

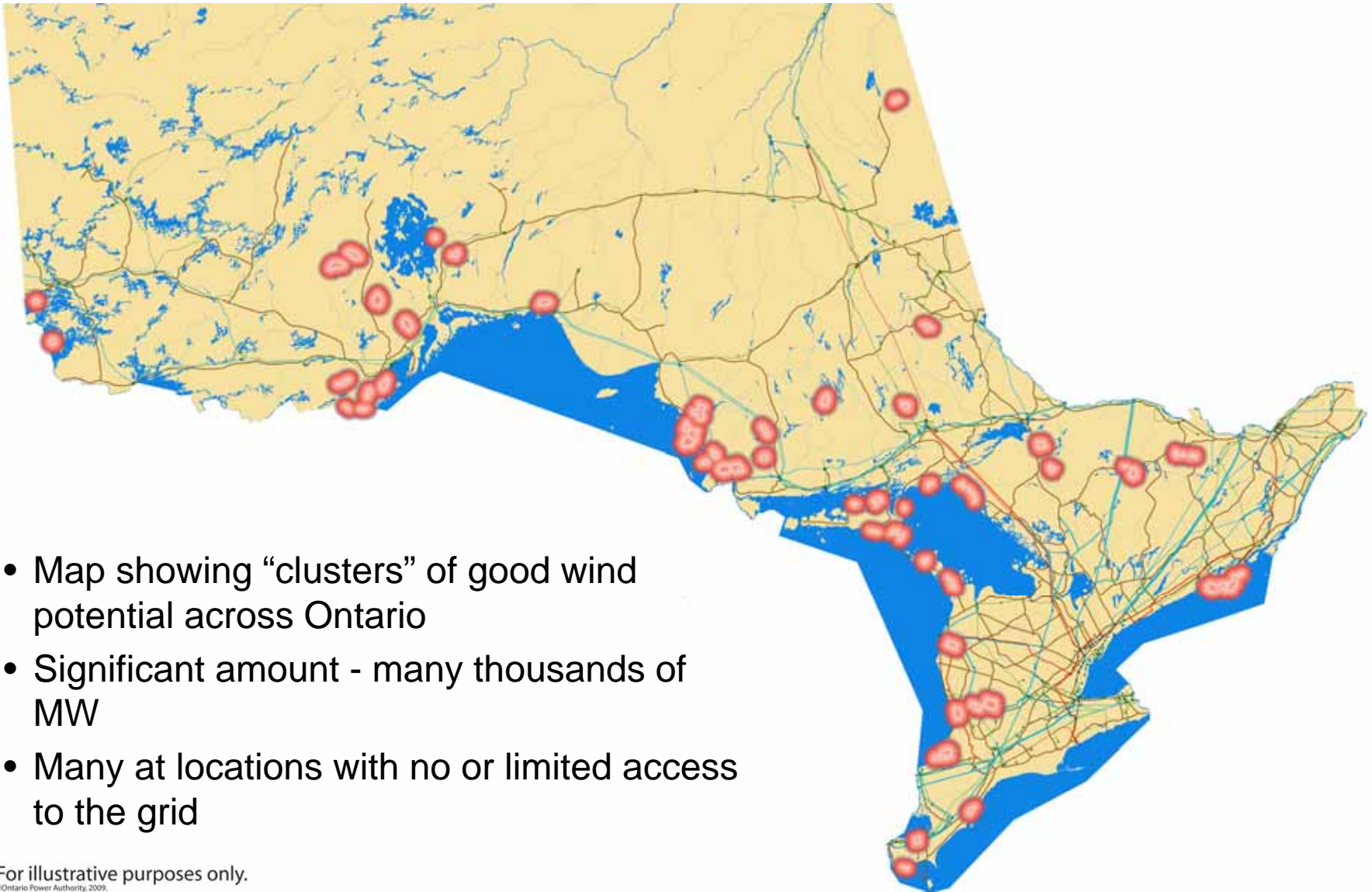
ONTARIO POWER AUTHORITY

January 28, 2009



*Presented by Bob Chow, Director – Transmission Integration  
Ontario Power Authority*

# Wind Generation Potentials



- Map showing “clusters” of good wind potential across Ontario
- Significant amount - many thousands of MW
- Many at locations with no or limited access to the grid

For illustrative purposes only.

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Information sources include National Resources Canada, Government of Ontario, Hydro One Networks Inc., Statistics Canada  
Boundaries: Source: Geography Division, Statistics Canada, Boundary Files, 2006 Census 92-160-XWE/XWF  
The incorporation of data sourced from any of the above entities within this product shall not be construed as constituting  
an endorsement by any of the above entities of such product.

