



# 2019 Year End Investor Briefing



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GENERATION

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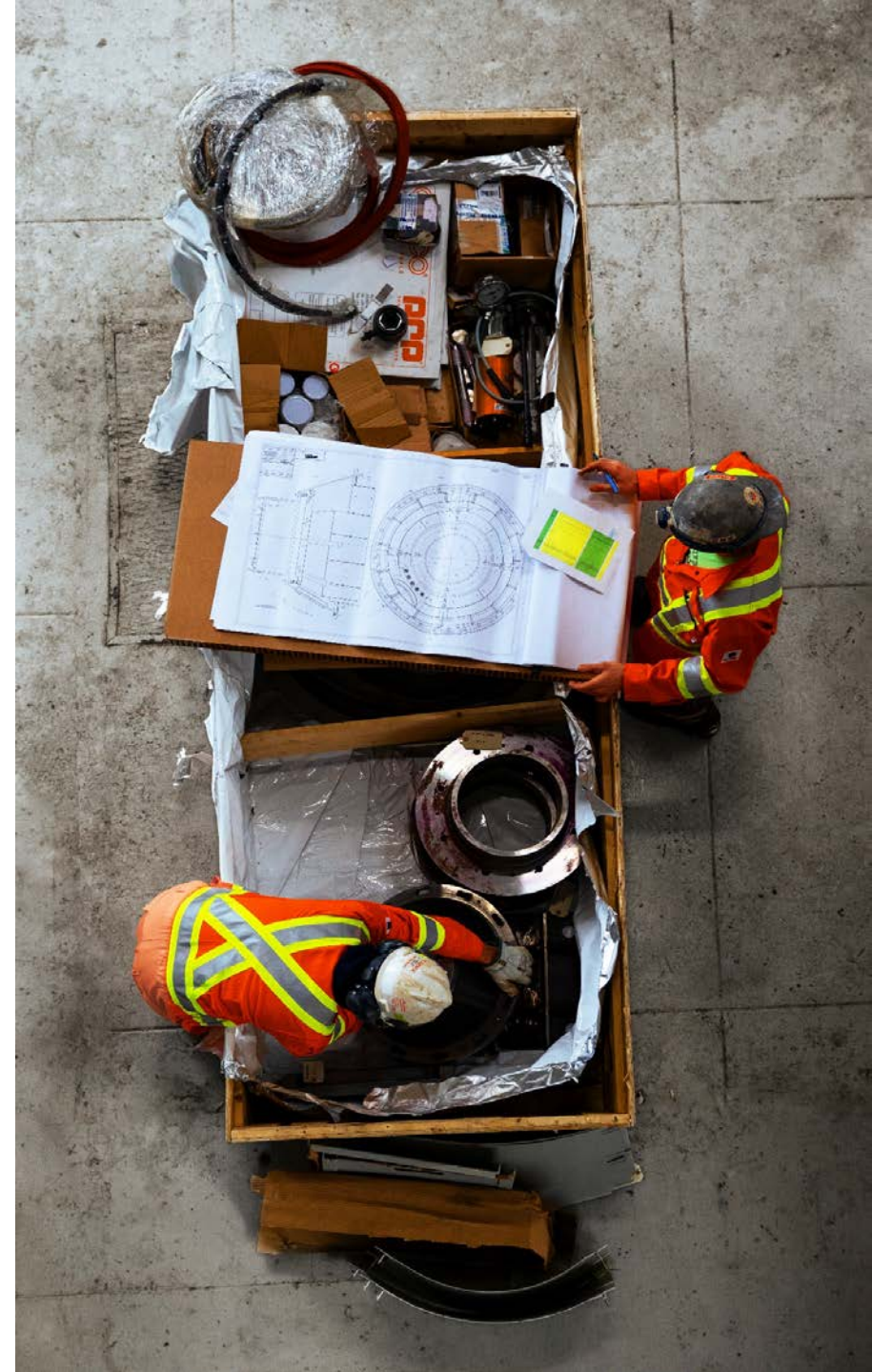
Words such as “anticipate”, “believe”, “foresee”, “forecast”, “estimate”, “expect”, “schedule”, “intend”, “plan”, “project”, “seek”, “target”, “goal”, “strategy”, “may”, “will”, “should”, “could”, and other similar words and expressions are used to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking. The forward-looking information contained in this presentation are not guarantees of future performance and involve inherent assumptions and risks and uncertainties that are difficult to predict. All forward-looking information could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG’s generating station performance, availability and operating lives, fuel costs, surplus baseload generation, cost of fixed asset removal and nuclear waste management and associated funding requirements, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, acquisition transactions, performance of acquired businesses, defined benefit pension and other post-employment benefit obligations and funds, income taxes, proposed new legislation, the ongoing evolution of electricity industries and markets in Ontario and the United States, the continued application and renewal of energy supply agreements and other contracts for non-regulated facilities, foreign currency exchange rates, environmental and other regulatory requirements, operating licence applications to the Canadian Nuclear Safety Commission and the Federal Energy Regulatory Commission, health, safety and environmental developments, changes in the Company’s workforce, renewal of union collective agreements, business continuity events, the weather, financing requirements and liquidity, funding sources, applications to the Ontario Energy Board for regulated prices, the impact of regulatory decisions by the OEB, forecasts of earnings, cash flow, Return on Equity Excluding Accumulated Other Comprehensive Income, Total Generating Cost, operations, maintenance and administration expenses and project and other expenditures, retention of critical talent, and supplier and third party performance. Actual outcomes and results may differ materially from what is expressed, implied or forecasted in this forward-looking information. While the Company does not know what impact any of these differences may have, the Company’s business, results of operations, financial condition and credit stability may be materially adversely affected. Potential investors should carefully consider these and other factors and not place undue reliance on forward-looking information. The forward-looking information included in this presentation represent OPG’s views as of the date of this presentation and should not be relied upon as representing OPG’s views as of any subsequent date. 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.

