MINISTRY OF ENERGY

TREASURY BOARD / MANAGEMENT BOARD of CABINET SUBMISSION

ONTARIO POWER GENERATION (OPG) 2018-21 BUSINESS PLAN

April 2018

CONFIDENTIAL

MINISTRY OF ENERGY

1.0 MINISTRY REQUEST

The Ministry of Energy is requesting that Treasury Board/Management Board of Cabinet (TB/MBC):

1. NOTE the receipt of OPG's 2018-2021 Business Plan.
2. NOTE that the Minister of Energy will provide concurrence with OPG's Business Plan.

2.0 PURPOSE OF REQUEST

In accordance with the 2015 Memorandum of Agreement (MOA) between OPG and the Province, OPG is to develop and submit a rolling 3-5 year business plan to the Minister of Energy for review and concurrence.

- Concurrence is subject to the appearance of OPG's business plan before Treasury Board.
- OPG submitted its 2018-21 Business Plan to the Minister of Energy for concurrence on February 12, 2018.

3.0 KEY CONTEXT

Business Plan Overview

The 2018-21 Business Plan covers an important time for OPG:

- Darlington Refurbishment: Unit 2 continues to track on time and on budget to a return to service in 2020. Planning work for refurbishing the next unit (Unit 3) is underway.
- Pickering Generating Station: The plan reflects continued investment and work to support continued operations until 2024. OPG is also planning for Pickering end of life through its OPG25 restructuring initiative.
- Rate Certainty: OEB issued a Decision on OPG's rates for regulated nuclear and hydroelectric facilities, providing rate stability to 2021.
- Efficiency Measures: The plan identifies a number of efficiency measures leading to increased electricity production and decreased OM&A costs.
- Business Development: OPG hopes to grow its business inside and outside Ontario by investing in near-commercial technologies, and project development and acquisitions.
- Fair Hydro Trust Financial Services Manager: OPG began its role as financial services manager in 2017. The business plan reflects increases to OPG's net income and debt associated with this role.

The improvements to operating efficiency, successful completion of capital projects and new revenue contribute to OPG to setting ambitious targets in its 2018-21 Business Plan. However, a number of risks could impact OPG's ability to meet the targets:

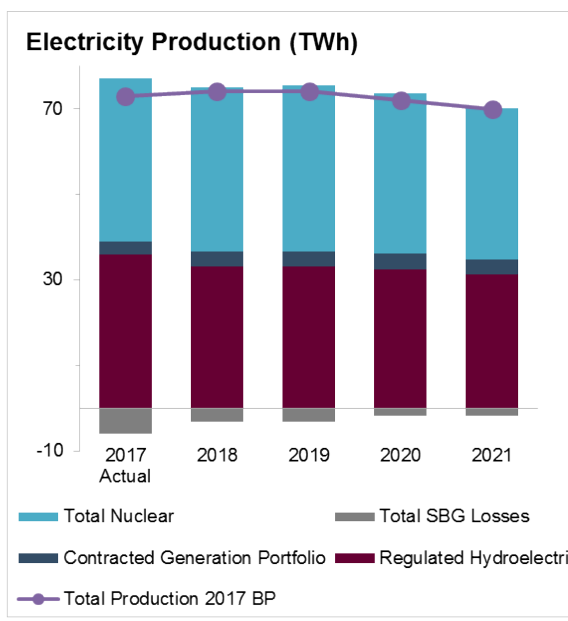
- Capital project completion: Led by Darlington Refurbishment, the plan includes extensive capital spending. Failure to meet project timelines and budgets would reduce income due to lower production revenues and higher costs.
- Outcomes of new efficiency measures: The plan highlights a number of new efficiency measures driving improvements over last year's plan. If the impact of these measures is overestimated, increased production revenues and lower OM&A costs may not materialize as forecasted.
- Collective Bargaining: OM&A reductions are contingent on outcomes of 2018 collective bargaining, namely the expanded use of term employees, and continued progress in managing wage increases and pension costs.
- Pickering License Extension: The plan assumes the CNSC will approve the renewal of OPG's operating license for the Pickering Generating Station without conditions in summer 2018. Production revenues and costs will be impacted if Pickering cannot operate beyond 2020.
- Attracting talent and leadership: Inability to retain and attract leadership talent and qualified management employees could adversely impact the execution of Darlington refurbishment, continued Pickering operation and other strategic priorities.