# Need for Enabling Transmission

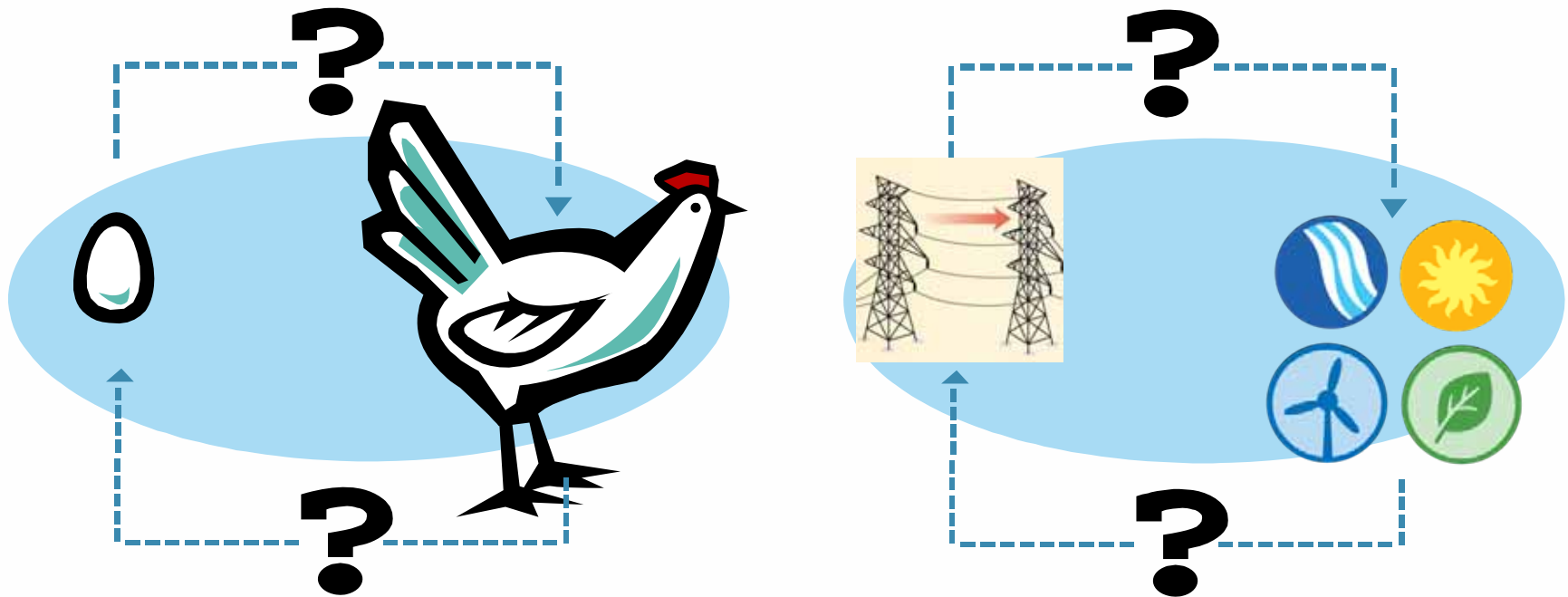
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- A significant level of transmission reinforcement has been identified and recommended for enabling the development of renewable resources in the filed IPSP
- Because of long lead times (5-7 years) required for transmission, development work, including EA approvals, needs to be initiated now
- Many uncertainties related to timing, location, capacity, technology and design for the actual facilities
- Commitment of enabling projects would be linked closely with developer interests and progress/commitment of the associated resource projects

# Transmission for Enabling Wind Generation in the Filed IPSP



# Enabling Renewable Resources



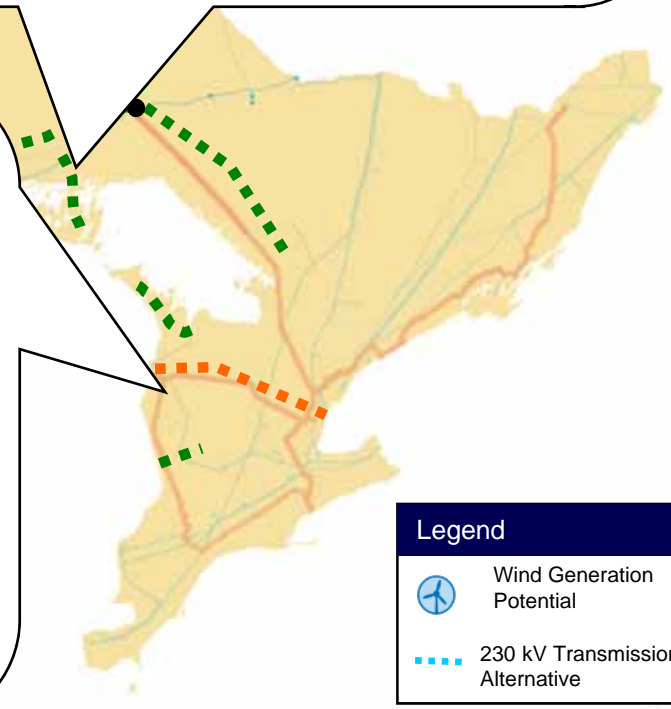
*The "Chicken and Egg" dilemma*



# Enabler Cost Responsibility and Development Process

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- In the filed IPSP, OPA proposed that:
  - Enabler lines should be treated as network assets and the costs, at least the initial costs, should be socialized
  - The existing regulatory framework should be adapted to accord with the Electricity Act's and the Directive's renewable objectives
- In early 2008, the OEB initiated the Transmission Connection Cost Responsibility Review (TCCRR)
- The outcome:
  - The OEB proposed amendments to the TSC
  - Adopting the “hybrid” connection cost allocation model
  - Covered other related matters including development work, identification of “clusters” and selection of a transmitter
- Not yet finalized but expected that these changes would allow enabler development to proceed

# Enabler Examples



Legend	
	Wind Generation Potential
	230 kV Transmission Alternative