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

# Agenda

- 1 | Annual highlights and key developments
- 2 | Sustainability Strategy
- 3 | Financial and operational performance
- 4 | Project excellence
- 5 | Energy industry leader
- 6 | Financial profile
- 7 | Outlook
- 8 | Q&A





# Annual Highlights

- Strong financial performance driven by strong generation and outage execution in Nuclear
  - Higher water flows in Ontario managed successfully at hydroelectric facilities with continued safe, reliable operations throughout the fleet
  - Pickering station achieved exemplary World Association of Nuclear Operators rating; recognized as one of the world's top performing nuclear plants
  - Darlington Refurbishment continues overall on schedule and on budget; Unit 2 is in the fourth and final segment with an expected in-service date of Q2 2020; Unit 3 set to begin refurbishment in Q2 2020
  - OPG's first solar facility placed in service and operating under a contract
  - Acquisitions of Cube Hydro & Brighton Beach plant completed and agreement signed to acquire a portfolio of further gas plants in Ontario; contribute to scale of fleet ahead of the end of commercial operations at the Pickering station
  - Investments in innovation made during the year, including nuclear
- p4 Small Modular Reactors and electrification of the transportation sector



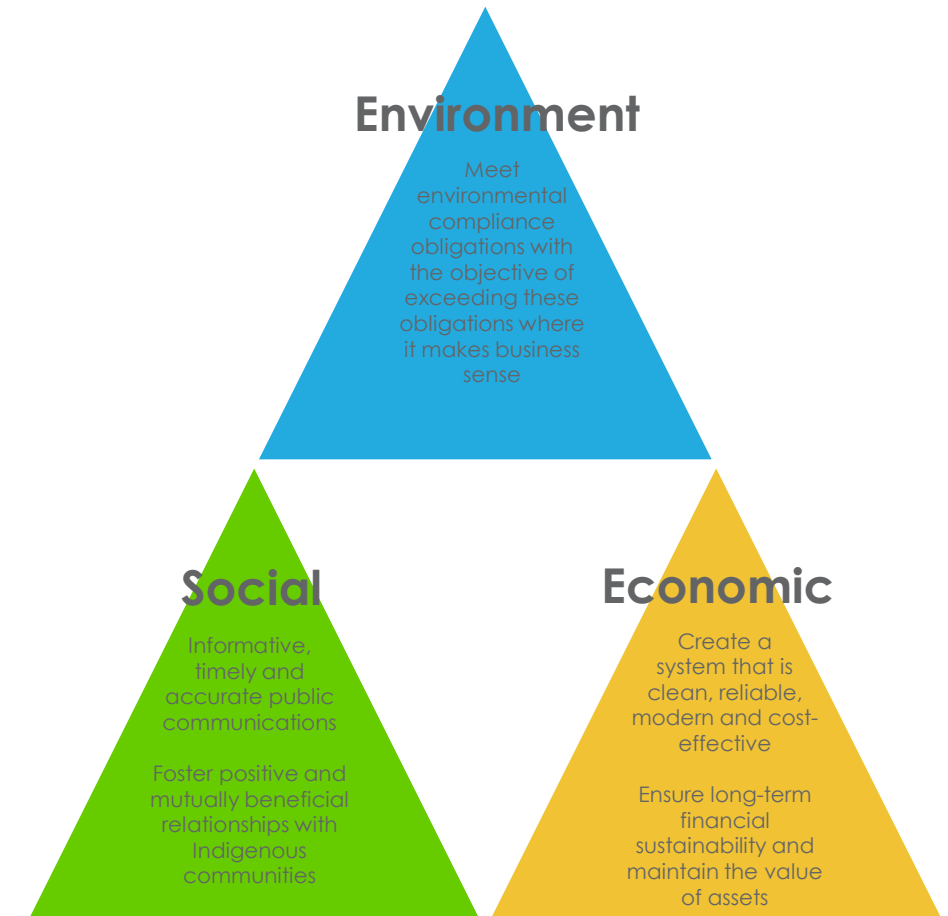


# Sustainability Strategy

OPG is proud to be one of Canada's Best 50 Corporate Citizens for the sixth year in a row

**At OPG, we believe in generating power with purpose.**

- OPG is already a clean power leader, having delivered the world's single largest climate change action to-date by closing our coal stations.
- We're a catalyst for efficient, economy-wide decarbonization through:
  - nurturing new industries and new careers for Ontarians
  - leading the development of new technologies like SMRs
  - ensuring province-wide chargers for electric vehicles
  - advancing the potential of vehicle-grid integration
  - ensuring customers benefit from electrification.
- OPG is developing a comprehensive climate change strategy, which outlines our goals and plans for achieving this vision. The strategy will be released in the second quarter of 2020.





