

# Ontario Smart Grid Forum

## Ontario Smart Grid Forum Notes of Meeting

Date: **Tuesday, June 21<sup>st</sup>, 2011**  
Time: 09:00 to 1:00  
Location: IESO Minto Plaza Office, Main Boardroom  
655 Bay Street, Suite 410  
Toronto, ON

### Forum members attending:

Paul Murphy	IESO (Forum Chair)
David Collie	Electrical Safety Authority
Don Tench	IESO
Jim Huntingdon	Niagara-on-the-Lake Hydro (by phone)
Brian Hewson	Ontario Energy Board
Jatin Nathwani	University of Waterloo
Michael Angemeer	Veridian

### Working Group Members Attending:

David Curtis	Hydro One
Raed Abdullah	Hydro Ottawa
Edward Arlitt	IESO
David Barrett	IESO (by phone)
Russ Houldin	Ontario Energy Board
Jerry Chwang	Ontario Ministry of Energy
Sasha Sud	Ontario Power Authority
John Mulrooney	PowerStream
Richard Ford	Toronto Hydro

### Corporate Partners Committee members attending:

Shelley Lewis,	Chair,
Ron Dizey	Vice-Chair
Ron Clark	Aird & Berlis LLP
Geoffery Salter	Aztech Associates Inc.
Ric Forster	Direct Energy
Allen Chan	Direct Energy
Stuart Lombard	Ecobee
Niraj Bhargava	Energate
Alan Clarke	Energate
Elize Herzig	Ontario Energy Association
Helen Platis	Ontario Energy Association
Ariel Levi	Reliance Comfort
Steve Greey	S & C Canada
Richard Wunderlich	Siemens
Keyvan Cohanin	Bullfrog Power

### Additional IESO staff:

Guy Springgay	IESO
June Too	IESO

See **Appendix A** for a cumulative list of open Forum action items.

### **09:10 – call to order**

### **Agenda Item # 1: Previous SGF Minutes**

#### **FINAL April 5<sup>th</sup>, 2011 meeting of the Smart Grid Forum:**

The minutes of the **April 5<sup>th</sup>, 2011** meeting were tabled as final.

#### **DRAFT Minutes of the May 2<sup>nd</sup>, 2011 meeting of the Smart Grid Forum:**

The draft minutes of the **May 2<sup>nd</sup>, 2011** meeting were tabled with a comment deadline of Friday, June 24<sup>th</sup>, 2011. No amendments were suggested at the meeting.

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## Agenda Item # 2: Report Back from the Working Group

{see also, “Report back from the Working Group” support presentation}

{see also, NAESB document (R10012), “Third Party Access to Smart Meter-based Information”}

Edward Arlitt (IESO Staff) presented the report back from the Working Group. The report covered the following topic areas:

1. Working Group’s review of the North American Energy Standards Board (NAESB) draft standard for third party access to smart meter-based information
2. Working Group’s review of 3rd third party access use cases from the Corporate Partners Committee
3. Developing a storage integration framework as per the Forum’s recommendation in their report.
4. Working Group activities and priorities stemming from the Forum’s second report (deferred from May 2nd )

During the combined discussion of items 1 and 2 above, members posed various questions regarding the NAESB document and whether or not it has been considered by the regulator in Ontario. A member also suggested that the NAESB document is likely more pertinent to the issue of accessing real-time smart meter data, as opposed to non real-time billing quality data from the province Meter Data Management/Repository (MDM/R). In response, it was mentioned that this was generally the focus of the Working Group’s recent discussion concerning the document’s potential applicability to Ontario.

During the discussion concerning item # 3 (storage integration framework) a member suggested that use cases developed by the Working Group to illustrate various storage utilization scenarios should be forward-looking and technology agnostic. Another member pointed out that there are several pilot projects across North America that the Working Group could draw from during the research stage of their analysis. Another comment reinforced the Working Group’s approach in using use case techniques to analyze the storage framework problem.

When discussing item # 4 (Working Group activities and priorities) the Forum reviewed the proposed priorities set out on slide 26 of the Working Group’s presentation. It was acknowledged that given the expertise and interests of the working group, some of these priorities may differ slightly from those of the Forum or the Corporate Partners Committee. Some Forum members also expressed their agreement with the proposal of a tighter degree of coordination between these three groups and using an updated version of the Recommendation Tracking Document (last issued in February) as starting point in those coordination activities. Other comments made during this discussion were as follows:

- The Ontario Energy Association (OEA) is holding the, “2011 OEA Energy Leaders’ Roundtable - The Public in Energy Policy” in Toronto on June 28<sup>th</sup>. One of the goals of the conference is to look at how to create a common lexicon for communicating electricity related information and concepts to the public in an effective manner.
- A member of the Corporate Partners Committee (CPC) mentioned that the CPC intends to go through a similar prioritization exercise as the Working Group has done.
- A member suggested that the high-level Privacy by Design principles recognized by the Forum in its recent report should also be translated into a series of actionable use cases.

