6	(1)	24
AOCL, end of year	(87)	(207)	(1)	(295)

The significant amounts reclassified out of each component of AOCL, net of income taxes, during December 31, 2017 and 2016 are as follows:

(millions of dollars)	Amount Reclassified from AOCL		Statement of Income Line Item
	2017	2016	
Amortization of losses from cash flow hedges			
Losses	20	21	Net interest expense
Income tax recovery	(2)	(2)	Income tax expense
	18	19	
Amortization of amounts related to pension and OPEB			
Actuarial losses and past service costs	13	16	See (1) below
Income tax recovery	(3)	(4)	Income tax expense
	10	12	
Total reclassifications for the year	28	31	

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:

Asset Class	Target
Liability Hedging Assets	34%
Return Enhancing Assets	31%
Real Assets	20%
Return Diversifying Assets	15%

The plan may use derivatives for risk management or strategic 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, and corporate bonds. Equity securities are diversified across

Canadian, US, and Global 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, 2017. 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 require 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 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:

(millions of dollars)	December 31, 2017			Total
	Level 1	Level 2	Level 3	
Cash and cash equivalents	377	-	-	377
Short-term investments	-	9	-	9
Fixed income				
Corporate debt securities	-	521	-	521
Government bonds	-	3,476	-	3,476
Equities				
Canadian	1,441	329	-	1,770
US	1,551	-	-	1,551
Global	1,681	-	-	1,681
Pooled funds	459	105	-	564
Other	15	-	-	15
	5,524	4,440	-	9,964
Investments measured at NAV ¹				4,221
				14,185 ²

¹ Represents investments measured at fair value using Net Asset Value (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 in tables following.

² The table above excludes pension fund receivables and payables.

(millions of dollars)	December 31, 2016			Total
	Level 1	Level 2	Level 3	
Cash and cash equivalents	690	-	-	690
Fixed income				
Corporate debt securities	-	407	-	407
Government bonds	-	3,483	-	3,483
Equities				
Canadian	1,449	291	-	1,740
US	1,495	-	-	1,495
Global	1,643	-	-	1,643
Pooled funds	118	413	-	531
	5,395	4,594	-	9,989
Investments measured at NAV ¹				3,504
				13,493 ²

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 in tables following.

² The table above excludes pension fund receivables and payables.

Plan Costs and Liabilities

Details of OPG's pension and OPEB obligations, pension fund assets and costs, together with the key assumptions used in determining these amounts, are presented in the following tables:

	Registered and Supplementary Pension Plans		Other Post-Employment Benefits	
	2017	2016	2017	2016
<i>Weighted Average Assumptions – Benefit Obligations at Year-End</i>				
Discount rate for projected benefit obligation	3.57 %	3.90 %	3.60 %	3.94 %
Salary schedule escalation rate - initial rate ¹	1.90 %	1.80 %	1.90 %	1.80 %
- 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	5.80 %	5.90 %
Ultimate health care trend rate	n/a	n/a	4.32 %	4.32 %
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	
	2017	2016	2017	2016
<i>Weighted Average Assumptions – Costs for the Year</i>				
Expected return on plan assets, net of expenses	6.00 %	6.00 %	n/a	n/a
Discount rate for current service cost	4.15 %	4.10 %	4.03 %	4.13 %
Discount rate for interest on projected benefit obligation	3.37 %	4.10 %	3.53 %	4.13 %
Discount rate for interest on current service cost	3.95 %	4.10 %	3.85 %	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 %
Expected average remaining service life for employees (years)	12	12	13	13

¹ Per year to December 31, 2021.

