

**ONTARIO POWER GENERATION INC.**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS**  
**2016 THIRD QUARTER REPORT**

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# ONTARIO POWER GENERATION INC.

## MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the unaudited interim consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the three and nine months ended September 30, 2016. OPG's unaudited interim consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars. This MD&A is dated November 10, 2016.

For a complete description of OPG's corporate strategies, risk management, corporate governance, and the effect of critical accounting policies and estimates on OPG's results of operations and financial condition, this MD&A should also be read in conjunction with OPG's audited consolidated financial statements, accompanying notes, the Annual Information Form, and the MD&A as at and for the year ended December 31, 2015.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the heading, *Exemptive Relief for Reporting under US GAAP*, in the section, *Critical Accounting Policies and Estimates*, in OPG's 2015 annual MD&A.

### FORWARD-LOOKING STATEMENTS

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

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

## THE COMPANY

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

As at September 30, 2016, OPG's electricity generation portfolio had an in-service capacity of 17,055 megawatts (MW). OPG operates two nuclear generating stations, 65 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report. A description of OPG's segments is provided in OPG's 2015 annual MD&A in the section, *Business Segments*.

OPG does not operate PEC, Brighton Beach, the Bruce A GS and the Bruce B GS.

The in-service generating capacity by business segment as at September 30, 2016 and December 31, 2015 was as follows:

(MW)	As at	
	September 30 2016	December 31 2015
Regulated – Nuclear Generation	6,606	6,606
Regulated – Hydroelectric	6,421	6,428
Contracted Generation Portfolio <sup>1</sup>	4,028	4,021
<b>Total</b>	<b>17,055</b>	17,055

<sup>1</sup> Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

During the nine months ended September 30, 2016, the total in-service capacity remained unchanged. In the second quarter of 2016, an adjustment to the capacity of the units at the Abitibi Canyon GS and the Sir Adam Beck 1 GS was made to reflect unit limit capability. This adjustment was offset by the increase in capacity reflecting the completion of the Harmon GS rehabilitation during the third quarter of 2016.

## HIGHLIGHTS

### Overview of Results

This section provides an overview of OPG's unaudited interim consolidated operating results. Significant factors which contributed to OPG's results during the three and nine month periods ended September 30, 2016, compared to the same periods in 2015, are discussed below.

<i>(millions of dollars – except where noted) (unaudited)</i>	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
Revenue	1,400	1,426	4,265	4,164
Fuel expense	187	175	541	512
Gross margin	1,213	1,251	3,724	3,652
Operations, maintenance and administration	666	680	2,061	1,995
Depreciation and amortization	313	350	941	746
Accretion on fixed asset removal and nuclear waste management liabilities	232	224	696	672
Earnings on nuclear fixed asset removal and nuclear waste management funds	(248)	(163)	(620)	(535)
Income from investments subject to significant influence	(11)	(8)	(28)	(30)
Property taxes	12	9	35	34
Restructuring	-	-	-	1
	964	1,092	3,085	2,883
Income before other gains, interest and income taxes	249	159	639	769
Other losses (gains)	1	2	(23)	2
Income before interest and income taxes	248	157	662	767
Net interest expense	28	42	92	136
Income before income taxes	220	115	570	631
Income tax expense	22	30	109	114
Net income	198	85	461	517
Net income attributable to the Shareholder	194	80	449	503
Net income attributable to non-controlling interest <sup>1</sup>	4	5	12	14
<i>Electricity production (TWh) <sup>2</sup></i>	19.5	19.1	59.9	61.2
<i>Cash flow provided by operating activities</i>	554	449	1,268	1,354

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

<sup>2</sup> Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

### Third Quarter

Net income attributable to the Shareholder was \$194 million for the third quarter of 2016, an increase of \$114 million compared to the same quarter in 2015.

Income before interest and income taxes for the quarter increased by \$91 million.

*Significant factors that increased income before interest and income taxes:*

- Higher earnings on the nuclear fixed asset removal and nuclear waste management funds (Nuclear Funds) of \$85 million, primarily due to higher market returns.
- The four-unit Vacuum Building Outage (VBO) at the Darlington GS, which began in September 2015 and was completed in October 2015, was the primary driver for the increase in nuclear generation of 0.5 terawatt

hours (TWh) and a decrease of \$14 million in the operations, maintenance and administration (OM&A) expenses for the Regulated – Nuclear Generation segment in the third quarter of 2016, compared to the third quarter of 2015. A higher number of unplanned outages days at the Pickering GS partly offset the quarter-over-quarter increase in nuclear generation.

*Significant factors that reduced income before interest and income taxes:*

- Lower earnings from the Regulated – Hydroelectric segment of \$21 million was primarily due to the income impact of OEB-approved regulatory variance accounts and slightly higher OM&A expenses.
- Higher accretion expense of \$9 million as a result of an increase in the fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities).

Net interest expense decreased by \$14 million during the third quarter of 2016, compared to the same quarter in 2015, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project expenditures and a higher amount of interest costs deferred in the regulatory variance accounts.

Income tax expense for the three months ended September 30, 2016 was \$22 million, compared to \$30 million for the same period in 2015. The decrease in income tax expense was primarily due to a higher amount of deferred tax expense recorded as recoverable from customers, partly offset by higher income before income taxes.

Year-To-Date

Net income attributable to the Shareholder was \$449 million for the first nine months of 2016, a decrease of \$54 million compared to the same period in 2015.

Income before interest and income taxes for the period decreased by \$105 million.

*Significant factors that reduced income before interest and income taxes:*

- An increase in unplanned and planned outages at the Pickering GS and planned outages at the Darlington GS during the year were the primary drivers for the higher OM&A expenses of \$91 million and lower generation of 1.1 TWh for the Regulated – Nuclear Generation segment. The impact of the VBO at the Darlington GS in 2015 partly offset the quarter-over-quarter decrease in nuclear generation.
- Lower earnings before other gains from the Regulated – Hydroelectric segment of \$27 million, primarily due to lower hydroelectric incentive mechanism revenue and the income impact of OEB-approved variance accounts.
- Higher accretion expense of \$24 million as a result of an increase in the Nuclear Liabilities recorded in December 2015.

*Significant factors that increased income before interest and income taxes:*

- Higher earnings on the Nuclear Funds of \$85 million, primarily due to higher market returns.
- A gain of \$22 million recorded during the first quarter of 2016 reflecting the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to Niagara Tunnel project expenditures, in response to OPG's motion requesting the OEB to review and vary parts of its November 2014 decision that resulted in that disallowance.

Net interest expense decreased by \$44 million for the nine months ended September 30, 2016, compared to the same period in 2015, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project expenditures and a higher amount of interest costs deferred in the regulatory variance accounts.

Income tax expense for the nine months ended September 30, 2016 was \$109 million, compared to \$114 million for the same period in 2015. The decrease in income tax expense was primarily due to lower income before taxes and a

higher amount of deferred tax expense recorded as recoverable from customers, largely offset by a lower change in reserves from the resolution of uncertainties.

### Segment Results

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

<i>(millions of dollars)</i>	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
<i>Income (loss) before interest and income taxes</i>				
Regulated – Nuclear Generation	47	16	17	203
Regulated – Hydroelectric	117	138	500	506
Contracted Generation Portfolio	74	78	219	218
Total electricity generation business segments	238	232	736	927
Regulated – Nuclear Waste Management	18	(59)	(70)	(131)
Services, Trading, and Other Non-Generation	(8)	(16)	(4)	(29)
	248	157	662	767

### Electricity Generation

Electricity generation for the three and nine month periods ended September 30, 2016 and 2015 was as follows:

<i>(TWh)</i>	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
Regulated – Nuclear Generation	11.7	11.2	34.6	35.7
Regulated – Hydroelectric	6.9	7.3	22.8	23.1
Contracted Generation Portfolio <sup>1</sup>	0.9	0.6	2.5	2.4
Total OPG electricity generation	19.5	19.1	59.9	61.2
Total electricity generation by all other generators in Ontario <sup>2</sup>	19.5	19.1	53.8	56.5

<sup>1</sup> Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

<sup>2</sup> Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the Independent Electricity System Operator (IESO), minus total OPG electricity generation.

