Ontario

MINISTRY OF
ENERGY

Ontario Power Generation

Transition 2018

Foundation Briefing

Working Draft

CONFIDENTIAL DRAFT

Ontario Power Generation Overview

ONTARIO POWER GENERATION

Ontario Power Generation (OPG) **owns and operates electricity generation facilities** in Ontario, including

- Darlington & Pickering nuclear stations.
- Sir Adam Beck I & II hydro-electric stations in Niagara
- Biomass stations in Northwestern Ontario that were previously coal-fired plants.

The company is **100% owned by the Government of Ontario**.

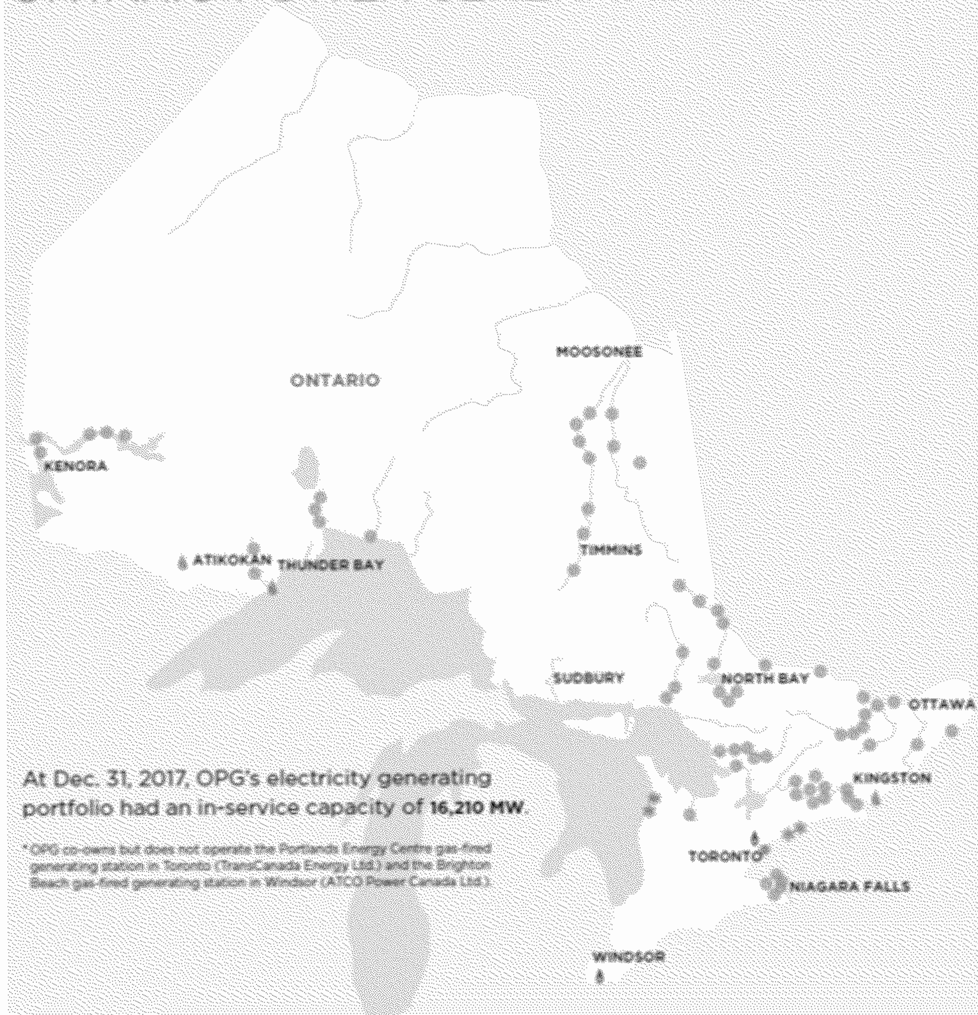
- The Minister of Energy represents the government as Sole Shareholder.
- Incorporated under the *Business Corporations Act*.
- Reporting requirements stem from government agency and public debt requirements.

