

# SGF Agenda Item # 5: Report back from the WORKING GROUP

Ontario Smart Grid Forum  
Monday, May 17, 2010



# SGF Working Group Meeting

## Held on: Tuesday, May 4<sup>th</sup>, 2010

- 1) **Action Item/Discussion:** *“The Working Group should map the interoperability issues screening criteria it came up with to current Ontario activities and highlight to the Forum specific topics of interest that meet the screening criteria.”*
- 2) **Discussion:** What are some future “themes” that future meetings of the Smart Grid Forum should focus on, and what should their priority be?
- 3) **Discussion:** It has been proposed that the theme of the next SGF meeting on May 17<sup>th</sup> focus on the topic of Demand Response. *What are some of the specific smart grid issues that this meeting should address? – DEFERRED ITEM*
- 4) **Discussion:** The Forum is considering adoption of the seven privacy principles which are contained in Appendix ‘A’ of the Ontario Information and Privacy Commissioner’s smart grid discussion paper entitled, *“SmartPrivacy for the Smart Grid: Embedding Privacy into the Design of Electricity Conservation November 2009”* **Q:** *What is the Working Group’s opinion on this matter and more specifically what are the implications of adopting these principles?*

## Background:

- Back in April, the SGF Working Group considered the question:  
*What makes an interoperability issue an Ontario Smart Grid Forum issue?*
- On this question, some of the criteria suggested at that time included:
  1. Does the interoperability issue run contrary to a specific Ontario policy?
  2. Does the interoperability issue present a problem with respect to a previous legacy technological selection decisions already made by the Ontario electricity sector?
  3. Are there specific timing issues with respect to the interoperability standard and Ontario-specific implementation timelines?
- At the April 19<sup>th</sup> SGF meeting, it was generally felt that this was an appropriate set of criteria.

## Background (continued):

- Comments from the April 19<sup>th</sup> SGF:
  - It is important to focus on any issues that might pose a conflict or barrier to Ontario policies and objectives.
  - What is the next “big thing?” Should the Forum be examining specific technological growth areas? In response to these questions it was suggested that perhaps the Forum should have a focused discussion on “behind the meter” technologies. Electric Vehicles was also raised as a topic of interest.
- **ACTION ITEM:** The Working Group should map the interoperability issues screening criteria it came up with to current Ontario activities and highlight to the Forum specific topics of interest that meet the screening criteria.

## May 4<sup>th</sup> Working Group Meeting Feedback:

- It was proposed that the first selection criteria (for identifying interoperability issues for the SGF) should be re-worded as follows:

*“Does the interoperability issue pose a challenge to a specific Ontario smart grid initiative?”*

## May 4<sup>th</sup> Working Group Meeting Feedback:

- Existing Ontario Initiatives that should be considered alongside interoperability issues:
  - Smart Metering and AMI standards
  - MEI Conservation Goal: “To reduce Ontario's peak demand by about 20% - or a total of 6,300 megawatts - by 2025.”
  - 100,000 solar roofs in Ontario, as part of the province's “Go Green” climate change strategy
  - Ontario Home Energy Savings Program
  - M.O.E.: Ontario’s Action Plan on Climate Change
  - OPA FIT and microFIT programs
  - Electric Vehicle adoption
  - Electrification of public Transit
  - City of Toronto Clean Air initiative

## **May 4<sup>th</sup> Working Group Meeting Feedback:**

- The group explored AMI standards in more detail.
- Other, potential interoperability issues raised for future discussion included:
  - Electric Vehicles
  - In-home Displays
  - Upstream operational issues
  - In-home demand management

