

ONTARIO POWER GENERATION

Ontario's Future Electricity



BMO Infrastructure Conference

February 10, 2011

OPG Nuclear Fleet



Pickering



Darlington

- 10 operating units – 6,606 MW
- Approximately 46 TWh generated in 2010 – about one-third of Ontario's electricity demand
- Focus is on continuous improvement
 - 2010 - Improved unit capability factor for Darlington compared to 2009
 - 2009 - Improved performance from Pickering B units
 - 2008 - 4 OPG's nuclear units achieved unit capability factors above 90%
 - 2008 - 4 OPG nuclear units ranked among the top five performing CANDU reactors in the world
 - 2007 - Darlington recognized by Institute of Nuclear Power Operations for improved performance

OPG is moving ahead with Nuclear Refurbishment and preparing for New Nuclear Build

Darlington



Darlington

- OPG is proceeding with detailed planning for refurbishment

Pickering B

- OPG continues to undertake technical and regulatory work related to continued operations to extend the life of Pickering B for an additional four to six years beyond the stations nominal end of life

New Nuclear Build

- OPG selected by Province to operate two new nuclear units at Darlington site (June 2008)
- Province suspends RFP process (June 2009)
- OPG is proceeding with the EA and site licensing process
- On December 14, 2010 the Joint Review Panel for the Darlington New Nuclear Project (the Panel) announced that it will proceed to the public hearing phase of the environmental review
- The hearings will take place beginning March 21, 2011
- Public hearings are an essential element of the review of the proposed Darlington New Nuclear Project

OPG Thermal Fleet



Lambton GS



Atikokan GS



Lennox GS



Nanticoke GS



Portlands Energy Centre*



Thunder Bay GS



Brighton Beach*

- 5 Thermal Generating stations: 6,327 MW (coal, oil, natural gas fuelled)
- 2 Co-owned Natural-Gas stations*: 1,130 MW
- Flexible, reliable power
- OPG shut down 2 Lambton units and 2 Nanticoke units in October 2010
- 2 additional Nanticoke units will close in 2011

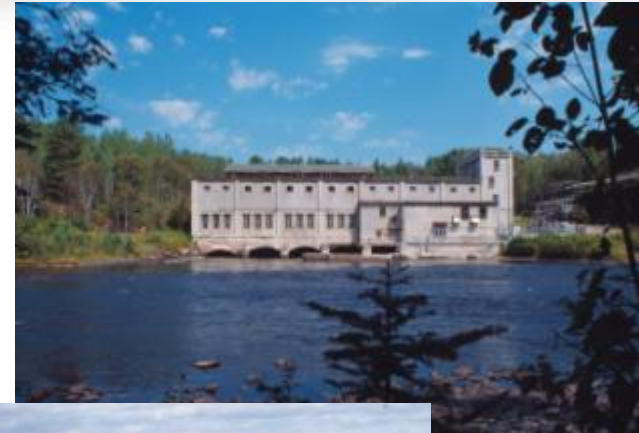
Thermal - Managed Coal Phase Out

- OPG will complete regulated phase out of coal by end of 2014
- Until then, the units remaining in service will help to ensure adequate electricity supply in Ontario when demand is high
- The phase out of units has been advanced, where possible, to save costs for consumers without risking reliability (closure of four coal units in October 2010 saves \$200 million over the next 4 years)
- OPG is planning to convert its Atikokan GS to burn biomass (wood pellets), and Thunder Bay GS to gas

OPG Hydroelectric Fleet

Powering the Past, Present & Future

- Total capacity ~7,000 MW
- Hydroelectric normally produces about 34 TWh per year – or about 20% of Ontario's Generation
- Availability factor – over 90%
- 65 Hydroelectric stations
- Oldest in service from 1898
- Newest (Upper Mattagami and Hound Chute stations) in-service December 2010
- More than 50 per cent of stations began generating electricity over 80 years ago



OPG is adding clean, renewable, hydroelectric capacity



Niagara Tunnel



Upper Mattagami



Lower Mattagami

Upper Mattagami & Hound Chute

(UMH Energy Partnership)

- \$300 million project completed in December 2010 within budget and ahead of schedule
- Included the full redevelopment of 4 existing end-of-life stations located in Northeast Ontario
 - 3 stations on the Upper Mattagami River
 - 1 station on the Hound Chute River
- Added 44 MW of clean, renewable hydroelectric capacity