<i>(millions of dollars)</i>	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
	2017	2016	2017	2016	2017	2016
<i>Components of Cost Recognized for the Year</i>						
Current service costs	274	277	7	7	67	67
Interest on projected benefit obligation	548	634	11	12	106	133
Expected return on plan assets, net of expenses	(766)	(734)	-	-	-	-
Amortization of past service costs ¹	-	-	-	-	1	1
Amortization of net actuarial loss ¹	183	192	6	4	-	19
Recognition of LTD net actuarial loss (gain)	-	-	-	-	11	(52)
Costs recognized ²	239	369	24	23	185	168

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:

<i>(millions of dollars)</i>	2017	2016
Registered pension plans	239	369
Supplementary pension plans	24	23
Other post-employment benefits	185	168
Pension & OPEB Cash Payment Variance Account (Note 5)	81	86
Pension & OPEB Cash Versus Accrual Differential Deferral Account (Note 5)	(117)	(182)
Pension and other post-employment benefit costs	412	464

The pension and OPEB obligations and the pension fund assets measured as at December 31 are as follows:

<i>(millions of dollars)</i>	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
	2017	2016	2017	2016	2017	2016
<i>Change in Plan Assets</i>						
Fair value of plan assets at beginning of year	13,506	13,160	-	-	-	-
Contributions by employer	214	255	14	15	94	93
Contributions by employees	97	85	-	-	-	-
Actual return on plan assets, net of expenses	1,207	714	-	-	-	-
Benefit payments	(761)	(708)	(14)	(15)	(94)	(93)
Fair value of plan assets at end of year	14,263	13,506	-	-	-	-
<i>Change in Projected Benefit Obligations</i>						
Projected benefit obligations at beginning of year	16,199	15,475	336	299	2,992	3,188
Employer current service costs	274	277	7	7	67	67
Contributions by employees	97	85	-	-	-	-
Interest on projected benefit obligation	548	634	11	12	106	133
Benefit payments	(761)	(708)	(14)	(15)	(94)	(93)
Net actuarial loss (gain)	987	436	16	33	119	(303)
Projected benefit obligations at end of year	17,344	16,199	356	336	3,190	2,992
Funded status – deficit at end of year	(3,081)	(2,693)	(356)	(336)	(3,190)	(2,992)

The following table provides the pension and OPEB liabilities and their classification on the consolidated balance sheets as at December 31:

<i>(millions of dollars)</i>	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
	2017	2016	2017	2016	2017	2016
Current liabilities	-	-	(14)	(17)	(98)	(95)
Non-current liabilities	(3,081)	(2,693)	(342)	(319)	(3,092)	(2,897)
Total liabilities	(3,081)	(2,693)	(356)	(336)	(3,190)	(2,992)

The accumulated benefit obligations for the registered pension plans and supplementary pension plans as at December 31, 2017 are \$16,005 million and \$333 million, respectively (2016 – \$14,909 million and \$293 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, discussed in Note 5, for the years ended December 31, on a pre-tax basis:

<i>(millions of dollars)</i>	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
	2017	2016	2017	2016	2017	2016
<i>Changes in plan assets and benefit obligations recognized in OCI</i>						
Current year net actuarial loss (gain)	546	456	16	33	108	(251)
Amortization of net actuarial loss	(183)	(192)	(6)	(4)	-	(19)
Amortization of past service costs	-	-	-	-	(1)	(1)
Total decrease (increase) in OCI	363	264	10	29	107	(271)
Less: increase (decrease) in Pension and OPEB Regulatory Asset (Note 5)	352	253	9	27	102	(250)
Net decrease (increase) in OCI (pre-tax)	11	11	1	2	5	(21)

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:

<i>(millions of dollars)</i>	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
	2017	2016	2017	2016	2017	2016
<i>Unamortized amounts recognized in AOCL</i>						
Past service costs	-	-	-	-	4	5
Net actuarial loss	3,650	3,287	116	106	378	270
Total recognized in AOCL	3,650	3,287	116	106	382	275
Less: Pension and OPEB Regulatory Asset (Note 5)	3,391	3,039	109	100	355	253
Net recognized in AOCL (pre-tax)	259	248	7	6	27	22

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 2018, on a pre-tax basis:

