Ontario

MINISTRY OF

ENERGY

Ontario Power Generation (OPG) 2017-19 Business Plan and Special Status Application

May 2017

Context

- As required by the Memorandum of Agreement (MOA) between Ontario Power Generation and the Minister of Energy, OPG provided its Business Plan for 2017-2019 to the Ministry of Energy on November 29, 2016 for concurrence
  - Note that while OPG is seeking concurrence for its three year 2017-19 business plan, the plan also includes financial projections for 2020 and 2021
- With this Business Plan OPG is also making an application for Special Status under the Section 5.3 of the Management Board of Cabinet's Travel, Meal and Hospitality Expenses Directive, which allows agencies/organizations, for which international travel may be integral to their business, to seek TB/MBC approval for special status to ensure that the approval process does not have an undue negative effect on its ability to conduct business
- The Minister's concurrence requires presentation of OPG's business plan before TB/MBC
- The Ministry of Energy review and analysis of OPG's business plan is supported by the Electricity Investment and Governance Secretariat, a unit within the Ministry of Finance and the Corporate and Electricity Finance Division of the Ontario Financing Authority (OFA)
- The following presentation provides an overview of OPG's business plan, including:
  1. Business Plan Overview
  2. Other Considerations

Context *(cont'd)*

- Proceeding with Provincial concurrence now will demonstrate that OPG has support from its shareholder as it implements the plan and provides clarity to the Ontario Energy Board (OEB) as it reviews OPG's current rate application covering the 2017-2021 period

- Business plan forecasts may be affected by Ontario's Fair Hydro Plan (OFHP). Given the stage of implementation of OFHP and the timing of the receipt of the business plan in November 2016, these changes are not reflected in OPG's plan

  - The Ministry anticipates that as part of supporting the financing and administration of the global adjustment smoothing mechanism, OPG would purchase the right to future cash flows from IESO, financed partly by capital infusions from the Province, and majority by third-party lending

  - These changes are generally expected to be fiscally neutral as they would result in an increase in Provincial interest on debt, offset by increases in OPG net income

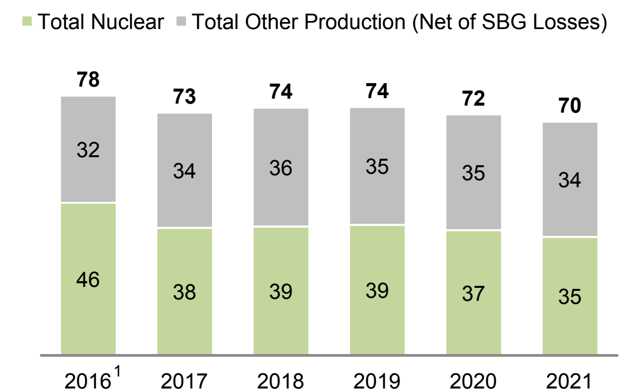
  - In addition, the Province's net debt position would remain unchanged

1. Business Plan Overview

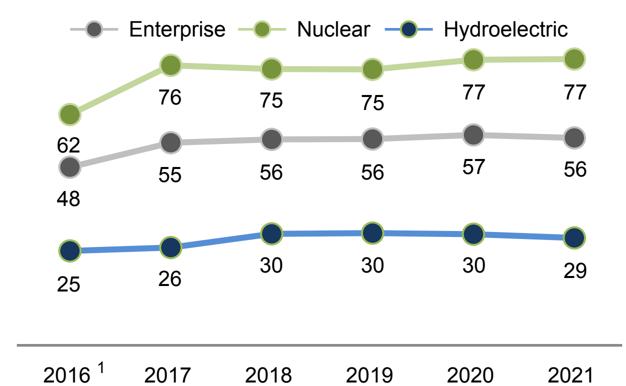
a) Production & Total Cost of Generation

- OPG's production is expected to fall to 69.8 TWh by 2021 from 77.6 TWh in 2016
  - Reflects a declining trend in the Darlington production due to refurbishment outages starting in October 2016
  - Includes a partial overlap starting in 2021 between second and third unit refurbishments, and
  - Includes the Pickering Vacuum Building Outage (VBO) in 2021 requiring the shutdown of all units for the duration of the outage
- While Operations, Maintenance and Administration (OM&A) remains relatively stable over the planning period (see next slide), total generating cost (TGC)* shows an increasing trend over the planning period relative to 2016, reflecting:
  - Lower nuclear production due to Darlington refurbishment outages, and
  - Increased sustaining capital spending (included in TGC) on two large hydroelectric projects, the Lower Mattagami dam safety upgrade and the Sir Adam Beck I GS power canal liner rehabilitation

