A TRUSTED BUSINESS PARTNER DRIVING VALUE

OPG's Public Debt Program

Discussion with Ministry of Finance
August 11, 2016

ONTARIO POWER GENERATION

Agenda

- OPG Strategic Direction
- Public Debt Program - Driver of Strategic Direction
- Assessment of Public Debt Program
- Capital Restructuring Scenarios
- Summary of Benefits to Ontario
- Market Assessment of Public Debt

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OPG Strategic Direction

POWER WITH PURPOSE: Providing low cost power in a safe, clean, reliable and sustainable manner for the benefit of our customers and shareholder.

STRATEGIC IMPERATIVES	KEY VALUE DRIVERS	KEY ENTERPRISE LEVEL INITIATIVES
OPERATIONAL EXCELLENCE	• Safe, Environmentally Responsible • Optimize Asset Management • Operations and Support Efficiencies	• Pickering Operations • Business Optimization • Resourcing Strategy
PROJECT EXCELLENCE	• Deliver On Time, On Budget • Industry Leading Project Management	• Darlington for the Future • Project Management Centre of Excellence
FINANCIAL STRENGTH	• Regulated Asset Revenue Strategy • Commercial Focus and Financial Flexibility • Risk Management • Expand Core Business	• Regulatory Effectiveness • Shareholder Value • Growth Strategy
SOCIAL LICENCE	• Public Trust • Indigenous Relations • Engaged Workforce	• Relationships and Outreach • Values Based Culture

LONG TERM GOALS: 2021

- Achieve Net Income of $1B and ROE of 7%
- Maintain our 30% generation price advantage for the benefit of customers
- Establish growth platforms that put OPG on track to replace 3,000 MW of retiring generation
- Build a diverse, healthy, engaged workforce and the culture to succeed in a challenging future

VALUES: • Safety • Integrity • Excellence • People & Citizenship

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OPG Strategic Direction

- OPG's strategy is to drive Shareholder value, support provincial policy initiatives and benefit Ontario electricity customers
  - OPG contribution to Shareholder Fiscal Objectives:
    - Contribute net income to help Province meet deficit reduction targets
    - Pay dividends to help fund provincial infrastructure priorities or reduce Provincial debt
    - Increase return on equity invested in OPG by its Shareholder
    - Preserve and enhance Shareholder options to monetize ownership
  - OPG contribution to Provincial Policy Objectives:
    - Contribute to the achievement of provincial climate change policy objectives
    - Advance development of energy technology that can benefit or be applied in Ontario
    - Stimulate economic development and employment in Ontario through major project development and ongoing operations
    - Partner with indigenous communities on new project developments
  - OPG contribution to Customer Objectives:
    - Continued focus on cost reduction and commercial objectives to create long-term Ontario electricity customer savings

OPG Strategic Direction

- OPG has improved operational performance, financial prospects and project performance over the last few years
  - Stable revenues underpinned by regulation and long term contracts
  - Improved efficiency and reduced costs from successful Business Transformation initiative
  - Demonstrated ability to deliver generation development projects on time and on budget
- OPG's strategic direction builds on this progress and expands it to:
  - Drive increase in future net income by maximizing the performance of OPG's existing generation fleet and investing in new business opportunities
  - Contribute to the achievement of the Province's climate change goals:
    - Underpin the electrification of Ontario's economy by investing in GHG-free generation
    - Invest in the development of new technology that supports a low carbon economy
    - Position itself to export "carbon-free" MW's to interconnected markets
  - Maintain sufficient scale to continue to reliably support long term nuclear and employee liabilities
  - Restructure the Balance sheet to increase leverage and provide capacity
  - Establish independent borrowing platform to support increased leverage, payment of dividends to the Shareholder and increase commercial focus in OPG to enhance overall efficiency

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Public Debt Program –Driver of Strategic Direction

