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# Offshore Windpower Development in Ontario: Provincial Update and Ontario's First Purchase Agreement

Great Lakes Wind Collaborative 3<sup>rd</sup> Annual Meeting  
Cleveland Ohio

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# Overview:

- Context: Offshore Windpower Development in Ontario
- Ontario's Green Energy Act
- New Streamlined Approvals Process
- Ontario's Feed-in-Tariff Program
- Ontario's First Offshore Power Purchase Agreement: Windstream Wolfe Island Shoals Project
- Offshore Windpower - Ontario Policy Review
- Conclusions

## Context: Offshore Windpower Development in Ontario

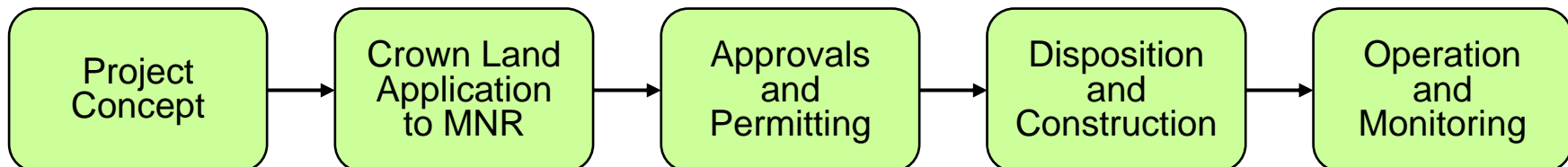
- Ontario's Ministry of Natural Resources introduced a Windpower Crown Land Site Release Policy in 2004, which included provisions for making the beds of the Great Lakes available for offshore development
- In 2008 Ontario Power Authority completed a study of windpower potential in the Ontario portion of the Great Lakes and identified 64 sites with over 35,000 MW of generating potential
- Since 2004, Ontario has had three application windows and accepted 144 applications for offshore wind development projects in Lakes Ontario, Erie, St. Clair, Huron and Superior

## Ontario's Green Energy Act

- *Green Energy Act* (May of 2009) sought to:
  - make Ontario a renewable energy leader
  - address climate change - phase out coal and procure 48% of province's energy from renewables by 2025
  - encourage investment and create green jobs
  - Aboriginal and local community participation incentives
  - foster a culture of conservation
- Provide investor certainty by establishing:
  - a provincial, streamlined approval process and
  - a long term power purchase framework (FIT program)

# New Streamlined Approvals Process

- Winter / Spring 2009 - GEA establishes legislative basis for new approval process for renewable energy projects
- Summer 2009 - New approval process and technical requirements established for wind, solar and bio-energy projects in Renewable Energy Approval Regulation and MNR's Approvals and Permitting Requirements Document
- September 2009 - MNR launched review of Crown land application processes to align with GEA, with initial focus on onshore wind



## Ontario's Feed-in Tariff (FIT) Program

- Launched in October 2009, Ontario Power Authority's FIT Program includes:
  - standard prices, 20 year contracts (40 years for waterpower)
  - Ontario content requirements (50%)
  - range of technologies included (wind, solar, waterpower, bio-energy) prices vary by technology and size
  - \$.19/kWh for offshore wind
- Before construction of a project, developer must receive all necessary environmental and grid connection approvals
- April 2010 - OPA offered 184 large scale contracts, totalling 2,420 MW of capacity (49 on Crown land and 135 on private land), including 50 onshore wind and one offshore wind projects

# Ontario's First Offshore Windpower Purchase Agreement: Windstream Wolfe Island Shoals

- 300 MW offshore project proposed for eastern part of Lake Ontario near Kingston
- Planned for a lake bed area covering over 50,000 acres
- Wolfe Island Shoals has recently signed a 20 year FIT contract with the OPA
- \$1.5B (CAN) project with approximately 100 turbines
- Planned operation by 2015/16 period

# Location: Wolfe Island Shoals Project





# Offshore Wind – Ontario Policy Review

## **Ministry of Environment - June 2010 Public Consultation Initiated**

- Seeking feedback on additional regulatory and technical requirements for offshore wind facilities
- 5 kilometre shoreline exclusion zone proposed