Highlights of the 2018-21 Business Plan are summarized as follows:

a) Electricity Production and Total Cost of Generation

Production decreases throughout the plan due to projects being taken out of service for refurbishment and capital repairs.

- In 2020, production decreases when Darlington Unit 2 returns to service and Unit 3 is taken offline. A major planned outage at Pickering is also planned for 2020.
- In 2021, a rehabilitation outage at Sir Adam Beck Generating Station reduces hydroelectric production.



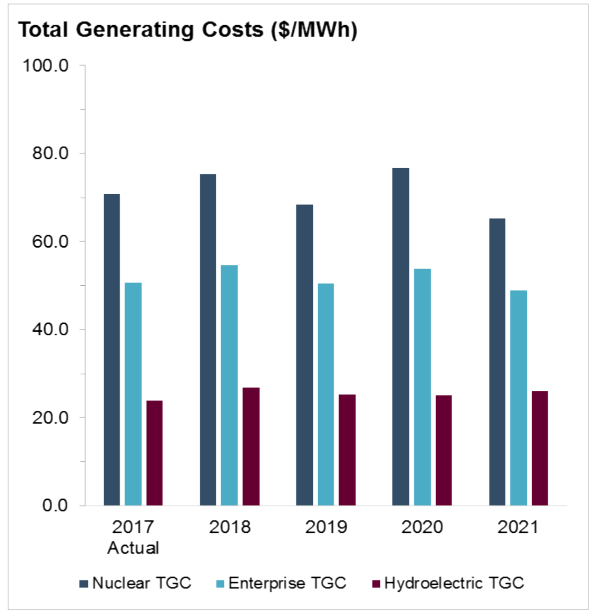
Relative to last year's business plan, production increases by 5.4 TWh, driven by efficiency improvements at Pickering Generating Station:

- OPG will increase time between routine outages, allowing units to run longer.
- Other reliability improvements reduce Pickering's 'forced loss rate'- (i.e., losses from unplanned shutdowns.)

The forecasts assume CNSC will grant Pickering license extension to 2024.

Total Generating Cost (TGC) per MWh is OPG's measure of operational cost effectiveness.

TGC targets fluctuate due to nuclear outages, efficiency initiatives and surplus-baseload generation adjustments due to high water levels.

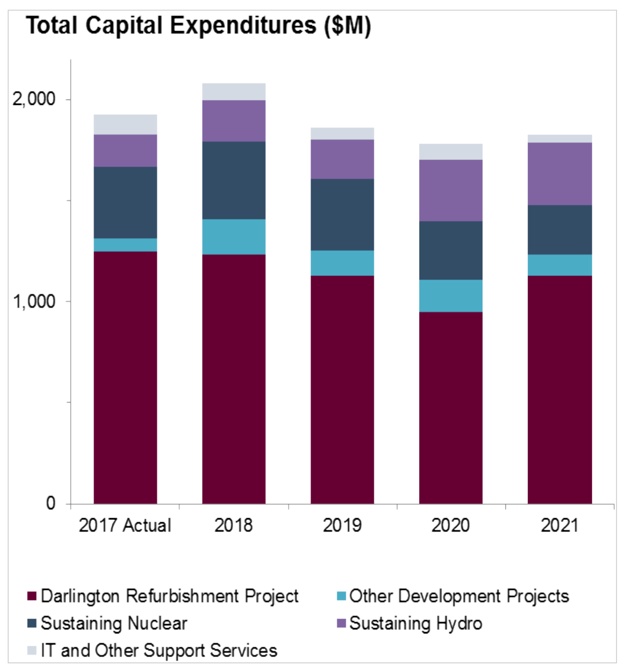


b) Capital Projects

The plan includes $4.4 billion in capital expenditures for the Darlington Refurbishment project (DRP). This includes $540 million for pre-execution spending for Unit 3.