Total OPG electricity generation increased by 0.4 TWh during the third quarter of 2016 compared to the same quarter in 2015, primarily due to higher nuclear generation of 0.5 TWh. The higher nuclear generation during the third quarter of 2016 was primarily due to the Darlington VBO in 2015, which required the shutdown of all four units from September 14, 2015 to October 30, 2015. The VBO is a unique outage to inspect and maintain specific safety and other systems common to all units of the station. Another VBO outage will not be required for another 12 years at the Darlington GS. The higher nuclear generation during the third quarter of 2016 was partially offset by a decrease in generation from the Pickering GS, primarily due to an increase in the number of unplanned outage days. Lower generation of 0.4 TWh from the Regulated – Hydroelectric segment during the third quarter of 2016 was primarily due to lower water flows in parts of Ontario. Higher generation from the Contracted Generation Portfolio segment during the three months ended September 30, 2016 mainly reflected an increase in generation from PEC.

For the nine months ended September 30, 2016, the decrease in total OPG electricity generation of 1.3 TWh was mainly due to lower generation from the Regulated – Nuclear Generation segment, compared to the same period in 2015. The decrease in nuclear generation was the result of a higher number of unplanned and planned outage days at the Pickering GS and a higher number of planned outage days at the Darlington GS. The year-over-year decrease

in generation of 0.3 TWh for the Regulated – Hydroelectric segment was primarily due to a higher volume of water spilled as a result of higher surplus baseload generation (SBG) conditions during the first six months of 2016. For the nine months ended September 30, 2016, the increase in SBG conditions was partly offset by lower water flows in parts of Ontario during the last three months of the period.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Ontario's electricity demand as reported by the IESO was 36.7 TWh for the third quarter of 2016, compared to 35.3 TWh during the same quarter of 2015. For the nine months ended September 30, 2016, Ontario's electricity demand as reported by the IESO was 103.8 TWh compared to 104.3 TWh for the same period in 2015.

Baseload generation supply surplus to Ontario demand was higher in the nine months ended September 30, 2016 compared to the same period in 2015, primarily due to higher water flows in the province during the first half of 2016 and limitations on the export of surplus power out of the province primarily due to transmission constraints in the state of New York. During the nine months ended September 30, 2016, OPG lost 3.9 TWh of hydroelectric generation due to SBG conditions, compared to 1.9 TWh during the same period in 2015. During each of the third quarters of 2016 and 2015, OPG lost 0.4 TWh of hydroelectric generation due to SBG conditions. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions is offset by a regulatory variance account authorized by the OEB.

### **Average Sales Prices**

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The regulated prices authorized by the OEB for electricity generated from OPG's nuclear and regulated hydroelectric generating stations are discussed in OPG's 2015 annual MD&A in the section, *Revenue Mechanisms for Regulated and Unregulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment during the quarter ended September 30, 2016 was 6.9 cents per kilowatt hour (¢/kWh), compared to 7.1 ¢/kWh during the same quarter in 2015. The decrease in the average sales price during the quarter ended September 30, 2016, compared to the same quarter in 2015, was primarily due to the expiry, on December 31, 2015, of an OEB-authorized nuclear rate rider of \$1.33 per megawatt hour (MWh) related to the recovery of variance and deferral account balances. The average sales price for the Regulated – Nuclear Generation segment during the nine months ended September 30, 2016 was 6.9 ¢/kWh, compared to 6.3 ¢/kWh during the same period in 2015. The increase in the average sales price for the nine months ended September 30, 2016 was primarily due to a higher rate rider of \$10.84/MWh for recovery of variance and deferral account balances in effect during the first half of 2016, compared to the rider of \$1.33/MWh in effect during the same period in 2015. The rate rider of \$10.84/MWh was authorized by the OEB in October 2015 with an effective date of July 1, 2015 and expires on December 31, 2016.

The average sales price for the Regulated – Hydroelectric segment during the three and nine month periods ended September 30, 2016 was 4.4 ¢/kWh, compared to 5.0 ¢/kWh and 4.7 ¢/kWh, respectively, during the same periods in 2015. The decrease was primarily due to a lower rate rider in effect during 2016 related to the recovery of variance and deferral account balances.

The income impact of changes in revenue from rate riders was largely offset by changes in amortization expense related to regulatory balances.

### **Cash Flow from Operations**

Cash flow provided by operating activities for the three months ended September 30, 2016 was \$554 million, compared to \$449 million for the same quarter in 2015. The increase in cash flow provided by operating activities for

the three months ended September 30, 2016 was primarily due to higher generation revenue receipts from higher nuclear rate riders.

Cash flow provided by operating activities for the nine months ended September 30, 2016 was \$1,268 million, compared to \$1,354 million for the same period in 2015. The decrease in cash flow provided by operating activities was primarily due to higher OM&A expenditures in the first half of 2016, the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016, and lower nuclear generation. The supplemental rent rebate to Bruce Power related to the period prior to December 4, 2015 and was made pursuant to a provision under the lease agreement for the Bruce nuclear generating stations between Bruce Power and OPG (Bruce Lease). This provision was eliminated effective December 4, 2015 as part of the 2015 amendments to the lease agreement, as discussed in OPG's 2015 annual MD&A under the heading, *Recent Developments*, in the *Highlights* section. The decrease in cash flow from operations during the period was partially offset by an increase in generation revenue receipts reflecting higher nuclear rate riders.

### **ROE Excluding AOCI**

ROE Excluding AOCI is an indicator of OPG's performance consistent with the Company's strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period in order to normalize for seasonal fluctuations. From time to time, changes in the timing of planned outages at the nuclear generating stations during the calendar year can cause significant variability in the ROE Excluding AOCI for non-calendar 12-month periods.

ROE Excluding AOCI was 3.3 percent for the 12 months ended September 30, 2016 and 4.0 percent for the 12 months ended December 31, 2015. The decrease was primarily due to lower net income attributable to the Shareholder for the 12-month period ended September 30, 2016. With the timing of the scheduled outage at the Darlington GS in the fall of 2015 to coincide with the required four-unit VBO at the station and the timing of scheduled outages at the Darlington GS in the second quarter of 2016, a combination of higher OM&A expenses and lower nuclear generation negatively impacted ROE Excluding AOCI for the 12-month period ended September 30, 2016.

### **FFO Adjusted Interest Coverage**

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flows. The indicator is measured over a 12-month period. FFO Adjusted Interest Coverage for the 12 months ended September 30, 2016 was 4.7 times, compared to 5.0 times for the 12 months ended December 31, 2015. FFO Adjusted Interest Coverage decreased in 2016 due to lower cash flows provided by operating activities for the 12 months ended September 30, 2016 compared to the 12 months ended December 31, 2015, primarily due to higher OM&A expenditures and the payment of a supplemental rent rebate provision under the Bruce Lease in the first quarter of 2016, partially offset by higher generation revenue from higher nuclear rate riders.

### **Nuclear Total Generating Cost per MWh**

Nuclear Total Generating Cost (TGC) per MWh is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation. In 2015, the Nuclear TGC per MWh indicator was amended with a view to enhance comparability across periods including adjustments to remove the impact of regulatory variance and deferral accounts. The change is reflected in the comparative period presented in this MD&A. The Nuclear TGC per MWh was \$58.55 for the three months ended September 30, 2016 and \$61.07 for the nine months ended September 30, 2016, compared to \$63.66 and \$59.49 for the same periods in 2015, respectively. The Nuclear TGC per MWh is discussed further in the section, *Discussion of Operating Results by Business Segment*.



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

## **Recent Developments**

### Darlington Refurbishment Project – Commencement of First Unit Refurbishment

In October 2016, OPG commenced, as planned, the refurbishment of the first Darlington GS unit, Unit 2, as part of the Darlington Refurbishment project. The unit was taken offline on October 15, 2016 and the initial steps of de-fuelling the reactor have begun. The unit is scheduled to be returned to service in the first quarter of 2020. Refer to the heading, *Project Excellence* in the *Core Business, Strategy and Outlook* section for further details on the progress of the project.

### Shareholder Declaration and Resolution to Sell the Company's Head Office Premises

In December 2015, OPG received a Shareholder Declaration and Resolution that requires the Company to sell its head office premises in Toronto, Ontario. The Shareholder Resolution also requires OPG to transfer to the Province the portion of the proceeds from the sale equal to the after-tax accounting gain on sale, net of transaction costs. An active program to locate a buyer was initiated in October 2016.

