

# Ontario Smart Grid Forum

## Ontario Smart Grid Forum Notes of Meeting

Date: **Tuesday, August 10, 2010**  
Time: 09:00 to 13:00  
Location: IESO Minto Plaza Office, Main Boardroom  
655 Bay Street, Suite 410  
Toronto, ON

### Forum Members Attending:

Paul Murphy	IESO (Chair)
David Collie	Electrical Safety Authority
Wayne Smith	Hydro One
Don Tench	IESO
Jim Huntingdon	Niagara-on-the-Lake Hydro
David McFadden	Ontario Centres of Excellence
Dan McGillivray	Ontario Centres of Excellence
Brian Hewson	Ontario Energy Board
Jon Norman	Ontario Ministry of Energy and Infrastructure
Mario Chiarelli	Ontario Power Authority (for Paul Shervill)
Ivano Labricosa	Toronto Hydro

### Corporate Partners Committee members attending:

Shelley Lewis	The SPi Group (Chair, Corporate Partners Committee)
Gregor Robinson	Ontario Energy Association

### Working Group Members Attending:

David Curtis	Hydro One
Raed Abdullah	Hydro Ottawa (by telephone)
Edward Arlitt	IESO
John Mulrooney	PowerStream
Joshua Wong	Toronto Hydro
Jerry Chwang	Ontario Ministry of Energy and Infrastructure

**NOTE:** These minutes are appended with a cumulative list of outstanding and closed Forum Action Items.

### **09:15 – call to order, attendance, and confirmation of the agenda**

The agenda was approved, but it was agreed to commence the meeting with Agenda items 1 (approval of minutes) and 3 (report back from the working group).

# Ontario Smart Grid Forum

## **Agenda Item # 1 – Minutes of previous meetings:**

### **Minutes of the June 8<sup>th</sup> meeting of the Smart Grid Forum:**

The minutes of the June 8<sup>th</sup> SGF meeting were tabled as amended at the July 13<sup>th</sup> meeting and hearing no further amendments, were declared as final.

### **Minutes of the July 13<sup>th</sup> meeting of the Smart Grid Forum:**

The minutes of the July 13<sup>th</sup> meeting were tabled with a deadline for comment by August 17<sup>th</sup>.

### **Minutes of the July 13<sup>th</sup> Corporate Partners Committee meeting:**

The minutes of the July 13<sup>th</sup> meeting were tabled with a deadline for comment by August 17<sup>th</sup>.

## **Agenda Item # 3: Report Back From the Working Group: Potential Impact of Smart Grid on Rates**

(see also, SGF Support Presentation)

Edward Arlitt (IESO Staff) presented the report back from the Working Group which has spent the month of August on its ongoing action item to develop revised estimates for smart grid incremental capital costs. During the discussion of the work and proposed work plan (see presentation) a number of comments were made by Forum members as follows:

- It was suggested by one Forum member that perhaps the 2010 Annual report should not focus on an overall, aggregate cost estimate number.
- The *Green Energy Act* embraces the recommendations of the 2009 report and therefore the estimates contained in the 2009 report of the Forum should not be drastically out of alignment as a result of the Act itself.
- The Forum should spend more time considering the communications issues surrounding the release of these revised estimates that the Working group is currently working on.
- We need an explicit list of the types of costs that fall within the definition of incremental smart grid expenditure.
- We need to further discuss the timing of the release of these cost estimates at the September Smart Grid Forum meeting.
- Customer control cost estimates should be clearly separated from other, common distribution infrastructure costs.

## **Agenda Item # 2: Report Back From the Corporate Partners Committee**

Shelley Lewis (The SPi Group), Chair of the SGF Corporate Partners Committee (CPC) reported back on the Committee meeting held on August 4<sup>th</sup> (see also, presentation slides distributed at the meeting in support of this agenda item). The CPC spent some time discussing the format of the CPC meetings, and then turned its attention to the topics of the Smart Grid Opportunities Fund and standards development. In addition, the CPC addressed the action item from the Smart Grid Forum to consider success measures in each of the three *Green Energy Act* focus areas. Shelley then presented some of

## Ontario Smart Grid Forum

the support slides that reflected the CPC discussion and various SGF members provided comments during the presentation:

Slide 2 (“Customer Control”) – comments received:

- A Forum member suggested that perhaps a success measure should include the amount of load under consumer control.
- Perhaps the level of private sector involvement/investment should also be looked upon as a success factor.

Slide 3 (“Utility Flexibility”) – comments received:

- Poor-quality inverters could have a major impact on power quality and unfairly affect the metrics by which distribution companies are judged.
- Should storage capacity also be considered a success factor?
- There was some discussion over the purpose and aims of exporting “green power” and what constitutes a success factor that is in the Ontario public interest in that regard.
- A member raised the question of how the cost of a MWh saved is relevant to the success of the smart grid. On this point, another member suggested this is more of a research challenge rather than a success factor. Another member pointed out that this is a similar question to the displacement of fossil fuel-based energy and is difficult to quantify without a scheme for valuing greenhouse gas reductions.

