



ecobee

Ontario Smart Grid Forum

Smart Grid Forum Corporate Partners Committee  
Product Interoperability Sandbox WG

December 6, 2011



# Smart Grid Forum Recommendation

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~ *“A test bed environment should be established, devoted to furthering interoperability between emerging products and services, as well as the various proprietary Advanced Metering Infrastructure (AMI) systems deployed across the province as part of the Smart Metering Initiative. The Forum and its Corporate Partners Committee will work with industry to investigate the best path forward”*

~ *May 2011.*



# Interoperability Sandbox WG

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~ Goal: To create a framework for building a interoperability and testing environment for in-home devices in Ontario.

## ~ Membership

- ~ Geoff Salter – Aztec
- ~ Ric Forster – Direct Energy
- ~ Martin Rovers – Better Place
- ~ Richard Wunderlich – Seimens
- ~ Gord Ellis – energent



# Background

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- ~ Green Energy and Green Economy Act Goals
  - ~ Expand opportunities to provide demand response, price information and load control to electricity customers
  - ~ Enable the increased use of renewable energy sources and technology
  - ~ Accommodate the use of emerging, innovative and energy saving technologies.
- ~ Ontario plans to deploy 400,000 in home devices in the province by 2014.



# But...

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- ~ There are challenges to be overcome

- ~ Ontario has a range of AMI technologies deployed across the province.
- ~ LDCs want to purchase fully functioning, fully integrated solutions
- ~ In Home Device manufacturers cite access to variations of AMI equipment to perform interoperability testing and verification as a significant barrier.
- ~ AMI vendors are finding it difficult to support the many requests for support from In Home Device Manufacturers.



# Resulting in...

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- ~ ... a “Chicken and Egg” problem
  - ~ In Home Device vendors cannot demonstrate interoperability to utilities without support from AMI vendors
  - ~ AMI vendors are reluctant to support In Home Device vendors without utility support
  - ~ Utilities are reluctant to support In Home Device vendors without first knowing the solution is viable.



# A Solution

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- Create a **Smart Grid Test and Demonstration Environment** to allow any In Home Device vendor to demonstrate and test interoperability of In Home solutions suitable for the Ontario Market.



# Key Goals of a Smart Grid Test and Demonstration Environment

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- ~ Create a lab where vendors can bring their equipment and verify/test interoperability with the existing smart grid equipment
- ~ A lab where utilities can come to view different solutions from different vendors
- ~ A lab where interoperability workshops can be conducted
- ~ A lab to promote Commercialization of Technology and Not Research
- ~ A lab that makes it easy to develop Smart Grid technologies in Ontario



# Delivering...

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- ~ More choice for Ontario Consumers and Utilities
- ~ Better value for Ontario Consumers and Utilities
- ~ More cleantech jobs in Ontario



# Technologies to be included

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- ~ Smart Meters with AMI networking enabled and load simulation
- ~ AMI Head End Systems
- ~ In home devices including
  - ~ Demand response thermostats,
  - ~ In-home displays
  - ~ Smart plugs
  - ~ Load control switches.
- ~ Home vehicle charging solutions



# Next Steps

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- ~ Determine who will be responsible for moving this forward.
- ~ Determine funding requirements for Smart Grid Test and Demonstration Environment and determine how the environment could be funded
- ~ Identifying a suitable location for the Smart Grid Test and Demonstration Environment.
- ~ Identify who and how the Smart Grid Test and Demonstration Environment will be managed.
- ~ Identify more specifically the equipment needed for the environment.
- ~ Define the rules of engagement for the Smart Grid Test and Demonstration Environment



# Thank You

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