<i>(millions of dollars)</i>	Registered Pension Plans	Supplementary Pension Plans	Other Post-Employment Benefits
Past service costs	-	-	1
Net actuarial loss	198	7	6
Total increase in OCI	198	7	7
Less: estimated decrease in Pension and OPEB Regulatory Asset	184	6	6
Net increase in OCI (pre-tax)	14	1	1

The most recently filed actuarial valuation, for funding purposes, of the OPG registered pension plan, as at January 1, 2017, was filed with the FSCO in September 2017. The next filed funding valuation must have an effective date no later than January 1, 2020. For 2018, OPG's required contribution to its registered pension plan is expected to be \$215 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 \$353 million as at December 31, 2017 (2016 – \$349 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, 2017 are as follows:

<i>(millions of dollars)</i>	Registered Pension Plans	Supplementary Pension Plans	Other Post- Employment Benefits
2018	676	15	98
2019	696	15	101
2020	722	15	105
2021	747	16	108
2022	764	16	111
2023 through 2027	4,397	86	633

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 2017 OPEB costs of \$40 million (2016 – \$45 million) or a decrease in the service and interest components of the 2017 OPEB costs of \$29 million (2016 – \$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, 2017 of \$592 million (2016 – \$560 million) or a decrease in the projected OPEB obligation as at December 31, 2017 of \$451 million (2016 – \$426 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 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, 2017 was less than \$1 million.

The fair value of the derivatives totalled a net liability of \$20 million as at December 31, 2017 (December 31, 2016 – \$24 million).

The following table shows the pre-tax amounts related to derivatives recorded in AOCL and net income for the years ended December 31:

<i>(millions of dollars)</i>	2017	2016
Cash flow hedges (recorded in AOCL)		
Reclassification of losses to net interest expense	20	21
Commodity derivatives (recorded in net income)		
Realized losses in revenue	(9)	(12)
Unrealized gains (losses) in revenue	3	(3)

Existing pre-tax net losses of \$19 million deferred in AOCL as at December 31, 2017 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 as 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 as 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.

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

<i>(millions of dollars)</i>	Fair Value		Carrying Value ¹		Balance Sheet Line Item
	2017	2016	2017	2016	
Nuclear Segregated Funds (includes current portion) ²	16,724	15,984	16,724	15,984	Nuclear fixed asset removal and nuclear waste management funds
Financing receivables	1,179	-	1,179	-	Financing receivables
Investment in Hydro One shares	188	212	188	212	Available-for-sale securities
Payable related to cash flow hedges	(40)	(48)	(40)	(48)	Long-term accounts payable and accrued charges
Long-term debt – OPG (includes current portion)	(6,234)	(6,033)	(5,735)	(5,520)	Long-term debt
Long-term debt – Fair Hydro Trust	(601)	-	(601)	-	Long-term debt
Other financial instruments	(16)	(18)	(16)	(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. OPG's fair value of the Nuclear Segregated Funds is set not to exceed an amount equal to the funding liability pursuant to the ONFA when the Nuclear Segregated Funds are in a surplus position. Refer to Note 8 for further information.

The fair value of the Fair Hydro Trust long-term senior debt and OPG's long-term debt issued under the Medium Term Note Program are based on unadjusted quoted active market prices, which are considered Level 1 inputs. All other long-term debt instruments are 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.

For the financing receivables related to the Investment Interest acquired from the IESO, fair value is estimated to equal the fair value of the underlying long-term debt due to the direct relationship between the asset and the debt instruments that financed the acquisition. The financing receivables are funded by both long-term senior debt issued by the Fair Hydro Trust to third parties and subordinated debt issued by the Trust to OPG and eliminated on consolidation. Therefore, the fair value of the portion of the financing receivables funded by the long-term senior debt is based on Level 1 inputs, while the portion funded by the subordinated debt has inputs that are based on indicative pricing from the market, which are considered Level 2 inputs.

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.