## **Discussion: AMI Interoperability:**

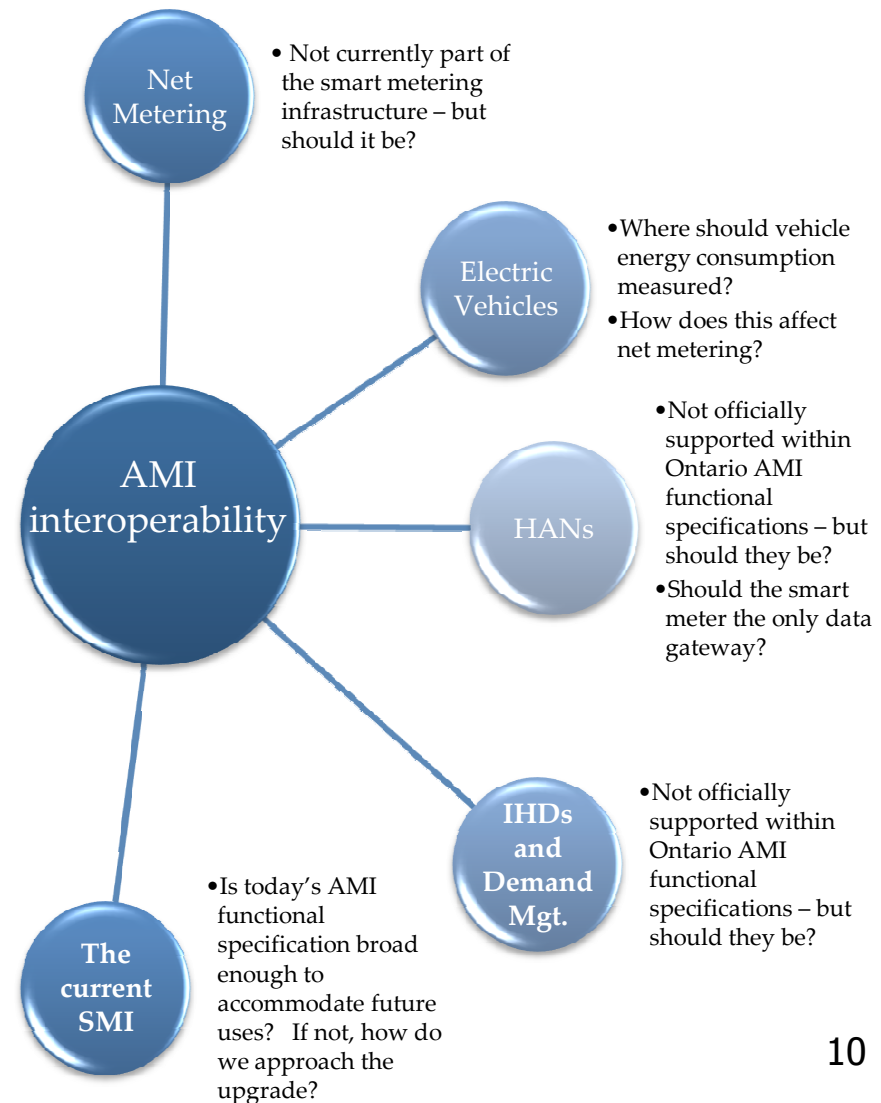
- Members of the Working Group drew a close association between this interoperability issue and several other topics including:
  - The current Smart Metering Initiative
  - Net Metering
  - Home Area Networks
  - In-home Displays and demand management
  - Electric Vehicles
  - Net metering and distributed generation
- At issue, is how the provinces' current AMI infrastructure may some day evolve to encompass these other activities.

# Working Group Item # 1 – Interoperability

	<b>Interoperability Issue: Metering and AMI Standards</b>	<b>Does the interoperability issue pose a challenge to a specific Ontario smart grid initiative?</b>	<b>Does the interoperability issue present a problem with respect to previous legacy technological selection decisions already made by the Ontario electricity sector?</b>	<b>Are there specific timing issues with respect to interoperability standards and Ontario-specific implementation timelines?</b>
<b>Ontario Initiative:</b>	<b>The current Smart Metering Initiative</b>	Yes	Depends on approach taken	Depends on approach taken
	<b>Net metering and distributed generation</b>	Unclear given current status of this initiative	Depends on approach taken	Unclear given current status of this initiative
	<b>Home Area Networks</b>	Unclear given current status of this initiative	n/a	Yes
	<b>In-home Displays and demand management</b>	Unclear given current status of this initiative	Yes –with respect to current generation of smart meters	Unclear given current status of this initiative
	<b>Electric Vehicles</b>	Depends on approach taken	n/a	Unclear given current status of this initiative

## Discussion: Smart Metering and AMI Interoperability – continued: Question raised by members of the working group:

*Several Ontario smart grid initiatives are strongly linked to current or future AMI technology - how should they relate to the smart metering system and to one another?*



## **Discussion: Smart Metering and AMI Interoperability - continued:**

- Other questions raised by members of the group:
  - If future AMI systems need to comply with standards that are now under development, what will be the best approach to evolve Ontario systems?
  - Does Ontario have a view as to how Electric Vehicle charging will be metered and what requirements does this imply for AMI infrastructure?
- Potential Opportunities raised by members of the group:
  - NIST Priority Action Plan (PAP) 00: NEMA AMI upgradeability standard - should Ontario adopt this standard
  - Perhaps the Forum should invite someone from NEMA or NIST to discuss the implications of ANSI C12 and other emerging AMI standards.

