

Canadian Wind Energy
Association/Ontario Waterpower
Association Presentation

OEB Stakeholder Meeting
Transmission Connection Cost
Responsibility Review
February 14, 2008

Introduction

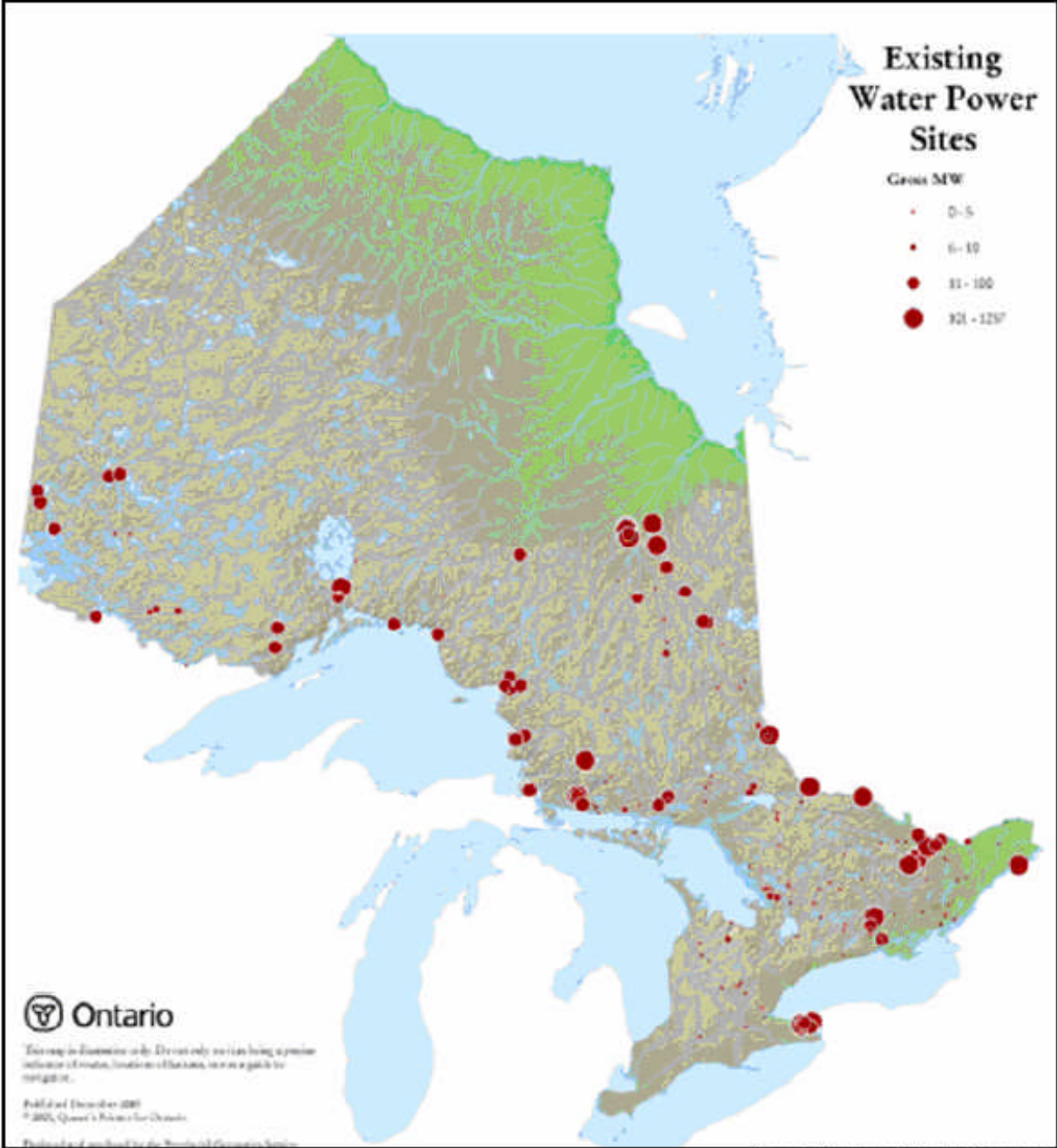
- OWA and CanWEA represent 95% of Ontario's existing and IPSP-proposed renewable energy generation
- The resources “are where they are”, so enabling transmission is required to access them
- This proceeding is of extreme importance to CanWEA's and the OWA's members
- CanWEA and OWA will seek to collaborate, wherever possible and to work with others