The following tables present financial assets and financial liabilities measured at fair value in accordance with the fair value hierarchy as at December 31, 2017 and December 31, 2016:

(millions of dollars)	December 31, 2017			Total
	Level 1	Level 2	Level 3	
Assets				
<i>Used Fuel Segregated Fund</i>				
Investments measured at fair value, excluding investments measured at NAV	6,090	4,705	-	10,795
Investments measured at NAV ¹				1,292
				12,087
Due to Province				(2,529)
Used Fuel Segregated Fund, net				9,558
<i>Decommissioning Segregated Fund</i>				
Investments measured at fair value, excluding investments measured at NAV	4,547	3,487	-	8,034
Investments measured at NAV ¹				1,065
				9,099
Due to Province				(1,933)
Decommissioning Segregated Fund, net				7,166
Investment in available-for-sale securities	188	-	-	188
Other financial assets	5	3	6	14
Liabilities				
Other financial liabilities	(28)	(2)	-	(30)

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 consolidated balance sheets.

	December 31, 2016			
(millions of dollars)	Level 1	Level 2	Level 3	Total
Assets				
<i>Used Fuel Segregated Fund</i>				
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
<i>Decommissioning Segregated Fund</i>				
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 consolidated balance sheets.

During the year ended December 31, 2017, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into or 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 financial instruments.

(millions of dollars)	Other financial instruments
Opening balance, January 1, 2017	9
Unrealized losses included in revenue	(3)
Realized losses included in revenue	(9)
Purchases	9
Closing balance, December 31, 2017	6

Nuclear Segregated Funds

The fair value of the investments within the Nuclear Segregated Funds' real assets 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, 2017:

<i>(millions of dollars except where noted)</i>	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Real Assets				
Infrastructure	1,330	798	n/a	n/a
Real Estate	936	440	n/a	n/a
Agriculture	91	97	n/a	n/a
Pooled Funds				
Short-term Investments	32	n/a	Daily	1 - 5 Days
Fixed Income	729	n/a	Daily	1 - 5 Days
Equity	952	n/a	Daily	1 - 5 Days
Total	4,070	1,335		

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 asset class includes investments in funds and assets with an objective to generate a combination of long-term capital appreciation and current income, generally through private investments in sectors such as energy, transportation, communication and utilities. The fair values of investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments in the respective 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 are liquidated. It is not possible to estimate when the underlying assets in this asset class will be liquidated.

Real Estate

This asset class includes investments in funds and assets with an objective to generate a combination of long-term capital appreciation and current income, generally through investments in institutional-grade real estate property. 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 in the respective funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each real estate fund will be received based on the operations of the underlying investments and/or as the underlying investments are liquidated. 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 asset class will be liquidated.

Agriculture

This asset class includes investments in funds and assets with an objective to provide a differentiated return source, income yield, and inflation protection, generally through private investments in global farmland and timberland. 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 in the respective 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 agriculture fund will be received based on the operations of the underlying investments and/or as the underlying investments are liquidated. It is not possible to estimate when the underlying assets in this asset class will be liquidated.

Pooled Funds

This asset 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.

14. SHARE CAPITAL

Common Shares

As at December 31, 2017 and 2016, 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, the Province.

Class A Shares

The Company's Articles of Amalgamation were amended effective December 1, 2017 to allow for the creation and issuance of non-voting Class A shares to the Province in exchange for equity injections in OPG. All of the outstanding shares are owned directly by the Province and OPG is authorized to issue an unlimited number of Class A shares without nominal or par value. The Class A and common shares rank equally as to entitlement to dividends, and all dividends declared by OPG must be declared in equal amounts per share on all outstanding shares without preference or distinction. Upon the liquidation, dissolution or wind-up of OPG, whether voluntary or involuntary, the holders of Class A shares and common shares are entitled to share equally, on a share for share basis, in all distributions of property and assets without preference or distinction. Any issue of new class of shares is subject to the consent of the Province. OPG is entitled to redeem outstanding Class A shares as may be approved by OPG's Board of Directors.