*What are some “themes” that future meetings of the Smart Grid Forum should focus on, and what should their priority be?*

- **Background – SGF key 2010 work tasks :**

- Work Tasks Nearing Completion:**

- Smart Grid Principles
    - Roles and Responsibilities

- Upcoming Work Tasks :**

- Corporate Partners Committee
    - Advice to Smart Grid Opportunities Fund and other funding initiatives
    - Discussion of Interoperability issues (ongoing)
    - 2010 Annual Report Development

# Working Group Item # 2- Themes for upcoming SGF meetings

**Today**  
May 17 2010

Q1	Q2	Q3	Q4
<p><b>Q1</b></p> <ul style="list-style-type: none"> <li>•January18</li> <li>•February 29</li> <li>•February 22</li> <li>•March 9</li> </ul>	<p><b>Q2</b></p> <ul style="list-style-type: none"> <li>•April 19</li> <li>•<b>May 17</b></li> <li>•June 8</li> </ul>	<p><b>Q3</b></p> <p><b>Number of meetings currently scheduled: 3</b></p> <ul style="list-style-type: none"> <li>•July 13</li> <li>•August 10</li> <li>•September 7</li> </ul>	<p><b>Q4</b></p> <p><b>Number of meetings currently scheduled: 3</b></p> <ul style="list-style-type: none"> <li>•October 12</li> <li>•November 9</li> <li>•December 7</li> </ul>

## Previous Themes:

- Policy and General Principles
- Privacy

## Upcoming Themes already agreed to:

- Demand Response (SGF suggestion)
- Electric Vehicles (SGF suggestion)
- “Behind the meter” (SGF suggestion)
- Wholesale Market Rules – Issues, Barriers and Opportunities (SGF Action Item)

## Suggestions from the Working Group:

- **Priority theme topics (recommended for discussion before the end of the year):**
  - Security
  - Cost and Efficiency: Business Cases, Reliability indices, quantifying consumer benefits, case studies, etc.
  - Building Codes
- **Other possible themes suggested by various members:**
  - Third Party Services (examples: Aggregation/Demand Response, Electric Vehicles, Home Automation Networks)
  - Innovation
  - Implementation Approaches: lessons learned from smart metering, Small LDCs vs. large LDCs, coordination, procurement, etc.
  - NIST Activities beyond Interoperability: Security, Privacy, Communications
  - The Customer: Communications, Education
  - Distributed Generation
  - Detailed analysis of selected Smart Grid Principles

*It has been proposed that the theme of the next SGF meeting on May 17th focus on the topic of Demand Response. What are some of the specific smart grid issues that this meeting should address?*

**Note: This theme has been deferred to a future S.G.F. meeting.**

## Background – recent developments:

- Minister of Energy and Infrastructure's Directive (437/2010) to the OEB.
- NAESB contributions to four NIST Priority Action Plans (PAPs):
  - PAP 03 - Common Price Communication Model
  - PAP 04 - Common Scheduling Mechanism
  - PAP 09 - Standard Demand Response (DR) Signals
  - PAP 10 - Standard Energy Usage Information
- Use of third part aggregation services for some OPA demand response programs

**Note: This theme has been deferred  
to a future S.G.F. meeting.**

## Technical Topics from the Minister's Directive for consideration:

- Tie-ins to other “relevant entities” (Minister's Directive, section 6(b))
- Evaluation, Measurement and Verification ” (“EM&V” - Minister's Directive, section 6)
- OPA third party vendor of record list (Minister's Directive, section 6(g))
- Technological selection process and smart grid integration issues for geothermal heating and cooling, solar heating and fuel switching (Minister's Directive, section 6(h))

**Note: This theme has been deferred to a future S.G.F. meeting.**

The Forum is considering adoption of the seven privacy principles which are contained in Appendix 'A' of the Ontario Information and Privacy Commissioner's smart grid discussion paper entitled, *"SmartPrivacy for the Smart Grid: Embedding Privacy into the Design of Electricity Conservation November 2009"*

*Q: What is the Working Group's opinion on this matter and more specifically, what are the implications of adopting these principles?*

## Comments from Various Working Group Members

- Probably best to recognize the principles as directionally-consistent with the Smart Grid *Privacy* principle originally developed by the group.
- Outright “*adoption*” has potential implications that are not fully quantifiable at this point.
- Important to recall that the “*Privacy*” “*Visibility*” and “*Access*” smart grid principles were previously identified by the SGF and the SGF Working group as requiring balance with one another.