Overview

- Waterpower in Context
- Windpower in Context
- Connection Considerations
- Proposed Direction
- Conclusion

Waterpower in Context – Current Contribution

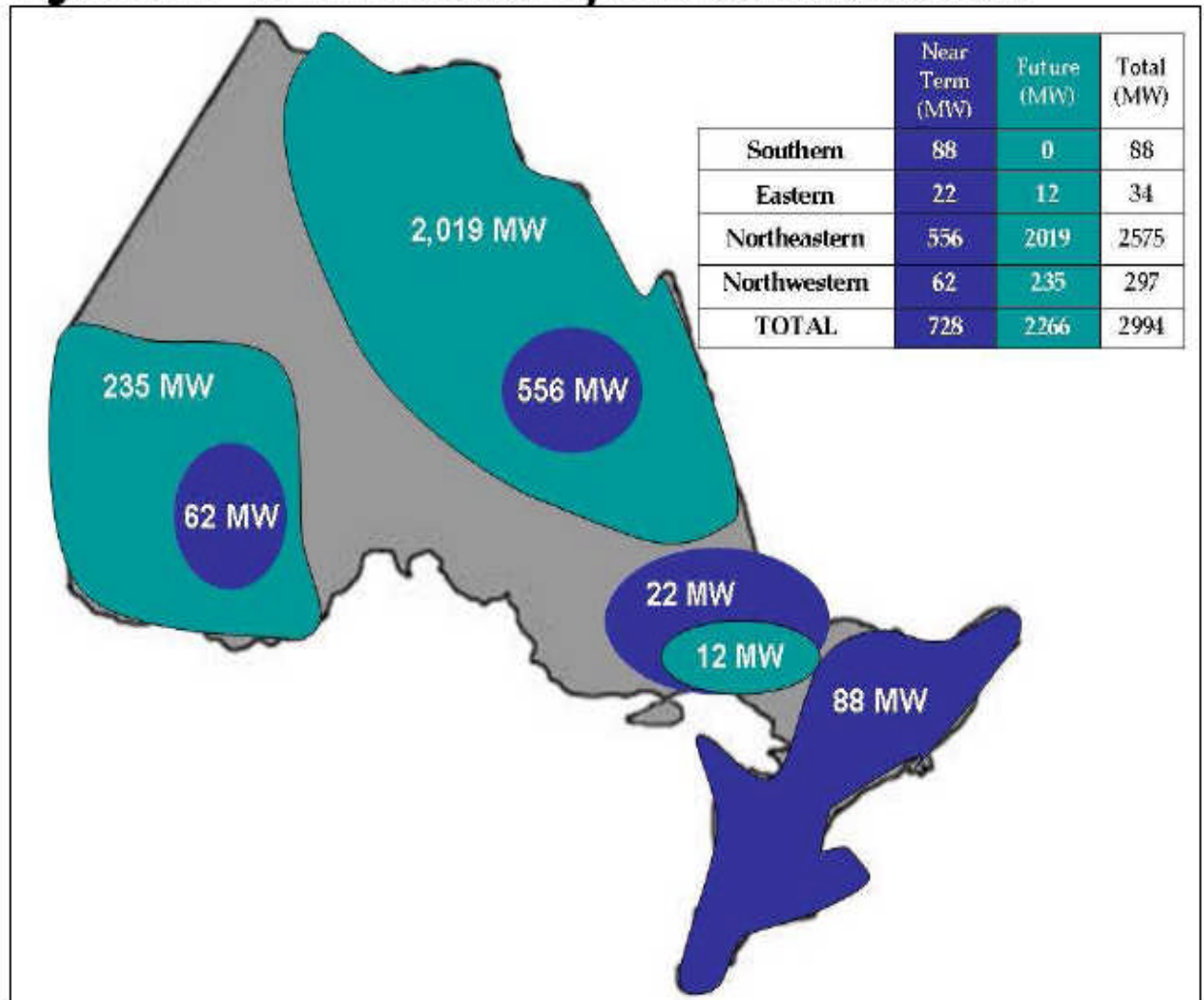
Figure 3.6.2 – Existing Waterpower Sites in Ontario



