

# Ontario Off-Coal Transition

Michigan Capacity Need Forum  
August 25, 2005

Kim Warren  
Manager, Regulatory Affairs, IESO



- The IESO is mandated by the Electricity Act to direct the safe and reliable operation of Ontario's bulk electricity system. Some of the objects of the IESO include ...
  - Directing the operation of the IESO controlled grid
  - To work with the responsible authorities outside Ontario to co-ordinate the IESO's activities with their activities
  - To operate the IESO administered markets

- Bill 100 introduced hybrid electricity sector:
  - Creation of Ontario Power Authority (power procurement, 20-year Integrated Power System Plan)
  - regulated retail price plan
- Wholesale Prices
  - Large customers (annual consumption > 250,000 kWh) pay real-time prices
- Retail Prices
  - Regulator annually sets retail energy prices that better reflect the true cost of power (5 cents/kwh for first 750 kwh; 5.8 cents above threshold)

“We are leading the way as the first jurisdiction in North America to put the environment and health of our citizens first by saying ‘no’ to coal.”

“And as we have said all along, maintaining the reliability is the first principle of our plan. It’s a prudent and responsible plan that will ensure cleaner air for the province”

(Ontario’s Energy Minister, Dwight Duncan – June 15, 2005)

# New Generation and Contracted Dispatchable Demand

Project	Zone	Fuel Type	Capacity MW	Estimated I/S Date
Pickering Unit 1	Toronto	Uranium	515	2005-Q3
Greater Toronto Airports Authority	Toronto	Gas	117	2005-Q4
Melancthon Grey Wind Project	Southwest	Wind	68	2005-Q4
Kingsbridge Wind Power Project	Southwest	Wind	40	2005-Q4
Prince Wind Farm	Northeast	Wind	99	2006-Q1
Erie Shores Wind Farm	Southwest	Wind	99	2006-Q2
Loblaws Properties	distributed	Demand	10	2006-Q2
Blue Highlands Wind Farm	Southwest	Wind	50	2006-Q3
Umbata Falls Hydroelectric	Northwest	Water	23	2007-Q1
Greenfield South Power Project	Toronto	Gas	284	2007-Q4
Greenfield Energy Centre	West	Gas	1,015	2007-Q4
St. Clair Power	West	Gas	688	2008-Q1
Greenfield North Power Project	Toronto	Gas	330	2009-Q2
<b>Total</b>			<b>3,338</b>	