In December 2017, OPG issued 12,217,616 Class A shares at a price of \$42.46 per share to the Province for its equity injection in OPG, generating proceeds of \$519 million. These proceeds were used by OPG to purchase the Fair Hydro Trust's subordinated debt in the amount of 44 percent of the total funding requirement for the Trust's acquisition of Investment Interest from the IESO in December 2017.

15. EARNINGS PER SHARE

Basic and diluted earnings per share are calculated by dividing net income attributable to the Shareholder by the weighted average number of shares outstanding.

Class A shares are included in the weighted average number of shares outstanding. The weighted average number of shares outstanding as at December 31, 2017 was 256.7 million (2016 – 256.3 million). There were no dilutive securities during the years ended December 31, 2017 and 2016.

16. 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 from Ontario Superior Court of Justice 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 has delivered a statement of defence in accordance with an extension of the original June 30, 2017 delivery deadline set up 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 December 31, 2017, the total amount of guarantees OPG provided to these entities was \$82 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 December 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 Obligations

OPG's contractual obligations as at December 31, 2017 are as follows:

(millions of dollars)	2018	2019	2020	2021	2022	Thereafter	Total
Fuel supply agreements	158	125	115	88	67	67	620
Contributions to the OPG registered pension plan ¹	215	219	-	-	-	-	434
OPG long-term debt repayment	398	368	663	413	172	3,721	5,735
Interest on OPG long-term debt	244	226	204	175	161	3,006	4,016
Fair Hydro Trust senior debt repayment ²	-	601	-	-	-	-	601
Interest on Fair Hydro Trust senior debt	15	15	-	-	-	-	30
Commitments related to Darlington Refurbishment project ³	457	-	-	-	-	-	457
Commitments related to Ranney Falls GS project	5	-	-	-	-	-	5
Operating licences	40	41	24	28	28	87	248
Operating lease obligations	28	24	24	22	22	79	199
Unconditional purchase obligations	62	59	56	5	-	-	182
Accounts payable and accrued charges	957	8	-	-	-	16	981
Other	47	28	2	1	1	64	143
Total	2,626	1,714	1,088	732	451	7,040	13,651

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, 2017. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2020. 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 2019 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 The notes were issued by the Fair Hydro Trust under an \$800 million two-year revolving warehouse facility in December 2017. In February 2018, the Trust issued \$500 million of senior notes payable to repay the majority of the outstanding balance of the revolving warehouse facility.

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.

Lease Commitments

The Company leases the Bruce A and Bruce B nuclear generating stations to Bruce Power. Under the lease agreement, 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 and costs associated with the Bruce A and Bruce B nuclear generating stations is included in the determination of OPG's nuclear regulated prices established by the OEB. The OEB has determined that, since the Bruce nuclear generating stations are not prescribed under *Ontario Regulation 53/05*, these revenues, including lease revenues, and costs, including depreciation expense, are to be calculated on the basis of the manner in which they are recognized in OPG's consolidated financial statements, without the application of regulatory constructs. As such, the net book value of the assets for these stations is not included in the regulated rate base.

The net book value of PP&E on lease to Bruce Power as at December 31, 2017 was \$2,962 million (2016 – \$2,986 million). The net book value is largely comprised of asset retirement costs. Refer to Note 3 for further details on the change in the estimate for the ARO.

Collective Bargaining Agreements

The Company maintains labour agreements with the Power Workers' Union (PWU) and The Society of Energy Professionals (The Society). As of December 31, 2017, the PWU represented approximately 4,850 OPG regular employees or approximately 53 percent of OPG's regular workforce. The current collective agreement between OPG and the PWU has a three-year term, expiring on March 31, 2018. As at December 31, 2017, The Society represented approximately 3,250 OPG employees or approximately 35 percent of OPG's regular workforce. The current collective agreement between OPG and The Society has a three-year term, expiring on December 31, 2018.