In the 2017-2021 Payments Decision, the OEB approved costs incurred for Darlington refurbishment through to 2021. The OEB confirmed it will take a holistic view to assessing DRP costs, evaluating overall project performance against approved budget rather than an individual sub-project basis.

The plan includes $105 million in capital expenditures for the Heavy Water Storage (D2O) project, an enabling sub-project for the DRP that previously experienced delays and cost overruns. However, total refurbishment costs remain on budget and schedule.



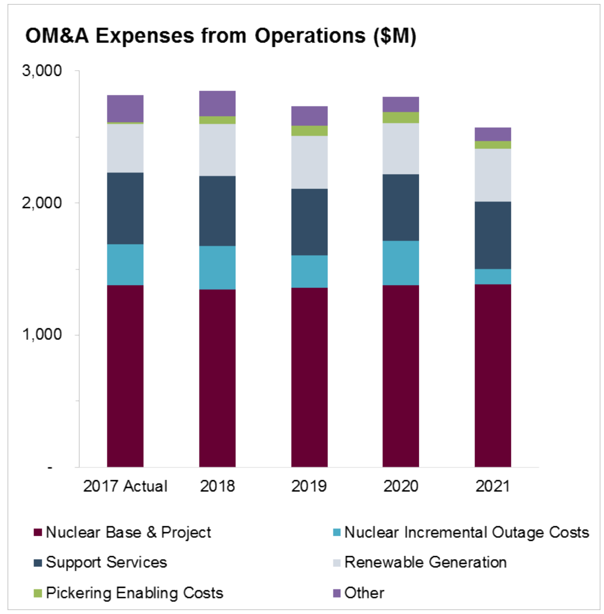
Other capital expenditures include:

- Ranney Falls re-development (2019 completion)

- Nanticoke Solar (2019 completion)
- Beck generating station upgrades (2022 completion)
- Other sustaining capital (Hydro unit overhauls; equipment upgrades)

c) Operations, Maintenance and Administration Costs

The plan targets a total decrease in OM&A expenditures of $600 million over four years. Annual spending decreases by $280 million in 2021 compared to 2018.

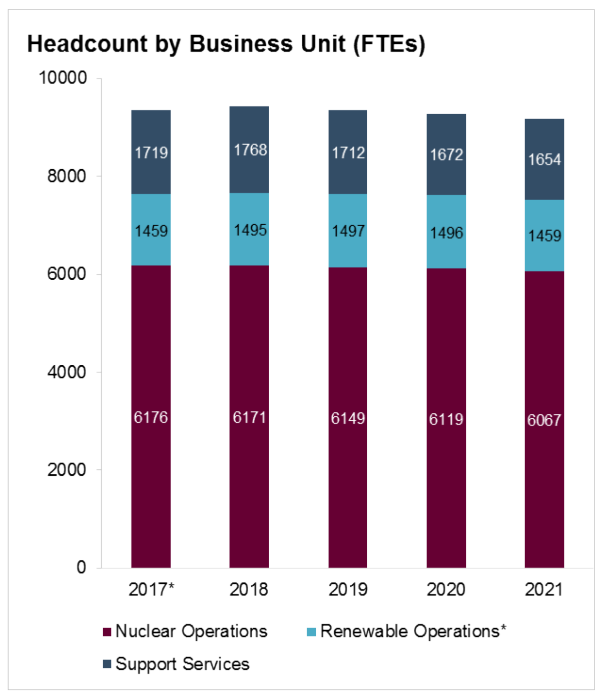


The reductions will be achieved through efficiency measures including new processes, technology upgrades and reducing nuclear plant outage frequencies.

OPG25 Initiative

OPG25 is the company's plan to restructure due to the closure of Pickering in 2024. The objective of OPG25 is to ensure operations remain cost-effective and that OPG is positioned for growth.

The initiative's long-term target is for Darlington to operate in the top-quartile for total generating costs. The 2018-21 business plan's cost reductions will help move OPG towards achieving the total target reductions post Pickering operations.