### Canadian Nuclear Safety Commission Safety Rating for the Pickering GS and the Darlington GS

The Canadian Nuclear Safety Commission (CNSC) publishes an annual report on the safety performance of Canada's nuclear power plants. The report assesses how well plant operators are meeting regulatory requirements and program expectations in the areas of operational performance, safety analysis, radiation protection, waste management and conventional health and safety. In its 2015 annual report, the CNSC gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". The Pickering GS received this rating for the first time, while the Darlington GS achieved the rating for the seventh year in a row.

## **CORE BUSINESS, STRATEGY AND OUTLOOK**

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

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

The following sections provide an update to OPG's disclosures in the 2015 annual MD&A related to its four key strategic imperatives – operational excellence, project excellence, financial strength, and social licence. A detailed discussion of these strategic imperatives is included in the 2015 annual MD&A in the *Core Business and Strategy* section.

### **Operational Excellence**

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

### Electricity Generation Production and Reliability

- In May 2016, OPG hosted a peer evaluation for the Darlington GS by the World Association of Nuclear Operators. The results of the review indicate that the Darlington GS maintained its excellent standing as one of the top performing nuclear plants in the world.
- During the third quarter of 2016, OPG's two biomass-fuelled stations, the Atikokan GS and the Thunder Bay GS, provided renewable generation when called upon to meet system requirements when utility maintenance was being conducted on a local transformer station. The Atikokan GS operated continuously from late July to early September, while the Thunder Bay GS operated as needed. To meet the increased demand for biomass fuels, OPG coordinated the acceleration of biomass fuel deliveries with suppliers while continuing to operate the plants safely.
- Work continues on the Sir Adam Beck Pump hydroelectric GS reservoir refurbishment project. During the third quarter of 2016, liner installation activities were completed. All six units at the Sir Adam Beck Pump GS will remain out of service for the duration of the project, which is expected to be completed by the second quarter of 2017.
- During the third quarter of 2016, major equipment overhauls and rehabilitation work was completed at Unit 2 of the Harmon hydroelectric GS, adding 7 MW of capacity.

### Environmental Performance

In June 2016 and August 2016, the CNSC released sampling results from its independent environmental monitoring program, which confirmed that the public and the environment around OPG's nuclear generating stations continued to be safe.

Ontario's *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation* provide the foundation for regulating greenhouse gas (GHG) emissions in Ontario and a cap-and-trade program that will begin on January 1, 2017. The first compliance period will be from January 1, 2017 until December 31, 2020. The new requirements are expected to result in increased fuel costs for some OPG-owned generating facilities and OPG's co-owned generating facilities. With OPG's low GHG emitting fleet, this is not expected to have a material adverse financial impact on the Company. OPG is in the process of obtaining approvals, establishing processes, and implementing systems for compliance with the new requirements.

In August 2016, the Government of Ontario initiated consultations to develop the design of the cap-and-trade program for subsequent compliance periods beyond 2020. OPG is monitoring the consultation process.

In support of efforts to mitigate climate change, the Company also continues to evaluate and implement plans to increase the generation capacity of its hydroelectric generating fleet, where economic.

Disclosures relating to the Company's environmental policies and environmental risks are provided in the 2015 annual MD&A.

## Project Excellence

OPG is pursuing a number of generation development and other projects in support of Ontario's electricity planning initiatives. The status updates for OPG's major projects as at September 30, 2016 are outlined below.

Project <i>(millions of dollars)</i>	Capital expenditures		Approved budget	Expected in-service date	Status
	Year-to-date	Life-to-date			
Darlington Refurbishment	715	2,881	12,800 <sup>1</sup>	First unit - 2020 Last unit - 2026	The refurbishment of Unit 2 commenced in October 2016 and is scheduled to be completed in early 2020 in accordance with plan. See update below.
Deep Geologic Repository for Low and Intermediate Level Waste	7 <sup>2</sup>	193 <sup>2</sup>			Additional information requested by the Canadian Environmental Assessment Agency is being prepared and OPG expects to submit the requested information by the end of 2016.
Peter Sutherland Sr. GS	104	199	300	2017	The project is tracking on budget and is estimated to be in service before the end of 2017, ahead of the original planned schedule. See update below.

<sup>1</sup> The total project budget of \$12.8 billion is for the refurbishment of the four units at the Darlington GS, with the last unit scheduled to be completed by 2026. OPG plans to commence subsequent unit refurbishments after Unit 2 is successfully returned to service.

<sup>2</sup> Expenditures are funded by the Nuclear Liabilities.

### Darlington Refurbishment

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

In October 2016, OPG commenced the refurbishment of the first unit, Unit 2, as planned. The unit was taken offline safely on October 15, 2016. Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately \$4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. The Government of Ontario's support for the Darlington Refurbishment project has been affirmed through the Minister of Energy's announcement in January 2016 endorsing OPG's plan to refurbish the four Darlington units.

Execution of pre-breaker open work to support the commencement of the refurbishment of Unit 2 has been completed and the refurbishment is progressing in line with the schedule. De-fuelling of the reactor, which is the first critical refurbishment activity undertaken once the unit is removed from service, has commenced, with a total of 480 fuel channels scheduled to be de-fuelled. This will be followed by preparatory work in the reactor vault to support the successive removal of feeder tubes and fuel channel assemblies.

Other key project activities are continuing as follows:

- Preparation activities on the major sub-projects are progressing in line with the first unit's refurbishment schedule
- Extensive testing and refurbishment task rehearsals continue for the specialized tooling that will be used to remove and replace feeder tubes and fuel channel assemblies in each reactor
- Fabrication of the major reactor components including fuel channels and feeder tubes is in progress, with planned deliveries tracking in line with the project schedule
- Project support activities and activities in support of requirements set out in the CNSC-approved Integrated Implementation Plan for the Darlington GS continue
- Pre-requisite projects including construction of facilities, infrastructure upgrades and installation of safety enhancements have either been completed or are continuing to track to completion in line with the refurbishment execution schedule.

#### Peter Sutherland Sr. GS

The project to construct the Peter Sutherland Sr. hydroelectric generating station is tracking on budget and is estimated to be completed before the end of 2017, ahead of the original planned schedule of the first half of 2018. Construction work on the project continues, including the enclosure of the power house building, commissioning and turnover of the overhead crane to a subcontractor to begin installation of the turbine and generator, and completion of the spillway concrete structure. Work also continues to progress on the penstock installation and building of the east and west dams in preparation for filling of the reservoir.

#### **Financial Strength**

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

#### Increase Revenue, Reduce Costs and Achieve Appropriate Return

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. Consistent with *Ontario Regulation 53/05*, OPG's application incorporates a nuclear rate smoothing proposal, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost-effective funding for the Darlington Refurbishment project and other expenditures and maintain the Company's investment grade credit rating, while taking into account both near-term and future impacts on customers. The decision on the application will be made by the OEB following a public proceeding, which is in progress. The oral hearing portion of the proceeding is scheduled to start in February 2017, with a decision expected in the second half of 2017.

#### Ensure Availability of Cost Effective Funding

In April 2016, DBRS Ltd. re-affirmed the long-term credit rating on OPG's debt at A (low) and OPG's commercial paper rating at R-1 (low). All ratings from DBRS Ltd. have a stable outlook. In July 2016, Standard & Poor's re-affirmed OPG's long-term credit rating at BBB+ with a stable outlook.

#### Pursue Business Growth Opportunities

OPG seeks to continue to expand beyond its core generation business through emerging opportunities, including selective solar generation, energy storage and micro-grid development, and is continuing to consider longer-term growth paths that include broader electricity sector opportunities. Growth opportunities may be pursued in

partnership with other commercial entities where appropriate synergies exist and are aligned with OPG's business objectives. The Company also continues to evaluate and implement plans to increase the generation capacity of its hydroelectric generating fleet, which would support climate change mitigation.

In October 2016, the Government of Ontario began a consultation process to update its Long-Term Energy Plan (LTEP). The Ontario Ministry of Energy intends to publish the next LTEP in 2017. OPG plans to make a formal submission as part of the consultation as it relates to OPG's core generation business and growth opportunities.