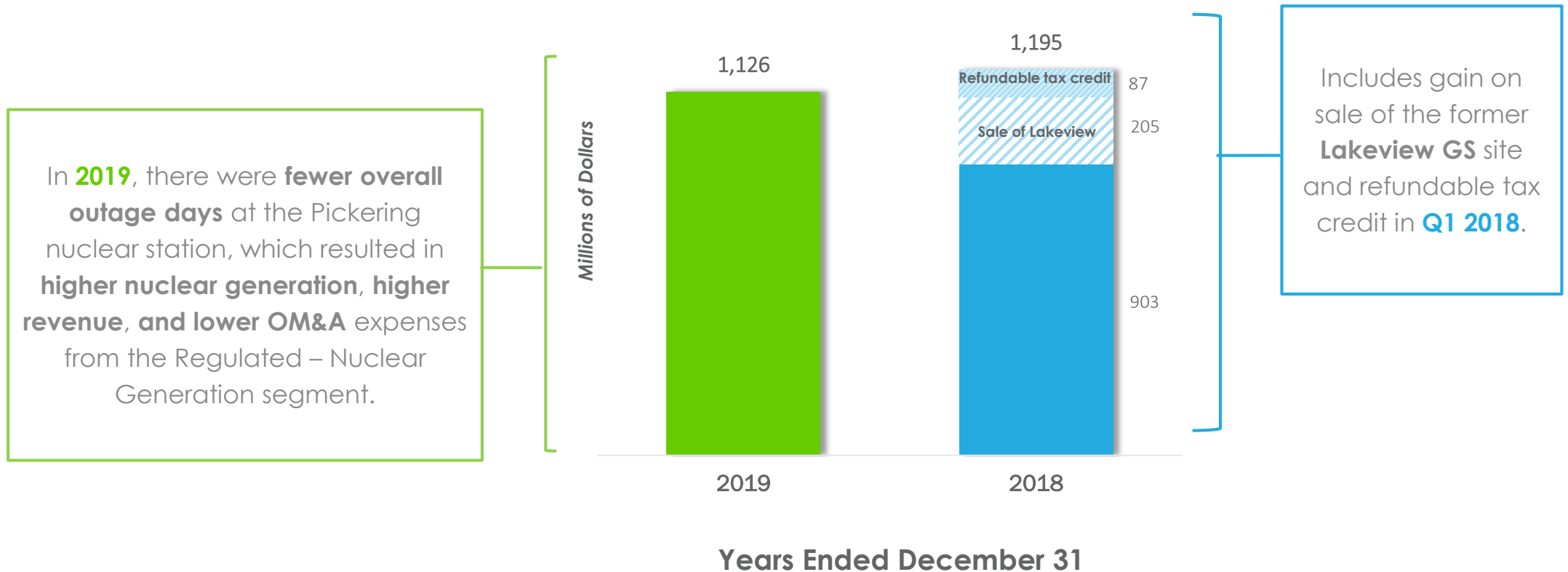


# Financial and Operational Performance

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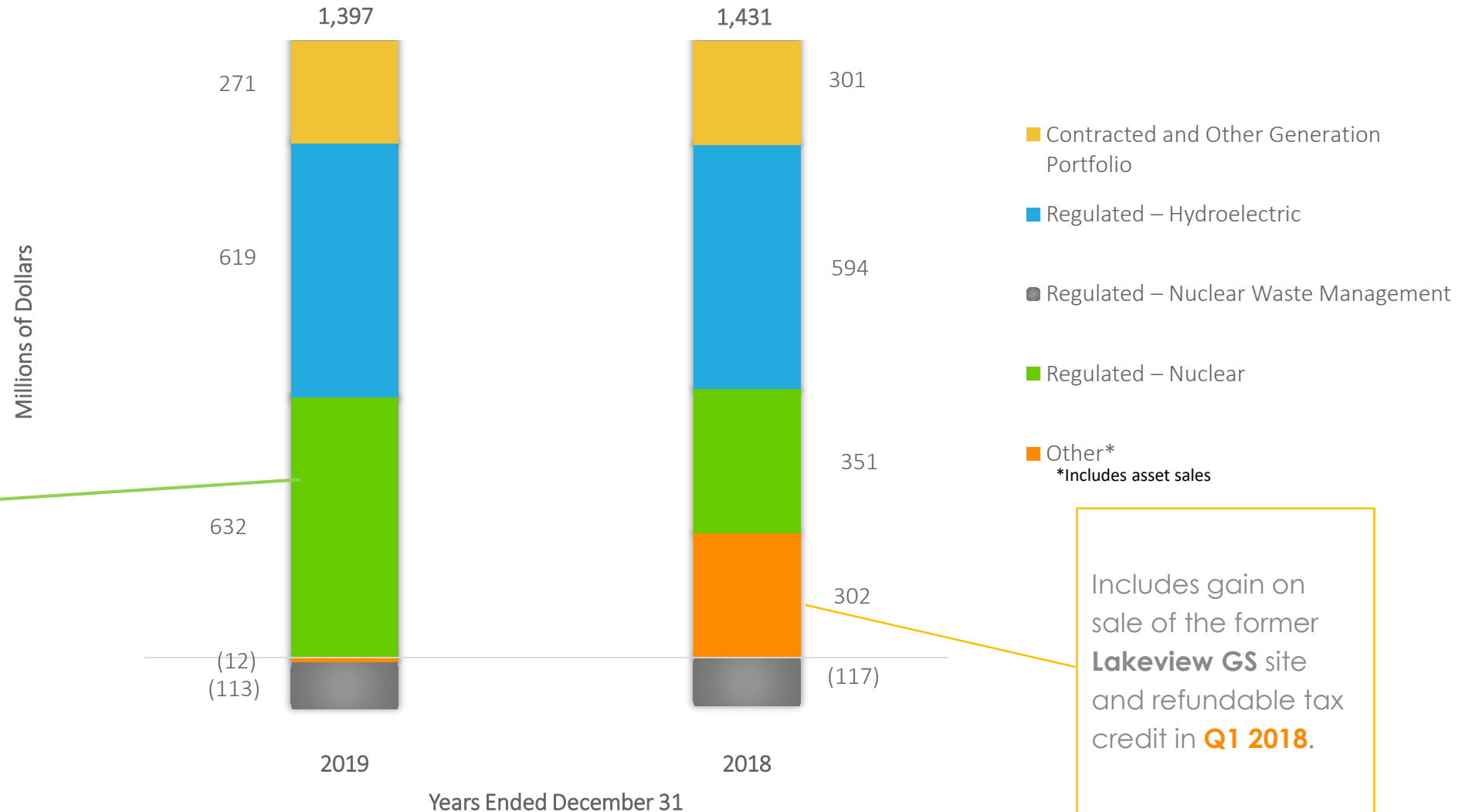