Source: Ministry of Natural Resources

Waterpower in Context – Identified Opportunities

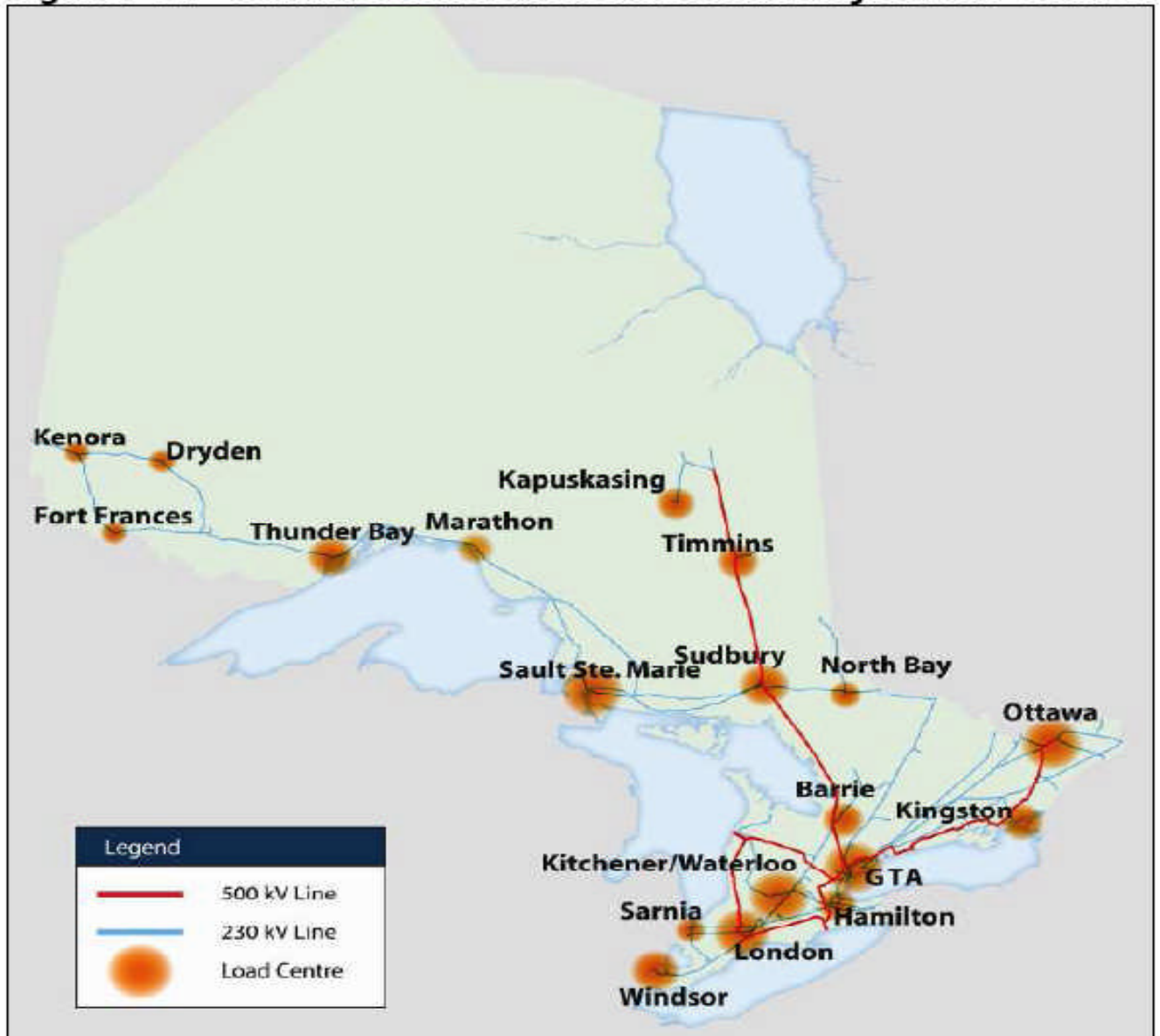
Figure 3.1 – New Potential Hydroelectric Resources