- Beneficial funding platform to shareholder and ratepayer:
  - Allows OPG to transition to target capital structure of 50% debt while paying dividend to Province
  - Attract capital on flexible terms and conditions consistent with the investment profile
  - No credit rating impact to OPG and, as a result, no expected increase in funding cost to ratepayer
  - Allows OPG to raise funds in both CAD and USD
- Positive cash impact to the Province
  - Under capital restructuring scenarios, the incremental cash available to the Province will be $5B-$6B higher as compared to the Business Plan, over the 10yr period
    - $3B-$4B incremental dividend
    - $1.9B sales of restructured OEFC notes (assuming notes with maturities prior to 2019 will be held to maturity and not sold)
  - Incremental dividend of $3B-$4B will reduce the Province’s borrowing requirement, and associated financing cost
  - Applying dividends to reduce provincial debt by $3B-$4B (representing approximately 1% of current Provincial debt) will lower interest costs by an estimated $0.6B over 10 years
    - OEFC would forego an annual spread margin on lending to OPG of $20-$25M per year
- Key enabler of a Growth Strategy
  - Communicates to the market the commercialization of OPG, which would:
    - Facilitate OPG’s access to investment opportunities as a “serious” investor
    - Add credibility to potential co-investment partners that have specific/complementary skills or resources
- Opportunity to raise funds in the US market as appropriate
  - Additional benefit of enhancing OPG’s potential to continue under US GAAP (through OSC regulation NI 52-107 s.3.7)

Assessment of Public Debt Program

- Shakerhill Partners, an advisor to the Advisory Council on Government Assets has reviewed OPG's proposal of "an independent public debt platform", which was prepared for the Province, the advisor is very supportive of this proposal and recommends that this should proceed as early as possible in the Fall of 2016.
- According to the advisor, the arguments in favour of OPG's public debt program include:
  - There will be benefits to ratepayers from improved debt flexibility including the ability to access historically attractive rates at longer tenors
  - The OEB will appreciate the increased transparency of the market rates and will also appreciate the market discipline that a rated entity will have to maintain
  - There will be a substantial one time reduction in the Public Sector Borrowing Requirement (PSBR) as well as very significant PSBR savings in the event that the growth strategy were to be approved by the Province
  - The introduction of OPG as an issuer will be an expansion of the investor base as OPG will show in the corporate bond indices, reducing pressure on the Province
  - The introduction of third part debt will imply a risk transfer to debt holders from taxpayers
  - There is the potential to create a gain for the Province by selling the existing debt held by OEFC at a premium to face value
  - Publicly listing US debt may aid in the characterisation of the accounting treatment of OPG under US GAAP
  - The public markets will be receptive to US dollar denominated debt that may be less available from the OFA

Assessment of Public Debt Program

- The advisor listed the arguments against OPG's public debt program as follows:
  - An independent borrowing platform will involve additional costs and spreads that will have to be borne by ratepayers or the shareholder
  - There is the potential for market disruptions for either macro or company specific factors that will result in OPG not being able to access markets and fall back on the OFA
  - As the Province is not likely to allow its power grid to go down, there is no real risk transference by having third party debt
  - OEFC currently earns a spread of $25 MM to $30 MM annually that will go away with a market program
    - Effectively this is a "carry trade" strategy whereby the Province arbitrages the difference in credit quality of the Province and OPG, with the consequence that the taxpayer supported debt of the Province is increased, negatively affecting the debt to GDP and the taxpayer supported debt to tax revenue credit metrics for the Province.
  - There is potential for OPG to cannibalize demand for Provincial debt, especially at the longest end
  - There is nothing wrong with the status quo
- The advisor concluded that on balance the positive arguments put forward far outweigh the counter-arguments.
  - The advisor is persuaded mainly by the advantages to ratepayers of a more flexible approach to markets and tenor, offset by the possibility of an increase in spreads and costs involved with the program.
  - The advisor is also highly motivated by the potential to reduce taxpayer supported debt measures for the Province – especially under the cases where a growth strategy is confirmed by the Province, where the effect is quite marked.

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Other Impacts and Considerations

- **Impact to Province and Customers as a result of retaining US GAAP for OPG**
  - **Avoids Negative Fiscal Impact to the Province:**
    - US GAAP could provide more favourable and predictable fiscal results to the Province than IFRS
      - Under IFRS, OPG’s nuclear asset retirement obligation (ARO) will be re-measured at least every five years using an updated discount rate, which is expected to result in significantly higher expenses and lower net income over at least several 5-year cycles (e.g., ~$1 billion reduction in 2016/2017)
      - OPG may be required to write off existing regulatory assets and may be unable to recognize amounts deferred under nuclear rate smoothing, which could significantly lower income during the Darlington refurbishment period
      - OPG’s fiscal contribution to the Province could become less predictable and more difficult to forecast
  - **Avoids Potential Negative Impact to Ratepayers:**
    - OPG expects to be able to retain US GAAP for external reporting if it issues debt in the US. This would strengthen OPG’s ability to retain US GAAP for OEB rate-setting purposes, avoiding the potential higher rates and uncertainty associated with ARO revaluation under IFRS.