17. BUSINESS SEGMENTS

Effective in the fourth quarter of 2017, OPG has the following six reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation
- Fair Hydro Trust

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 existing isotope sales contracts and ancillary services supplied by OPG from the nuclear stations it operates. Ancillary revenues are earned through voltage control and reactive support.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management business 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 and 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 reported 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 regulated because OPG's costs associated with the Nuclear Liabilities are included in the OEB's determination of regulated prices for production from the Pickering and Darlington nuclear generating stations.

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 comprises the results of 54 regulated hydroelectric generating stations located across a number of major river systems in the province.

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.

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 or other long-term contracts with the IESO.

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.

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 business 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, gains or losses on disposition of non-regulated real estate assets, costs associated with non-regulated business development activities, and costs related to the Lambton GS and Nanticoke GS sites.

OM&A expenses of the generation business segments include an inter-segment service fee for the use of certain PP&E and intangible assets held within Service, Trading, and Other Non-Generation segment. The total service fee is recorded as a reduction to the segment's OM&A expenses.

The service fee included in OM&A expenses by segment in 2017 and 2016 was as follows:

<i>(millions of dollars)</i>	2017	2016
Regulated – Nuclear Generation	36	34
Regulated – Hydroelectric	7	7
Contracted Generation Portfolio	4	4
Reduction to Services, Trading, and Other Non-Generation	47	45

Fair Hydro Trust Segment

The Fair Hydro Trust segment is a non-generation segment that is not subject to rate regulation. It reports OPG's income related to its role as the Financial Services Manager under the Fair Hydro Act and holder of the Trust's subordinated debt, and includes the financial results of the Trust. Segment earnings include interest income from the Trust, recovery of third-party costs and fees for financial management and ongoing administration services, partially offset by interest costs on debt issued by OPG to fund its purchase of the Trust's subordinated debt and third-party and other costs incurred related to the management and administration of the Trust. OPG's fees for its services to the Trust, as the Financial Services Manager, are subject to an annual review by the OEB.

The earnings from the Fair Hydro Trust are comprised of the following for the year ended December 31:

<i>(millions of dollars)</i>	2017
Revenue	(8)
Operating expenses	8
Interest income	(1)
Earnings from Fair Hydro Trust	(1)

Segment Income (Loss) for the Year Ended December 31, 2017 (millions of dollars)	Nuclear Gene- ration	Regulated Nuclear Waste Manage- ment	Hydro- Electric	Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non- Generation	Fair Hydro Trust	Elimi- nation	Total
Revenue	3,095	121	1,436	579	43	-	(116)	5,158
Fuel expense	284	-	351	53	1	-	-	689
Gross margin	2,811	121	1,085	526	42	-	(116)	4,469
Operations, maintenance and administration	2,293	129	330	169	18	1	(116)	2,824
Depreciation and amortization	431	-	139	79	30	-	-	679
Accretion on fixed asset removal and nuclear waste management liabilities	-	943	-	9	8	-	-	960
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(801)	-	-	-	-	-	(801)
Earnings from Fair Hydro Trust	-	-	-	-	-	(1)	-	(1)
Income from investments subject to significant influence	-	-	-	(38)	-	-	-	(38)
Property taxes	26	-	1	7	6	-	-	40
Other losses (gains)	4	-	1	-	(384)	-	-	(379)
Income (loss) before interest and income taxes	57	(150)	614	300	364	-	-	1,185
Net interest expense								95
Income before income taxes								1,090
Income tax expense								209
Net income								881

Segment Income (Loss) for the Year Ended December 31, 2016 (millions of dollars)	Nuclear Gene- ration	Regulated Nuclear Waste Manage- ment	Hydro- electric	Unregulated Contracted Generation Portfolio	Services, Trading, and Other Non- Generation	Elimi- nation	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
Net interest expense							120
Income before income taxes							621
Income tax expense							168
Net income							453

