



# Ontario Power Generation

## 2017 Investor Call

March 9, 2018

**ONTARIO****POWER**  
GENERATION



# Disclaimers

## GENERAL

The information in this presentation is based on information currently available to Ontario Power Generation Inc. and its affiliates (together, OPG or the Company), and is provided for information purposes only. The Company makes no representation or warranty, expressed or implied, as to the accuracy, reliability, completeness or timeliness of the information and undertakes no obligation to update or revise any forward-looking information as a result of new information, future events or otherwise. The information in this presentation should be read together with the financial and other continuous disclosure documents filed by the Company with the securities regulatory authorities in the provinces of Canada on SEDAR at [www.sedar.com](http://www.sedar.com).

In this presentation, all amounts are in Canadian dollars, unless otherwise indicated. Any graphs, tables or other information in this presentation demonstrating the historical performance of the Company are intended only to illustrate past performance of the Company and are not necessarily indicative of its future performance.

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

Some of the statements contained in this presentation contain “forward-looking information” within the meaning of applicable Canadian securities laws. Forward-looking information in this presentation is based on current expectations, estimates, forecasts and projections about OPG’s business and the industry in which OPG operates and includes beliefs and assumptions made by the management of OPG. Such information includes, but is not limited to, statements about the general development of OPG’s business, strategy, future capital expenditures, and expectations regarding developments in the statutory and operating framework for electricity generation and sale in Ontario.

Words such as “anticipate”, “believe”, “foresee”, “forecast”, “estimate”, “expect”, “schedule”, “intend”, “plan”, “project”, “seek”, “target”, “goal”, “strategy”, “may”, “will”, “should”, “could”, and other similar words and expressions are used to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking. The forward-looking information contained in this presentation are not guarantees of future performance and involve inherent assumptions and risks and uncertainties that are difficult to predict. All forward-looking information could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG’s generating station performance and availability, fuel costs, surplus baseload generation, cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario’s electricity industry, environmental and other regulatory requirements, operating licence applications to the Canadian Nuclear Safety Commission, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, Ontario’s Fair Hydro Plan and forecasts of earnings, cash flows, Funds from Operations Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income, Total Generating Cost, OM&A expenditures, retention of critical talent, supplier and third party performance, and project expenditures. Actual outcomes and results may differ materially from what is expressed, implied or forecasted in this forward-looking information. While the Company does not know what impact any of these differences may have, the Company’s business, results of operations, financial condition and credit stability may be materially adversely affected. Factors that could cause actual results or outcomes to differ materially from the results expressed or implied by forward-looking information are discussed in the prospectus. Potential investors should carefully consider these and other factors and not place undue reliance on forward-looking information. The forward-looking information included in this presentation represent OPG’s views as of the date of this presentation and should not be relied upon as representing OPG’s views as of any subsequent date.

## NON-GAAP MEASURES

This presentation also contains reference to certain financial measures (non-GAAP measures) that do not have any standardized meaning prescribed by United States generally accepted accounting principles (“US GAAP”) and, therefore, may not be comparable to similar measures presented by other issuers. The Company believes that these indicators are important since they provide additional information about OPG’s performance, facilitate comparison of results over different periods, and present measures consistent with the Company’s strategies to provide value to the Province of Ontario as its sole shareholder, improve cost performance, and ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow provided by operating activities, or any other measure in accordance with US GAAP, but as indicators of operating performance. The definitions and calculations of Enterprise Total Generation Cost per MWh and Return On Equity Excluding Accumulated Other Comprehensive Income, are found in the in the section, *Supplementary Non-GAAP Financial Measures* of the Company’s quarterly Management’s Discussion and Analysis, which is available on SEDAR at [www.sedar.com](http://www.sedar.com) or on the Company’s website at [www.opg.com](http://www.opg.com).