Collective Bargaining

Collective bargaining impacts OPG's ability to reduce OM&A. Most employees belong to either the Power Workers Union (PWU) or Society of Energy Professionals (Society).

Collective agreements with Society & PWU expire in 2018. Negotiated outcomes will impact OPG's ability to meet the plan's savings forecasts. Through collective bargaining, OPG hopes to:

- Manage wage increases
- Reduce future workforce costs including pension and benefits

- Ensure future staff capability
- Reduce downsizing costs resulting from Pickering closure

d) Executive Compensation

In 2017, OPG implemented an Executive Compensation Program compliant with O.Reg 304/16. The program is designed to provide compensation that is at the 50th percentile of the market and focused on at-risk, performance based pay.

TB/MBC approved exemptions allowing OPG to compare against private sector and international companies. Overall compensation for all management group staff increases at 2% based on assumed inflation each year in the plan.

OPG's executive compensation program includes both fixed and variable (i.e. incentive-based) components. The program is designed to provide total target compensation at the 50th percentile of the labour market within which OPG competes for talent.

- Fixed elements: base salary, pension, and benefits
- Variable elements: short term incentives and medium term incentives

Short term incentives are based on individual performance and OPG's Corporate Scorecard. Individual performance is graded by CEO (CEO's performance is set by OPG's Board). Corporate scorecard includes a range of measures determined annually by the CEO and leadership team.

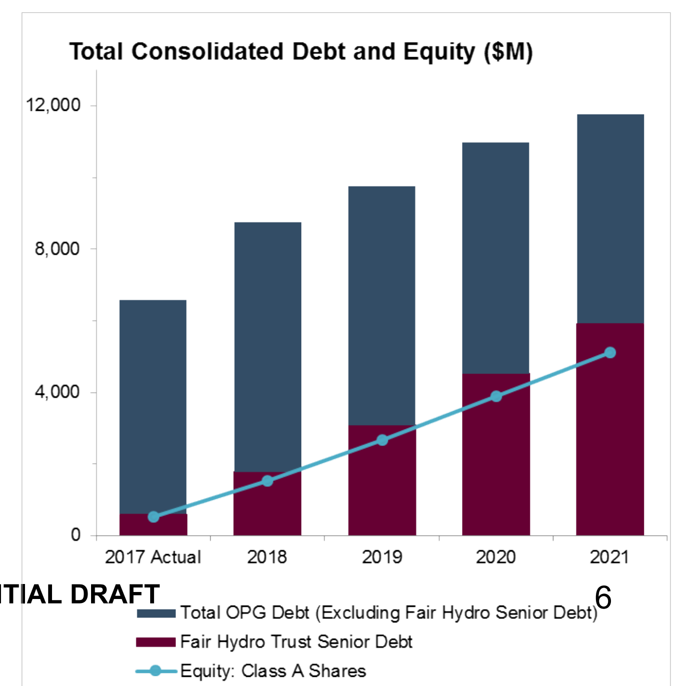
Medium term incentives are based on additional performance measures including return on equity, total generating cost and meeting Darlington refurbishment milestones.

e) Fair Hydro Plan Financial Services Manager

The business plan reflects OPG's role as Financial Services Manager (FSM) for the Fair Hydro Trust.

The Fair Hydro Trust contributes to increasing amounts of net income, growing from $10 million in 2018 to $225 million in 2021.

- This reflects the spread earned on the equity contributions from the



Province to fund 44% of OPG's financing of the Trust.

As the Province provides more funding to facilitate asset purchases in exchange for shares in the company, the government's equity increases, lowering ROE.

The Fair Hydro Trust external senior debt is projected to increase to $5.9 billion by 2021.

f) Business Development

OPG hopes to grow its business by investing in commercial innovation, project development and asset acquisition. Lack of material growth investments will contribute to OPG's loss of scale (i.e., lower and less diversified revenue) following the retirement of Pickering.