### **Social Licence**

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

OPG continues to support procurement, employment and educational opportunities with its Indigenous community partners. OPG's commitment to building long-term, mutually beneficial working relationships with Indigenous communities, people, businesses and organizations across Ontario is reflected in the diversity of initiatives that are ongoing across the Company. This includes two recently completed shoreline restoration projects. One of these was a \$16 million project which involved the Whitesand First Nation working closely with OPG to restore nearly two kilometers of shoreline, with Whitesand First Nation community members making up close to 60 percent of the project's labour force. The Long Lake #58 First Nation undertook the management of another project, a five-year \$3 million shoreline restoration project completed ahead of schedule and under budget. OPG also has been engaging proactively with Indigenous communities regarding the Company's nuclear operations. In addition to holding regularly scheduled meetings with Indigenous communities, an outreach effort is being made in connection with OPG's proposed deep geologic repository for low and intermediate level waste (L&ILW) and the re-licensing of the waste facilities at the Pickering GS and the Bruce nuclear generation stations' site.

### **Outlook**

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB in late 2014 based on a forecast of revenue requirement and production for the regulated facilities for the 2014 to 2015 period. The outcome of the OEB rate application for new base regulated prices submitted in May 2016 is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period. The OEB rate application is further discussed in the *Core Business, Strategy and Outlook* section under the heading, *Financial Strength*.

In addition to receiving base regulated prices, during 2016, OPG is authorized to recover over \$600 million in previously approved variance and deferral account balances, through rate riders established by the OEB in October 2015. While the income impact of the additional revenue from the riders is largely offset by a corresponding increase in amortization expense related to regulatory balances resulting in no significant net income impact, the recovery of the balances favourably impacts operating cash flow and the FFO Adjusted Interest Coverage indicator for 2016. The existing rate riders will expire on December 31, 2016.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, this includes existing variance accounts related to the gross margin impact of variability in regulated hydroelectric water flows and SBG conditions, which are expected to continue to result in generally more stable earnings from the Regulated – Hydroelectric segment, compared to the Regulated – Nuclear Generation segment. There is currently no regulatory variance or deferral account related to the impact of generation performance of the OPG-operated nuclear stations on revenue from base regulated prices. OPG continues to operate and maintain its nuclear facilities with a view to optimize their

performance and availability, while improving the overall reliability and predictability of the fleet. OPG's May 2016 rate application requested the continuation of all applicable variance and deferral accounts.

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

OPG's forecast capital expenditures for 2016 are approximately \$1.7 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric development projects including the construction of the Peter Sutherland Sr. GS, and sustaining capital investments across the generating fleet.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Funds, which are established pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province to fund the Company's obligation for the long-term management of used nuclear fuel and L&ILW and the decommissioning of its existing nuclear stations and eligible waste management facilities. While these funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given reporting period are subject to various external factors including financial market conditions and changes in the Ontario consumer price index, which can be volatile and cause potentially significant short-term fluctuations in the Company's income, net of the impact of a regulatory variance account.

The ONFA establishes the segregated Nuclear Funds for the purpose of discharging the Company's above noted obligations, with any excess funding on termination of the agreement accruing to the Province. To recognize this, OPG limits the amount of segregated fund assets reported on its balance sheet to the amount of the obligations determined per the ONFA. Updated obligation values are being finalized and targeted to be in place by the end of 2016 through the ONFA reference plan update process, subject to the Province's review and approval. OPG anticipates that, if approved by the Province, the updated obligations under the ONFA will be lower than the currently approved obligation. OPG projects that this would result in lower earnings on the Nuclear Funds during the fourth quarter of 2016, compared to 2015, in part due to an accounting adjustment that would be required to limit the funds asset values on OPG's financial statements to the lower obligations. For further information on the ONFA Reference Plan update, refer to the *Risk Management* section of this interim MD&A.

## DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

### Regulated – Nuclear Generation Segment

<i>(millions of dollars) (unaudited)</i>	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
Revenue	885	880	2,631	2,503
Fuel expense	79	77	239	234
Gross margin	806	803	2,392	2,269
Operations, maintenance and administration	521	535	1,665	1,574
Depreciation and amortization	230	245	691	472
Property taxes	6	7	19	20
Income before other loss, interest, and income taxes	49	16	17	203
Other loss	2	-	-	-
Income before interest and income taxes	47	16	17	203

The increase in segment earnings of \$31 million during the third quarter of 2016, compared to the same quarter in 2015, was primarily due to the four-unit Darlington VBO in 2015, which required the shutdown of all four units at the station starting in the third quarter of 2015. This resulted in higher nuclear generation and lower OM&A expenses in the third quarter of 2016, compared to the same period in 2015. The quarter over quarter increase in segment earnings was partially offset by lower generation from the Pickering GS, which was primarily due to a higher number of unplanned outage days and higher OM&A expenses related to materials and supplies obsolescence. Offsetting the increases in revenue for the three month period ended September 30, 2016 was the impact of expiry, on December 31, 2015, of a rate rider of \$1.33/MWh in effect since January 1, 2015.

During the nine months ended September 30, 2016, segment earnings decreased by \$186 million, compared to the same period in 2015. The decrease was primarily due to higher OM&A expenses and lower generation resulting from an increase in the number of planned outage days at the nuclear generating stations, and lower production due to a higher number of unplanned outages at the Pickering GS.

Notwithstanding the reduced generation during the nine month period ended September 30, 2016, segment revenues increased, compared to the same period in 2015, primarily due to a higher OEB-authorized rate rider of \$10.84/MWh effective from July 1, 2015 to the end of 2016. Prior to July 1, 2015, OPG received a rate rider of \$1.33/MWh during the first six months in 2015.

As the rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, the decrease in revenue during the third quarter of 2016 and the increase in revenue during the nine months ended September 30, 2016 related to rate riders was largely offset by changes in amortization expense related to regulatory balances.

The Unit Capability Factors for the Darlington and Pickering generating stations and the Nuclear TGC per MWh were as follows:

	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
Unit Capability Factor (%)				
Darlington GS	<b>89.6</b>	75.9	<b>87.6</b>	88.3
Pickering GS	<b>77.3</b>	82.2	<b>73.8</b>	78.4
Nuclear TGC per MWh (\$/MWh)	<b>58.55</b>	63.66	<b>61.07</b>	59.49

The Unit Capability Factor at the Darlington GS increased for the third quarter of 2016, compared to the same quarter in 2015, primarily due to the four-unit VBO that commenced during the third quarter of 2015. The lower Unit Capability Factor for the Pickering GS during the third quarter of 2016, compared to the same quarter in 2015, was primarily due to an increase in unplanned outage days.

The Unit Capability Factor decreased at the Darlington GS for the nine months ended September 30, 2016, compared to the same period in 2015 primarily due to a higher number of planned outage days due to the timing of scheduled outages at the station in 2016 compared to 2015. The timing of planned outages at a nuclear generating station during the year can cause significant variability in year-over-year operating results for partial periods of a fiscal year, but is not a significant driver of variability for full fiscal year results.

The decrease in the Unit Capability Factor at the Pickering GS for the nine months ended September 30, 2016 was primarily due to a higher number of unplanned and planned outage days, compared to the same period in 2015.

The decrease in Nuclear TGC per MWh for the third quarter of 2016 compared to the same quarter in 2015 was primarily due to a decrease in nuclear OM&A expenses and an increase in generation. The increase in Nuclear TGC per MWh for the nine month period ended September 30, 2016, compared to the same period in 2015, primarily reflected decreased production and higher OM&A expenses. The definition and calculation of Nuclear TGC are found under the section, *Supplementary Non-GAAP Financial Measures*.

### Regulated – Nuclear Waste Management Segment

	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
<i>(millions of dollars) (unaudited)</i>				
Revenue	<b>36</b>	30	<b>102</b>	91
Operations, maintenance and administration	<b>38</b>	33	<b>108</b>	97
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	<b>228</b>	219	<b>684</b>	660
Earnings on nuclear fixed asset removal and nuclear waste management funds	<b>(248)</b>	(163)	<b>(620)</b>	(535)
Income (loss) before interest and income taxes	<b>18</b>	(59)	<b>(70)</b>	(131)

Higher market returns on the Decommissioning Segregated Fund (Decommissioning Fund), net of the impact of the Bruce Lease Net Revenues Variance Account, was the primary driver for the increase in segment earnings during the third quarter of 2016, compared to the same quarter in 2015. The market returns during the third quarter of 2016 resulted in the Decommissioning Fund becoming over 120 percent funded compared to the decommissioning funding obligation per the current approved ONFA Reference Plan. When the Decommissioning Fund is in an overfunded position of over 120 percent, fund earnings recognized in net income are impacted by market returns, as OPG recognizes 50 percent of the surplus over 120 percent to the extent that the Used Fuel Segregated Fund (Used Fuel Fund) is less than 100 percent funded compared to the used fuel funding obligation per the current approved ONFA



Reference Plan. This treatment reflects the ONFA provisions that allow OPG to direct 50 percent of the surplus over 120 percent in the Decommissioning Fund as a contribution to the Used Fuel Fund. As at September 30, 2016, based on the current approved ONFA Reference Plan, the amount of 50 percent of the surplus over 120 percent in the Decommissioning Fund was \$66 million.