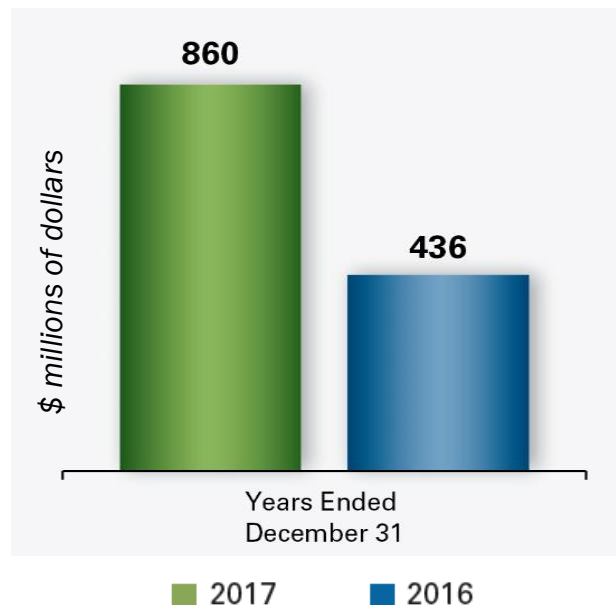


# Annual Highlights

- Darlington's Unit 2 refurbishment recently passed the halfway point based on work performed; remains on time and on budget
- Pickering performance continues to be strong; increased generation of 1.5 TWh from 2016
- The Canadian Nuclear Safety Commission (CNSC) awarded both of these nuclear stations with its highest safety ratings
- Peter Sutherland Sr. hydroelectric station completed in 2017 on budget and ahead of schedule in close partnership with the Taykwa Tagamou First Nation.
- In October 2017, OPG successfully closed its inaugural bond offering of \$500 million unsecured 10-year bonds priced with a coupon of 3.315%, payable semi-annually until maturity on October 4, 2027
- Fair Hydro Trust established in December 2017; purchased first Investment Interest tranche of ~\$1.18 billion from the IESO



# Net Income Attributable to Shareholder



- Increase in net income attributable to the shareholder of \$424 million compared with 2016.
- Our results were driven by strong generating performance from our nuclear and hydro fleets, especially Pickering, and continued cost management, augmented by the sale of our head office.
- Earnings were reduced by the planned reduction in nuclear electricity generation, primarily due to the Darlington Refurbishment



# In-Service Generating Capacity

In-service generating capacity by business segment was as follows:

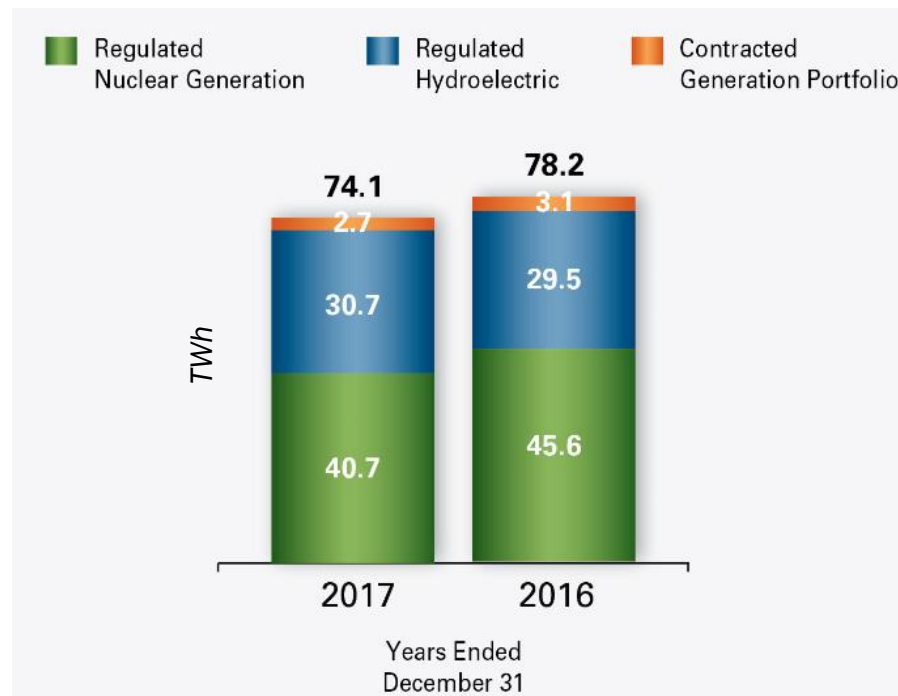
(MW)	December 31, 2017	December 31, 2016
Regulated – Nuclear Generation <sup>1</sup>	5,728	5,728
Regulated – Hydroelectric	6,426	6,421
Contracted Generation Portfolio <sup>2</sup>	4,056	4,028
<b>Total</b>	<b>16,210</b>	<b>16,177</b>