The business plan references organic and non-organic investments:

- Organic investments are in-house project development of generation and energy products in Ontario. The plan allocates incremental capital funding of ~$200 million for organic investments.
- Non-organic investments are new opportunities (acquisitions and developing projects) in Ontario and other jurisdictions. These investments are not included in the plan, however, OPG forecasts up to $3 billion would be available for such investments.

Non-organic expansion options must meet the Shareholder's expectations and priorities. As the Shareholder, the Province may need to provide approvals for certain investments (e.g., development and acquisitions).

- The Ministry of Energy plans to develop a policy framework to guide these approvals.

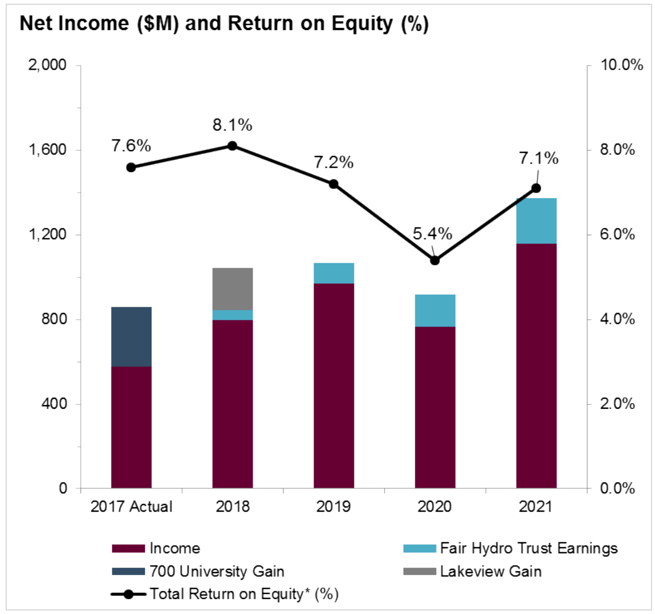
g) Real Estate Sales and Trillium Trust

The plan reflects the sale of two properties identified by the *Trillium Trust Act, 2014:*

- <u>Head Office Property at 700 University:</u> Sale closed in April 2017. $283 million credited to Trillium Trust in 2017/18.
- <u>Lakeview Site:</u> Sale expected to close by March 31, 2018. ~$200 million to be credited to Trillium Trust in 2017/18.

h) Financials

OPG is forecasting total net income to reach $1.37 billion in 2021, from $860 million in 2017.



Operating net income[1] fluctuates throughout the plan. Cumulatively for the 2018 – 2021 period, operating net income levels are a plan over plan improvement of $390 million. Changes in net income are driven by:

- Higher production at Pickering reflecting efficiency improvements;
- Higher revenue from regulated hydroelectric production due to higher operating efficiency;
- Company-wide reductions in OM&A costs;
- Lower regulated revenue from disallowances and adjustments resulting from OEB payments decision; and
- Real estate sales in the near-term: Head Office sale in 2017 and Lakeview in 2018.

Operating Return on Equity (excluding impact of Fair Hydro Trust) increases from 5.3% in 2017 to 8.1% in 2021. Should OPG fail to meet targets for production, operating cost reductions or capital expenditures, net income improvements may not materialize.

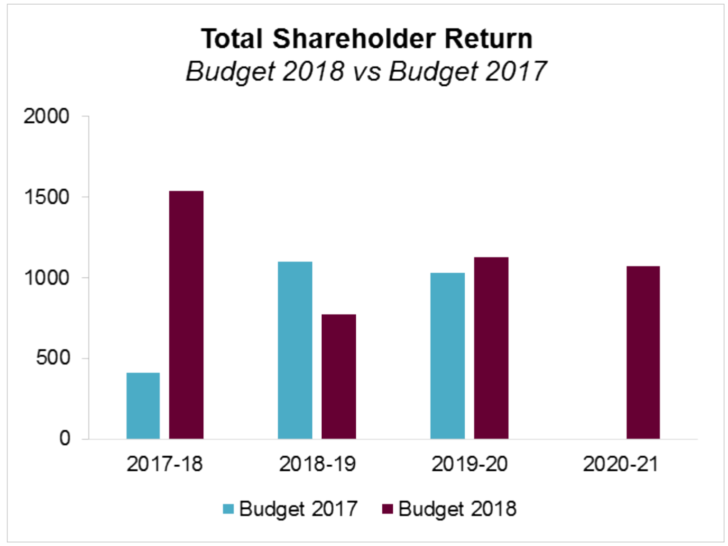
i) Provincial Fiscal Impacts: Shareholder Return and Payments-in-Lieu of Taxes

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

[1] Total net income includes Fair Hydro Trust Earnings. OPG reports on “operating net income” which excludes these earnings.