Human Capital

- **Chair & Board of Directors:** appointed annually by the Shareholder.
- **Current CEO:** Jeffrey Lyash appointed by the Board in 2015.
- **9,200 Regular Employees**: 88 percent are unionized represented by PWU or Society of Energy Professionals.

OPG's Generation Facilities

ONTARIO POWER GENERATION FACILITIES



At Dec. 31, 2017, OPG's electricity generating portfolio had an in-service capacity of **16,210 MW**.

* OPG co-owns but does not operate the Portlands Energy Centre gas-fired generating station in Toronto (TransCanada Energy Ltd.) and the Brighton Beach gas-fired generating station in Windsor (ATCO Power Canada Ltd.).

2 — **Nuclear** Stations

2 — Leased **Nuclear** Stations

66 — **Hydroelectric** Stations

2 — Co-Owned **Gas-Fired** Stations*

3 — **Thermal** Stations

1 — **Wind** Power Turbine

OPG's Generation Facilities (cont'd)

2 Nuclear Stations

- **Darlington:** Refurbishment underway to extend life 30 years.
- **Pickering:** Plan to extend operations by four years to 2024 when it will be shut down.
- Rates are **regulated,** meaning they are approved by OEB.

2 Leased **Nuclear** Stations

- **Bruce Units A & B:** Leases units to Bruce Power on a long-term basis.
- OPG receives payments from Bruce Power

66 Hydroelectric Stations

- **Regulated:** 54 stations- rates approved by OEB.
- **Contracted:** 12 stations- rates set in long-term contracts with IESO.

3 Thermal Stations

- **Biomass:** 2 stations, previously coal. Rates set in contracts.
- **Oil/Gas:** 1 station at Lennox. Rate set in contracts.

2 Co-Owned **Gas-Fired** Stations*

- **Natural Gas:** Co-owns, but does not operate stations in Toronto and Windsor.
- Rates set in contracts.

1 Wind Power Turbine

- **Wind:** 1 turbine located at Pickering Nuclear site.
- Rate set in contract

OPG is working with Indigenous partners on new projects including a solar facility at its former Nanticoke coal plant; and a micro-grid project in Gull Bay.

OPG's Generation Facilities (cont'd)

OPG's generation facilities have different characteristics as illustrated in the company's:

- **In-service capacity:** the amount of electricity a facility can generate
- **Generation output:** the amount of electricity a facility generated in a period.

NUCLEAR STATIONS

- **In-service capacity** ~1/3rd total capacity. Can fluctuate as units are refurbished.
- **Generation output** is high as nuclear stations typically run continuously.

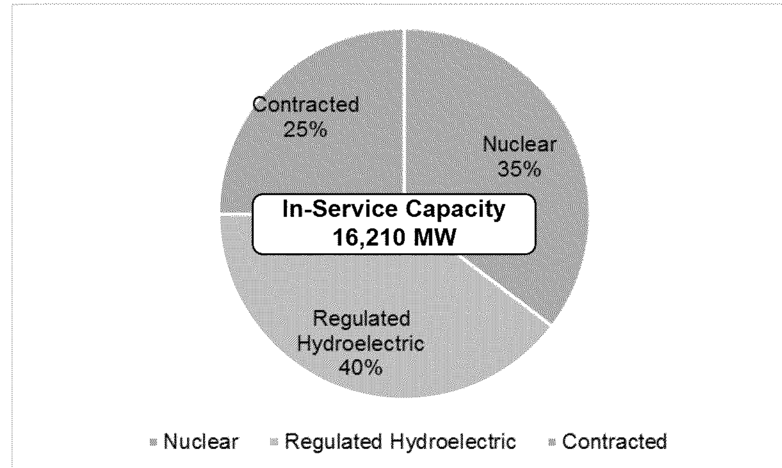
HYDROELECTRIC STATIONS

- **In-service capacity:** Nearly half of total capacity.
- **Generation output**: Facilities run frequently; output can depend on weather and river flow.