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





# Electricity Generation



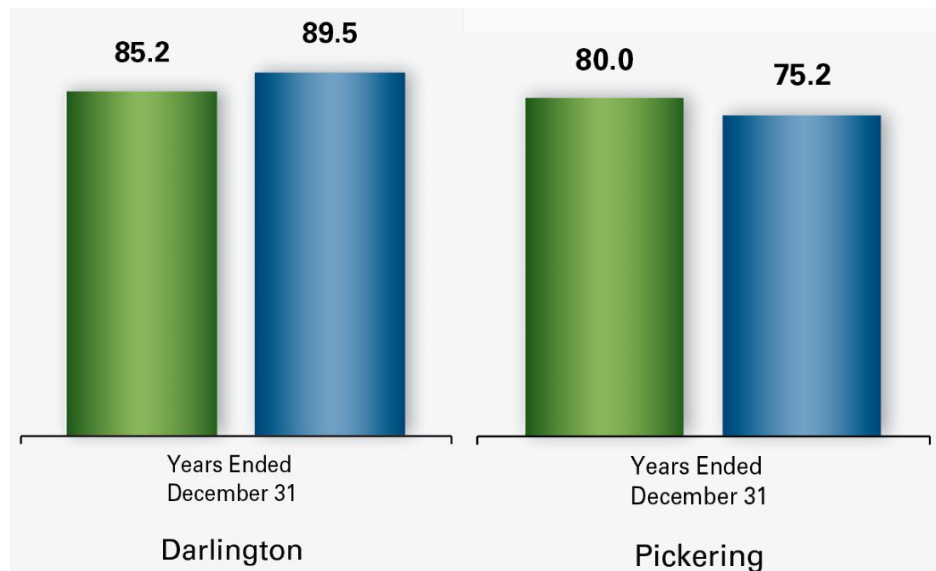
- Reduction in generation primarily due to the refurbishment of Darlington Unit 2, as expected
- Increase in generation from Pickering, and higher hydroelectric generation from increased water flows



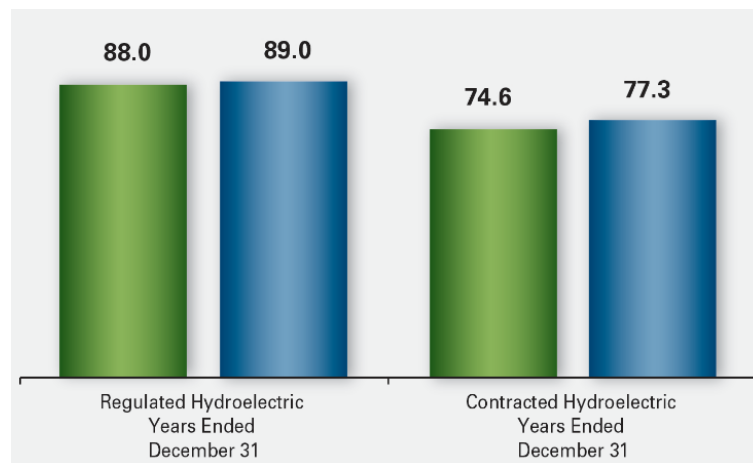
## Generation Performance (%)

### Nuclear Unit Capability Factor\*

represents actual energy generated, adjusted for external constraints such as transmission or demand limitations, as a percentage of potential maximum generation over a specified period



**Hydroelectric Availability** represents amount of time that units are capable of producing electricity as a percentage of the total time for a respective period