Source: OPA

Waterpower in Context – Transmission Limitations

Figure 2.2 – Ontario Bulk Transmission and Major Load Centres



Source: IESO and OPA

Connecting Waterpower

Figure 2.16 – North and East of Sudbury Transmission Enhancements

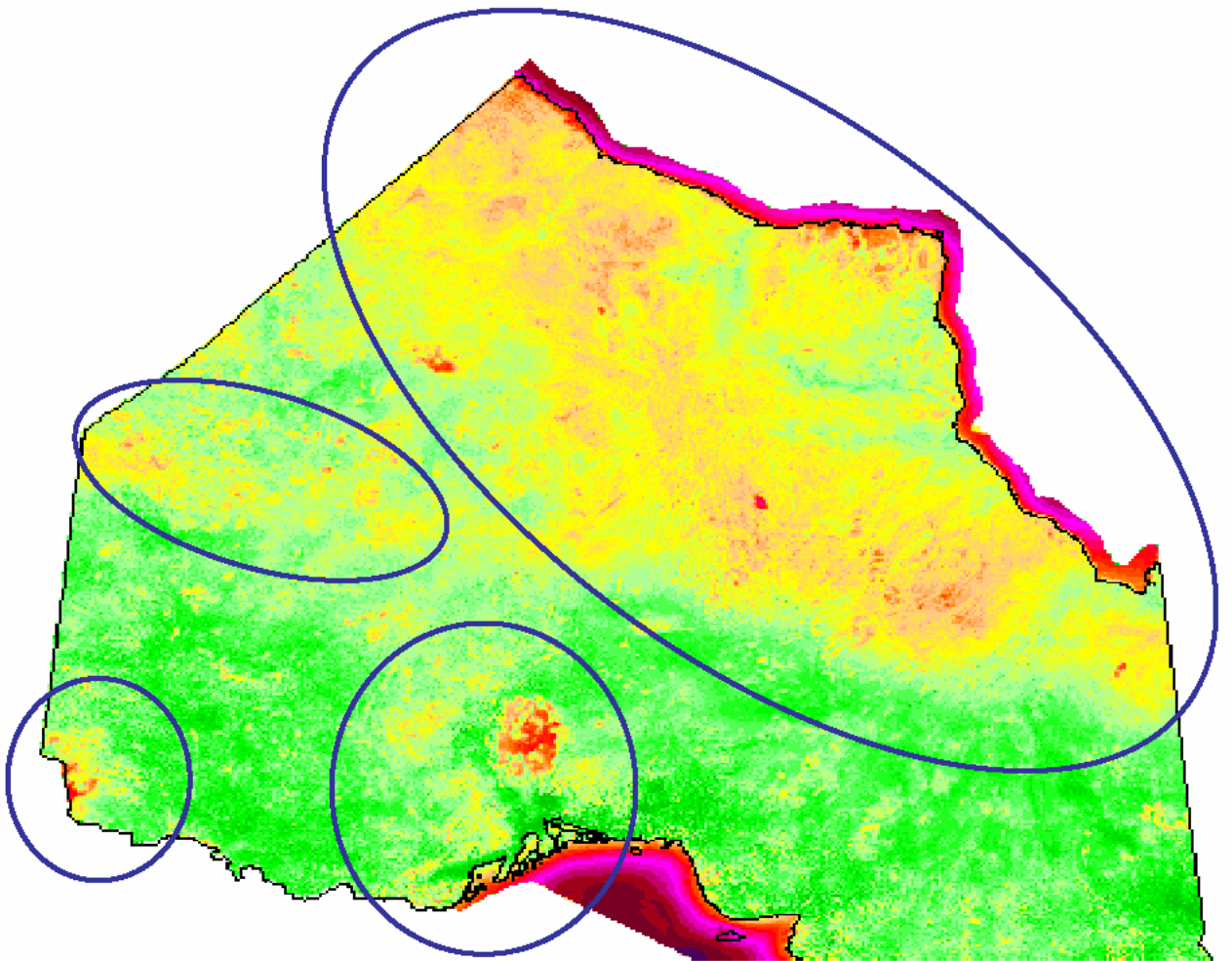