# Net Income Attributable to Shareholder





# Segment Earnings before Interest and Tax



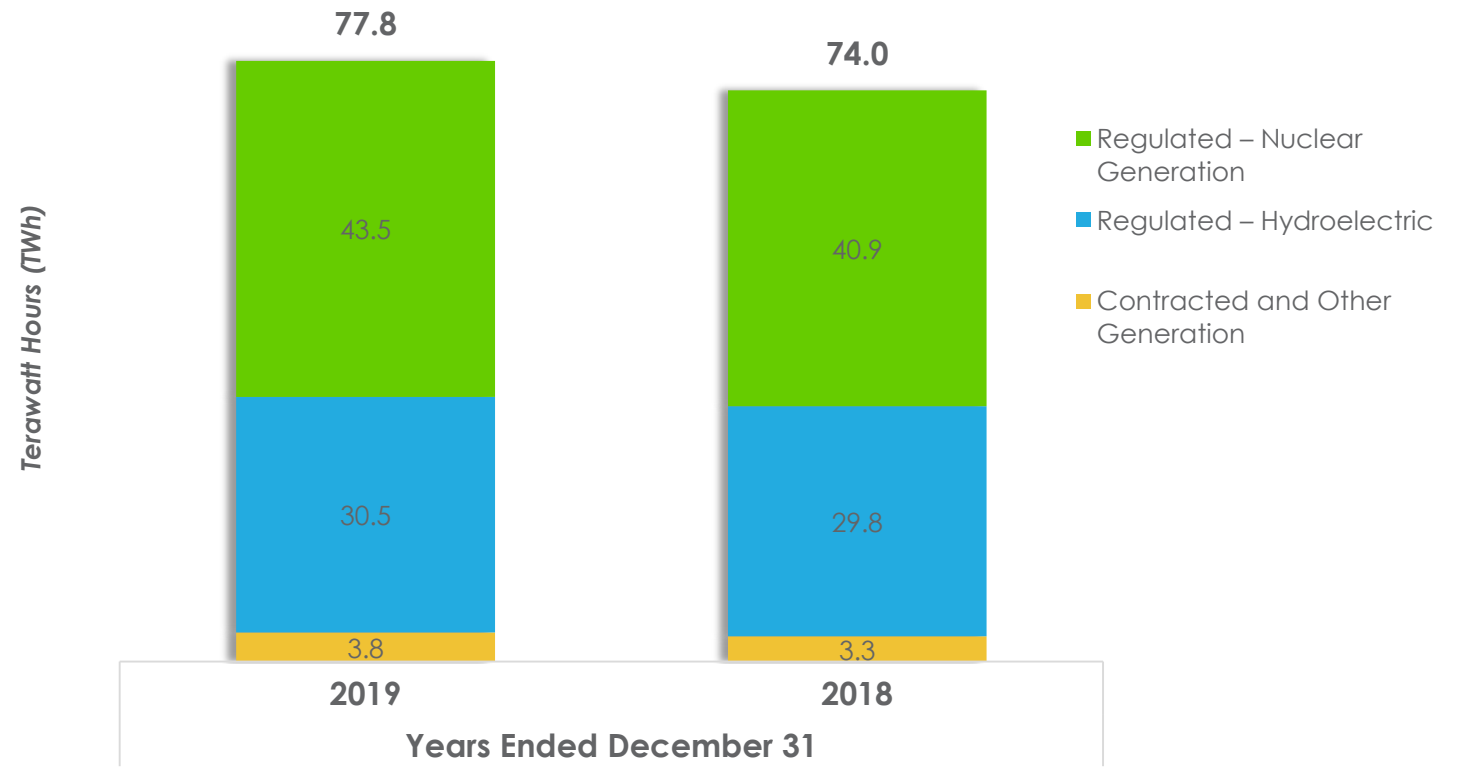


# Electricity Generation

**Regulated – Nuclear Generation** production increased primarily due to **fewer overall outage days at the Pickering nuclear station**.

**Regulated – Hydroelectric** production increased primarily due to **higher water flows** across most of Ontario, particularly in the spring of 2019.

**Contracted and Other Generation** production was positively impacted by the acquisition of **Eagle Creek** in Q4 2018 and **Cube Hydro** in Q4 2019, both in the US, offset by **lower water flows** from contracted facilities in Ontario in the second half of 2019.

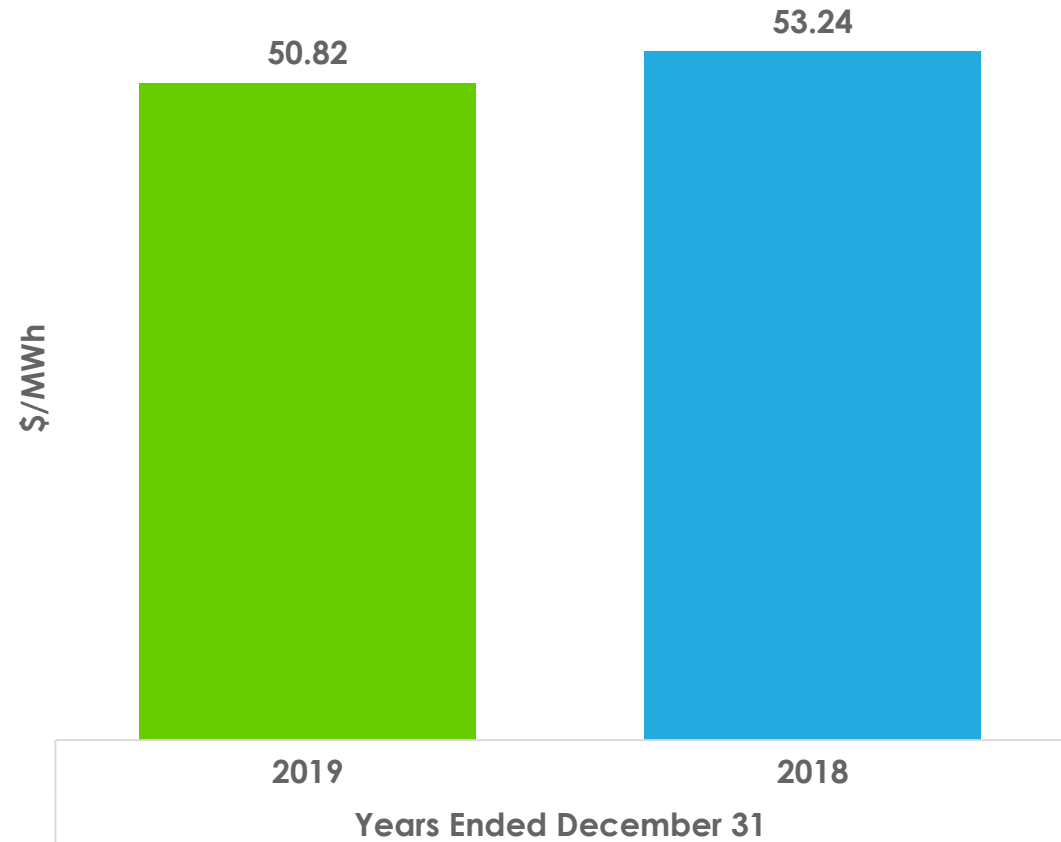


# Enterprise Total Generating Cost (TGC)

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

- In 2019, **higher electricity generation and lower OM&A** from the Regulated – Nuclear Generation and Regulated - Hydroelectric facilities decreased TGC compared to 2018.

**Enterprise TGC per MWh** is defined as OM&A expenses, fuel expense and capital expenditures incurred during the period, divided by total electricity generation plus electricity generation forgone due to surplus baseload generation conditions during the period. Excludes costs of the Darlington Refurbishment project, US operations, other generation development projects, business development initiatives and the impact of regulatory variance and deferral accounts.