## **Addition Resources**

**Bruce GS Units 1 and 2**

**up to 380 MW hydroelectric capacity in Northern Ontario**

**1,000 MW generation in the western GTA**

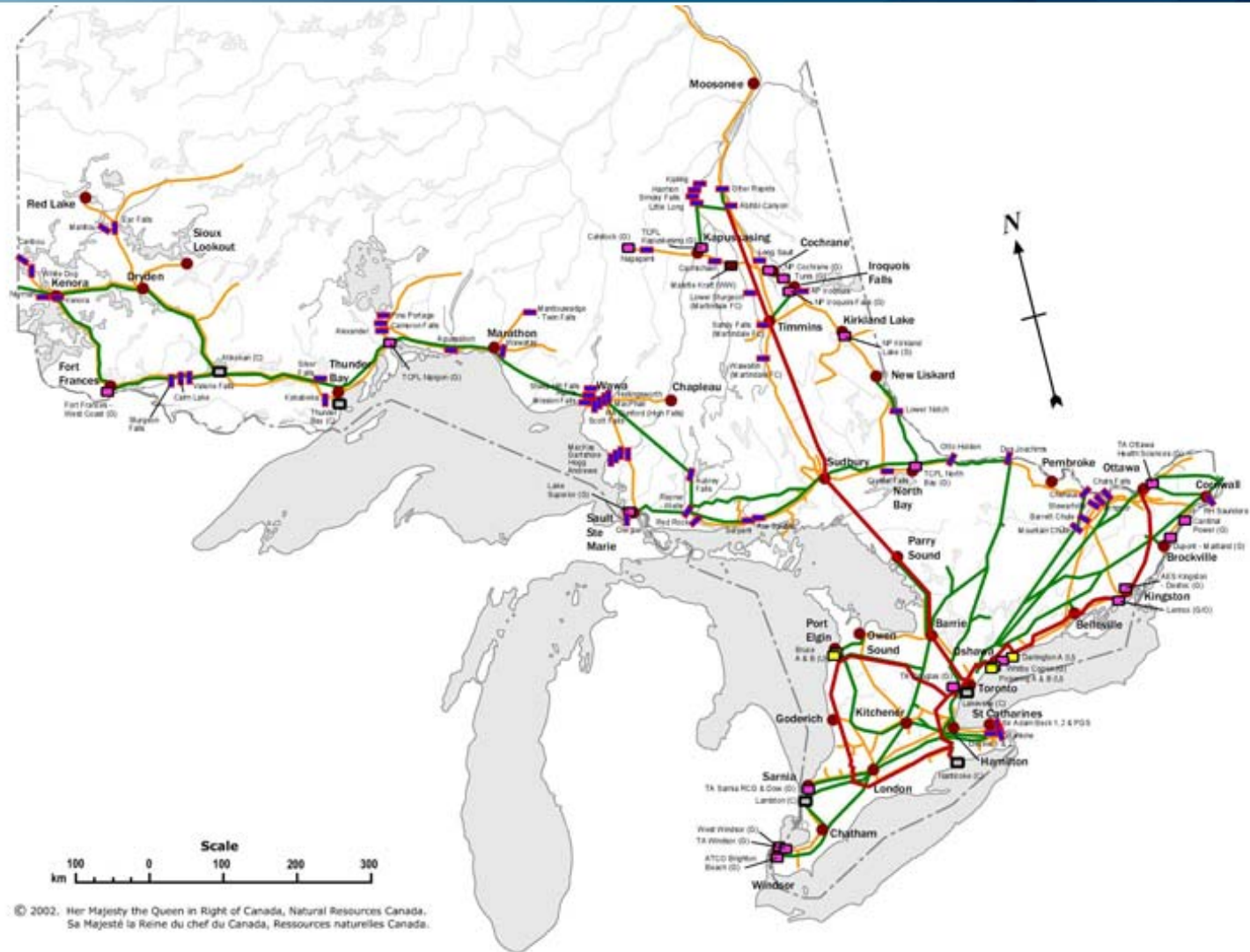
**500 MW generation in downtown Toronto**

**1,000 MW co-generation projects**

**250 MW demand-side measures**

<b>Possible Additional Resources</b>
<b>Pickering G2, G3</b>
<b>Conservation Programs under the OPA</b>
<b>Projects to meet the Renewable Portfolio Standard of 2700 MW by 2010</b>
<b>long term power purchases from Manitoba</b>
<b>long term power purchases from Newfoundland and Labrador</b>

# Ontario Major 500 kV and 230 kV Line Routes and Stations



- The transition off coal is one of the most significant undertakings in the history of Ontario's electricity system
- There are a number of transmission infrastructure additions required to support the off coal plan
- There are also a number of local delivery problems developing in southern Ontario
- These issues are presented in detail in the IESO's 10- Year Outlook posted on public website:  
[www.ieso.ca/imoweb/pubs/marketReports/10YearOutlook\\_2005jul.pdf](http://www.ieso.ca/imoweb/pubs/marketReports/10YearOutlook_2005jul.pdf)

- Reliability based processes are in place to manage the transition process
- Modifications to project schedules are expected and being accounted for in the transition plan
- The IESO will continue to monitor developments and modify transition plans
- The IESO will continue to meet our area, regional and interconnection obligations through our extensive connection and adequacy assessment processes.

- Ontario will not rely on the interconnections for capacity requirements during the coal replacement transition
- The interconnections will continue to be used for issues such as extreme weather variations
- The long term use of interconnections for capacity purposes should be based on the construction of additional interconnection capability

- The IESO was recently realigned to address the challenges of the transition
- The realignment includes the position of Vice President, Reliability Assurance
- This position reports directly to the CEO and is responsible for ensuring reliability is maintained during this transition
- Also includes co-ordination activities with the OPA initiatives (RFP processes and the IPSP)

“The phase out of coal represents one of the most significant undertakings in the history of Ontario's electricity sector. The implementation of the government's plan to stop burning coal in 2009 recognizes the need to maintain reliability as coal-fired generation is phased out in favour of cleaner generating sources. The IESO is committed to working with the provincial government and others to ensure that reliability is not compromised during this transition period.”

*Dave Goulding*

*President and CEO of the Independent Electricity System Operator (IESO)*