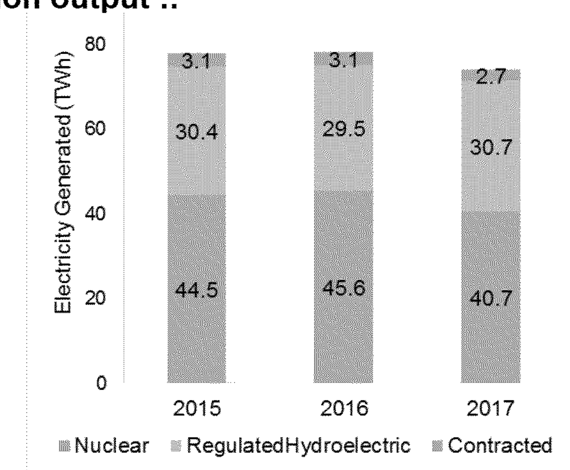
THERMAL AND GAS

- **In-Service Capacity:** Around 20% of OPG capacity
- **Generation output**: Only generate power when demand is high.

In-service capacity- MW (as of Dec 31,2017)



Generation output :.



OPG Structure and Funding

Topic	Details
Governance	OPG's Board of Directors is responsible for supervising the management of the company's business affairs and operations. The Board's decisions are guided by the company's commercial mandate. The Board is responsible for appointing the company's President and CEO who is responsible for day to day operations of the company.
Board Appointments	The Minister of Energy appoints or reappoints board members through an annual shareholder resolution. There are 14 Directors on the Board including the company CEO and the Board Chair.
Shareholder Direction	The Minister of Energy represents the Province as the Sole Shareholder of OPG. In this role, the Minister can issue Shareholders resolutions and declarations outlining direction to OPG's Board of Directors.
Shareholder Oversight	A Memorandum of Agreement serves as the basis of agreement between OPG and its sole Shareholder on mandate, governance, performance, and communications of OPG.

OPG Structure and Funding

Topic	Details
Financing	OPG recovers its costs from electricity ratepayers for the electricity it generates. OPG borrows from the Ontario Electricity Financing Corporation (OEFC) for generation projects and general corporate purposes. In 2017, it began to borrow from capital markets, largely in support of Ontario's Fair Hydro Plan. OPG's capital structure is 65% equity – 35% debt. The OEB uses a deemed capital structure of 45% equity – 55% debt to determine OPG's regulated rates.
Province's Fiscal Plan	OPG's net income is included in the government's financial statements, meaning it impacts the government's fiscal/deficit position. OPG also pays payments in lieu of taxes to the government and other taxes
Business Plan	OPG's Board approves the company's Business Plan. The Business Plan is then submitted to the Minister of Energy for review and concurrence. Concurrence is subject to the appearance of OPG's business plan before Treasury Board
Agency status	A government business enterprise (GBE). This means: • the government owns the company, • it is a separate legal entity • It has financial and operational authority to carry on its business • It provides services/goods to entities outside of government Other examples of GBE's include the LCBO and OLG.

OPG Reporting Requirements

Frequency	Reporting Requirement
Quarterly	Quarterly Financial Statements and MD&A (including Fair Hydro Plan Trust) are publicly released with media release Briefings to the Shareholder on operational and financial performance Board and Executive Expenses Review as required under the Broader Public Sector Executive Compensation Act, 2014 and the Travel, Meal and Hospitality Expense Directive.
Jan. 1st – March 31st	Annual Information Form and year-end financial statements are filed with the Ontario Securities Commission. Government releases Public Sector Salary Disclosure/Statement of Executive Compensation OPG seek Minister's concurrence for Business Plan and Minister presents the plan to Treasury Board
April 1st – June 30th	Annual Report is tabled in the Legislature
July 1st – Sept. 30th	Sustainability report: provides update on OPG's environment, social and economic sustainability initiatives. Posted on OPG's website.
Oct. 1st – Dec. 31st /Year-end	Target date to submit Business Plan to ENERGY

Status of Collective Bargaining

Union	The Society of Energy Professionals	Power Workers Union
Total Regular Employees (end of 2017)	~3,250	~4,850
Term of Agreement	3 years	3 years
Collective Agreement Expiry Date	December 31, 2018	March 31, 2018 (negotiations ongoing)
Settlement Mechanism	Arbitration	Strike/Lockout

In addition to the regular workforce, construction work is performed through **19 craft unions** with established bargaining rights at OPG facilities.