# Project Excellence

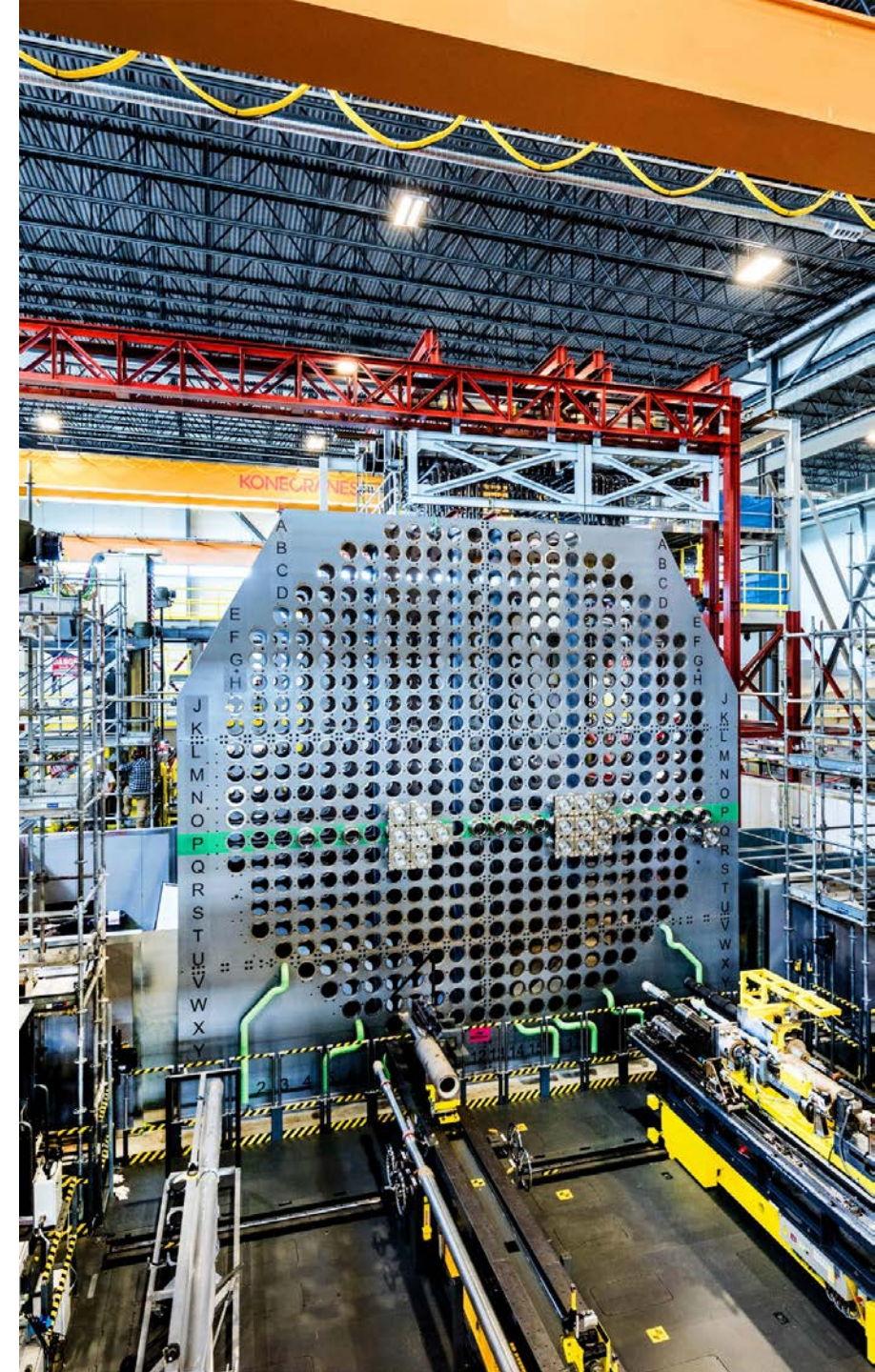
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# Darlington Refurbishment

**Unit 2 refurbishment return to service expected in Q2 2020; overall project continues to track on schedule and to the \$12.8 billion budget.**

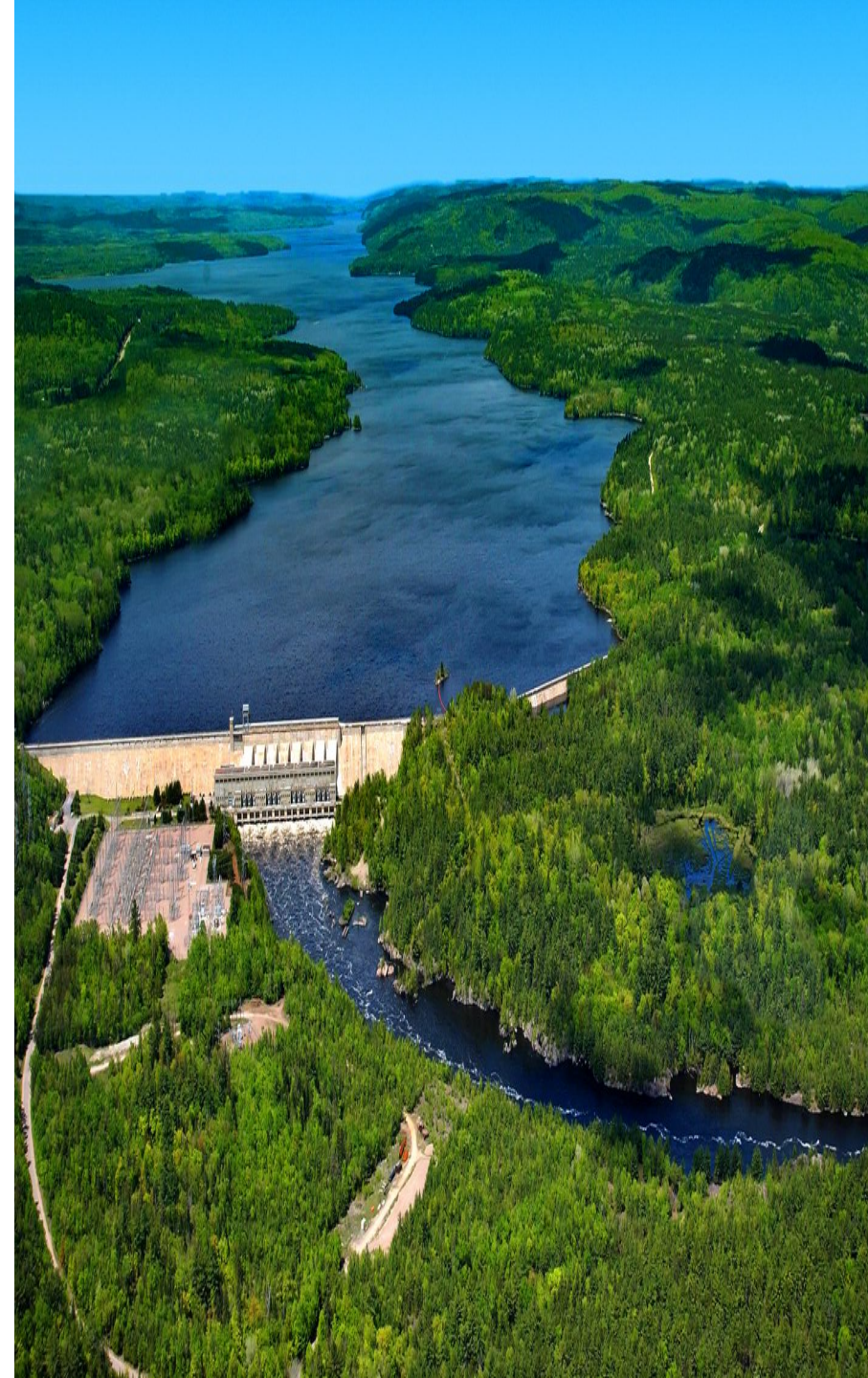
- The project is expected to extend the operating life of the Darlington nuclear station by at least 30 years and commenced in October 2016 with the refurbishment of Unit 2; the approved budget for the four-unit refurbishment is \$12.8 billion.
- Unit 2 refurbishment is currently expected to be returned to service in Q2 2020 – this expectation incorporates our commitment to safety.
- The third major segment was completed in the fourth quarter of 2019 with the completion of the Lower Body Tubing installation series. The fourth segment is underway, with fuel loading completed in November 2019. Work to restore the reactor vault is underway, which includes removing the bulkheads to reconnect Unit 2 back to the operating units.
- Planning and pre-requisite activities related to the refurbishment of the second unit, Unit 3, continue to progress in accordance with the overall project schedule, incorporating experience learned to date from the Unit 2 refurbishment. Unit 3 is scheduled to commence refurbishment in Q2 2020.