Slide 4 (“Adaptive Infrastructure”) – comments received:

- A member suggested that a success factor could include the overall breadth of business models supported by the smart grid that are available to accommodate Electric Vehicles
- A member raised the question what types of Electric Vehicles were considered by the CPC, and on this question it appears that plug-in hybrids were the main focus of attention.

Slides 5 and 5 (“Economic Development”) – comments received:

- A member questioned the extent to which Ontario subsidiaries of foreign companies have the mandate to sell Ontario-based products and services on a global scale and whether or not this could affect the associated success measures.
- There was extensive discussion of the nature of ‘success’ in stimulating economic growth in Ontario. One of the main questions was whether or not the Forum itself should become a focal point for Ontario development.

**ACTION ITEM:** The Corporate Partners Committee should investigate what metrics should be targeted to become a selling point for Ontario smart grid expertise and products and how we can leverage those metrics accordingly. In addition this analysis should examine which of those metrics could be put in place sooner rather than later.

Advanced Metering Infrastructure (AMI) standards:

Shelley then alluded to a presentation to the CPC by Ecobee in regards for the global push towards open Advanced Metering Infrastructure (AMI) Standards. Access to customer data is seen as a key success factor by many CPC member organizations. To this, a member asked whether or not there is anything

## Ontario Smart Grid Forum

Ontario can do in this regard right now and it was agreed that the CPC would examine this issue more closely. Another member suggested that there are pros and cons to open AMI standards and considerations such as privacy and security also need to weigh into this question.

**ACTION ITEM:** The Corporate Partners Committee should examine the issue of open AMI standards with a specific view to recommending any Ontario-specific actions and report back to the SGF.

Electric Vehicle (EV) standards:

The discussion then turned to Electric Vehicle (EV) standards. The roles of aggregators and other service providers along with their potential regulatory treatment in Ontario was the subject of extensive discussion. A member suggested that the current structure of the Ontario marketplace was seen as a barrier because aggregators are "...simply seen as just another load." There was much discussion on this particular point.

Paul Murphy thanked the OEA, Gregor Robinson and Shelley Lewis on behalf of the Forum.

### **Agenda Item # 4: Presentation by IBM Canada, "Home Energy Management in Ontario"**

{See also, presentation and report by the same title distributed to Forum members}

Michael Martin of IBM Canada delivered a presentation based on a report distributed to SGF members, regarding "Home Energy Management in Ontario". Michael thanked MEI staff, and particularly, Usman Syed, Jerry Chwang and Jon Norman for the opportunity to develop the report.

Introduction:

Michael began his presentation by portraying the home energy management industry as very much in a state of flux right now, particularly with the emergence of three competing, developing standards (WiFi, Zigbee and HomePlug) – each with their various advantages and disadvantages. As these standards continue to develop, closed-architecture systems with "bridge devices" that link various disparate systems together, are very much a key development in the industry at this present time. Another major trend, is that the industry is rapidly moving away from single-purpose devices.

Examples:

Michael's presentation outlined various types of solutions, some of which are based upon the smart metering infrastructure, while others are based upon a smart device of various types. Specific solution examples provided by three major AMI providers that currently have a presence in Ontario (specifically, Elsters, Trilliant and Sensus) were also examined over the course of the presentation.

Key barriers:

It was postulated that at present there is a difficult path to the Ontario market for Home Energy Management systems, as providers need to navigate both proprietary AMI standards and securing a utility partner. On this point, there was an extensive discussion on the role of Local Distribution Companies (LDCs). Michael suggested that new entrants will greatly affect this areas of the market over the longer term, and LDCs will need to give this due consideration.

Paul Murphy thanked Michael on behalf of the Forum.

{12:30 – brief lunch break}

### **Agenda Item # 5: Follow-up discussion to presentation by IBM Canada, "Home Energy Management in Ontario"**

## **Ontario Smart Grid Forum**

Following the break, there was an interactive discussion between Forum members and Michael Martin of IBM Canada. Major areas of discussion included:

- Potentially feasible timelines for establishing meter to In-home device communications in Ontario and more granular information regarding specific devices within the home.
- Planning assumptions, and specifically the number and voltage of distribution transformers currently in the field and what may be required in the future to meet the demands of the smart grid. In addition, these estimates are greatly affected about assumptions regarding the number of electric vehicles charging simultaneously.
- Standards: there is a potential concern that the some of the utility network standards being developed in the U.S. may not be as good as the 1.8 GHz band reserved for such use in Canada.

### **Next Meeting:**

Tuesday, September 7<sup>th</sup>, 2010 – morning. (details to follow).