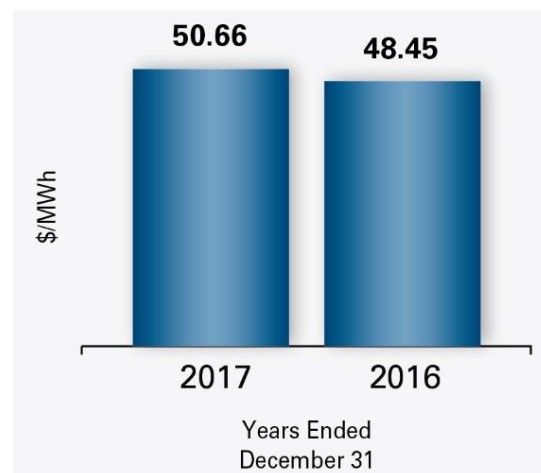
■ 2017

■ 2016



# Enterprise Total Generation Cost (TGC)\*

*A measure of how productive our expenditures are in relation to energy production*



- Increase in TGC from lower electricity generation due to the Unit 2 refurbishment outage at Darlington and higher sustaining capital expenditures; partially offset by higher Pickering production and surplus baseload generation-adjusted hydroelectric electricity generation reflecting higher water flows
- Impact of Unit 2 refurbishment on Enterprise TGC estimated at \$4 to \$5 per MWh in 2017

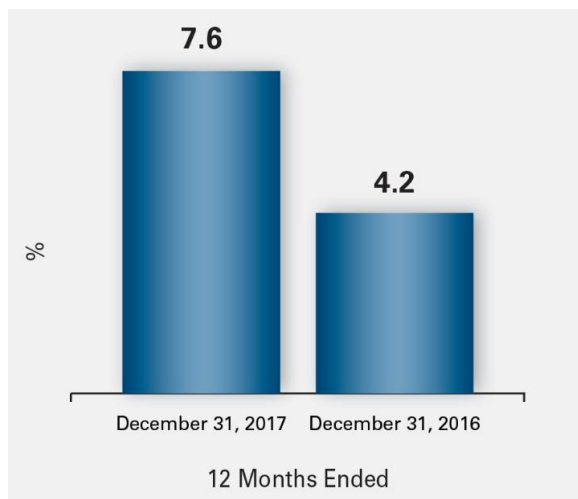
\* See “Disclaimers – Non-GAAP Measures”. For more information on non-GAAP measures please refer to disclosure in the News Release and MD&A available at [www.opg.com](http://www.opg.com).





# Return on Equity (ROE) excluding Accumulated Other Comprehensive Income\* (AOCI)

*An indicator of OPG's performance consistent with the Company's strategy*



- 2016 results driven by strong generating performance from our nuclear and hydro fleets, especially Pickering, and continued cost management, augmented by the sale of our head office.
- Partially offset by reduction in nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS not reflected in the regulated rates in effect through May 2017

\* See "Disclaimers – Non-GAAP Measures". For more information on non-GAAP measures please refer to disclosure in the News Release and MD&A available at [www.opg.com](http://www.opg.com).



# OEB's Decision on OPG's Rate Application

- OEB's issued its decision on OPG's 2017-2021 rate application for new regulated prices for nuclear and regulated hydroelectric generation on December 28, 2017
- The OEB set an effective date for the new regulated prices of June 1, 2017
- New prices resulted in \$15.9 billion of nuclear revenue requirements over the next five years as calculated by OPG
- OEB's decision included:
  - \$5.5B Darlington Refurbishment into rate base by 2020,
  - Recovery of \$292M Pickering extension enabling costs,
  - Reduction in OPG-submitted 5-year nuclear revenue requirement by \$600M including \$100M reduction in nuclear OM&A costs per year,
  - Maintaining existing deemed capital structure,
  - Continuation of recovery methodology for nuclear waste liabilities and Bruce variance account,
  - Recovery of \$305M of regulatory balances,
  - Endorsement of OPG's proposed nuclear rate smoothing principles
  - Hydroelectric rate increases of 1.2% effective Jun 1, 2017 and 0.9% effective Jan 1, 2018