## **Ministry of Natural Resources - August 2010 Public Consultation Initiated**

- Seeking input on potential considerations or criteria for areas that could be constrained from offshore wind development
- Reviewing how and when Crown (public) land is made available for offshore development

# Potential Constraint Considerations

- Areas that may be constrained from future offshore wind development could include:
  - Shoreline exclusion zone (e.g. setback)
  - Navigational lanes
  - Areas of core commercial fishing activity
  - Sensitive environmental and ecological areas and features
  - Areas subject to important recreational activities
  - Cultural heritage features
  - Areas of natural gas activity
  - Inland lakes
  - Great Lake specific considerations

## Conclusions:

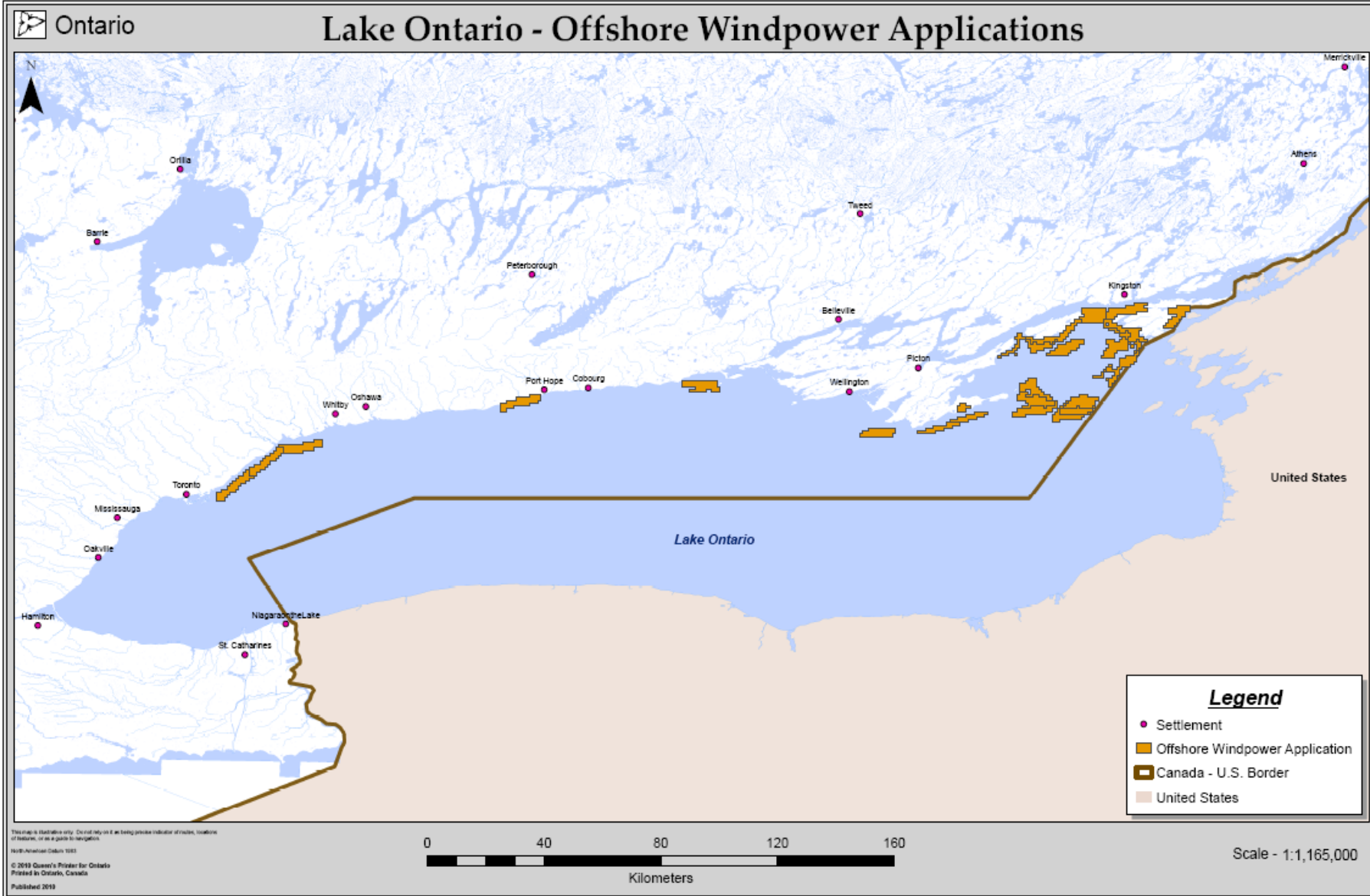
- GEA and FIT continue to drive strong interest in renewable energy development opportunities in Ontario, including offshore wind
- Ontario has awarded first offshore power purchase agreement in Great Lakes Basin to Windstream Wolfe Island Shoals Inc.
- Province in midst of broad policy review of its overall approach to offshore wind development
  - may result in a shoreline exclusion zone and constrained areas
  - will provide clarity and certainty for offshore windpower development on Ontario's side of the Great Lakes