Source: Hydro One Networks Inc. and OPA

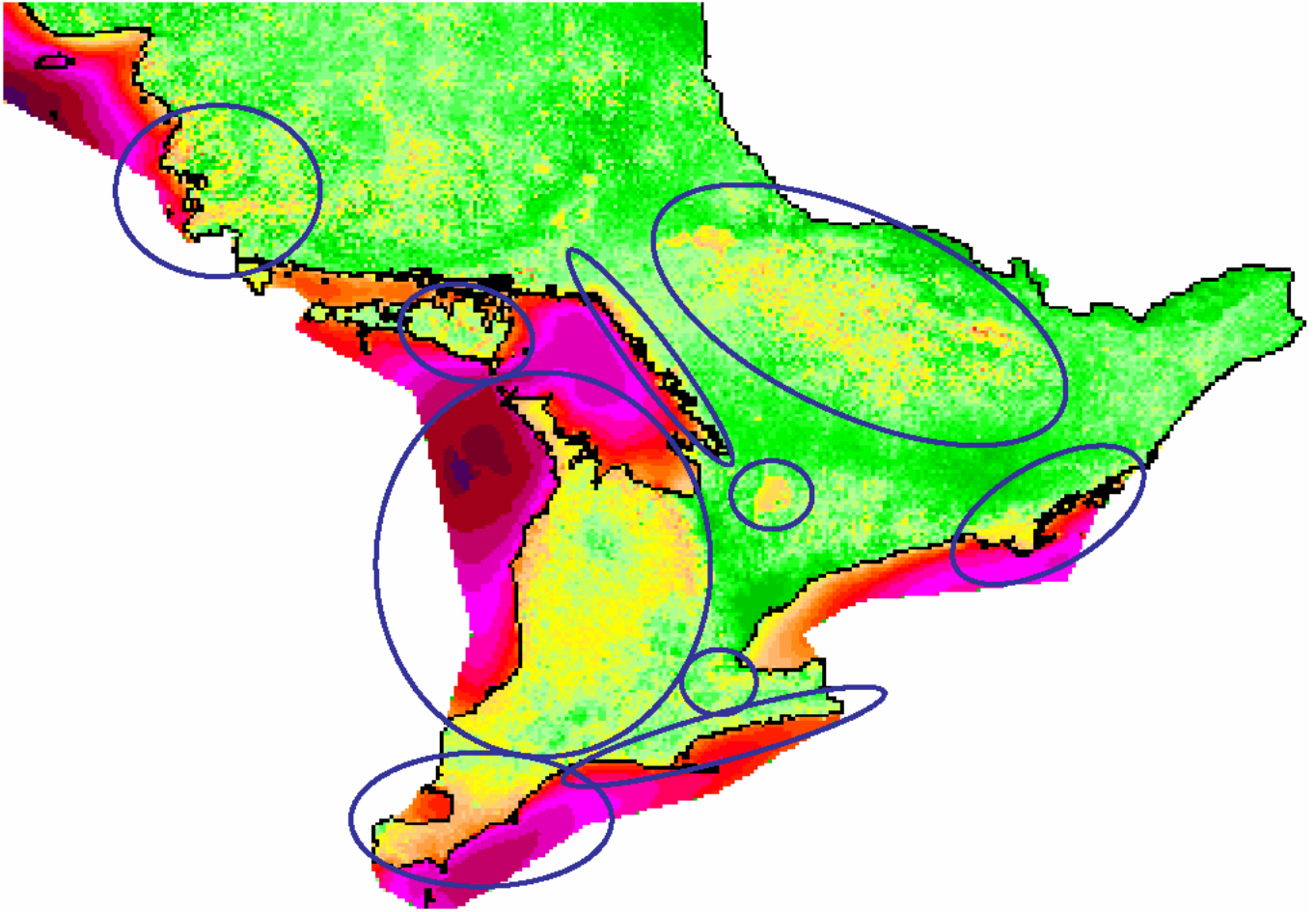
Windpower in Context – Current Contribution

	Water	Wind	Biomass	Solar
RES RFPs	43	865		
Standard Offer	25	431	30	109
<i>Total</i>	<i>68</i>	<i>1,296</i>	<i>30</i>	<i>109</i>