Higher earnings on the Used Fuel Fund, net of the impact of the Bruce Lease Net Revenue Variance Account, also contributed to an improvement to the segment earnings during the third quarter of 2016, compared to the same period in 2015. The increase in Used Fuel Fund earnings was primarily due to favourable market conditions impacting the returns on the portion of the fund not guaranteed by the Province.

For the nine month period ended September 30, 2016, the primary driver for the increase in segment earnings was higher earnings from the Used Fuel Fund as a result of the higher CPI-adjusted rate of return guaranteed by the Province for funding related to the initial 2.23 million used fuel bundles, as well as higher market returns on the remaining portion of the fund. Earnings on the Decommissioning Fund also contributed to the year-over-year improvement in the segment earnings.

As discussed under the heading, *Outlook* in the *Core Business and Strategy* section, the carrying value of the segregated funds recognized on the balance sheet is expected to be impacted during the fourth quarter of 2016 due to the anticipated decrease in OPG's funding obligations under the ONFA through the finalization of the updated ONFA Reference Plan, subject to the Province's review and approval.

In December 2015, OPG recognized an increase in the Nuclear Liabilities reflecting revised accounting assumptions for the estimated useful lives of its nuclear generating stations. As a result, higher accretion expense on the Nuclear Liabilities was recognized during the three and nine month periods ended September 30, 2016, compared to the same periods in 2015. The increased accretion expense was largely offset by the impact of the Bruce Lease Net Revenues Variance Account.

### Regulated – Hydroelectric Segment

<i>(millions of dollars) (unaudited)</i>	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
Revenue <sup>1</sup>	350	393	1,148	1,196
Fuel expense	88	88	259	248
Gross margin	262	305	889	948
Operations, maintenance and administration	87	83	238	238
Depreciation and amortization	56	81	169	201
Property tax	1	1	1	1
Income before other losses (gains), interest and income taxes	118	140	481	508
Other losses (gains)	1	2	(19)	2
Income before interest and income taxes	117	138	500	506

<sup>1</sup> During the three and nine month periods ended September 30, 2016, the Regulated – Hydroelectric segment revenue included incentive payments of \$6 million and \$8 million, respectively, related to the OEB-approved hydroelectric incentive mechanism (three and nine month periods ended September 30, 2015 – \$7 million and \$21 million, respectively). The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

Income before interest and income taxes decreased by \$21 million during the third quarter of 2016, compared to the same quarter in 2015. The decrease was primarily driven by the income impact of OEB-approved variance accounts, and slightly higher OM&A expenses during the third quarter of 2016.

The decrease in income before interest and income taxes of \$6 million during the nine months ended September 30, 2016 compared to the same period in 2015 was primarily due to lower hydroelectric incentive mechanism payments and the income impact of OEB-approved variance accounts, partially offset by a gain of \$22 million recognized during

the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures. The OEB's January 2016 decision was in response to OPG's motion that requested the OEB to review and vary parts of its November 2014 decision that resulted in the original disallowance.

The decrease in segment revenues for the three and nine month periods ended September 30, 2016 also included the impact of a lower rate rider authorized by the OEB. The income impact of the lower rate rider was largely offset by lower amortization expense related to the regulatory balances.

The Hydroelectric Availability and Hydroelectric OM&A expense per MWh for the stations included in the Regulated – Hydroelectric segment were as follows:

	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
Hydroelectric Availability (%)	84.1	90.5	89.8	91.3
Hydroelectric OM&A expense per MWh (\$/MWh)	12.6	11.4	10.4	10.3

Hydroelectric Availability for the third quarter of 2016 decreased compared to the same quarter of 2015, primarily due to an increase in unplanned outages. Additionally, the decrease in Hydroelectric Availability for the three and nine month periods ended September 30, 2016 reflected the planned outage at the Sir Adam Beck Pump GS related to the reservoir refurbishment project. The project is expected to be completed during the second quarter of 2017.

The increase in Hydroelectric OM&A Expense per MWh for the three months ended September 30, 2016, compared to the same period in 2015, was primarily due to higher OM&A expenses and lower generation.

The marginal increase in Hydroelectric OM&A Expense per MWh for the nine month period ended September 30, 2016, compared to the same period in 2015, was primarily due to lower generation.

### Contracted Generation Portfolio Segment

	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
<i>(millions of dollars) (unaudited)</i>				
Revenue	149	147	431	414
Fuel expense	19	11	42	29
Gross margin	130	136	389	385
Operations, maintenance and administration	44	46	129	134
Depreciation and amortization	19	17	56	52
Accretion on fixed asset removal liabilities	2	2	6	6
Property taxes	1	1	6	5
Income from investments subject to significant influence	(11)	(8)	(28)	(30)
Income before other loss, interest and income taxes	75	78	220	218
Other loss	1	-	1	-
Income before interest and income taxes	74	78	219	218

Income before interest and income taxes decreased by \$4 million during the third quarter of 2016, compared to the same quarter in 2015. The decrease in income was primarily due to a change in provision in 2015, partially offset by higher revenues from the Atikokan GS, which was called upon to provide the needed support to the electricity system in Northwestern Ontario as a result of an outage at a local transformer station from late July 2016 to early September 2016.

Income before interest and income taxes increased by \$1 million during the nine months ended September 30, 2016, compared to the same period in 2015. The increase was primarily due to lower earnings in the first quarter of 2015 as a result of a provision made in that quarter related to an IESO audit, partially offset by higher depreciation expense partly due to new fixed assets additions.

The Hydroelectric Availability, Hydroelectric OM&A Expense per MWh, and the Thermal Equivalent Forced Outage Rate (EFOR) for the Contracted Generation Portfolio segment were as follows:

	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
Hydroelectric Availability (%)	68.2	81.5	79.6	91.5
Hydroelectric OM&A Expense per MWh (\$/MWh)	32.0	28.0	22.5	22.6
Thermal EFOR (%)	2.1	7.4	1.3	14.1

Lower Hydroelectric Availability during the three and nine month periods ended September 30, 2016, compared to the same periods in 2015, was primarily due to a higher number of planned outage days at the Harmon GS and Kipling GS.

The Hydroelectric OM&A Expense per MWh increased during the three months ended September 30, 2016, compared to the same period in 2015, primarily as a result of an increase in OM&A expenses related to the hydroelectric stations included in the segment. The Hydroelectric OM&A Expense per MWh decreased slightly during the nine months ended September 30, 2016, compared to the same period in 2015, primarily as a result of an increase in generation.

The decrease in the Thermal EFOR during the three and nine month periods ended September 30, 2016, compared to the same periods in 2015, was primarily due to a higher number of unplanned outage days at the Lennox GS in 2015.

### Services, Trading, and Other Non-Generation Segment

<i>(millions of dollars) (unaudited)</i>	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
Revenue	15	5	52	48
Fuel expense (recovery)	1	(1)	1	1
Gross margin	14	6	51	47
Operations, maintenance and administration	11	12	20	40
Depreciation and amortization	8	7	25	21
Accretion on fixed asset removal liabilities	2	3	6	6
Property taxes	4	-	9	8
Restructuring	-	-	-	1
Loss before other gains, interest, and income taxes	(11)	(16)	(9)	(29)
Other gains	(3)	-	(5)	-
Loss before interest and income taxes	(8)	(16)	(4)	(29)

Segment earnings improved by \$8 million during the third quarter of 2016, compared to the same quarter in 2015. The increase in earnings was primarily due to a provision made in the third quarter of 2015 related to an IESO audit, partially offset by lower trading revenue during the third quarter of 2016.

The improvement in segment earnings for the nine months ended September 30, 2016 of \$25 million, compared to the same period in 2015, largely reflected higher OM&A expenses incurred in 2015 partly in relation to the Nanticoke GS prior to OPG's decision to proceed with the decommissioning of the station and a provision made in the third

quarter of 2015 related to an IESO audit. The decrease in the OM&A expenses during the nine month period ended September 30, 2016 also reflected lower staffing levels in 2016.