**Recall:** Smart Grid *Privacy* Principle previously developed by the Forum:

**“PRIVACY: respect and protect the privacy of customers. Integrate privacy requirements into smart grid planning and design from an early stage.”**

IESO Staff proposal, based upon Working Group feedback:

- Focus on “recognition” not, “adoption”
- “Adoption” implies that the Forum is acting in an implementation capacity, which it is not.
- The Forum does not act on behalf of its individual members and therefore the meaning of “adoption” in this context is unclear.
- Ensure that “recognition” does not override previous discussions the Forum has had regarding the need to **balance** many of the competing considerations that were discussed during the development of the Smart Grid Principles

## IESO Staff proposal – continued: potential Recognition Statement for consideration:

*“The Ontario Smart Grid Forum recognizes that the 7 *Privacy by Design Foundational Principles* developed by the Ontario Information and Privacy Commissioner are directionally-consistent with the Smart Grid Forum’s general principle of *“Privacy”*. As such, the Forum also recognizes that adherence to these seven principles enables compliance with applicable privacy laws, helps protect Ontario Consumers, and should be regarded as a recommended best practice in the implementation of the Smart Grid in the province of Ontario.”*

# Appendix:

## 7 Privacy by Design Foundational Principles\*

\*Source: Ontario Information and Privacy Commissioner, “*SmartPrivacy for the Smart Grid: Embedding Privacy into the Design of Electricity Conservation*, November 2009”

## Background – the 7 *Privacy by Design Foundational Principles*\*

### 1. *Proactive not Reactive; Preventative not Remedial*

- The *Privacy by Design* approach is characterized by proactive rather than reactive measures. It anticipates and prevents privacy invasive events before they happen. PbD does not wait for privacy risks to materialize, nor does it offer remedies for resolving privacy infractions once they have occurred – it aims to prevent them from occurring. In short, *Privacy by Design* comes before-the-fact, not after.

## Background – the 7 *Privacy by Design Foundational Principles\**

### 2. Privacy as the *Default*

- We can all be certain of one thing – the default rules! *Privacy by Design seeks to deliver the maximum degree of privacy by ensuring that personal data are automatically protected in any given IT system or business practice. If an individual does nothing, their privacy still remains intact. No action is required on the part of the individual to protect their privacy – it is built into the system, by default.*

### 3. Privacy *Embedded into Design*

- *Privacy by Design is embedded into the design and architecture of IT systems and business practices. It is not bolted on as an add-on, after the fact. The result is that privacy becomes an essential component of the core functionality being delivered. Privacy is integral to the system, without diminishing functionality.*

## Background – the 7 *Privacy by Design* Foundational Principles\*

### 4. Full Functionality – Positive-Sum, not Zero-Sum

- *Privacy by Design seeks to accommodate all legitimate interests and objectives in a positive-sum “win-win” manner, not through a dated, zero-sum approach, where unnecessary trade-offs are made. Privacy by Design avoids the pretense of false dichotomies, such as privacy vs. security, demonstrating that it is possible to have both.*

### 5. End-to-End Lifecycle Protection

- *Privacy by Design, having been embedded into the system prior to the first element of information being collected, extends throughout the entire lifecycle of the data involved, from start to finish. This ensures that at the end of the process, all data are securely destroyed, in a timely fashion. Thus, Privacy by Design ensures cradle to grave, lifecycle management of information, end-to-end.*

## Background – the 7 *Privacy by Design Foundational Principles*\*

### 6. Visibility and Transparency

- *Privacy by Design seeks to assure all stakeholders that whatever the business practice or technology involved, it is in fact, operating according to the stated promises and objectives, subject to independent verification. Its component parts and operations remain visible and transparent, to users and providers alike. Remember, trust but verify.*

### 7. Respect for User Privacy

- *Above all, Privacy by Design requires architects and operators to keep the interests of the individual uppermost by offering such measures as strong privacy defaults, appropriate notice, and empowering user-friendly options.*



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Power to Ontario.  
On Demand.

Thank you.