Production (TWh)



Total Generating Cost ($/MWh)



1. Actuals

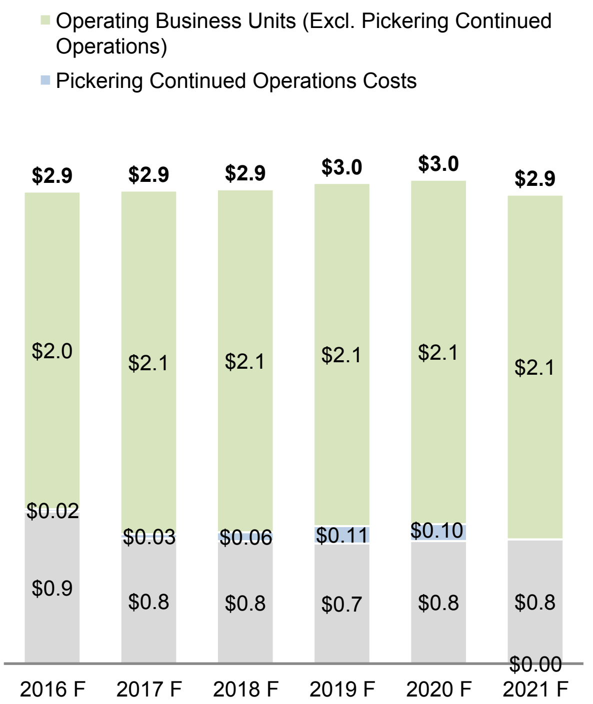
*TGC = OM&A expenses from ongoing operations + fuel and Gross Revenue Charge expenses for OPG-operated stations + sustaining capital expenditures) divided by OPG generation adjusted for surplus baseload generation losses

1. Business Plan Overview

b) Operations, Maintenance and Administration (OM&A) Expenses

- Annual OM&A expenses from ongoing operations are expected to stay consistent over the plan period, averaging $2.9B per year
- Increases over 2016 are mainly attributable to:
  - Increases in business unit expenditures, including changes in nuclear outage scope at Darlington, and planned hiring to fill staffing gaps
  - Incremental outage and other program costs to enable Pickering continued operations
- These increases are partially offset by declining pension and Other Post Employment Benefits (OPEB) costs over the period due to projected pension asset returns, increased employee contributions, and adoption of a new method for applying discount rates to determine interest components of pension costs

OM&A from Ongoing Operations* ($B)



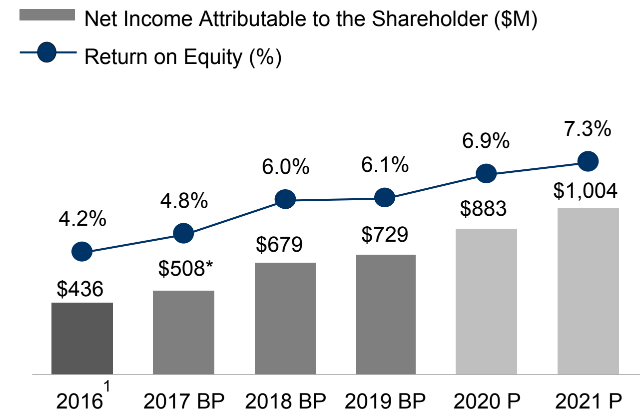
*Excludes Darlington refurbishment OM&A expenses and all OEB variance and deferral account offsets
** Includes centrally held pension /OPEB costs and support services