Windpower in Context - Identified Opportunities

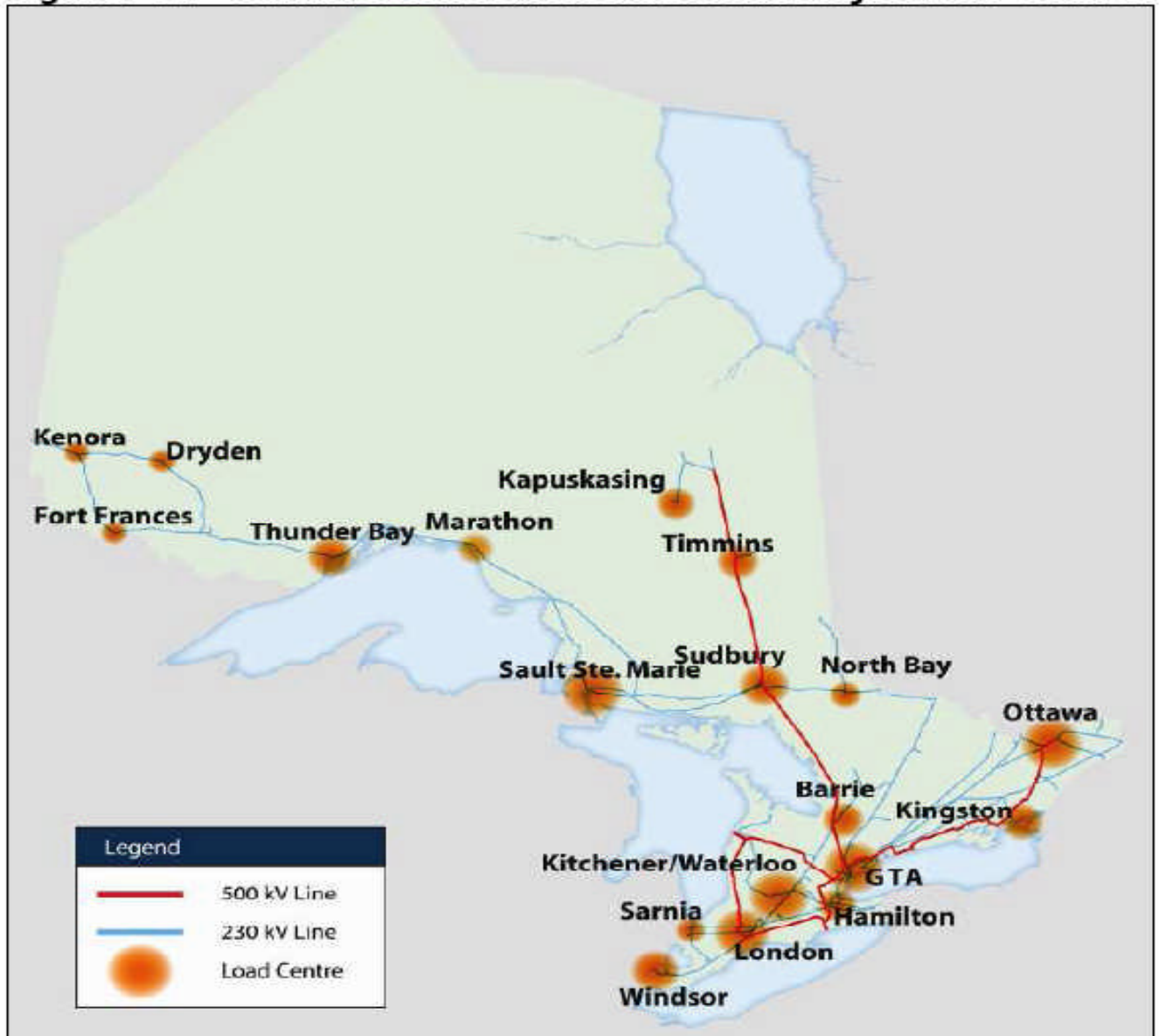


Windpower in Context - Identified Opportunities



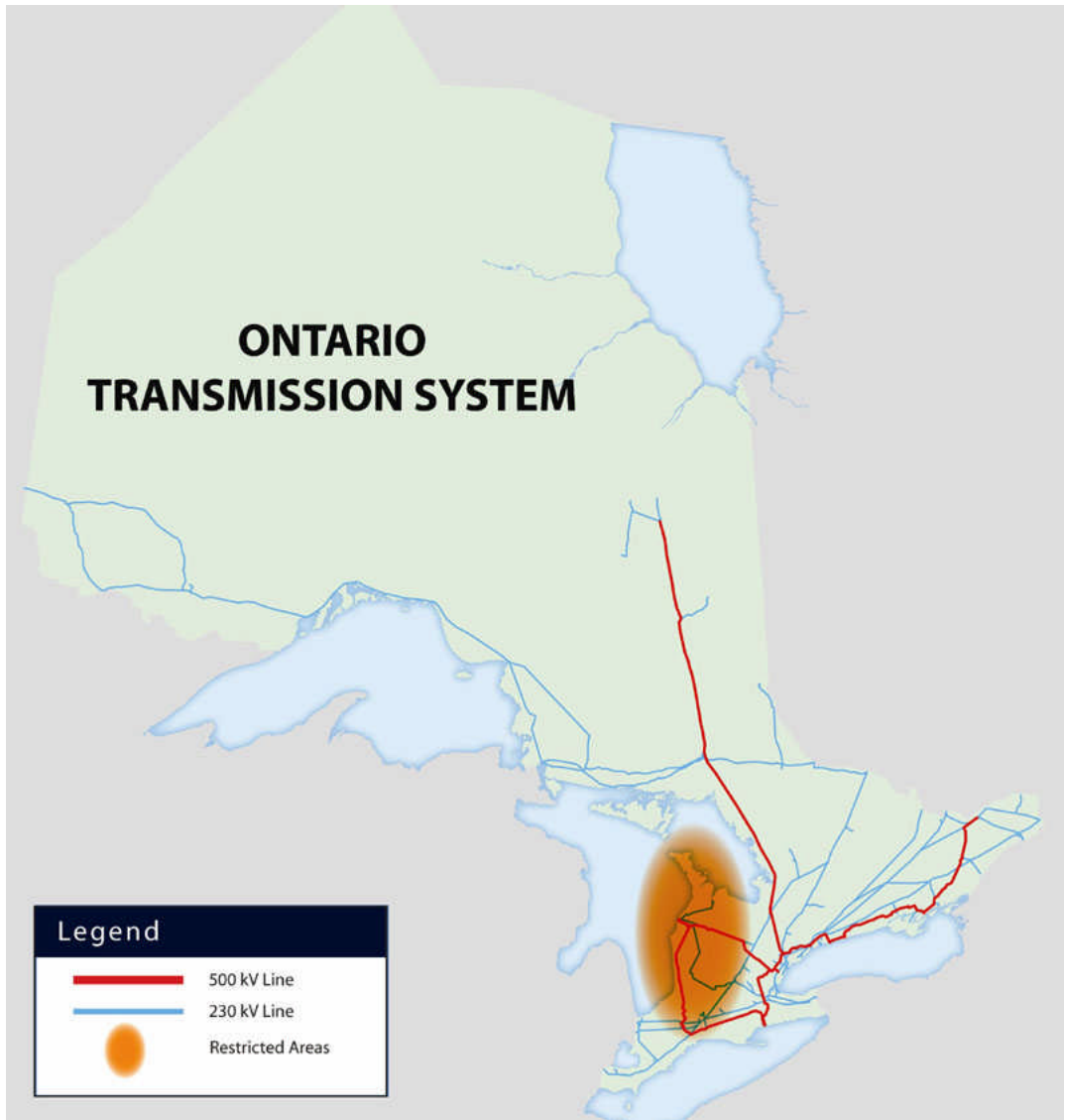
Windpower in Context – Transmission Limitations