# Little Long Dam Safety

- In January 2019, OPG initiated a plan to improve dam safety along the Lower Mattagami River in Ontario, which supports several of OPG's contracted hydroelectric facilities.
- The project is expected to improve dam safety along the river by increasing the discharge capacity and by making other reliability and operational improvements at the Little Long Main Dam to comply with the updated provincial requirements.
- Currently in the execution phase, the project is expected to be in-service in 2023 with an approved budget of \$650 million.
- The project will help protect the community, keep the stations running safely and reduce impacts to the environment, in line with OPG's commitment to strengthening infrastructure to increase resilience.





# Sir Adam Beck I G1 & G2 Replacement

- OPG has initiated a project to replace two older generating units at the Sir Adam Beck I GS that used outdated line frequency technology prior to being decommissioned.
- The project is expected to add 125 MW of incremental generating capacity, providing many more decades of cost effective, clean power from one of the flagship stations in the Company's hydroelectric fleet.
- The project's expected in-service date is in 2022, with a total estimated cost in the range of \$120 million to \$150 million.
- Installation of the new unit is scheduled to begin upon completion of engineering design activities, later in 2020.





# Ranney Falls Hydroelectric Station

- OPG has completed construction and continues commissioning on a new 10 MW single-unit powerhouse on the existing Ranney Falls station site.
- The new unit will replace an existing unit that reached its end of life, doubling the station's total generating capacity.
- Due to equipment component issues identified during commissioning, the new in-service date for the project is expected to be in the first half of 2020.
- The project continues to track on budget of \$77 million.







# Energy Industry Leader

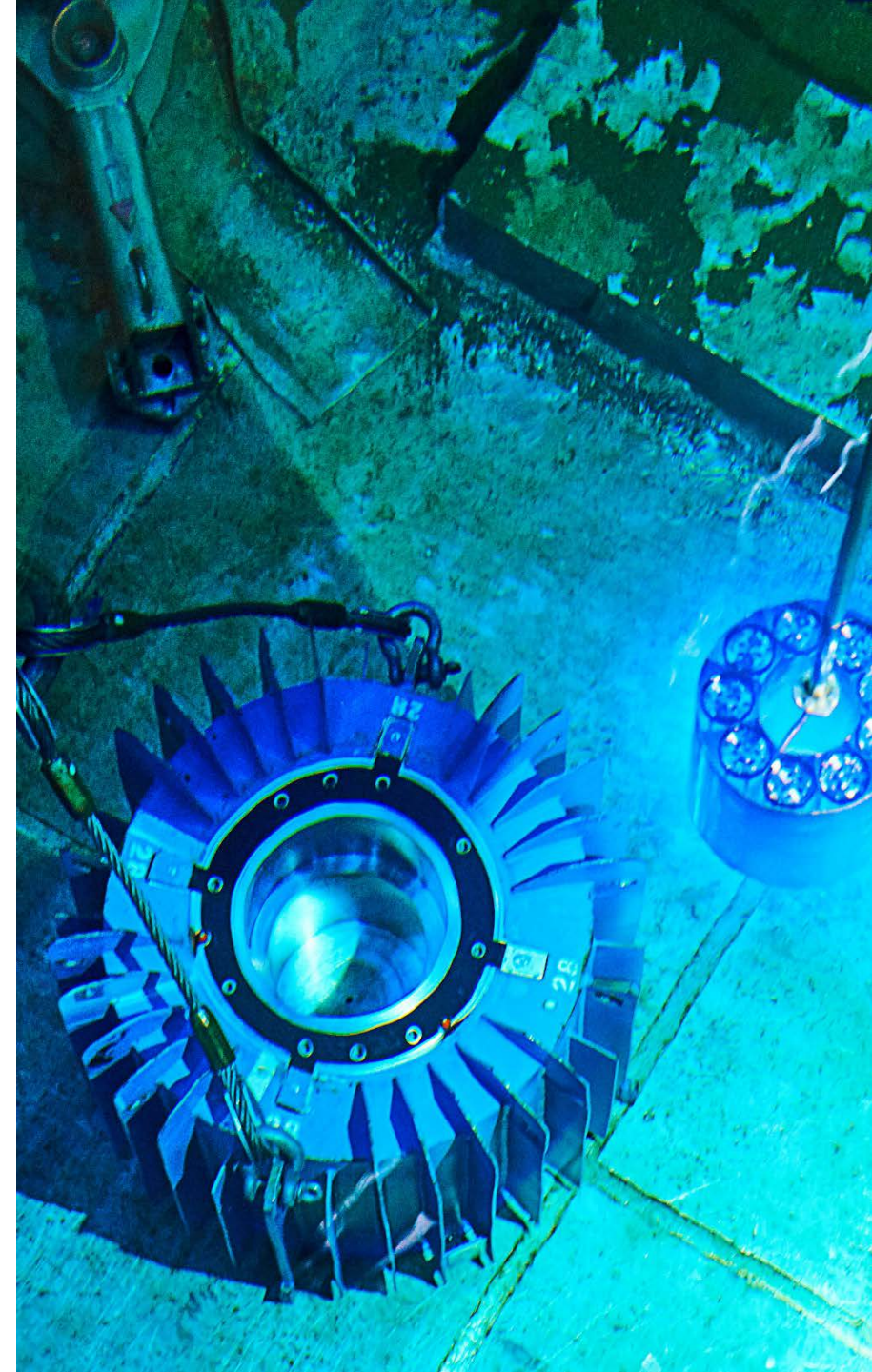
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# Energy Industry Leader

**OPG's strategy is to be a transformational North American clean energy leader that drives economic growth and prosperity for Ontario. Business strategy highlights:**