1. Business Plan Overview

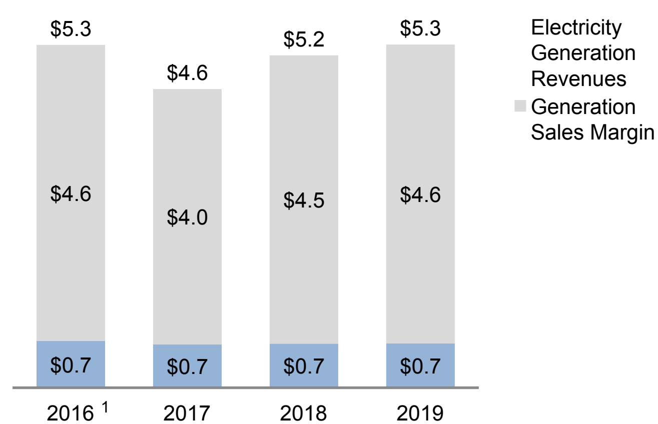
c) Financials

- OPG is forecasting net income attributable to the Shareholder to reach $1B in 2021, from $436M in 2016
  - 2017 net income is forecast to increase as a result of new regulated rates, higher capitalized interest for the Darlington Refurbishment expenditures partially offset by reduced production as a result of planned outages at Sir Adam Beck I and DeCew II hydro stations
  - Net income in 2018 and 2019 is planned to increase, primarily due to higher forecast production, and earnings from Peter Sutherland Sr. GS starting in 2017 and Nanticoke solar facility starting in 2019
- As a result, return-on-equity (ROE) is estimated to increase from 4.2% in 2016 to 7.3% by 2021
- Overall, the 2017-19 Business Plan is largely unchanged relative to last year's plan in terms of commitments for Net Income, and Total Shareholder Return
- In early January 2017, subsequent to the OPG Board's approval of the 2017-2019 Business Plan, OPG reached an agreement with KingSett Canadian Real Estate Income Fund LP for the purchase of OPG's head office property. The net gain is estimated to be $285M and will be distributed to the Trillium Trust

Net Income ($M) and ROE (%)



Revenue Margin ($B)



*Includes extraordinary gain associated with the sale of OPG head office

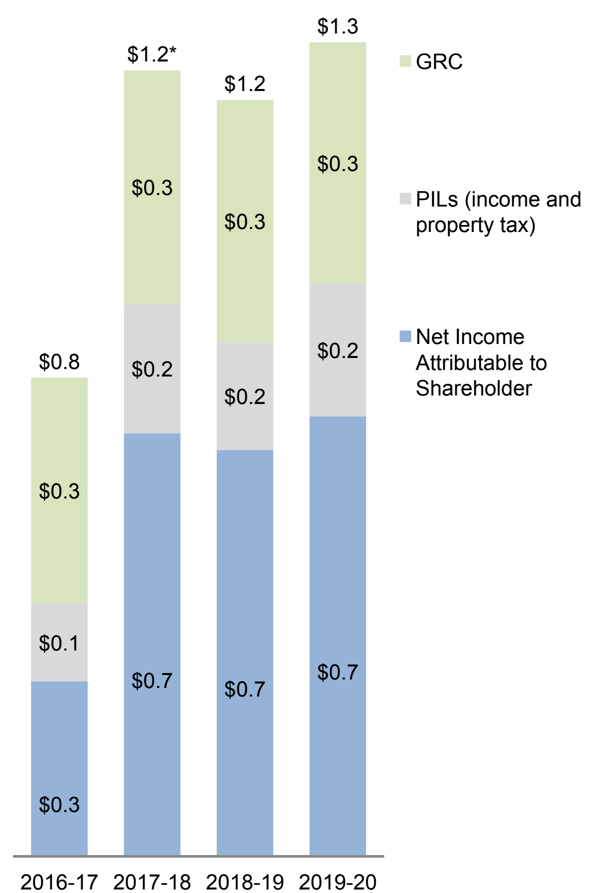
1. Actuals

1. Business Plan Overview

d) Provincial Fiscal Impacts: Shareholder Return and Payments-in-Lieu of Taxes

- Total fiscal revenue impacts to the Province, including net income return to the shareholder and payments-in-lieu of taxes, averages ~$1B over the period
  - Provincial revenues from OPG are dedicated to servicing and paying down stranded debt and the investment cost of the Province acquiring the equity in OPG[1]
- Return to the shareholder improves due to changes in net income, which OPG attributes to:
  - Assumed OEB rate outcomes
  - Completion of the first Darlington unit refurbishment
  - Further cost efficiencies
- Net income is consolidated by the Province as Revenue from Government Business Enterprises (GBEs)
- Income tax PILs, Gross Revenue Charges (GRC) and property tax PILs paid to the Ontario Electricity Financial Corporation (OEFC) to help service and pay down stranded debt are consolidated in Public Accounts under Taxation Revenue
- OPG also pays a portion of the GRC to the Province's Consolidated Revenue Fund (CRF)

Total Fiscal Revenues ($B)