Selected Consolidated Balance Sheet information as at December 31, 2017 <i>(millions of dollars)</i>	Nuclear Gener- ation	Regulated Nuclear Waste Manage- ment	Hydro- electric	Unregulated Contracted Generation Portfolio	Services, Trading, and Other Non- Generation	Fair Hydro Trust	Total
Segment property, plant and equipment in-service, net	6,167	-	7,359	3,480	224	-	17,230
Segment construction in progress	3,839	-	157	78	18	-	4,092
Segment property, plant and equipment, net	10,006	-	7,516	3,558	242	-	21,322
Segment intangible assets in-service, net	4	-	1	5	84	-	94
Segment development in progress	16	-	-	-	23	-	39
Segment intangible assets, net	20	-	1	5	107	-	133
Segment fuel inventory	265	-	-	44	-	-	309
Segment materials and supplies inventory:							
Current	102	-	-	1	-	-	103
Long-term	351	-	-	4	-	-	355
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	16,724	-	-	-	-	16,724
Financing receivables	-	-	-	-	-	1,179	1,179
Fixed asset removal and nuclear waste liabilities	-	(20,077)	-	(151)	(193)	-	(20,421)

Selected Consolidated Balance Sheet Information as at December 31, 2016 (millions of dollars)	Regulated Nuclear Waste Manage- ment			Unregulated Services, Trading, and Other Non- Generation			Total
	Nuclear Generation		Hydro- electric	Contracted Generation Portfolio			
Segment property, plant and equipment in-service, net	5,653	-	7,355	3,282	226		16,516
Segment construction in progress	2,988	-	166	301	27		3,482
Segment property, plant and equipment, net	8,641	-	7,521	3,583	253		19,998
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:							
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)

Segment Capital Expenditure Information (millions of dollars)	Regulated			Unregulated			Total
	Nuclear Generation	Nuclear Waste Manage- ment	Hydro- electric	Contracted Generation Portfolio	Services, Trading, and Other Non- Generation	Fair Hydro Trust	
Year ended December 31, 2017 Investment in property, plant and equipment, and intangible assets	1,631	-	148	73	74	-	1,926
Year ended December 31, 2016 Investment in property, plant and equipment, and intangible assets	1,338	-	132	198	36	-	1,704

18. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

<i>(millions of dollars)</i>	December 31	
	2017	2016
Receivables from related parties	60	116
Fuel inventory	1	34
Materials and supplies	(3)	(4)
Prepaid expenses	(14)	(6)
Other current assets ¹	(28)	(32)
Income taxes payable	2	57
Accounts payable and accrued charges	36	15
	54	180

¹ Represents other accounts receivable.

19. 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:

<i>(millions of dollars)</i>	2017		2016	
	Income	Expense	Income	Expense
Hydro One				
Electricity sales	8	-	6	-
Services	1	10	1	5
Dividends	7	-	6	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province ¹	-	456	-	192
Change in Used Fuel Segregated Fund amount due to Province ¹	-	591	-	235
Hydroelectric gross revenue charge	-	110	-	120
ONFA guarantee fee	-	8	-	8
Other	-	2	-	-
OEFC				
Hydroelectric gross revenue charge	-	216	-	203
Interest expense on long-term notes	-	158	-	169
Income taxes, net of investment tax credits	-	246	-	104
IESO				
Electricity related revenue	4,802	-	5,082	-
Earnings from Fair Hydro Trust	1	-	-	-
	4,819	1,797	5,095	1,036

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, 2017 and December 31, 2016, the Nuclear Segregated Funds were reported net of amounts due to the Province of \$4,462 million and \$3,415 million, respectively.