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Other Impacts and Considerations

- **Positive fiscal impact to the Province through restructuring OPG notes held by OEFC**
  - Province could realize a gain of $100-$200M on sale of OPG debt held by the OEFC. The gain would be amortized over the life of the new structured notes
  - No loss would be recognized by OPG as the debt would be treated as "modification" from an accounting perspective
- **Positive impact on Provincial credit profile**
  - From rating agencies' perspective, with regards to key debt to GDP ratios
    - If OPG's debt is held by the public, all agencies would exclude it, based on the fact that OPG is considered self-supporting, i.e. generating sufficient funds to support its operations including debt obligation.
    - If OPG debt is held by OEFC, only DBRS would exclude it from Province's debt
  - Debt holders of OPG's public debt will have no legal recourse to the Province
    - Province's risk exposure to OPG's public debt would be no different than its exposure to OPG's project financing
- **OPG has maintained solid investor relationships and has large investors base**
  - Lower Mattagami project financing has attracted a broad investor base of ~80 institutional investors who are the major investors in Canadian power and utility bonds market. These investors have expressed significant interest in OPG debt
  - OPG bonds are expected to be priced close to Hydro One and new issue spread concessions are expected to be low given investors familiarity with OPG and the success of the project financing debt platforms.

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Operational Considerations

- **Administration**
  - OPG is currently managing 3 project financing programs totaling ~$2B and 2 commercial paper programs, and as such, has established process in place.
  - OPG's Treasury functions, including front office, middle office and back office, are well in place in managing existing project debt program. Operational and investor relations activity for a public debt program can be done without incremental staff
    - Estimated incremental work relating to public debt program at 0.5FTE
- **Costs**
  - All-in annualized incremental costs (legal and other transactional fees) are expected to be less than 3bps
- **Execution Flexibility**
  - Public debt program once established would enable OPG to take advantage of favourable market pricing opportunities and respond to reverse inquiries; something that does not exist at this time

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Capital Restructuring Scenario

- The table below summarizes the approved business plan and a capital restructuring scenario with dividends
- For the leveraged scenario:
  - ROE improves to 8.1% from 7%
  - Dividends increase by more than $4B
  - Lower Net Income Attributable to Shareholder as a result of higher interest costs could be offset by incremental investment and additional growth

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Business Plan	Debt Ratio	36%	37%	37%	36%	34%	32%	31%	30%	29%	31%	
	Equity ($M)	10,565	11,069	11,745	12,470	13,348	14,346	15,399	16,530	16,740	16,909	
	Debt ($M)	5,924	6,496	6,898	7,080	6,917	6,779	6,926	7,083	6,880	7,577	
	Net Income Attributable to Shareholders ($M)	411	508	680	729	883	1,004	1,058	1,129	1,209	1,168	**8,778**
	Total Shareholder Return ($M)	902	982	1,163	1,182	1,562	1,628	1,677	1,778	1,895	1,962	**14,732**
	ROE	4.0	4.8	6.0	6.1	6.9	7.3	7.2	7.1	7.3	7.0	
	Dividend	200	0	0	0	0	0	0	0	1,000	1,000	**2,200**
	Impact of Assumed Regulated Rate Increases on Residential Customer's Monthly Bill	~$1.06/mth annually over the 2017-2025 period										
Business Plan + Leverage (with dividend)	Debt Ratio	36%	37%	37%	36%	37%	38%	39%	41%	45%	50%	
	Equity ($M)	10,465	11,069	11,745	12,470	12,727	13,086	13,478	13,721	12,913	12,033	
	Debt ($M)	6,024	6,496	6,898	7,080	7,517	7,979	8,726	9,683	10,380	11,977	
	Net Income Attributable to Shareholders ($M)	411	508	680	729	862	963	997	1,041	1,091	1,019	**8,302**
	Total Shareholder Return ($M)	902	982	1,163	1,182	1,535	1,574	1,596	1,661	1,737	1,764	**14,097**
	ROE	3.9	4.7	6.0	6.0	6.8	7.5	7.5	7.7	8.2	8.1	
	Dividend*	200	0	0	0	600	600	600	800	1,900	1,900	**6,600**
	Sale of Restructured OEFC Notes**		1,400	500								**1,900**

*Min $550M, starting 2020 when Unit 2 comes in-service ** At the discretion of the Province

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Summary of Benefits to Ontario