- Examples include the Canadian Union of Skilled Workers and the Brick and Allied Craft Union
- These bargaining rights are established either through the **Electrical Power Systems Construction Association (EPSCA**) or directly with OPG.
- These collective agreements currently have multi-year terms, expiring on **April 30, 2020**.

OPG's Business Plan

- OPG's most recent 2018-21 Business Plan received concurrence from the Minister of Energy on April 18, 2018. The plan outlines five critical factors for the company:

1. Pickering Relicensing

- OPG is planning to continue operation of the Pickering Generation Station to 2024.
- OPG is seeking a 10-year license renewal from the federal nuclear regulator. The current license expires in August 2018.

2. Darlington Refurbishment

- Work on the first unit, Unit 2, has passed the half-way mark and is tracking on time and on budget. Unit 2 is tracking to be returned to service in early 2020, after which Unit 3 would begin refurbishment.
- All 4 units are expected to be refurbished by 2026.

3. Collective Bargaining

- Collective agreements with both the PWU and Society expire in 2018.
- The Business Plan's targets to reduce operating costs are contingent on outcomes of collective bargaining.

4. Fair Hydro Trust

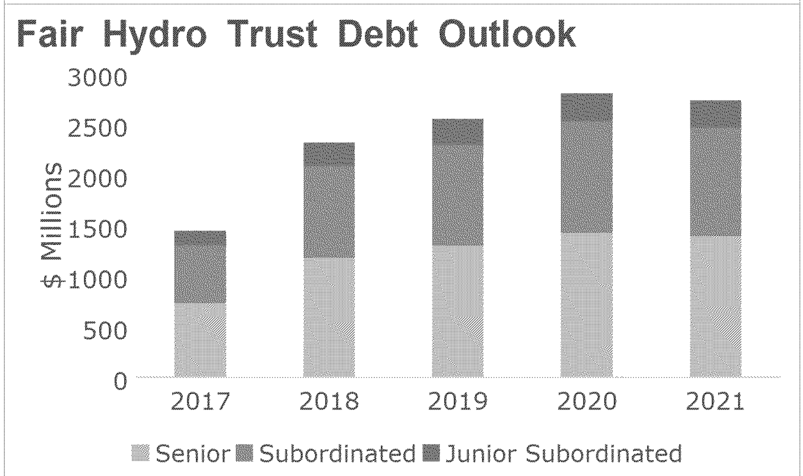
- OPG serves as the Financial Services Manager (FSM) of the Fair Hydro Trust
- As the FSM, OPG is responsible for managing the refinancing of the Global Adjustment (GA).

5. Business Development

- OPG plans to improve efficiencies from its core operations.
- OPG also hopes to use a public debt platform to pursue new business opportunities to grow its revenue. These could include new development projects and acquisitions.

Fair Hydro Trust

- The *Fair Hydro Act, 2017* (Act) received Royal Assent on June 1, 2017. The Act appointed OPG as Financial Services Manager (FSM) of the Global Adjustment (GA) refinancing program.
- In 2017, OPG completed a Financing Plan and establishing a financing entity (i.e. the Fair Hydro Trust) through which debt obligations are incurred and managed.
  - The Fair Hydro Trust (FHT) is structured to be bankruptcy remote and ring-fenced from OPG.
  - The FHT issues 51% of the debt in the capital markets (called senior debt). The remainder is purchased by OPG, funded by periodic equity injections from the Province and OPG's own corporate borrowing program.
- <u>Current Status:</u> The FHT closed its first two issuances of long-term debt in February and April 2018, for a total of $1.77 billion at a weighted average interest rate of 3.61%.
- OPG forecasts earnings of over $500 million in net income as a result its investment in the Trust.
- Since the Province owns OPG, OPG's net income is consolidated onto the Province's books.



Note: Based on Ministry of Energy forecasts consistent with the Fair Allocation Amount provided to OPG in September 2017. Analysis assumes a 5% average interest rate over the 30-year life of the program and includes estimates of OPG fees. Estimates are subject to change based on a number of variables, including interest rates.

Source: Ministry of Energy