



Ontario Energy Board

Commission de l'énergie de l'Ontario

Smart Grid Working Group Meeting 3: Customer Control Objectives

March 29, 2011

Agenda

9:30 – 9:40	Welcome and Review of Agenda	Board Staff
9:40 – 9:50	Previous Meeting Summary	Board Staff
9:50 – 10:00	Overview of Customer Control Objectives	Board staff
10:00 – 10:45	Discussion of Access Objective	All
10:45 – 11:00	BREAK	
11:00 – 12:15	Discussion of Access and Visibility Objectives	All
12:15 – 1:00	LUNCH	
1:00 – 2:30	Discussion of Control and Participation in Renewable Energy Objectives	All
2:30 – 2:45	BREAK	
2:45 – 4:30	Discussion of Customer Choice and Education Objectives	All
4:30 – 4:45	Review of day and overview of next meeting	Board staff



What We Heard

Policy Objective	Key Observations
1. Efficiency	There are several types of efficiency that result from better information
2. Customer Value	Different types of customers derive different benefits and have different levels of engagement
3. Co-ordination	Many LDCs are already coordinating with one another. The challenge is finding a way to formalize this coordination to included LDCs at the right levels.
4. Interoperability	Three key issues: Legacy - interoperability with existing systems; at the distribution system level; and Home Area Networks (HANs)
5. Security	The Board can draw upon the significant body of work on security and privacy that already exists in energy and other sectors.
6. Privacy	
7. Safety	Safety is already good utility practice. Smart grid will provide some new tools to improve safety.
8. Economic Development	
9. Environmental Benefits	Smart grid technology inherently provides environmental benefits. Some form of environmental test may be required when evaluating smart grid investments
10. Reliability	Information improves reliability but some technologies (e.g. EVs) may compromise reliability

Customer Control Objectives Overview

- **Directive:** “For the purpose of providing the customer with increased information and tools to promote conservation of electricity”
- Which will expand “opportunities to provide demand response, price information and load control to electricity customers” (Subsection 2(1.3)(B) of *The Electricity Act*)
- Staff is seeking advice on the technical meaning of the objectives in the context of the policy objectives

Access and Visibility Objectives

- **Access**

- Enable access to data by customer authorized parties who can provide customer value and enhance a customer's ability to manage consumption and home energy systems.

- **Visibility**

- Improve visibility of information, to and by customers, which can benefit the customer and the electricity system, such as electricity consumption, generation characteristics, and commodity price.

Access Objective Questions – Residential customers

- What type/level of access to data should be given to customer authorized parties (LDCs, agencies, etc.) with respect to **residential** customers?
 - What type/level of access to data is necessary to provide value to customers? For example, raw consumption details vs. billing determinants to 3rd parties (e.g. retailers).
 - To whom do LDCs need to provide customer and/or metering data? Are there any other types of 3rd party data-sharing for which provision may be made besides licensed retailers and the IESO?
 - What type/level of access to data is necessary to allow LDCs, agencies, etc. to achieve the benefits of smart grid? For example, utility use of consumption data to support active transformer load monitoring.

Access Objective Questions – Commercial customers

- What type/level of access to data should be given to customer authorized parties (LDCs, agencies, etc.) with respect to **commercial** customers?
 - What type/level of access to data is necessary to provide value to customers?
 - What type/level of access to data is necessary to allow LDCs, agencies, etc. to achieve the benefits of smart grid?
 - To whom do LDCs need to provide customer and/or metering data? Are there any other types of 3rd party data-sharing for which provision may be made besides licensed retailers and the IESO?

Access Objective Questions – Industrial Customers

- What type/level of access to data should be given to customer authorized parties (LDCs, agencies, etc.) with respect to **industrial** customers?
 - What type/level of access to data is necessary to provide value to customers?
 - What type/level of access to data is necessary to allow LDCs, agencies, etc. required to achieve benefits of smart grid?
 - To whom do LDCs need to provide customer and/or metering data? Are there any other types of 3rd party data-sharing for which provision may be made besides licensed retailers and the IESO?