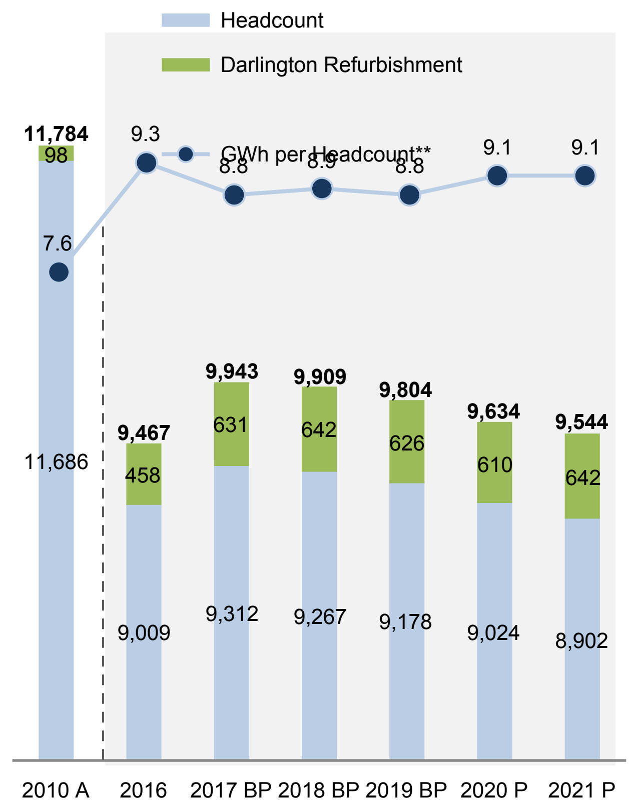
1. Aside from the water power rental portion of the GRC, paid to the CRF.
*Includes gain associated with the sale of OPG head office

1. Business Plan Overview

e) Business Transformation Initiative & Labour Costs

- As part of a company-wide business transformation, OPG saved over $1B in costs from January 2011 to December 2016
  - Headcount has fallen from 11,686 in 2010 to a forecasted 9,009 in 2016 while GWh per headcount has increased from 7.6 to 9.3
- However, OPG is ramping up recruitment between 2016 and 2017 to fill key vacancies in certain areas (particularly in the Nuclear business unit) due to high levels of attrition from employee demographics, as well as continued Pickering operations beyond 2020
  - OPG is forecasting regular headcount to show a net increase of ~300 by the end of 2017 before gradually decreasing to 4% lower than 2017 levels in 2021
- In addition, to date OPG has hired ~95 Term employees, a new category of non-regular staff negotiated with the Power Workers' Union (PWU) through collective bargaining in 2015
  - Intention is to add fewer regular staff in circumstances where they are likely to be laid off as a result of the end of Pickering commercial operations, per the terms of the collective agreement

Ongoing Operations Regular Headcount and Productivity



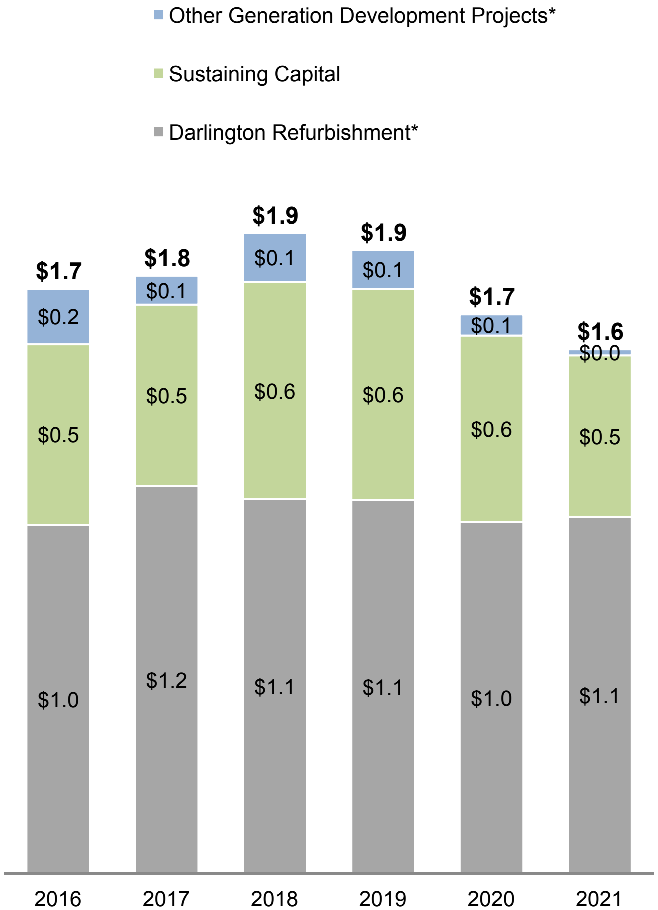
**Production is normalized by adding back hydroelectric surplus baseload generation losses and, in 2017- 2021, the lower production due to the Darlington refurbishment outages