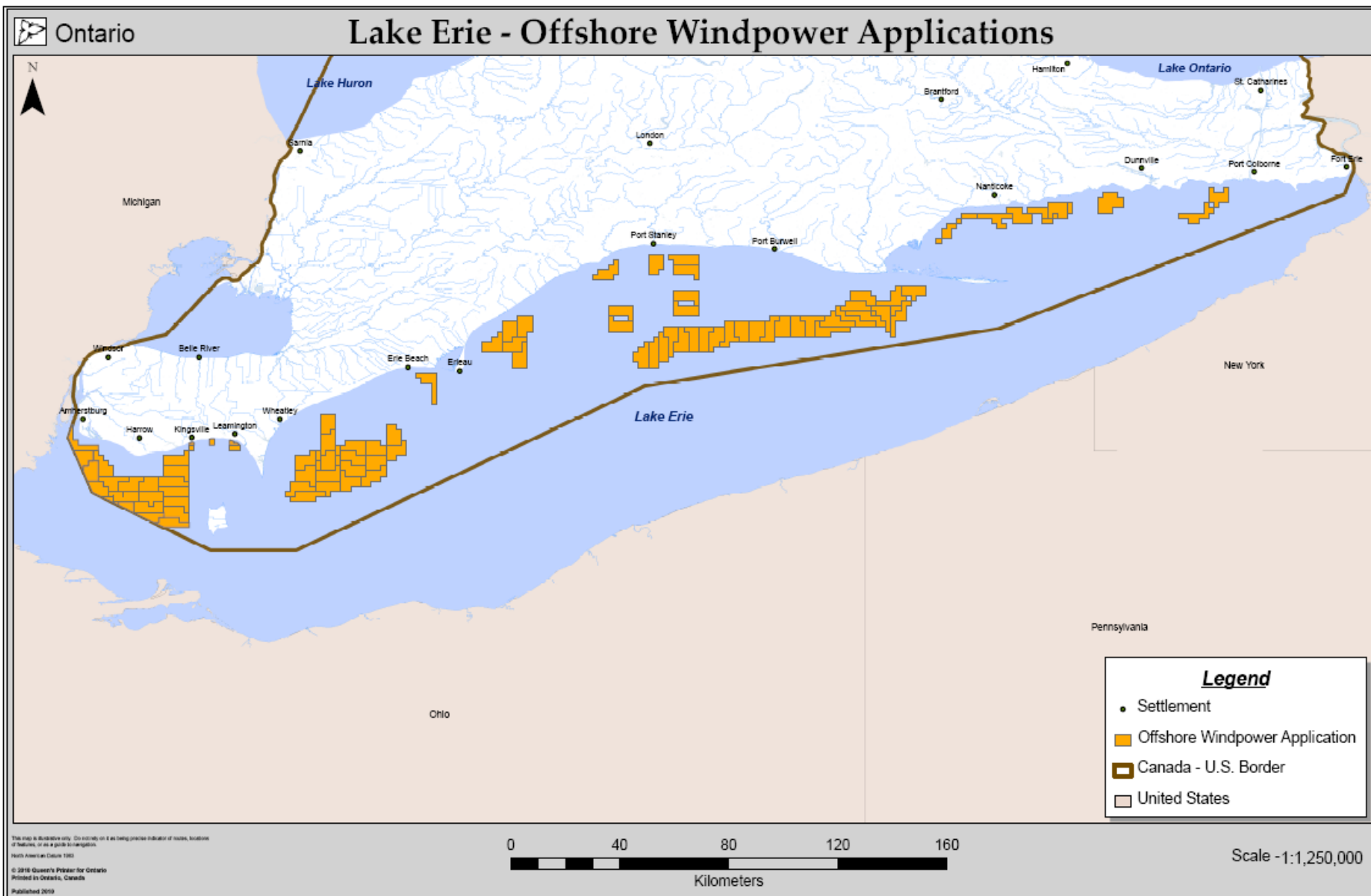
# Questions?