- What security and privacy concerns are associated with providing these levels of access?
- How can this access be provided in a coordinated way? Is there a reliance upon standards?
- How can this access be provided in a way that ensures interoperability of different behind-the-meter energy devices for the LDCs among customers?

- Clarify the source of data access – meter, MDMR, in-home appliance level. Should a 3rd party be allowed to access the data directly from the meter or through a service provided by the LDC?
- What additional rules are necessary beyond the Retail Settlement Code for authorization of 3rd parties?

Visibility Objective Questions

- What level of visibility do the customers require?
 - What do they need to see to get value from smart grid? (Price, usage, power details, level of detail required)
 - Are visibility requirements real-time, near real-time, or day after?
 - Are there any visibility requirements unique to each of the residential, commercial and industrial customer classes?
- How can systems that provide visibility be provided such that interoperability is ensured?

Visibility Objective Questions

- What access methods are required? Public portal? Private portal? Mobile?
- Is there a position or perspective related to comparative consumption presentment?
- Are there limits to the visibility of consumption data by customers?
- If a customer is participating in a FIT or Micro FIT program, do they need to have visibility to their delivered energy and their consumed energy?

Control and Participation in Renewable Generation Objectives

- **Control**
 - Enable consumers to better control their consumption of electricity in order to facilitate active, simple, and consumer-friendly participation in conservation and load management.
- **Participation in Renewable Generation**
 - Provide consumers with opportunities to provide services back to the electricity grid such as small-scale renewable generation and storage.

- What type/level of control is needed or wanted (e.g., ‘set it and forget it”)?
 - *Residential customers*
 - *Commercial customers*
 - *Industrial customers*

Control Objective Questions

- How will interoperability among different devices from different vendors be ensured when providing these levels of control?
- What privacy and security concerns exist when providing these levels of control?
 - How do control points affect security risks?
 - How do control points affect privacy?
- Can customers download relevant information for external analysis?

Participation in Renewable Energy Objective Questions

- How can efficiency be ensured in giving customers access to renewable generation?
- What are the specific value drivers that residential, commercial, and industrial customers get from participating in renewable generation?

Participation in Renewable Energy Objective Questions

- What standard guidelines could be provided to LDCs to facilitate participation in renewable generation to aid in coordination?
- What should be provided to LDCs to facilitate participation in renewable generation to aid in interoperability among customers/LDCs?

Customer Choice and Education Objectives

- **Customer Choice**
 - Enable improved channels through which customers can interact with electricity service providers, and enable more customer choice.
- **Education**
 - Actively educate consumers about opportunities for their involvement in generation and conservation associated with a smarter grid, and present customers with easily understood material that explains how to increase their participation in the smart grid and the benefits thereof.

Customer Choice Objective Questions

- What range of choices will **residential customers** want with respect to smart grid? (e.g., Pre-pay, appliance monitoring, estimated bills)
 - What range of options may they require for products and services?
- What range of choices will **commercial customers** want with respect to smart grid?
 - What range of options may they require for products and services?
- What range of choices will **industrial customers** want with respect to smart grid?
 - What range of options do customers require for products and services?

- What type of education do ***residential*** customers require and how can this type of education be provided?
 - What type of education regarding the value of smart grid to the customer, security, privacy, safety, and environmental benefits are required? (e.g., Bill components – commodity charge, transmission charge, generation charge, local delivery charge; concept of peak demand vs. consumption; carbon footprint; cost avoidance/deferral of spinning reserves)

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- What level of detail must be presented by LDCs in SG plans submitted to the OEB relative to internal Change Management and external Communications?

Next Meeting – March 29

- Focus on the Directive's Customer Control Objectives
- A complete agenda will be provided in advance