Expenditures related to decommissioning activities for Nanticoke GS incurred during the first nine months of 2016 were charged against a previously established decommissioning provision.

## LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes, including investment in plants and technologies, major projects, funding obligations such as contributions to the pension fund and the Nuclear Funds, payments under the OPEB plans, expenditures on fixed asset removal and nuclear waste management activities not funded by the Nuclear Funds, and servicing and repaying long-term debt.

Changes in cash and cash equivalents for the three and nine month periods ended September 30 are as follows:

<i>(millions of dollars) (unaudited)</i>	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
Cash and cash equivalents, beginning of period	295	575	464	610
Cash flow provided by operating activities	554	449	1,268	1,354
Cash flow used in investing activities	(414)	(354)	(1,310)	(982)
Cash flow (used in) provided by financing activities	(9)	(102)	4	(414)
Net increase (decrease)	131	(7)	(38)	(42)
Cash and cash equivalents, end of period	426	568	426	568

For a discussion of cash flow provided by operating activities and FFO Adjusted Interest Coverage, refer to the *Highlights* section.

### Investing Activities

Cash flow used in investing activities during the third quarter of 2016 increased by \$60 million, compared to the same quarter in 2015, primarily due to expenditures on the Darlington Refurbishment project. For the nine months ended September 30, 2016, the increase in cash flow used for investing activities mainly resulted from the acquisition of nine million common shares of Hydro One Limited (Hydro One) at \$23.65 per share in April 2016 and expenditures on the Darlington Refurbishment project. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations to eligible employees under the collective agreements with the Power Workers' Union (PWU) and The Society of Energy Professionals (The Society). The acquisition of the shares is discussed in Note 2 of the Company's third quarter 2016 unaudited interim consolidated financial statements.

### Financing Activities

Cash flow used in financing activities during the three months ended September 30, 2016 was \$9 million, compared to \$102 million for the same period in 2015. The higher cash flow used in financing activities during the third quarter of 2015 was primarily due to the repayment of long-term debt of \$200 million, partially offset by the net issuance of short-term notes of \$100 million.

Cash flow provided by financing activities during the nine months ended September 30, 2016 was \$4 million, compared to cash flow used of \$414 million for the same period in 2015. The cash flow used in financing activities for the nine months ended September 30, 2015 reflected long-term debt repayment of \$500 million during the first nine months of 2015.

OPG maintains a \$1 billion revolving committed bank credit facility, which is divided into two \$500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended the expiry date of both tranches from May 2020 to May 2021. As at September 30, 2016, there were no outstanding borrowings under the bank credit facility.

As at September 30, 2016, OPG also maintained \$25 million of short-term, uncommitted overdraft facilities, and a further \$460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at September 30, 2016, a total of \$386 million of Letters of Credit had been issued under these facilities. This included \$349 million for the supplementary pension plans, \$36 million for general corporate purposes, and \$1 million related to the operation of the PEC.

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

As at September 30, 2016, the Lower Mattagami Energy Limited Partnership (LME) maintained a \$500 million bank credit facility to support the funding requirements for the Lower Mattagami River Project, including support for LME's commercial paper program. The facility originally consisted of a \$300 million tranche maturing in August 2020 and a \$200 million tranche maturing in August 2016, respectively. In the third quarter of 2016, the maturity of the first tranche was extended to August 2021, while the second tranche was extended to August 2017. As at September 30, 2016, there was external commercial paper of \$240 million outstanding under LME's commercial paper program and no amounts outstanding under LME's credit facility. In October 2016, LME issued senior notes totalling \$220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In December 2014, OPG entered into an \$800 million general corporate credit facility agreement with the OEFC in support of its financing requirements for 2015 and 2016. As at September 30, 2016, there were no outstanding borrowings under this credit facility, which expires on December 31, 2016. In June 2016, OPG entered into a \$700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017.

As at September 30, 2016, OPG's long-term debt outstanding was \$5,470 million, including \$1,123 million due within one year. OPG continues to evaluate debt refinancing alternatives.

## **Contractual and Commercial Commitments**

### Pension Plan Actuarial Valuation

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are \$253 million for 2016, \$248 million for 2017, and \$251 million for 2018.

## BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's unaudited interim consolidated financial position using selected balance sheet data:

<i>(millions of dollars) (unaudited)</i>	As At	
	September 30 2016	December 31 2015
<b>Property, plant and equipment - net</b>	<b>21,297</b>	20,595
The increase was primarily due to capital expenditures on the Darlington Refurbishment project, partially offset by depreciation expense.		
<b>Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)</b>	<b>15,899</b>	15,136
The increase was primarily due to earnings on the Nuclear Funds and contributions to the Used Fuel Fund, partially offset by reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
<b>Fixed asset removal and nuclear waste management liabilities</b>	<b>20,845</b>	20,169
The increase was primarily a result of accretion expense representing the increase in the liabilities due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		
<b>Available-for-sale securities</b>	<b>233</b>	-
The balance as at September 30, 2016 represents the fair value of the nine million Hydro One shares acquired in April 2016, as discussed in Note 2 of the Company's third quarter 2016 unaudited interim consolidated financial statements.		

### Pension & OPEB Cash Versus Accrual Differential Deferral Account

In setting OPG's regulated prices effective November 1, 2014, the OEB limited the recovery of the regulated portion of OPG's pension and OPEB costs to the cash expenditures. Effective November 1, 2014, the OEB authorized the Pension & OPEB Cash Versus Accrual Differential Deferral Account, which records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis under US GAAP and OPG's corresponding actual cash expenditures for these plans. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The Company has recognized the amount set aside in the Pension & OPEB Cash Versus Accrual Differential Deferral account as a regulatory asset. As at September 30, 2016, the regulatory asset balance was \$432 million, which represents the excess of pension and OPEB costs calculated using the accrual basis over the cash basis for the period from November 1, 2014 to September 30, 2016.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation, which is continuing. In July 2016, the OEB held a public stakeholder forum as part of the consultation. In September 2016, OPG made a written submission of its position on the matter with the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual

basis, OPG may be required to adjust the regulatory asset recorded for the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

### **Off-Balance Sheet Arrangements**

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's interim consolidated financial statements or are recorded in the Company's interim consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

## **CHANGES IN ACCOUNTING POLICIES AND ESTIMATES**

OPG's significant accounting policies are outlined in Note 3 to the audited consolidated financial statements as at and for the year ended December 31, 2015. A discussion of recent accounting pronouncements is included in Note 2 to OPG's unaudited interim consolidated financial statements as at and for the three and nine month periods ended September 30, 2016 under the section, *Changes in Accounting Policies and Estimates*. Disclosure regarding OPG's critical accounting policies is included in OPG's 2015 annual MD&A.

## **RISK MANAGEMENT**

The following provides an update to the discussion of the Company's risks and risk management activities included in OPG's 2015 annual MD&A. As such, the disclosure in this section should be read in conjunction with the *Risk Management* section included in the annual MD&A.

### **Operational Risks**

#### Risks Associated with Major Development Projects

*The risks associated with the cost, schedule, and technical aspects of the major development projects could adversely impact OPG's financial performance and its corporate reputation.*

#### *Nanticoke Solar Facility*

In March 2016, OPG and its partners, SunEdison Canadian Construction LP (SECCLP) and Six Nations Development Corporation, were awarded a contract through the IESO's Large Renewable Procurement (LRP I) program to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. On October 27, 2016, SECCLP made an application under Canada's Companies' Creditors Arrangement Act. This follows actions taken by the SECCLP's parent SunEdison Inc., which filed a voluntary petition for relief pursuant to title 11 of the United States Code (11 U.S.C. §§ 101-1330) in April of this year. SECCLP's filing does not constitute a default under the LRP I contract and is not expected to impact the development schedule of the project. The risks previously disclosed relating to partner non-performance and project development remain unchanged by SECCLP's filing and OPG continues to implement appropriate mitigation mechanisms to limit such risks.