Healey Falls

- Addition of 4th unit to existing station
- 6 MW capacity
- Completed in 2010 on schedule



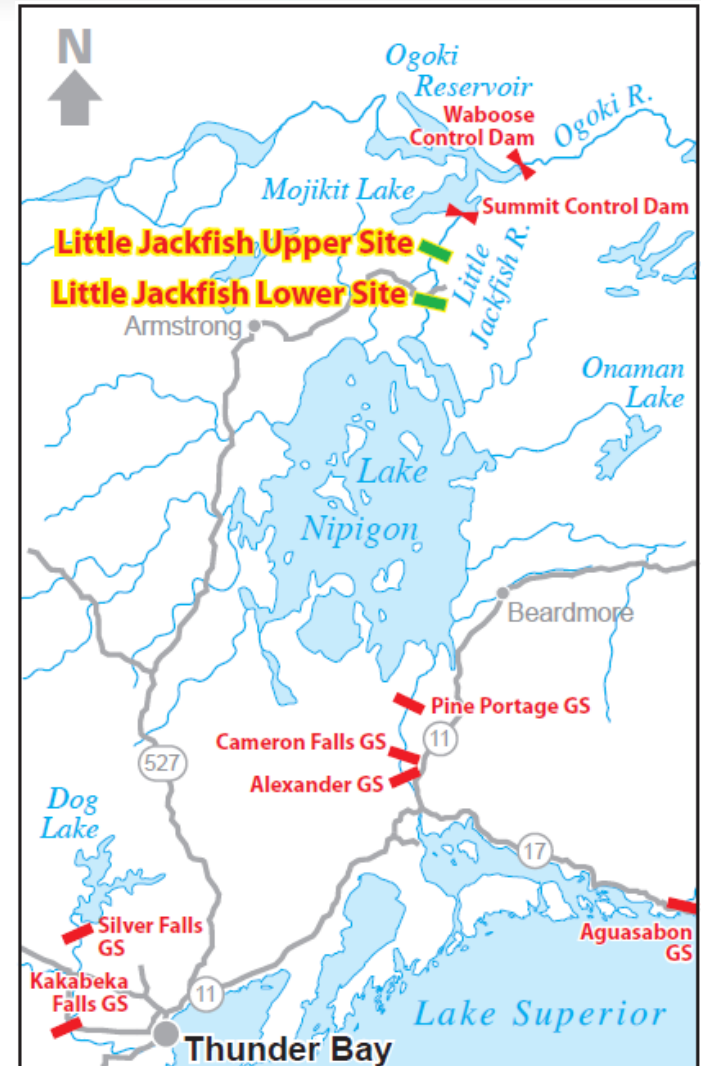
Niagara Tunnel



- One of the largest tunnel projects in North America
- Will generate 1.6 billion kilowatt hours of electricity every year – enough to power 160,000 homes
- Tunnel boring has reached over 9 km of 10.2 km route
- Project is tracking on revised 2009 schedule:
 - Difficult rock conditions delayed progress from 2006 through 2009
 - 2010 progress was excellent
 - Total budget revised in 2009 to reflect actual rock conditions - now \$1.6 billion
- Breakthrough of the tunnel boring machine this year...stay tuned
- Project scheduled for completion in 2013