Total fiscal revenue impacts to the Province, including net income return to the shareholder and payments-in-lieu of taxes, ranges from $1.1 billion to $1.7 billion.

- Returns are highest in 2017/18 due to one-time gains in real estate sales.
- Compared to Budget 2017, total return is forecasted to be higher in 2017/18 but lower in 2018/19.[2]



The Ministry of Finance adjusts OPG's reported net income when preparing the fiscal plan to reflect IFRS accounting standards:

- OPG uses US GAAP accounting standards for financial reporting. The Province consolidates OPG's results using International Financial Reporting Standards (IFRS).

4.0 RISKS

The Ministry of Energy, based on OPG's business plan, has identified the following as key risks to OPG meeting the financial performance targets identified in the 2018-21 Business Plan.

Risk	Mitigation
1. Capital project completion	OPG has improved its project management planning in recent years.

[2] Numbers provided by OFA. Budget 2018 reflects the impacts of 2018-21 Business Plan.

2017/18 positive variance due to:

- $646M for real estate sales included in Budget 2018, not in Budget 2017.
- $194M ONFA Adjustments included in Budget 2018 not in Budget 2017
- $100M lower IFRS adjustment in Budget 2018 than Budget 2017

2018/19 negative variance due to:

- $375 million IFRS adjustment included in Budget 2018, not included in Budget 2017.

Led by Darlington Refurbishment, the plan includes extensive capital spending. Failure to meet project timelines and budgets reduces income due to lower production revenues and higher costs.	In the 2017-21 regulated payments Decision, the OEB stated it was satisfied with OPG's planning approach and approved all project costs. OPG executive compensation is tied to milestone achievement on Darlington Refurbishment and completion of other capital projects such as Ranney Falls and Nanticoke Solar.
2. Efficiency Improvements The plan forecasts higher production and lower OM&A costs resulting from efficiency improvements. Net income targets may not be achieved if these measures do not materialize as expected.	Efficiency improvements leading to production improvements at Pickering are backed by investments. Implementation is already underway. OM&A reductions rely on deploying resource plans that utilize regular and non-regular staff by leveraging the current provisions in the collective agreement. Fully utilize PWU "Term" staffing model and contract workers where possible.
3. Collective Agreement Outcomes Many of OPG's strategies to reduce OM&A costs are dependent on successful outcomes of 2018 collective bargaining with PWU and Society.	OPG hopes to build on successful 2015 agreement where it made progress on managing staff costs, reduced pension liability and introduced the use of term employees. The Minister of Energy wrote to OPG in March 2018 to signal its support for OPG's continued progress in managing these costs through collective bargaining.
4. Pickering License Extension The plan assumes the CNSC will approve the renewal of OPG's operating license for the Pickering Generating Station without conditions in summer 2018. Production revenues and	OPG anticipates the risk of the license not being extended is low. In its rate application, OEB approved costs for OPG to move forward with enabling work on Pickering.

costs will be impacted if Pickering cannot operate beyond 2020.	
5. Attracting talent and leadership: Inability to retain and attract leadership talent and qualified management employees could adversely impact the execution of Darlington refurbishment, continued Pickering operation and other strategic priorities.	OPG hopes to strengthen its leadership pipeline and increase diversity through the recruitment / selection process and employee / leadership development programs. Exemptions for OPG's executive compensation program allow OPG to benchmark against private sector and international comparators, helping it to attract and retain executive talent.

5.0 RECOMMENDATION

The Ministry of ENERGY is requesting that Treasury Board/Management Board of Cabinet (TB/MBC):

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