# Investment Priorities – Major Projects

Project (\$ millions)	Capital Expenditures as of December 31, 2017		Approved Budget	In-service Date
	Year-to-date	Life-to-date		
<b>Darlington Refurbishment *</b>	<b>1,249</b>	<b>4,434</b>	<b>12,800<sup>1</sup></b>	<b>First Unit - 2020 Last Unit - 2026</b>
<b>Peter Sutherland Sr. GS **</b>	<b>41</b>	<b>277</b>	<b>300</b>	<b>2017</b>
<b>Ranney Falls Hydroelectric GS *</b>	<b>25</b>	<b>28</b>	<b>77</b>	<b>2019</b>
<b>Nanticoke Solar Facility **</b>	<b>2</b>	<b>3</b>	<b>107</b>	<b>2019</b>

<sup>1</sup>The total project budget of \$12.8 billion is for the refurbishment of the four units at the Darlington GS.

*Our goal is to deliver all projects safely, on time, on budget and with high quality*

\* Will form part of regulated assets

\*\* Will form part of contracted assets



# Darlington Refurbishment

- The Darlington Refurbishment project will extend the station's operating life by approximately 30 years. Refurbishment of the first unit (Unit 2) started in October 2016 as planned and is scheduled to be returned to service in Q1 2020. Approved budget for the four-unit refurbishment is \$12.8 billion
- The overall project continues to track on schedule and budget
- In first half of 2017, we successfully de-fuelled the reactor and segregated Unit 2 from the three operating units
- Disassembly of reactor components began in Q3, with the removal of all 960 feeder tubes completed in September 2017
- Removal of fuel channel assemblies is in progress; removal of all reactor components is expected to be completed by mid-2018
- Most of the pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, have been completed. Re-tube Waste Processing Building was completed in November 2017.
- In February 2018, the Province confirmed its commitment to proceed with Unit 3 refurbishment; OPG continues planning and procurement activities for Unit 3







# Renewable Generation Capital Projects

**Ranney Falls Hydroelectric Station** - began construction work for a 10 MW single-unit powerhouse on the existing Ranney Falls GS site. The expected in-service date is Q4 2019, with a budget of \$77 million. Will form part of regulated assets.



**Nanticoke Solar Facility** - project to construct a 44 MW solar facility at OPG's Nanticoke site is planned to commence in Spring 2018. The project is OPG's fourth generation-related development in partnership with an Indigenous community. Project budget has been approved at \$107 million and the facility is expected to be completed in Q1 2019. Will operate under a contract with the IESO.







# Extension of Commercial Operations at Pickering GS

- Continuing to execute on plan to extend safe and reliable operation of Pickering to 2024
- In Q4 2017, OPG confirmed that technical assessments completed to date provide sufficient confidence to assure fitness-for-service of fuel channel components, in line with the planned extended commercial operation period
- Final major component of Periodic Safety Review completed and submitted to Canadian Nuclear Safety Commission (CNSC) in November 2017 in support of operating licence renewal
- Current operating licence expire in August 2018; renewal application with CNSC through 2028 is in progress