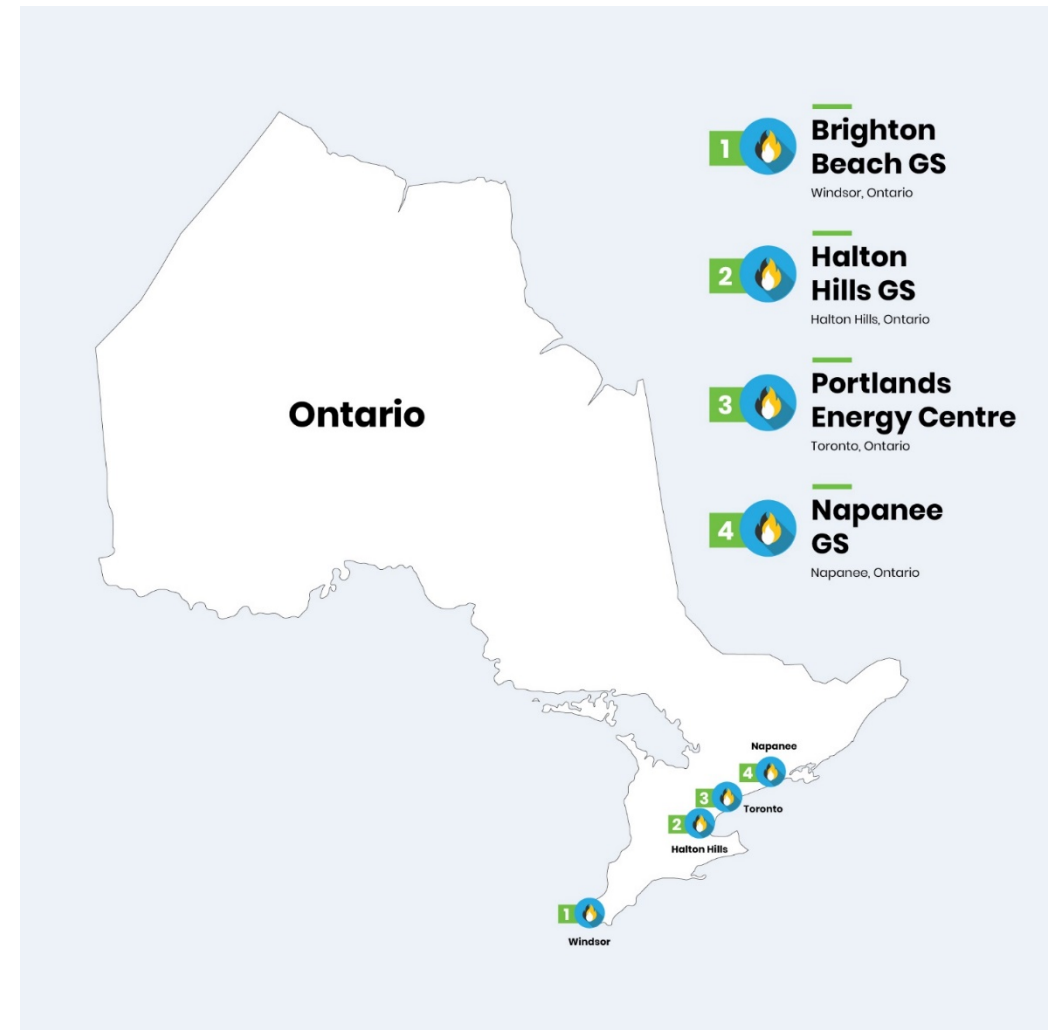
- Redevelopment – Darlington Refurbishment, existing hydroelectric fleet.
- New development – OPG continues to explore the nuclear Small Modular Reactors (SMR) technology as a source of safe, carbon-free, reliable and cost effective energy in the future.
- Develop innovative energy services to meet customers needs
  - Isotopes for medical use: Cobalt-60 and Molybdenum-99
  - Ivy Charging Network: OPG and a subsidiary of Hydro One formed a partnership to create the largest fast-charging network in Ontario with 73 sites and 160 chargers by the end of 2021.
- Acquisitions - Natural Gas Assets, Cube Hydro & Brighton Beach.
- Engaging in the above activities while preparing for the end of the Pickering station's operations in the middle of this decade.



# Acquisition of Natural Gas Assets in Ontario

## Portfolio of Natural Gas-Fired Assets in Ontario:

- In August 2019, completed the acquisition of the remaining 50 percent interest in Brighton Beach plant.
- In July 2019, entered into a purchase and sale agreement to acquire a portfolio of combined-cycle natural gas-fired plants in Ontario for \$2.87 billion, subject to working capital and other customary adjustments.
  - The facilities operate under contracts with the IESO.
  - A pre-merger notification and a request for an Advance Ruling Certificate have been filed with the Commissioner of Competition and a review is currently in process.
  - Closing is expected to occur at approximately the end of the first quarter of 2020.







# Financial Profile



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# Corporate Profile

**\$55.4**  
BILLION  
OF ASSETS<sup>1</sup>

ONTARIO's  
LARGEST **CLEAN** ENERGY  
GENERATOR



A (low)



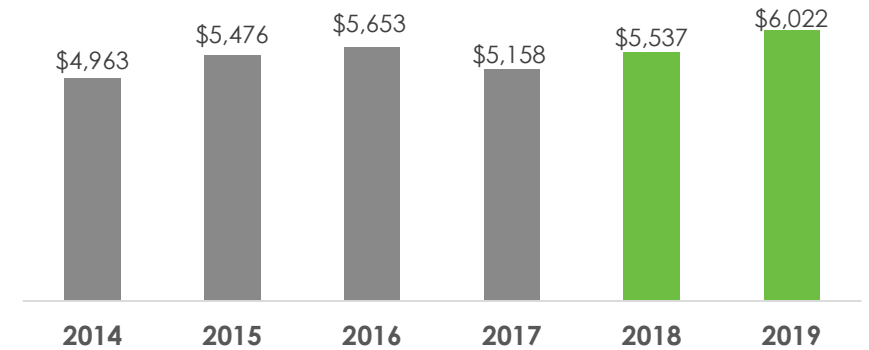
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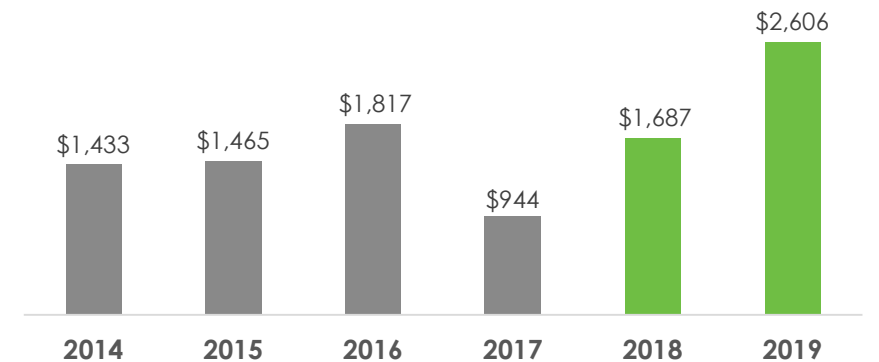
A3

100% owned  
by the  
Province of  
ONTARIO

Revenue (\$M)