**13:10 – Adjournment.**

# Ontario Smart Grid Forum

## APPENDIX 'A'

### S.G.F. **OPEN** Action Items as of August 10, 2010

Action Item	Date Assigned	Assigned To	Target Completion	Status
The Corporate Partners Committee should investigate what metrics should be targeted to become a selling point for Ontario smart grid expertise and products and how we can leverage those metrics accordingly. In addition this analysis should examine which of those metrics could be put in place sooner rather than later.	Aug. 10, 2010	Corp. Partners Committee	Sept. 7 <sup>th</sup>	OPEN
The Corporate Partners Committee should examine the issue of open AMI standards with a specific view to recommending any Ontario-specific actions and report back to the SGF.	Aug. 10, 2010	Corp. Partners Committee	Sept. 7 <sup>th</sup>	OPEN
The Working Group should move forward with its smart grid cost analysis using readily available data such that an interim estimate could be ready for use by Ministry of Energy and Infrastructure by September 1st.	July 13 <sup>th</sup>	Working Group	Sept. 7 <sup>th</sup>	OPEN
Report back to the Forum as to when other materials pertaining to advice to government since Fall, 2009 might be suitable for publication.	May 17 <sup>th</sup>	Jon Norman	TBD	OPEN (update provided on June 8 <sup>th</sup> .)
Jatin Nathwani to report back to the Forum on the salient points of emerging standards for Electric Vehicle charging stations in order to support a future discussion on the matter.	March 9 <sup>th</sup> , 2010	Jatin Nathwani	May 17 <sup>th</sup>	OPEN
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

## APPENDIX 'B'

### S.G.F. **CLOSED** Action Items as of August 10, 2010

Action Item	Date Assigned	Assigned To	Target Completion	Status
Working Group should commence the development of smart grid costing model	June 8 <sup>th</sup>	Working Group	TBD	CLOSED
Distributor members of the Forum should contribute their experience to the working groups examination of smart grid costs.	June 8 <sup>th</sup>	LDC Forum members	TBD	CLOSED
Report back to the Forum on potential nominations for the Corporate Partners Committee.	May 17 <sup>th</sup>	Don Tench, Gregor	June 8 <sup>th</sup>	CLOSED

## Ontario Smart Grid Forum

Action Item	Date Assigned	Assigned To	Target Completion	Status
		Robinson and Jon Norman		
Forum members should familiarize themselves with the seven privacy principles which are contained in Appendix 'A' of the IPC's smart grid discussion paper entitled " <a href="#">SmartPrivacy for the Smart Grid: Embedding Privacy into the Design of Electricity Conservation November 2009</a> "	April 19 <sup>th</sup> 2010	All Forum Members	May 17 <sup>th</sup>	CLOSED
Edward Arlitt (IESO staff) to draft an outline of the 2010 Annual Report of the Ontario Smart Grid Forum for consideration by the Forum.	March 9 <sup>th</sup> , 2010	Edward Arlitt	May 17 <sup>th</sup>	CLOSED
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.	April 19 <sup>th</sup> 2010	Working Group	May 17 <sup>th</sup>	Initial report made on May 17 <sup>th</sup> . Ongoing examination of this topic will continue.
The SGF Working Group should recommend smart grid interoperability standards-related issues that the Forum should focus on	March 9 <sup>th</sup> , 2010	SGF Working Group	April 19 <sup>th</sup> 2010	CLOSED
The Forum Working Group should suggest what survey questions might be posed to the CEA Corporate Partners Committee for the purposes of developing the Forum's next annual report.	March 9 <sup>th</sup> , 2010	SGF Working Group	April 19 <sup>th</sup> 2010	CLOSED
Wayne Smith to seek positive confirmation from the CEA that additional Ontario nominees for the Corporate Partners Committee will not have become full-fledged members of the CEA.	March 9 <sup>th</sup> , 2010	Wayne Smith	April 19 <sup>th</sup> 2010	CLOSED as a result of OEA proposal
Forum members were asked to make any further suggestions for additions to the list of Additional Nominations for CEA Corporate Partners Committee as soon as possible.	March 9 <sup>th</sup> , 2010 and Feb. 22 <sup>nd</sup> , 2010	Forum Members	April 19 <sup>th</sup> 2010	CLOSED as a result of OEA proposal
Forum members to review the RACI matrix in light of March 9th discussion and convey any further comments to IESO staff.	March 9 <sup>th</sup> , 2010	Forum Members	April 19 <sup>th</sup> 2010	CLOSED
The SGF Working Group should identify those principles that are truly unique to the smart grid where new roles and responsibilities might need to be defined.	March 9 <sup>th</sup> , 2010	SGF Working Group	April 19 <sup>th</sup> 2010	CLOSED
The SGF Working Group should identify those principles where it feels that that accountabilities for that topic are too diffuse (based on the entries in the RACI matrix) and make recommendations as to how this might be rectified.	March 9 <sup>th</sup> , 2010	SGF Working Group	April 19 <sup>th</sup> 2010	CLOSED
Ministry Staff and the Chair will coordinate the timing of any such communications between the Forum and the Ontario Government regarding the Smart Grid Opportunities Fund.	March 9 <sup>th</sup> , 2010	Ministry Staff and Forum Chair	April 19 <sup>th</sup> 2010	CLOSED