1. Business Plan Overview

f) Operating Highlights - Projects and Capital Expenditures

- OPG continues to focus on delivery of its major projects over the plan period, including:
  - **Darlington Refurbishment**: Unit 2 is assumed to be returned to service in February 2020 with the second unit refurbishment commencing immediately thereafter and the third unit refurbishment starting in July 2021, assuming necessary concurrence from the Province is obtained
  - **Sustaining Capital:** Expenditures average $570M, including:
    - Nuclear expenditures unrelated to refurbishment at Darlington and costs for continued operation of Pickering
    - Regulated hydro expenditures including upgrades at Sir Adam Beck and upgrades to DeCew II
    - Lower Mattagami upgrades in 2018 and 2019
  - **Other Generation Development Projects:** Investments in current (e.g., hydroelectric) and emerging generation technologies including solar and energy storage including construction and operation of the Nanticoke solar facility by 2019

Capital Expenditure Estimates ($B)



*Includes expenditures budgeted by Support Services

2. Other Considerations

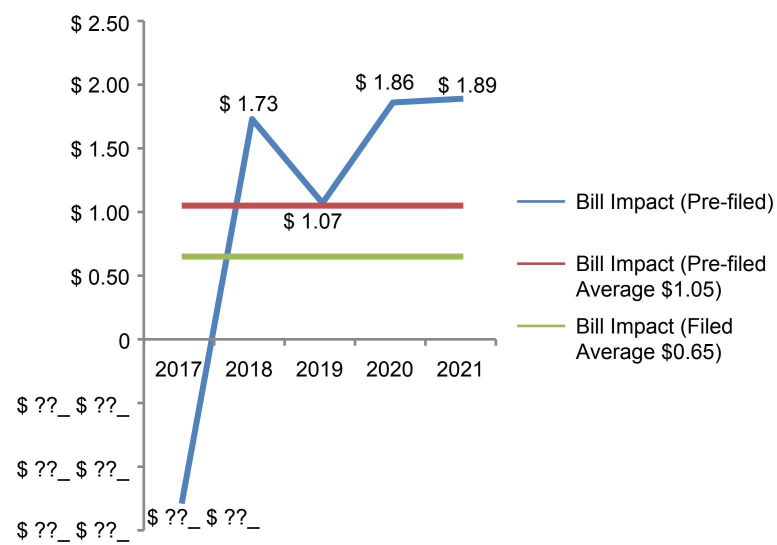
Rate Application

- OPG's 2017-19 Business Plan is dependent on the outcome of its rate filing with the OEB for the five-year period from 2017-2021
- Oral hearings began February 21, 2017 with a decision expected in Q4 2017
- OPG's 2017-19 Business Plan assumes new rates are effective January 1, 2017
  - The OEB setting a later effective date would negatively impact OPG's 2017-18 fiscal year net income by ~$50-60M per month of delay*

Rate-Smoothing Proposal:

- On March 2, 2017 the Province filed an amendment to O.Reg.53/05, which enables OPG to smooth its rates based on OPG's weighted average hydroelectric and nuclear all-in rates (which approximates total bill impact), rather than on the basis of nuclear base rates only
  - Rate smoothing is expected to be fiscally neutral due to rate regulated accounting
- On March 8, 2017 OPG filed a revised rate smoothing proposal with the OEB, which is expected to decrease the average year-over-year annual impact on the monthly customer bill for an average consumption of 750 KWh/month from about $1.05 to 65 cents per month per year

Comparison of Annual Bill Impact ($/Month per year)