## Regulatory and Legislative Risks

### Rate Regulation

*As inherent in regulatory proceedings, significant uncertainties remain regarding the outcome of rate and generic proceedings for OPG's rate regulated operations.*

In May 2016, OPG applied to the OEB for new regulated prices effective January 1, 2017, on the basis of an incentive regulation rate making methodology for the hydroelectric operations and a custom incentive regulation ratemaking methodology for the nuclear operations. If accepted by the OEB, both approaches would result in greater decoupling of OPG's revenues for the regulated operations from their costs. There is an inherent risk that the new prices established by the OEB may not provide for the recovery of all actual costs incurred by OPG's regulated operations or may not allow the regulated operations to earn an appropriate rate of return based on actual results. As the proposed custom incentive regulation methodology for the nuclear operations builds on OPG's forecasted operating costs, production and a return on rate base, including OPG's plans to pursue Pickering extended operations until 2024 and the scheduled return to service of the first refurbished Darlington unit in the first quarter of 2020, the Company remains exposed to risks of the OEB not accepting certain levels of costs or other elements of OPG's forecasts reflected in the application. There are also inherent uncertainties regarding the effective date that the OEB will establish for the new regulated prices.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG's application includes a nuclear rate smoothing proposal, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. There is an inherent risk that the magnitude of the deferral ordered by the OEB will result in regulated prices that do not provide sufficient cash flow to the Company for meeting its financial objectives in an optimal manner, including ensuring sufficient liquidity, cost effectively funding the Darlington Refurbishment project and other expenditures, and maintaining the Company's investment grade credit rating. Maintaining adequate levels of credit metrics will support OPG's investment grade credit rating. As such, OPG has advanced credit metrics as a key criterion for the OEB to apply in determining the smoothed nuclear base rates.

## Financial Risks

### Commodity Markets

*Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.*

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix, and as such, are subject to change as these forecasts are updated.

	2016 <sup>1</sup>	2017	2018
Estimated fuel requirements hedged <sup>2</sup>	75%	74%	75%

<sup>1</sup> Based on actual fuel requirements hedged for the nine months ended September 30, 2016 and forecast for the remainder of the year.

<sup>2</sup> Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydro and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel. In the case of hydroelectric generation, this obligation is the water rental charge. Excess fuel inventories in a given year are attributed to the next year for the purpose of measuring hedge ratios.



## Foreign Exchange

*OPG's earnings and cash flows can be affected by movements in the United States dollar (USD) relative to the Canadian dollar.*

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to USD. To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at September 30, 2016, OPG had no foreign exchange contracts outstanding.

## Trading

*OPG's financial performance can be affected by its trading activities.*

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. For the third quarter of 2016, the VaR utilization ranged between \$0.03 million and \$0.1 million.

## Credit

*Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flows from operations.*

OPG manages its exposure to suppliers or counterparties by evaluating their financial condition and negotiating appropriate collateral or other forms of security. OPG's credit exposure relating to energy markets transactions as at September 30, 2016 was \$437 million, including \$428 million to the IESO. Management considers the Company's risk exposure relating to electricity sales through the IESO-administered spot market to be low as the IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market. Over 95 percent of the remaining \$9 million exposure as at September 30, 2016 was related to investment grade counterparties.

## Nuclear Waste Management and Decommissioning Obligations, and Nuclear Funds

*The cost estimates for nuclear waste management and decommissioning obligations are based on assumptions that evolve over time. Changes in estimates could impact OPG's future contributions to the Nuclear Funds to cover these obligations, and OPG's financial position.*

OPG is responsible for the management of used nuclear fuel and L&ILW and the decommissioning of its nuclear stations and waste management facilities. The cost estimates for OPG's nuclear waste management and decommissioning obligations are based on multiple underlying assumptions and estimates that are inherently uncertain. The assumptions include station end-of-life dates, waste volumes, waste disposal methods, the timing of construction of assumed waste disposal facilities including the assumed nuclear used fuel deep geologic repository consistent with the Adaptive Phased Management concept approved by the Government of Canada and OPG's proposed L&ILW deep geologic repository, waste packaging systems, decommissioning strategy, and financial indicators. To address the inherent uncertainty, OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates at least once every five years, in line with the required ONFA Reference Plan update process. An approved ONFA Reference Plan determines OPG's contributions to the Nuclear Funds.

OPG is finalizing its estimates for the nuclear waste management and decommissioning obligations for the Province's review pursuant to the ONFA. By the end of 2016, a comprehensive reassessment of the underlying assumptions and lifecycle baseline cost estimates is expected to be completed and finalized for the Province's consideration as part of the ONFA Reference Plan update process. Currently, OPG is making quarterly contributions to the Used Fuel Fund and no contribution to the Decommissioning Fund, which is fully funded. The changes in the obligations from the updated ONFA Reference Plan are expected to change OPG's future contributions requirements starting in 2017. The value of the obligations can also impact the carrying value of the Nuclear Funds recognized on OPG's consolidated balance sheet. As OPG does not have the right to access the Nuclear Funds other than for the reimbursement of expenditures on the underlying obligations, portions of the excess value in the segregated funds are not recognized as assets by OPG and are recorded as due to the Province. The anticipated impact of the updated ONFA Reference Plan on the earnings of the segregated funds during the fourth quarter of 2016, subject to the Province's approval, is discussed under the heading, *Outlook* in the *Core Business and Strategy* section.

Concurrent with an update to the ONFA Reference Plan estimate, OPG expects to update the cost estimates for its nuclear asset retirement obligation, which will impact the related asset retirement costs capitalized to property, plant and equipment during the fourth quarter of 2016. The associated impact on expenses is expected to be largely offset by existing regulatory variance and deferral accounts until such time as corresponding changes to OPG's nuclear regulated prices are made effective by the OEB.

## RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions are summarized below:

<i>(millions of dollars) (unaudited)</i>	<b>Three Months Ended September 30</b>			
	<b>2016</b>		<b>2015</b>	
	<b>Revenue</b>	<b>Expense</b>	<b>Revenue</b>	<b>Expense</b>
Hydro One				
Electricity sales	1	-	2	-
Services	-	3	-	-
Province of Ontario				
Decommissioning Fund excess funding <sup>1</sup>	-	201	-	(202)
Used Fuel Fund rate of return guarantee <sup>1</sup>	-	295	-	(320)
Gross revenue charges	-	28	-	29
ONFA guarantee fee	-	2	-	2
OEFC				
Gross revenue charges	-	57	-	62
Interest expense on long-term notes	-	42	-	44
Income taxes, net of investment tax credits	-	28	-	21
Contingency support agreement	-	-	(2)	-
IESO				
Electricity related revenue	1,293	7	1,227	15
	<b>1,294</b>	<b>663</b>	<b>1,227</b>	<b>(349)</b>

<sup>1</sup> The Nuclear Funds are reported on the balance sheet net of amounts recognized as due to the Province in respect of the Decommissioning Fund excess funding and the Province's Used Fuel Fund rate of return guarantee. As at September 30, 2016 and December 31, 2015, the Nuclear Funds were reported net of amounts due to the Province of \$3,315 million and \$2,988 million, respectively. The details of accounting for the Nuclear Funds are described in OPG's 2015 annual MD&A under the section, *Critical Accounting Policies and Estimates*.

<i>(millions of dollars) (unaudited)</i>	Nine Months Ended September 30			
	2016		2015	
	Revenue	Expense	Revenue	Expense
Hydro One				
Electricity sales	4	-	10	-
Services	1	12	1	2
Province of Ontario				
Decommissioning Fund excess funding <sup>1</sup>	-	137	-	17
Used Fuel Fund rate of return guarantee <sup>1</sup>	-	190	-	21
Gross revenue charges	-	91	-	92
ONFA guarantee fee	-	6	-	6
OEFC				
Gross revenue charges	-	147	-	150
Interest expense on long-term notes	-	127	-	134
Income taxes, net of investment tax credits	-	112	-	135
Contingency support agreement	-	-	(2)	-
IESO				
Electricity related revenue	3,894	22	3,804	54
	<b>3,899</b>	<b>844</b>	<b>3,813</b>	<b>611</b>

<sup>1</sup> The Nuclear Funds are reported on the balance sheet net of amounts recognized as due to the Province in respect of the Decommissioning Fund excess funding and the Province's Used Fuel Fund rate of return guarantee. As at September 30, 2016 and December 31, 2015, the Nuclear Funds were reported net of amounts due to the Province of \$3,315 million and \$2,988 million, respectively. The details of accounting for the Nuclear Funds are described in OPG's 2015 annual MD&A under the section, *Critical Accounting Policies and Estimates*.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

<i>(millions of dollars) (unaudited)</i>	September 30 2016	December 31 2015
Receivables from related parties		
Hydro One	-	1
IESO	428	531
OEFC	4	9
PEC	3	3
Province of Ontario	3	1
Available-for-sale securities		
Hydro One shares	233	-
Accounts payable and accrued charges		
Hydro One	-	1
OEFC	39	51
Province of Ontario	6	20
IESO	1	18
Long-term debt (including current portion)		
Notes payable to OEFC	3,465	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Funds and the OPG registered pension fund. As at September 30, 2016, the Nuclear Funds and the registered pension fund held \$1,725 million and \$309 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Funds and the registered pension fund held \$1,597 million and \$288 million of interest-bearing Province of Ontario bonds, respectively. OPG jointly oversees the investment management of the Nuclear Funds with the Province. The Province of Ontario bonds reported above are publicly traded securities and are measured at fair value.