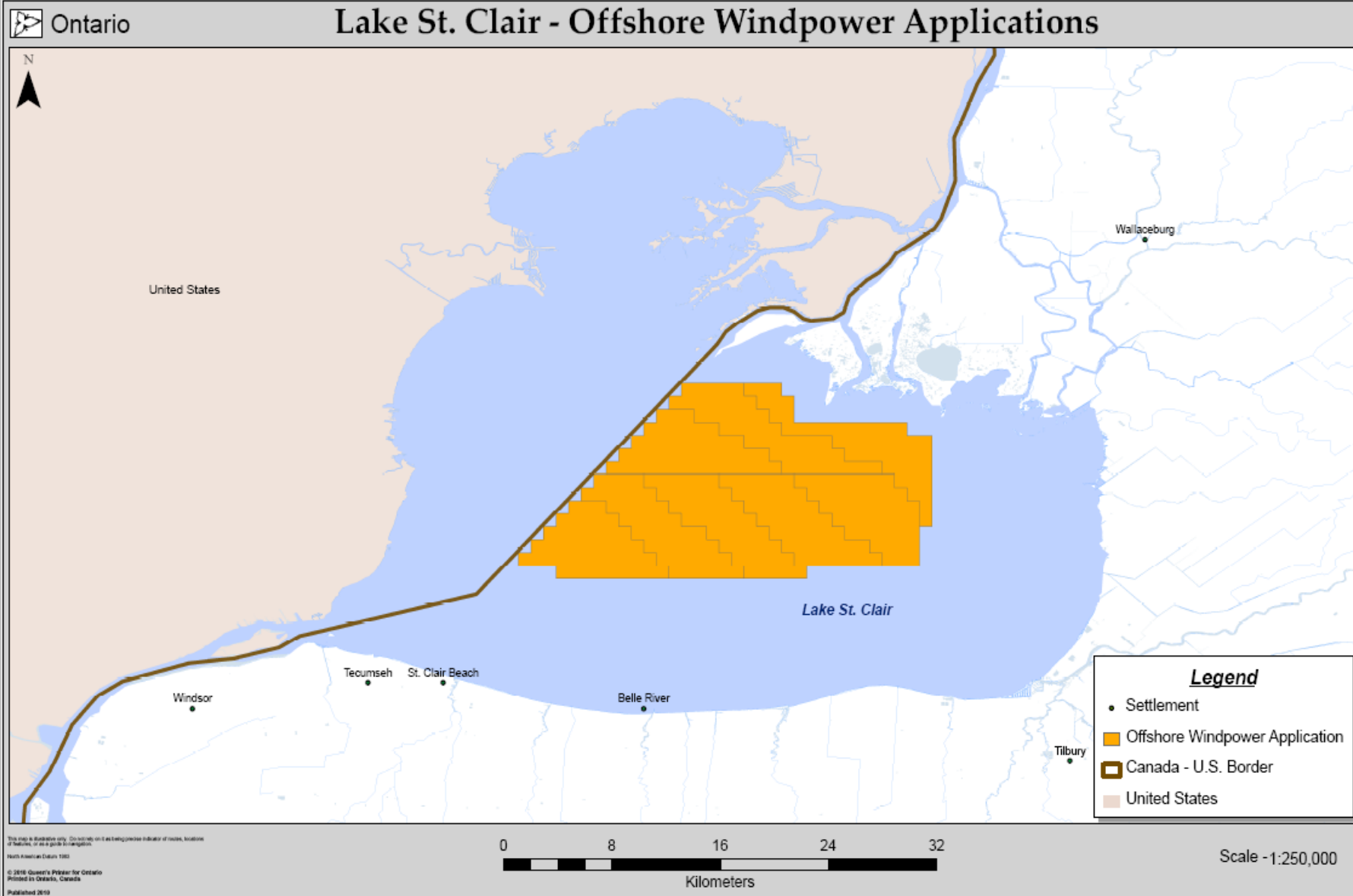


# Appendix

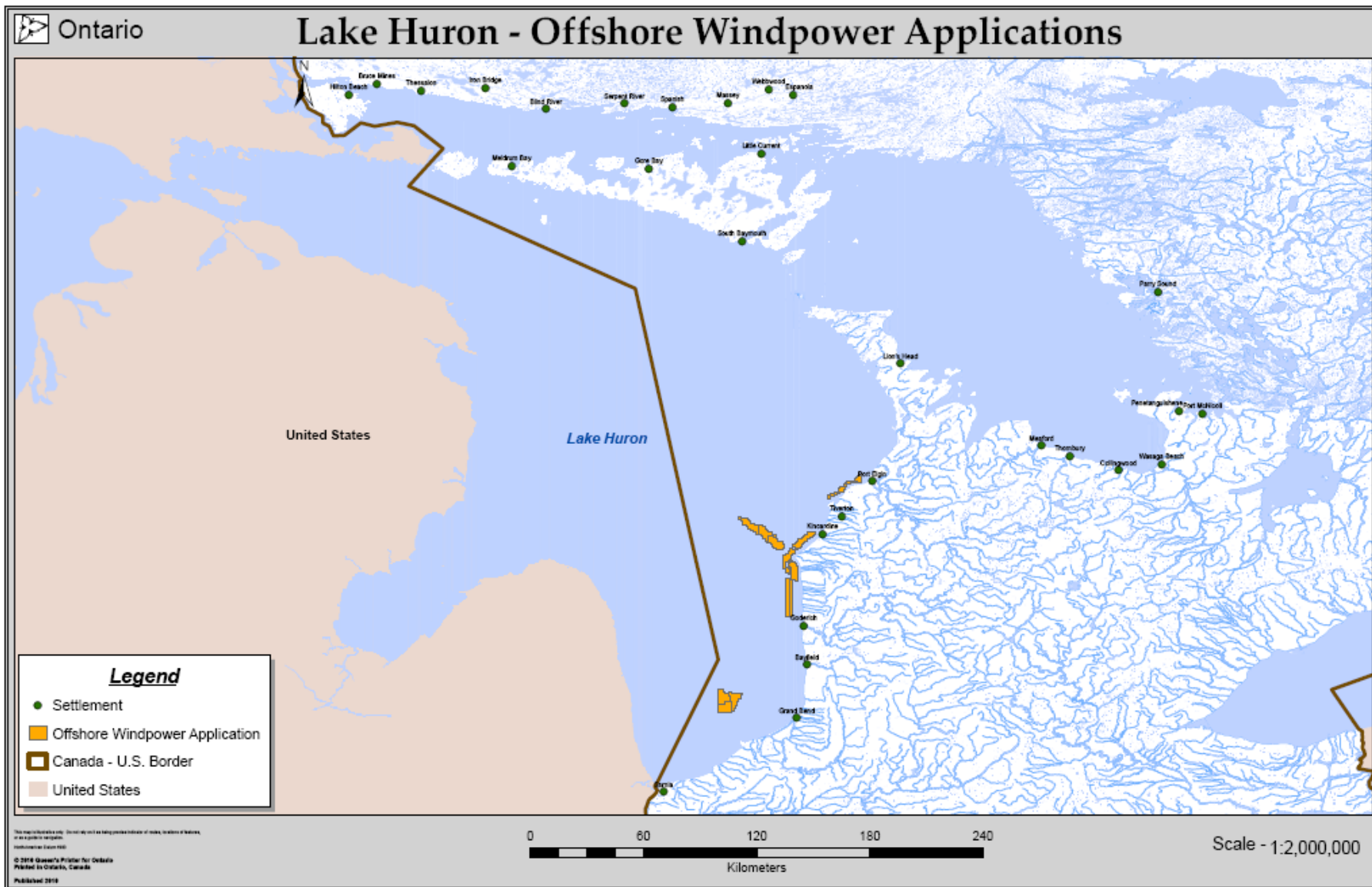
## Maps of Current Ontario Offshore Windpower Crown Land Applications