*Forecasted in May 2016

2. Other Considerations

Sales

	OPG Head Office	R.L. Hearn Site	Lakeview Site
Current Status	Completed	Agreement Reached	OPG and Infrastructure Ontario are preparing for marketing
Site Description	700 University Ave. and parking garage at 40 Murray St. in Toronto	~33 acres at the R.L. Hearn site in Toronto	~67 acres to be transferred by the purchaser to the City of Mississauga (Municipal Park Lands) and ~110 acres to be developed for mixed uses (Uplands)
Buyer	KingSett Canadian Real Estate Income Fund LP	Studios of America Limited Partner	TBD
Value	Estimated up-front 2017-18 fiscal impact of ~$375M (includes after-tax gain as well as PILs to OEFC)	TBD	TBD
Other Considerations	N/A	N/A	Negotiations with the City have been lengthy and costs to remediate/prepare site may be significant due to concerns regarding site condition
Timing	The sale closed in April 2017	Anticipated to close in Q3 2017	Marketing is planned to start in April 2017, pending negotiations with the City, with an anticipated closing in 2017

2. Other Considerations

Special Status for OPG to Approve International Travel

- On January 24, 2017, OPG's President and CEO wrote to the Deputy Minister to provide a business case and request authority for OPG to approve international travel for its employees. In summary:
  - Section 5.3 of the Management Board of Cabinet's Travel, Meal and Hospitality Expenses Directive allows agencies/organizations, for which international travel may be integral to their business, to seek TB/MBC approval for special status to ensure that the approval process does not have an undue negative effect on its ability to conduct business
  - OPG believes that international travel is integral to the safe and prudent operation of its business and having OPG's CEO approve international travel will enable more efficient decision-making while significantly lowering travel costs
  - OPG cites the importance of enabling its engagement with the international community (in particular in regards to nuclear safety), procurement activities, and investment and due diligence processes for over $30 billion in pension fund and nuclear funds
  - OPG requires a high level of international business travel at approximately 90-100 trips annually, while the Darlington Refurbishment Project accounts for 45% of OPG's international travel and is expected see increases over the 10 year life of the project
  - OPG indicated that the approval process, which took 23 days on average in 2016, delays flight bookings which results in higher costs as airlines raise fares closer to the travel date
  - OPG believes the inability to make timely commitments on events and meetings impacts employee engagement as well as its international relationships and reputation
- OPG is seeking Special Status as part of concurrence with its business plan. OPG has committed to providing semi-annual reports to the Ministry on international travel taken, and continue to be accountable for compliance with all applicable OPS directives, policies and procedures

Appendix

2016 Year-End Financials

OPG Balance Sheet as at Dec 31	
$B	2016
Assets	
Cash and cash equivalents	0.2
Available-for-sale securities	0.2
Receivables from related parties	0.4
Nuclear fixed asset removal and nuclear waste management funds	0.02
Other current assets	0.9
Total current assets	**$1.7**
Net property, plant and equipment	**$20.0**
Net intangible assets	**$0.1**
Nuclear fixed asset removal and nuclear waste management funds	16.0
Regulatory assets	5.9
Other long-term assets	0.7
Other assets	**$22.5**
Total assets	**$44.4**
Liabilities	
Accounts payable and accrued charges	1.2
Short-term debt and long-term debt due within one year	1.1
Income taxes payable and other current liabilities	0.1
Total current liabilities	**$2.4**
Long-term debt	4.4
Fixed asset removal and nuclear waste management liabilities	19.5
Pension liabilities	3.0
Other post-employment benefit liabilities	2.9
Other liabilities	1.7
	$31.5
Total liabilities	**$33.9**
Equity	
Equity attributable to the Shareholder	10.4
Equity attributable to non-controlling interest	0.1
Total equity	**$10.5**
Total liabilities and equity	**$44.4**

OPG Income Statement Year Ended Dec 31	
$B	2016
Revenue	$5.7
Fuel expense	0.7
Gross margin	**$4.9**
Operations, maintenance and administration	2.7
Depreciation and amortization	1.3
Accretion on fixed asset removal and nuclear waste management liabilities	0.9
Earnings on nuclear fixed asset removal and nuclear waste management funds	-0.7
Other expenses	0.02
Total expenses	**$4.2**
Income before other (gains) losses, interest and income taxes	**$0.7**
Other (gains) losses	-0.02
Income before interest and income taxes	**$0.7**
Net interest expense	0.1
Income before income taxes	**$0.6**
Income tax expense	0.2
Net income	**$0.5**
Net income attributable to the Shareholder	**$0.4**
Net income attributable to non-controlling interest	**$0.02**