In April 2016, OPG acquired nine million common shares of Hydro One at \$23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations to eligible employees under the collective agreements with the PWU and The Society renewed in 2015. The fair value of the shares was \$233 million as at September 30, 2016.

### INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

The Company maintains a comprehensive system of policies, procedures, and processes that represents its framework for internal controls over financial reporting and for its disclosure controls and procedures (together referred to as ICOFR). There were no changes in the Company's internal control system during the current interim period that has or is reasonably likely to have a material impact to the ICOFR.

### QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected financial information from OPG's unaudited interim consolidated financial statements for each of the eight most recently completed quarters.

<i>(millions of dollars - except where noted) (unaudited)</i>	<b>September 30 2016</b>	<b>June 30 2016</b>	<b>March 31 2016</b>	<b>December 31 2015</b>
Revenue	1,400	1,387	1,478	1,312
Net income (loss)	198	135	128	(100)
Less: Net income attributable to non-controlling interest	4	3	5	1
Net income (loss) attributable to the Shareholder	194	132	123	(101)
<b>Per common share, attributable to the Shareholder (dollars)</b>	<b>\$0.76</b>	\$0.51	\$0.48	(\$0.39)

<i>(millions of dollars - except where noted) (unaudited)</i>	<b>September 30 2015</b>	<b>June 30 2015</b>	<b>March 31 2015</b>	<b>December 31 2014</b>
Revenue	1,426	1,383	1,355	1,318
Net income	85	193	239	90
Less: Net income attributable to non-controlling interest	5	4	5	4
Net income attributable to the Shareholder	80	189	234	86
<b>Per common share, attributable to the Shareholder (dollars)</b>	<b>\$0.31</b>	\$0.74	\$0.91	\$0.34

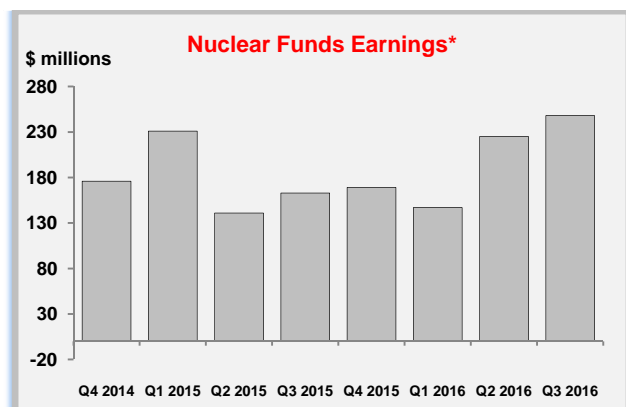
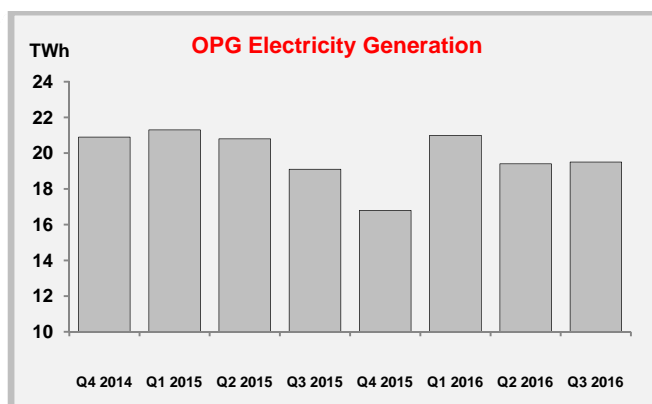
## Trends

OPG's quarterly results are affected by changes in grid-supplied electricity demand primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues are higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. With respect to regulated hydroelectric operations, the financial impact of foregone production due to SBG conditions and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by existing regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation decreased significantly, mainly due to the Darlington VBO which lasted 47 days from September 14, 2015 to October 30, 2015 and required all four units at the station to be shut down for the duration of the outage. Another VBO will not be required for another 12 years at the Darlington GS.

OPG's financial results are also affected by the earnings on the Nuclear Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.



\*net of regulatory variance account

Additional items that affected net income in certain quarters above are described in OPG's 2015 annual MD&A under the section, *Quarterly Financial Highlights*.

## SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flows from operations, or any other measure in accordance with US GAAP, but as an indicator of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) **ROE Excluding AOCI** is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE Excluding AOCI is measured over a 12-month period and is calculated as follows:

<i>(millions of dollars – except where noted) (unaudited)</i>	Twelve Months Ended	
	September 30 2016	December 31 2015
ROE Excluding AOCI		
Net income attributable to the Shareholder	348	402
Divided by: Average equity attributable to the Shareholder, excluding AOCI	10,499	10,023
<b>ROE Excluding AOCI (percent)</b>	<b>3.3</b>	<b>4.0</b>

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and interest on pension and OPEB projected benefit obligations less expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows:

<i>(millions of dollars – except where noted) (unaudited)</i>	<b>Twelve Months Ended</b>	
	<b>September 30 2016</b>	<b>December 31 2015</b>
FFO before interest		
Cash flow provided by operating activities	<b>1,379</b>	1,465
Add: Interest paid	<b>263</b>	269
Less: Interest capitalized to fixed and intangible assets	<b>(130)</b>	(102)
Add: Changes to non-cash working capital balances	<b>115</b>	100
<b>FFO before interest</b>	<b>1,627</b>	1,732
Adjusted interest expense		
Net interest expense	<b>136</b>	180
Add: Interest income	<b>7</b>	9
Add: Interest capitalized to fixed and intangible assets	<b>130</b>	102
Add: Interest related to regulatory assets and liabilities	<b>24</b>	2
Add: Interest on pension and OPEB projected benefit obligations less expected return on pension plan assets	<b>46</b>	53
<b>Adjusted interest expense</b>	<b>343</b>	346
<b>FFO Adjusted Interest Coverage (times)</b>	<b>4.7</b>	5.0



(3) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as the total of OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred in the period, divided by OPG's nuclear electricity generation.

<i>(millions of dollars – except where noted) (unaudited)</i>	<b>Three Months Ended September 30</b>		<b>Nine Months Ended September 30</b>	
	<b>2016</b>	<b>2015</b>	<b>2016</b>	<b>2015</b>
Nuclear TGC				
Regulated – Nuclear Generation OM&A expenses	<b>521</b>	535	<b>1,665</b>	1,574
Regulated – Nuclear Generation fuel expense	<b>79</b>	77	<b>239</b>	234
Regulated – Nuclear Generation capital expenditures	<b>339</b>	261	<b>896</b>	738
Less: Darlington Refurbishment project capital and non-capital costs	<b>(269)</b>	(193)	<b>(717)</b>	(525)
Add: Regulated – Nuclear Generation OM&A expenses and fuel expense deferred in regulatory variance and deferral accounts	<b>31</b>	64	<b>84</b>	172
Less: Nuclear fuel expense for non OPG-operated stations	<b>(18)</b>	(16)	<b>(50)</b>	(45)
Other adjustments	<b>2</b>	(15)	<b>(5)</b>	(23)
<b>Nuclear TGC</b>	<b>685</b>	713	<b>2,112</b>	<b>2,125</b>
<b>Nuclear electricity generation (TWh)</b>	<b>11.7</b>	11.2	<b>34.6</b>	35.7
<b>Nuclear TGC per MWh (\$/MWh) <sup>1</sup></b>	<b>58.55</b>	63.66	<b>61.07</b>	59.49

<sup>1</sup> Amounts may not calculate due to rounding.

(4) **Gross margin** is defined as revenue less fuel expense.

Additional information about OPG, including its 2015 annual information form, annual MD&A, and audited annual consolidated financial statements as at and for the year ended December 31, 2015 and notes thereto can be found on SEDAR at [www.sedar.com](http://www.sedar.com).

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