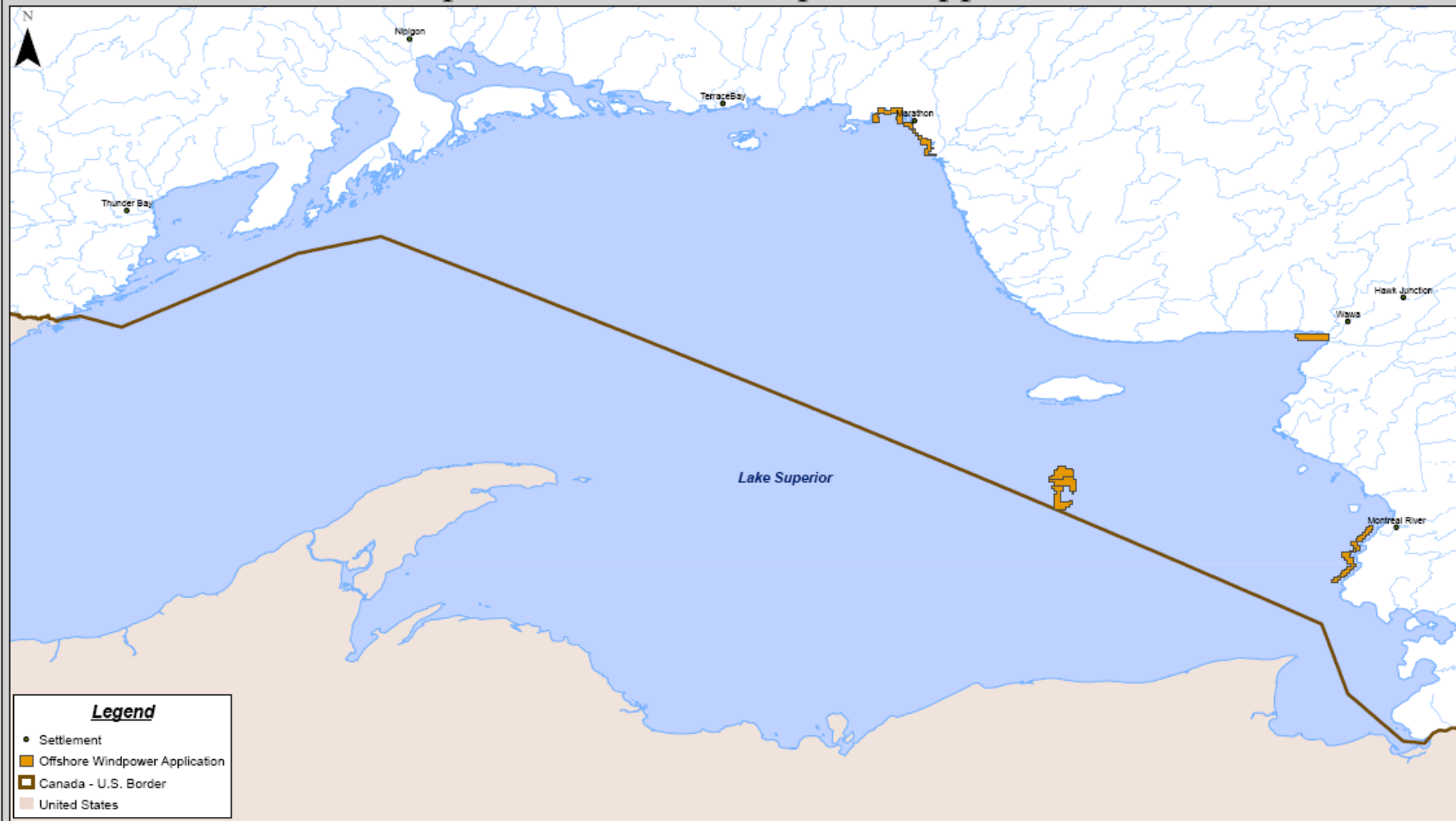






Ontario

## Lake Superior Offshore Windpower Applications



This map is illustrative only. Do not rely on it as being precise indicator of status, locations of features, or as a guide to navigation.

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0 40 80 120 160  
Kilometers

Scale - 1:1,500,000