

Distributed Generation and Ontario's Transmission Requirements

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- What's the potential?
- How far can we go?
- Explore the “I Have a Dream” scenario
- Keep it in sight!

Another Step on a Continuum

**The
Hydro
Days**

**Move
To
Competition**

**Environment
Stronger
Driver**

**Smart
Grid
Potential**

**The
Big
Payoff**

Power at Cost	Market Disciplines	Environmental shift	Environment and Efficiency	Universal Involvement
Vertically Integrated	Multiple Owners	Multiple Owners	Multiple Participants	Second Nature – it's just what we do!
Large scale gen	Large scale gen	Large scale gen, Distributed gen	Large scale gen, Distributed gen, Smart consumption	Large scale local? gen, Distributed gen, Smart consumption Energy storage
Centrally Controlled	Centrally Dispatched	Mainly Centrally Dispatched – CENTRALLY BALANCED	Mainly Centrally Dispatched – centrally balanced	Centrally Balanced?

- Embedded Generation Stakeholder Engagement
- 2006 Joint Wind Study
- Smart Grid Forum
- Smart Meter Data Repository development
- Connection Assessment and Approvals – improve ease and transparency
- Active Involvement in Bruce x Milton OEB application
- Numerous market enhancements, e.g:
 - Relaxation of metering requirements for small distributed facilities
 - Relaxation of telemetry requirements for distributed facilities

The Top Challenges (system operator perspective)

- Sending the right messages
 - To ensure both reliability and economic efficiency
- Coping with variability
 - Need for greater regulating capability?
 - Need for greater ramping capability?
 - Need for greater visibility?
 - Need for new ancillary products?
 - Need for new arrangements with our neighbours?
- Adapting the Rules and the System to different operating characteristics
- Enabler Investments

- The IESO will continue to work with government and the industry to achieve policy objectives
- We will not let reliability suffer – and we will adapt
- The potential is huge! – and it's exciting!

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