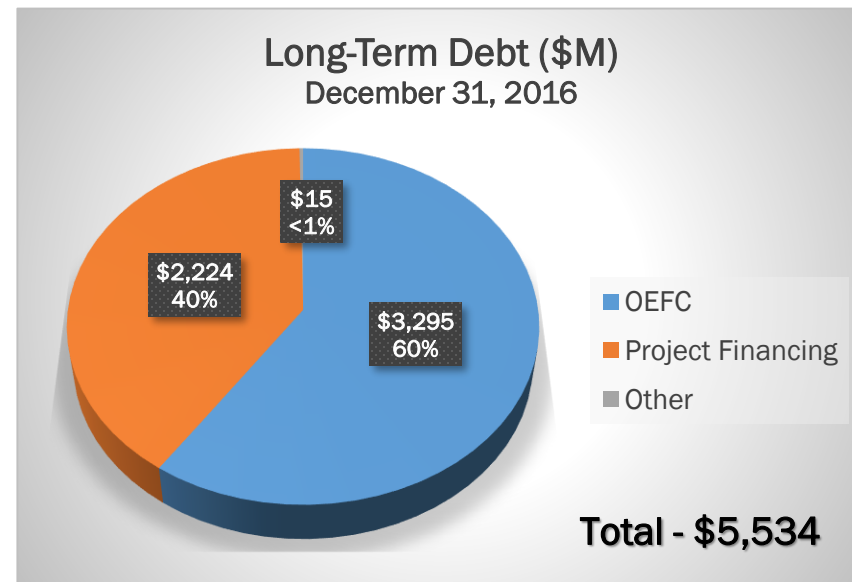
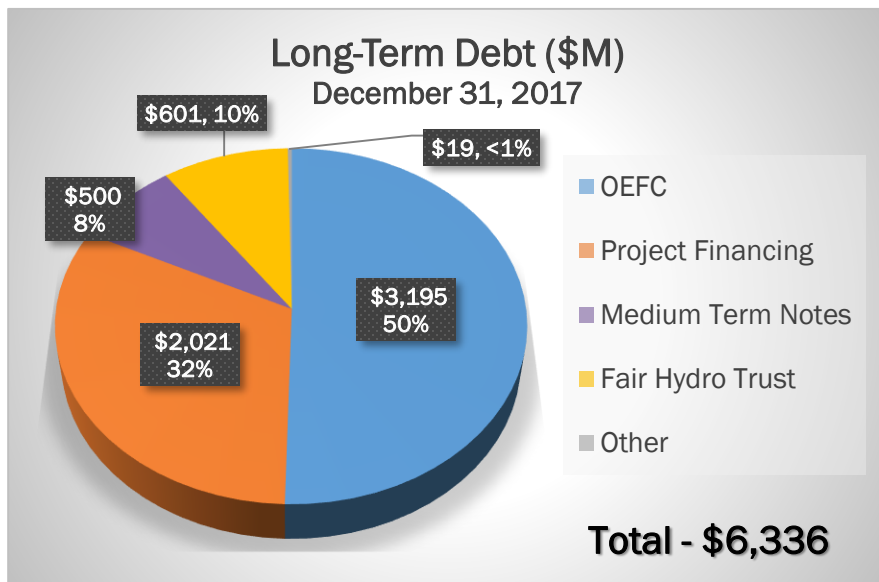