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- The reality in Ontario right now is that the current population of smart meters does not readily support real-time data access and these technological barriers are clearly of the highest priority for the CPC at the moment.

### **Agenda Item # 3: Report back from the Corporate Partners Committee**

{see also, presentation entitled, “*Corporate Partners Committee Smart Meter Data Access – Use Case*”}

Shelley Lewis Chair of the Corporate Partners Committee briefly provided an update regarding the work plan of the four sub-committees - namely:

- The Use Case sub-committee;
- The Long-term Technical Architecture sub-committee;
- The Sandbox sub-committee<sup>1</sup> is expected to provide a report at the August meeting.
- The Education sub-committee is currently forming-up – details to follow.

Of particular note, the Long-term Technical Architecture sub-committee is expected to report to the Forum at its next meeting. This will be followed at a future meeting by the sandbox sub-committee.

Shelley also mentioned that the Education sub-committee is currently establishing itself and its mandate will include looking for ways that the Corporate Partners Committee can influence and direct current and future consumer education initiatives.

The Corporate Partners Committee is continuing to pursue a meeting with Trilliant Incorporated, as part of its ongoing investigation into the technical aspects of third party access to smart metering data across all of the major AMI systems currently deployed in Toronto. Another Forum member offered to help Shelley in setting up such a meeting.

Use Case sub-committee report:

Shelley then turned the floor over to CPC member Ric Forster of Direct Energy to provide a presentation on behalf of the Use Case sub-committee entitled, “*Corporate Partners Committee Smart Meter Data Access – Use Case*” (see distribution materials). The presentation set out a narrative use case encompassing the user interactions over the course of day, involving a family living in a smart home of the near future. Immediately following the presentation, the following comments were raised by various attendees:

- Integration of home energy management with other products and services is essential.
- In the next day scenario, the necessary smart meter data could come from either the MDM/R or other real-time sources.
- The issue of whether or not to retrofit existing buildings, and requirements for new build structures is emerging as a crucially important issue. Another spectrum of choices lies between automated vs. manual solutions.

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<sup>1</sup> Relates to the Forum’s report recommendation regarding the establishment of an Advanced Metering Infrastructure (AMI) test bed facility.

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- Don't overestimate the take-up rates of these technologies, but by the same token, don't underestimate the potential, indirect spin-off benefits from them either.
- A member posed the question, whether the use case sub-committee foresaw any new requirements regarding revenue-quality metering data. In response to this question it was felt that the biggest need was likely to arise from various forms of prepaid services.
- Electric Vehicle use cases need to account for limited/constrained use of the battery.

{10:40 – 10:55 – break}

### **Special Thanks to Don Tench Upon his Retirement from the IESO:**

Upon returning from the break, Paul Murphy, Chair of the Smart Grid Forum thanked Don Tench on behalf of all organizations present for his dedication and service to the success and ongoing activities of Forum since its founding. Don's contributions to the Forum have included helping with its establishment, acting as chair of the Working Group and more recently, the establishment of the Corporate Partners Committee. Don Tench is retiring from the IESO after 32 years of service in the electricity industry and today will be his last Forum meeting in his capacity as an IESO employee.

Paul Murphy's thanks and best wishes were echoed by all present and Don graciously responded by stating how much he has enjoyed working with the Forum and its constituent bodies over the past two-and-a-half years and by wishing the Forum well in its future endeavours.

### **Agenda Item # 4: Corporate Partners Committee Demonstration Day**

As part of its Demonstration Day the Forum then received a series of presentations from select member organizations of the Corporate Partners Committee as follows. What follows is an excerpt from the various comments and questions that followed each presentation.

CPC Member: **Direct Energy**    Presenter: **Alan Chan**

Presentation Title: **"HomeConnect Overview"**

Direct Energy's presentation began with a short video presentation showing the various capabilities and functions of the tablet computing device that sits at the heart of the 'HomeConnect' system. Following the video presentation, Alan Chan presented the HomeConnect Overview presentation and also described Direct Energy's residential pilot project in Texas.