	Business Plan	Business Plan + Leverage (with Dividend)	Impact
Return on Equity in 2025	7%	8.1%	**+1.1%**
Shareholder Dividends (cumulative 2016-25)	$2.2B	$6.6B	**+$4.4B**
Reduced Interest Costs from Applying Cash Dividends to Provincial Debt	N/A	Cumulative Over 10 years: $ 0.6B	**Cumulative Over 10 Years: +$ 0.6B**
Incremental cash on sale of restructured notes	N/A	$1.9B	**$1.9B**
OEFC gain on sale of restructured notes (depends on timing & amount sold; may be eliminated on OPG consolidation with Province)	N/A	$100 to 200M	**+$100 to 200M**
OEFC Loss of Interest Rate Spread on OPG Borrowing	N/A	-$20 to 25M/year	**-$20 to $25M/year**
Net Income Attributable to Shareholder (cumulative 2016-2025)	$8.8B	$8.3B	**-$0.5B**
OPG Debt held by OEFC (as of 2025)	$7.6B	$0B	**-$7.6B**

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Market Assessment of Public Debt

- OPG has assessed its ability to access the public debt markets and believes markets for both Canadian and U.S. denominated debt exist
- There have been several examples of Ontario energy companies that have successfully sourced funds from the capital debt markets in support of their business strategies similar to OPG's proposal. These companies were able to improve their liquidity position and fund their initiatives to the benefit of their shareholder and customers (e.g. Hydro One, Toronto Hydro, Hydro Ottawa, Bruce Power).
- Current positive market tone favours Canadian utilities bond issuers as a result of the lower yield environment, combined with the scarcity in the Canadian bond market, especially issuers with stable and regulated cash flows.
- Canadian market has demonstrated its willingness to take on nuclear risk. Bruce Power's inaugural bond issue in June 2016, which was upsized to $1 billion and over-subscribed, set the precedent that a sole nuclear power producer is financeable in the Canadian market.
    - Bruce Power's credit spreads have further tightened by ~25bps since its inaugural issue
- The following table summarizes current credit spreads for reference purposes

(bps)	Rating (Moody's / S&P / DBRS)	5Yr	10Yr	30Yr
OPG	NR/BBB+/AL	122	150	197
Province of Ontario	Aa2/A+/AAL	59	83	97
Hydro One	A3 / A / AH	93	122	170
Toronto Hydro	NR / A / A	94	122	171
Hydro Ottawa	NR / A- / A	109	138	182
Bruce Power	Baa2/BBB/BBB	184	249	313

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Appendix & Backup

Timeline to Access Public Debt Markets

Activity	Key Deliverables	Timing
Rating agency assessment of leverage scenarios based on March Business Plan update	Credit rating assessments by S&P-completed (higher leveraged scenario of 50% debt has no rating impact)	April 2016
Amend OPG Articles (same amendment made to Hydro One Articles in May 2000)	• Shareholder Approval	Q3 2016
Market execution strategy	See Appendix 2 for details	Q3 2016
Establish borrowing platform	• AIF • OPG Board Approval • Shelf Prospectus for MTN • Trust Indenture	Q3/Q4 2016
Inaugural Bond Offering in Canadian Market US Market offering will follow as appropriate	• Issue 10 year debt and 30 year debt - To create a benchmark curve	Q4 2016

Execution Considerations

Inaugural Bond Offering Timeline - OPG could complete its inaugural bond offering in the Canadian market in approximately 6 weeks

Indicative Execution Timeline

Stage	Item / Deliverable	Week 1	2	3	4	5	6
Develop Financing Plan	Select & engage Issuer and Dealer legal counsel	■					
	Kick off conference call	■					
	Prepare and execute engagement letter	■					
Prepare Documentation	Prepare Trust Indenture	■	■	■	■		
	Prepare Offering Memorandum / Shelf Prospectus	■	■	■	■		
	Prepare Agency Agreement	■	■	■	■		
	Prepare Due Diligence Questions	■	■	■	■		
	File Shelf Prospectus and Trust Indenture				■		
	Contact rating agencies to confirm ratings on bonds				■		
Marketing	Prepare Investor Presentation	■	■	■	■		
	Plan marketing approach and book roadshow events			■	■		
	Book one-on-one meetings with investors			■	■		
	Investor Roadshow					■	
	National Investor Call					■	
	Gather investor feedback					■	
Launch & Close Transaction	Obtain expressions of interest from investors						■
	Finalize launch terms / prepare syndicate package for launch						■
	Launch Transaction						■
	Formal Due Diligence Call						■
	Pricing						■
	Settlement & Closing (T+3)						■