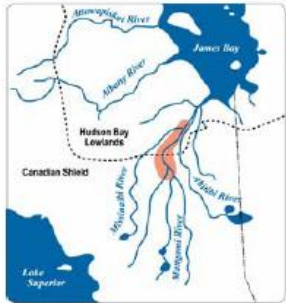
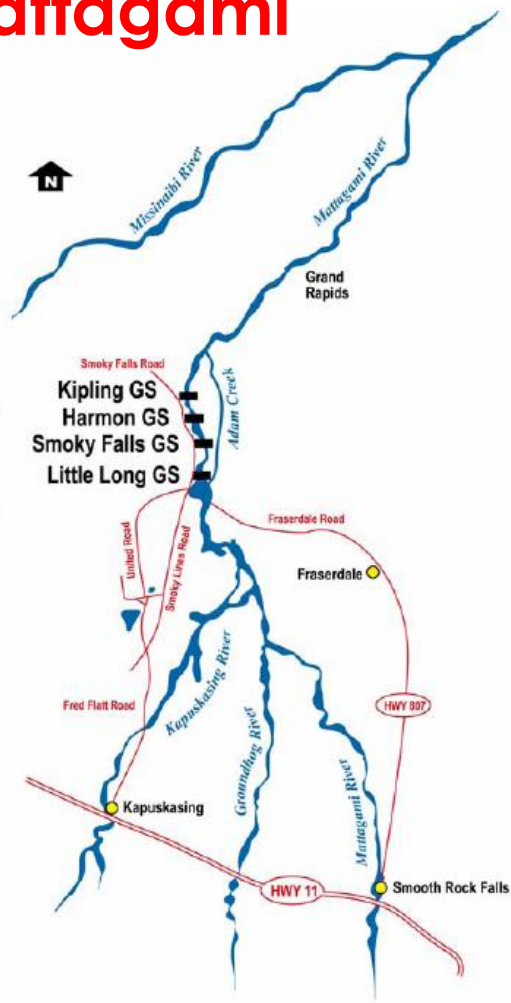
Little Jackfish

- In planning phase
- Proposed project would provide up to 100 MW clean renewable energy
- Unique partnership being developed with several First Nations
- Will make better use of existing water
- Included in Ontario's Long Term Electricity Plan



OVERVIEW OF LOWER MATTAGAMI PROJECT

Lower Mattagami



- OPG is expanding hydroelectric assets near James Bay; the expanded complex will consist of both existing and incremental assets
- Currently the Lower Mattagami Energy Complex is composed of four stations on the Mattagami River in north eastern Ontario approximately 70 km northeast of Kapuskasing
 - Little Long (138 MW)
 - Smoky Falls (52 MW)
 - Harmon (142 MW)
 - Kipling (154 MW)
- Project includes full replacement of the Smoky Falls station and expansion of the other three stations in order to optimize water flow on the River
- Cost of redevelopment is \$2.56 billion with \$1.92 billion funded through debt in bank, CP and bond markets

Lower Mattagami Energy Complex



- Total asset value will be \$2.96 billion after the redevelopment and total capacity will be 937 MW
 - 438 MW of new, clean, renewable energy at existing sites using river water more efficiently
- Moose Cree First Nation will have the opportunity to invest up to 25% equity partnership in the project
- Construction will employ up to 800 people at peak
- Over 4,000 person-years of direct and indirect employment in the region

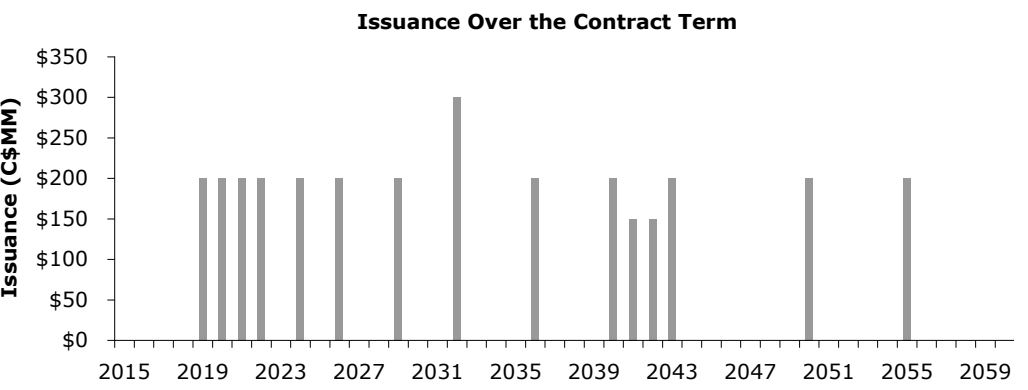
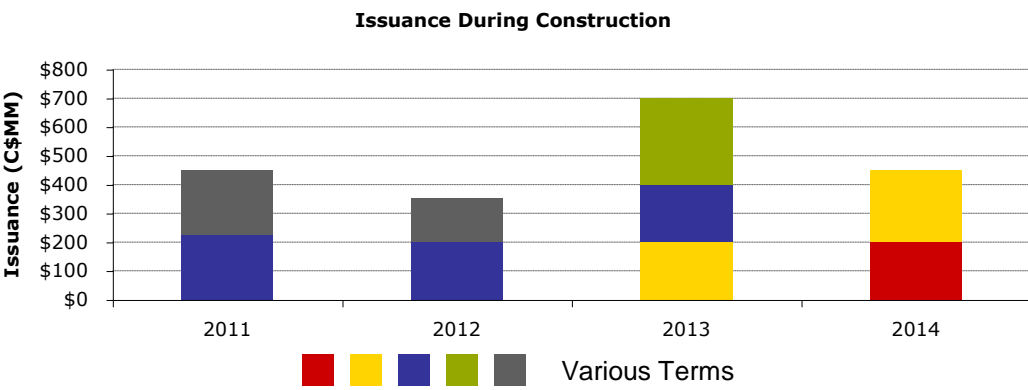
Investment Highlights