Comments and discussion:

- Q: An attendee questioned why Direct Energy elected to develop a separate tablet computing device for the 'HomeConnect' system, instead of using existing mobile computing technology. To this, it was answered that at present most other such devices do not have a Zigbee interface which was seen as key to home area network connectivity. As such devices encompass such capabilities in the future, that could be revisited.
- An attendee expressed his like for the familiar look and feel of the tablet computing interface, and that energy management is clearly not the only service offered through the device.
- Q: An attendee asked how would access to historical data be facilitated and what the parameters would need to be added. This question touched off a discussion of historical data

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retention rules currently in place in Ontario. Another member suggested that Ontario needs to come to a common understanding of how much historical data needs to be provided and under what circumstances.

CPC Member: **Ecobee**

Presenter: **Stuart Lombard**

Presentation Title: **“Ecobee Smart Grid Forum Demo Day”**

Ecobee’s presentation was delivered by Stuart Lombard, President & CEO of Ecobee and member of the Corporate Partners Committee. At the outset of his presentation, Stuart pointed out that his company’s Energy Management System won in the Building Automation category at the International Air-Conditioning, Heating, Refrigerating Exposition (AHR Expo). The competition is jointly sponsored by International Exposition Company (IEC), the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and the Air-Conditioning, Heating, and Refrigeration Institute.

Comments and discussion following the presentation:

- An attendee inquired as to what Ecobee felt to be the biggest challenge in Ontario. To this it was replied that the realities of the current, proprietary infrastructure deployed in the province was an issue, but there are technical solutions at hand that can help solve this.
- A question was raised as to how the Ecobee thermostat establishes a control link with air conditioners and other devices. In reply, it was mentioned that the device can be modularly fitted with up to three different types of radios – namely, Zigbee, WiFi and an AMI communication channel.
- An attendee asked how the web portal is hosted. To this it was mentioned that the portal is hosted by Ecobee at a third part data centre and this raised the opportunity for comprehensive, aggregated data analysis.

CPC Member: **Energate**

Presenter: **Niraj Bhargav**

Presentation Title: **“Connecting Conservation with Comfort – Energate Corporate Overview”**

Energate’s presentation was delivered by Niraj Bhargav, CEO of the company. Niraj began by giving some background to Energate’s corporate history and its Canadian roots going back to some of the programmable thermostat concepts developed by the National Research Council over 35 years ago.

Comments and discussion following the presentation:

- **Q:** Does distributed generation factor into your product line?
  - **A.:** Yes. Energate supports distributed generation, including a Zigbee-based solar controller for example.
- **Q:** Are there any compatibility issues with smart appliances?
  - **A.:** No major problems have been experienced with smart appliances we have dealt with so far. Energate does not conflict with locally settable parameters within the smart appliance itself.
- **Q:** Are there any compatibility issues AMI systems that have been deployed in Ontario?

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- **A.:** The system is compatible with the Trilliant mesh network. There are challenges with other types of AMI systems deployed in Ontario due to their proprietary nature however.

CPC Member: **AzTech In-home display**

Presenter: **Geoffrey Salter**

{untitled overview slide presented}

Geoffrey Salter, President & CEO of AzTech In-home display began his presentation by walking the group through an overview slide depicting the various types of interaction between the AzTech In-home display device and various other systems and interfaces within the home. The group then retired to the hallway outside of the boardroom where they were able to view a display of AzTech In-home display devices interacting with smart meters from each of the major AMI providers in use in the province of Ontario. The display devices used different methods of accessing the smart meter's real-time data, depending on the technology involved. Geoffrey also fielded some questions regarding the frequency of real-time time data across the different AMI types and access to persistent broadband data networks.

### **Next Meeting:**

TBD.

**1:00 – Adjournment.**

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## APPENDIX 'A'

### S.G.F. OPEN Action Items as of June 21<sup>st</sup> 2011

See also:

- Work plan of the SGF Working Group tabled at the June 21<sup>st</sup> meeting as part of the report back from the Working Group Presentation
- *Smart Grid Forum Recommendation Tracking Log*

Action Item	Date Assigned	Assigned To	Target Completion	Status
Examine the <i>IESO Market Rules</i> from the standpoint of whether or not they present any barriers to participation of load aggregators, and scheduling service providers in the wholesale market or otherwise conflict with the smart grid interoperability framework.	Feb. 9, 2010	IESO Staff	TBD	OPEN

#### **CLOSED Action Items:**

As of October 12<sup>th</sup>, 2010 closed action items are no longer listed in the minutes as per the agreement reached at the September 7<sup>th</sup>, 2010 Forum meeting. The removal of an open action item from the above list constitutes the completion of that item.