Cash Flow from Operations (\$M)

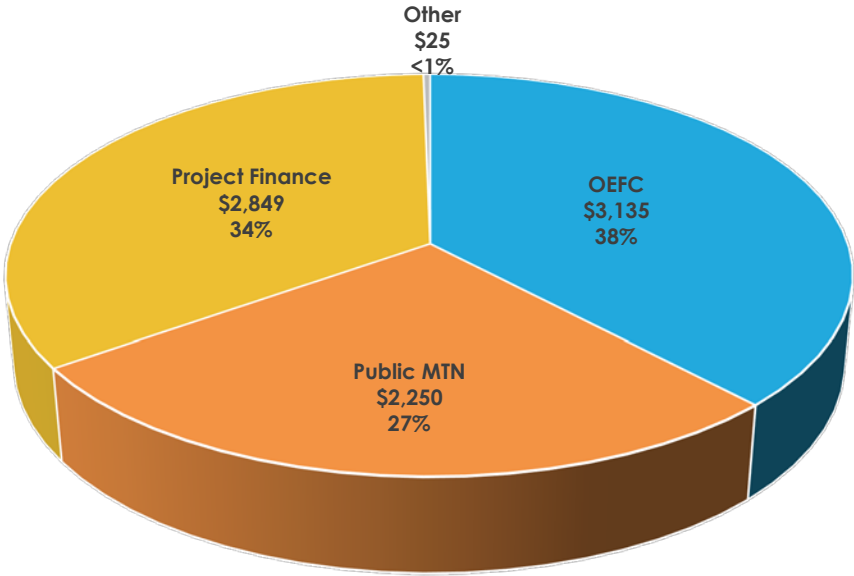
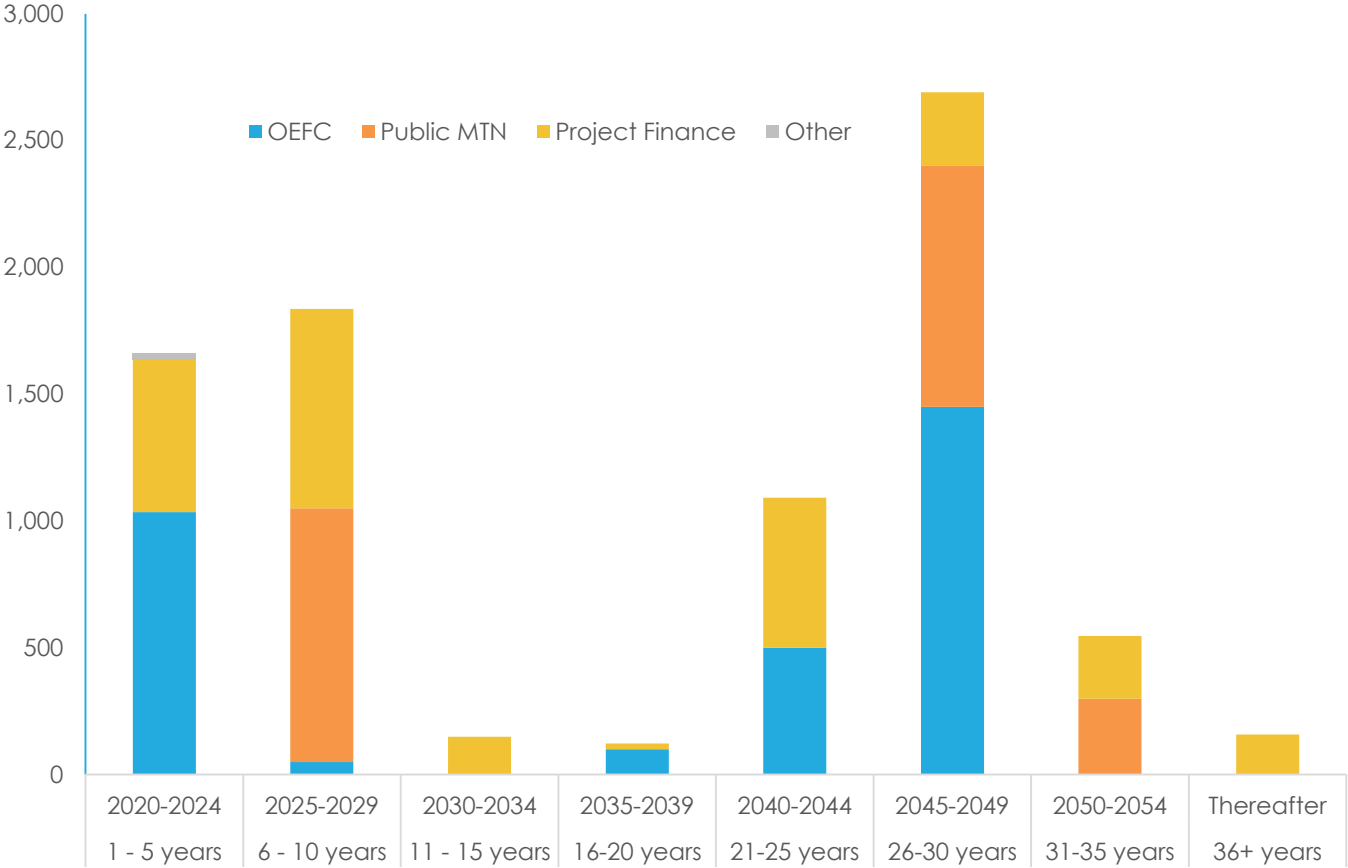


<sup>1</sup> As at December 31, 2019.



# Long Term Debt December 31, 2019 (\$M)

EXISTING DEBT MATURITIES AS AT DECEMBER 31, 2019





An aerial photograph showing a coastal industrial facility, likely a power plant, situated on a green, hilly peninsula. The facility includes several large white buildings and structures. The foreground is dominated by lush green grass and trees, with winding paths or roads. The background shows the vast blue expanse of a body of water under a clear blue sky.

# Outlook

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# Outlook for 2020

## Regulated – Nuclear Generation

- Year-over-year net income decrease is expected, taking into consideration planned outage activity and the refurbishment of Darlington GS timeline, partly off-set by higher approved regulated prices for nuclear generation
- In-service of Darlington GS Unit 2 refurbishment safely, with overall project continuing on schedule and on budget

## Regulated – Hydroelectric and Contracted and Other Generation

- Regulated – Hydroelectric segment expected to continue to provide a stable level of earnings
- Existing portfolio of Contracted & Other Generation segment expected to contribute a generally comparable level of earnings to 2019 levels

## Operating Cash Flow

- Cash flow from operating activities is expected to decline due to higher nuclear outage activity, partly offset by higher approved regulated prices for nuclear generation







Q&A

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