Figure 2.2 – Ontario Bulk Transmission and Major Load Centres



Source: IESO and OPA

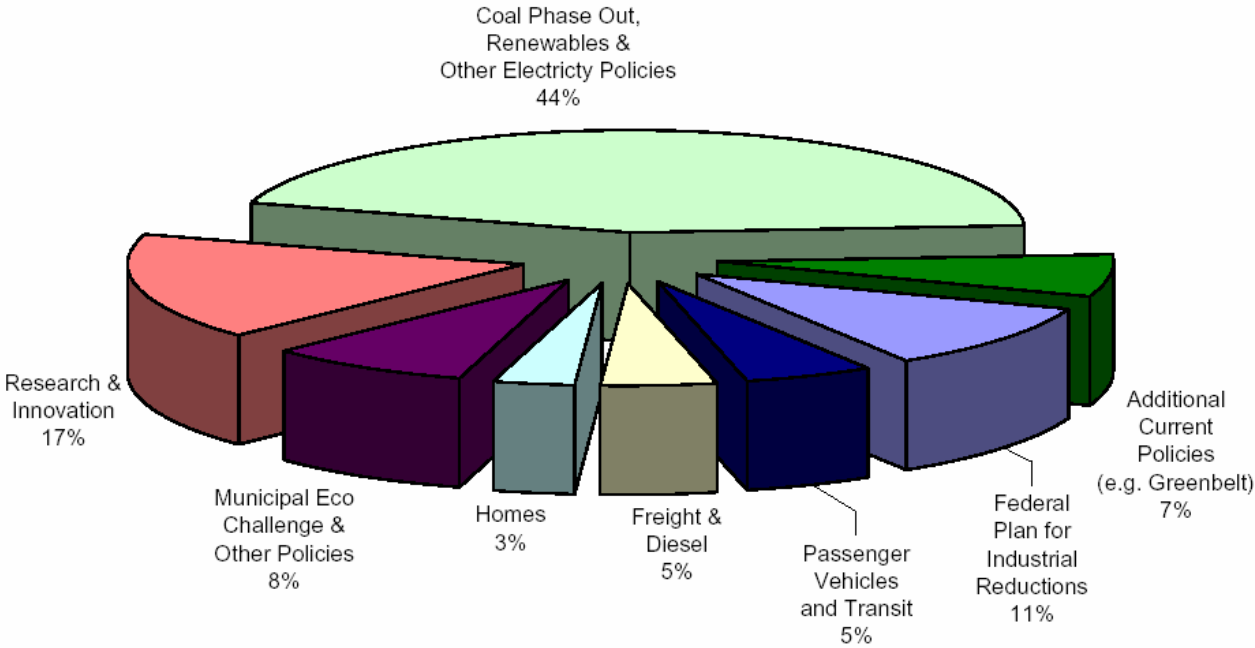
Windpower in Context – Transmission Limitations



Source: OPA

Public Policy Relationships – Climate Change

**Figure 7. Where Emissions Reductions Will Have Been Achieved by 2014:
Based on Current and New Policies**



The Supply Mix Directive (SMD)

- “The Government directs the OPA to create an Integrated Power System Plan to meet the following goals:
 6. Strengthen the transmission system to:
 - Enable the achievement of the supply mix goals set out in this directive;
 - Facilitate the development and use of renewable energy resources such as wind power, hydroelectric power and biomass in parts of the province where the most significant development opportunities exist;...”

Enabler Lines and the IPSP

- “Enabler lines” are radial transmission lines that need to be developed in advance to enable the subsequent development of renewable generation resources (OPA)
- The OPA has identified three remote clusters of wind resources in the IPSP:
 - Goderich area
 - Bruce Peninsula
 - Manitoulin Island
- Not a limitation to this proceeding
- The OEB should develop connection cost allocation principles in the context of all renewable SMD connections

Proposed Direction

- Connection facilities are required to access Ontario's wind and water resources
- The cost of connections to renewable SMD generation should be socialized
- These connections should be proactive and inclusive for new renewables
- Look to other advice:
 - California (pro-rata share of go forward costs)
 - Renewable Energy Task Team (cost cap concept)
 - Electricity Conservation and Supply Task Force (Improvements that serve the public interest)

Conclusion

- Wind and water generation and development serve an array of public interests
- Established targets and timelines demand a proactive approach to connecting infrastructure
- New connection facilities (and renewable generation) serving the provincial interest should receive expedited review and approvals
- New wind and water are essential to the success of the integrity of the SMD and IPSP