The receivables, financing receivables, AFS securities, payable and long-term debt balances between OPG and its related parties are summarized below:

<i>(millions of dollars)</i>	December 31	
	2017	2016
Receivables from related parties		
Hydro One	1	1
IESO – Electricity related receivables	354	421
IESO – Fair Hydro Trust ¹	7	-
OEFC	-	1
PEC	4	4
Province of Ontario	3	2
Financing receivables		
IESO – Fair Hydro Trust	1,179	-
Available-for-sale securities		
Hydro One shares	188	212
Accounts payable and accrued charges		
Hydro One	1	-
OEFC	52	61
Province of Ontario	9	2
IESO – Electricity related payables	5	2
IESO – Fair Hydro Trust	3	-
Long-term debt (including current portion)		
Notes payable to OEFC	3,195	3,295

¹ Balance consists of unbilled revenue.

OPG may hold Province of Ontario bonds and treasury bills in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2017, the Nuclear Segregated Funds held \$1,502 million of Province of Ontario bonds (2016 – \$1,650 million) and \$9 million of Province of Ontario treasury bills (2016 – \$2 million). As of December 31, 2017, the registered pension fund held \$1 million in Province of Ontario treasury bills (2016 – \$271 million). These Province of Ontario bonds and treasury bills are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

In December 2017, the Fair Hydro Trust purchased its first tranche of Investment Interest from the IESO for an exchange amount of \$1.18 billion, which has been classified as a financing receivable on OPG's consolidated balance sheet. The transaction was settled in cash using proceeds from the Trust's issuance of senior debt to third parties and subordinated debt to OPG. Pursuant to the general regulation of the Fair Hydro Act, the IESO is required to pay and remit carrying costs of the Trust, excluding repayment of principal on any debt obligations, up to July 31, 2021. Commencing May 1, 2021, Specified Consumers will be invoiced by their local distribution company for the Clean Energy Adjustment to pay the carrying costs of the Trust. These funds will be remitted to the Trust through the IESO and will be used to settle all funding and other related expenses of the Trust that underlie the financing receivable.

As at December 31, 2017, OPG's consolidated balance sheet included approximately \$7 million of unbilled revenue from the IESO, primarily for OPG's general fee for 2017 as the Financial Services Manager under the Act relating to incurred third-party and certain direct labour costs.

The Province has provided a limited guarantee to specified creditors of the Fair Hydro Trust. The limited guarantee would be triggered in the event that the Trust's ability to receive amounts in respect of its Investment Interest to pay for certain funding obligations is adversely affected due to one or more of the following: the Province changes the Fair Hydro Act or any other legislation or regulation; a significant change in Ontario's electricity market undertaken by the Province; or a court declares that the Act is invalid or unconstitutional.

20. 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. A summary of the balances of the jointly controlled entities as at December 31, 2017 and December 31, 2016 are as follows:

<i>(millions of dollars)</i>	2017	2016
PEC		
Current assets	20	18
Long-term assets	240	256
Current liabilities	(10)	(8)
Long-term liabilities	(6)	(5)
Brighton Beach		
Current assets	5	5
Long-term assets	160	168
Current liabilities	(17)	(16)
Long-term liabilities	(9)	(7)
Long-term debt	(74)	(90)
Investments subject to significant influence	309	321

21. RESEARCH AND DEVELOPMENT

For the year ended December 31, 2017, research and development expenses of \$106 million (2016 – \$95 million) were charged to operations.

22. NON-CONTROLLING INTEREST

PSS Generating Station LP

PSS is a limited partnership between OPG, CRP and PSS GS Inc. The principal business of the partnership is the development, construction, ownership, operation and maintenance of the 28 MW Peter Sutherland Sr. hydroelectric GS on the New Post Creek.

The Peter Sutherland Sr. GS was placed in-service in March 2017 and, in April 2017, CRP increased its interest in PSS to 33 percent under the partnership agreement, by making contributions of \$21 million, reducing OPG's interest to 67 percent. CRP's 33 percent interest in PSS is reported as non-controlling interest. As a result of CRP increasing its interest in the partnership, PSS's AOCL and partner's deficit as at the time of CRP's contribution were proportionately allocated to CRP as a reduction to its 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.