# Ontario's Fair Hydro Plan

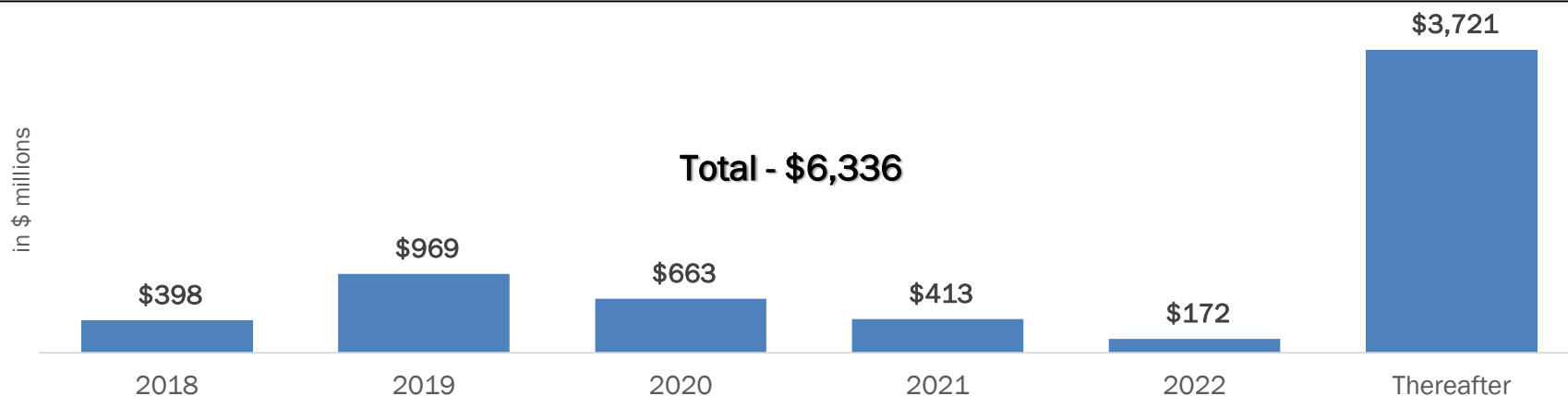
- The Province announced Ontario's Fair Hydro Plan in March 2017 aimed at reducing electricity bills for specified consumers by 25 percent on average by refinancing a portion of the Global Adjustment costs over a longer period of time
- Fair Hydro Trust was established as the financing entity contemplated by the Fair Hydro Act in December 2017
- In December 2017, Fair Hydro Trust purchased its first tranche of Investment Interest from the IESO for \$1.18 billion, classified as a financing receivable on OPG's balance sheet. 51% of the funding was sourced from a revolving warehouse facility, 44% through an equity injection from the Province (OPG issued \$519 million of Class A shares), and 5% from OPG
- In February 2018, the Trust issued \$500 million of senior notes payable with a coupon interest rate of 3.36% due on May 15, 2033. The proceeds were used to repay the majority of the outstanding balance of the senior notes issued by the Trust in December 2017
- This offering set a new benchmark, resulting in the lowest financing costs in the Canadian energy sector
- In March 2018, the Trust is expected to acquire another tranche of Investment Interest from the IESO
- Trust's investment will attract carrying costs (financing amounts and other related fees), payable by the IESO until July 2021



# OPG Debt Profile



## EXISTING DEBT MATURITIES AS AT DECEMBER 31, 2017





# Nuclear Segregated Funds

- As required by the Ontario Nuclear Funds Agreement, OPG sets aside funds specifically for discharging its obligation for nuclear facilities decommissioning and long-term nuclear waste management
- Two separate segregated funds:
  - Decommissioning Segregated Fund – funds future costs of nuclear fixed asset removal, long-term nuclear waste management and certain costs of used fuel storage incurred after the stations are shut down
  - Used Fuel Segregated Fund – funds future costs of long-term nuclear used fuel management and certain costs of used fuel storage incurred after the stations are shut down
- Contributions to the segregated funds are governed by the ONFA reference plan
- Based on current approved ONFA reference plan, OPG not currently required to make contributions to the segregated funds due to funded status of both funds
- Contributions to either or both funds may be required in the future should the funds be in an underfunded position when a new reference plan is prepared



# Performance Highlights

- ✓ Strong financial results, driven by solid operating performance and project execution – capital projects are on time and on budget
- ✓ OEB's December 2017 decision provides substantial price certainty for regulated segments to 2021
- ✓ Confirmation of Province's commitment to Darlington Refurbishment
- ✓ Established public debt platform to support liquidity requirements
- ✓ Established Fair Hydro Trust which will contribute to higher income and cash flows





# Question & Answer



# 2017 Financial Results

(\$ millions unless otherwise noted)	For the years ended December 31	
	2017	2016
Revenue	5,158	5,653
Fuel Expense	689	727
Gross Margin	4,469	4,926
OM&A	2,824	2,747
Other Expenses *	460	1,438
Income before interest and income taxes	1,185	741
Net Interest Expense & income taxes	304	288
<b>Net Income</b>	<b>881</b>	<b>453</b>
<b>Net Income attributable to the Shareholder</b>	<b>860</b>	<b>436</b>
Capital Expenditures	1,926	1,704
Total Assets	48,822	44,372
Total Liabilities	29,012	27,043
Shareholder's Equity	11,911	10,508
Return On Equity Excluding Accumulated Other Comprehensive Income (%) 12-month rolling average	7.6	4.2

\* Includes the one-time gain from sale of OPG's head office building