- Long-term Hydroelectric Energy Supply Agreement with creditworthy counterparty
 - Approximately 50 year agreement with Ontario Power Authority (OPA)
 - Insulates Lower Mattagami Energy Complex from construction risk and from financing, hydrology and market risks
- Sponsorship by and full recourse to OPG during construction
 - OPG will own and control the Issuer and Guarantor, and will construct and complete the expansion and redevelopment
 - Senior Debt Investors will benefit from full recourse to OPG in respect of all obligations until Recourse Release Date
- Long-life Hydroelectric power generation assets
 - Unique asset class with sustainable competitive advantages over other forms of electricity generation including reliability, “perpetual” asset with proper maintenance
- Robust financial profile
 - Revenue “floor” under the HESA provides downside protection and mitigates construction, operating, hydrology, financing and market risk through regulatory-like framework

Lower Mattagami Financing Plan

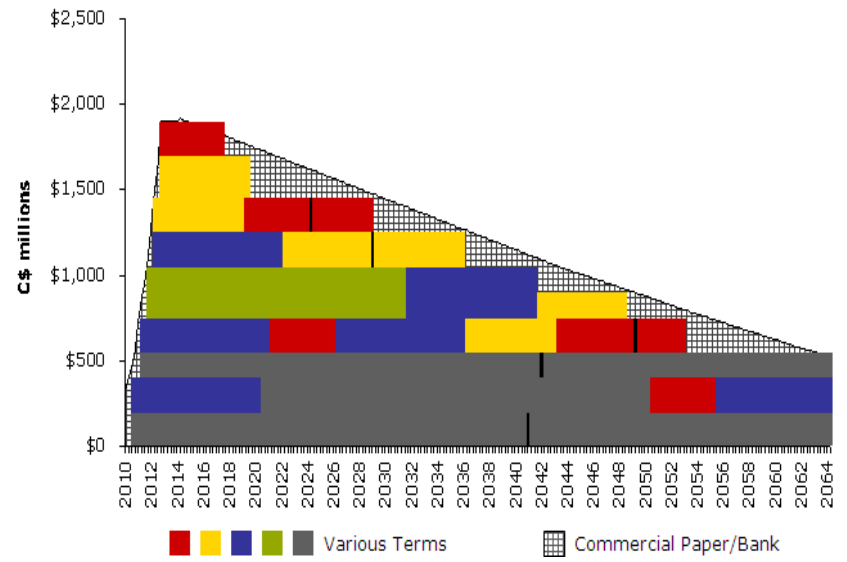
- Project costs will be initially funded through the issuance of commercial paper periodically refinanced in the long term debt market during the 5 year construction period
- CP program rated R1-Low was launched in September 2010
- Lower Mattagami received an issuer rating of A High from DBRS and A2 from Moody's
- Senior bonds will be periodically issued in the private placement market, either repaying commercial paper or being used to fund costs directly
- The bond issues will be structured to appeal to the broadest range of institutional investors through issue size, timing of issues, term, repayment profile as well as spreading out refinancing risk for subsequent bond maturities
- Bonds are secured by Lower Mattagami assets and will have recourse to OPG until assets are in-service and recourse release conditions are met

Illustrative Bond Issuance



Illustrative Refinancing Profile

- Planned principal amortization equivalent to 65% of asset depreciation
- Principal amortization achieved through repayment of short-term debt and reduced refinancing of long-term bonds as required



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