

# Ontario Smart Grid Forum

## Ontario Smart Grid Forum Notes of Meeting

Date: **Tuesday, October 12, 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
Norm Fraser	Hydro Ottawa
David McFadden	Ontario Centres of Excellence
Dan McGillivray	Ontario Centres of Excellence
Brian Hewson	Ontario Energy Board
Jon Norman	Ontario Ministry of Energy
Mario Chiarelli	Ontario Power Authority
Ivano Labricosa	Toronto Hydro
Craig Martin	TransCanada
Jatin Nathwani	University of Waterloo
Axel Starck	Veridian Corporation (for Michael Angemeer)

### Corporate Partners Committee members attending:

Shelley Lewis                      The SPi Group (Chair, Corporate Partners Committee)

### Working Group Members Attending:

David Curtis	Hydro One
Raed Abdullah	Hydro Ottawa (by telephone)
Edward Arlitt	IESO
Usman Syed	Ontario Ministry of Energy (by telephone)

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

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

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

#### **Minutes of the August 10<sup>th</sup> meeting of the Smart Grid Forum:**

The minutes of the August 10th meeting were tabled as final and no further amendments were raised at the meeting.

## Ontario Smart Grid Forum

### Minutes of the September 7<sup>th</sup> meeting of the Smart Grid Forum:

The draft minutes of the September 7<sup>th</sup> meeting were tabled with a comment deadline of October 19, 2010.

During the meeting it was proposed that the cumulative list of previously CLOSED action items be dropped from the meeting minutes on a going-forward basis. No objections were raised to this proposal.

### **Agenda Item # 2: Update from the Ministry of Energy**

Usman Syed (Ministry of Energy) began the Ministry update by discussing the status of the regulatory instrument enshrining the high-level smart grid principles. It was indicated that the formalization of such principles in a regulatory instrument may occur before the end of the year. On this point, a Forum member expressed his concern that the effort to develop such principles and more generally the smart grid, is at risk of losing its momentum as a result of the delays that have occurred thus far.

Usman also provided an update regarding the Smart Grid Opportunities Fund. Ideally the publication of the smart grid principles should precede the activation of the Fund, but under the circumstances the Fund may be launched first. As of today's meeting, approval of the Treasury Board was still pending however. In the meantime, the Ministry of Energy has been in consultation with the Ministry of Economic Development and Trade. Some of the comments and questions from Forum members were as follows:

- Jatin Nathwani (University of Waterloo) suggested perhaps the Forum could have a joint meeting with the Ministry at the University of Waterloo to further discuss the aims and application of the Smart Grid Opportunities Fund.
- A Forum member posed the question whether or not the Treasury Board could in fact opt not to release the funds. On this point, it was acknowledged that this is a possibility, but it wasn't clear if that would negate further opportunities to return to the Board to have the funds released at a later date.
- A Forum member suggested that perhaps the upcoming release of the Government's "Long Term Energy Plan" might be an opportunity to get things back on track for both the Smart Grid Opportunities Fund and the smart grid principles developed by the Forum.

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

(see also, SGF Support Presentation)

Edward Arlitt (IESO) presented the report back from the Working Group containing its revised estimates for smart grid incremental capital costs. During the presentation, the following comments and discussion amongst Forum members ensued:

- A Forum member observed that not all LDC's will proceed on the same basis or at the same base. However, another member countered that the sample size of the cost estimates

## Ontario Smart Grid Forum

covered more than 50% of the Ontario customer base, and should therefore account for such differences, inherent within the estimates.

- Another Forum member expressed his concern that the cost discussion was getting too detailed for the purposes of the Annual Report, and that we need to get back to a high-level discussion about the need to keep pace with smart grid technology.

### **ACTION ITEMS for Working Group:**

- 1) Re-examine the capital cost estimates in the context of comparative deployment rates amongst the smaller LDCs to ensure the model accounts for such differences.
  - 2) OPA conservation and demand management costs need to be included in the estimates, but still reported as a separate number.
  - 3) Isolate all capital expenditure estimates related to distributed generation.
- A Forum member observed that the smart grid principles will affect the OEB's work in approving capital expenditures, and by extension, the validity of these estimates.
  - Several members expressed their view that the capital cost estimates should not be presented in terms of a percentage of a typical consumer bill. However, it was acknowledged that other parties will take the Forum's estimates and try to do exactly that.
  - A Forum member suggested that smart grid benefits should be discussed, but not quantified. A cogent description of these benefits would be helpful, but the purpose of the Annual report is not to once again re-justify the need for a smart grid.

The Chair then summarized the various points of discussion in regards to the high-level questions posed to the Forum in the supporting slide deck as follows:

**Slide 22:** Q: "Do we have an adequate spectrum of smart grid benefits to draw from in order to support the Smart Grid principles?"

- On this point, it was agreed that the field of benefits presented was sufficient in scope, so long as the environment and jobs creation were added to the list.

**Slide 23:** Q: "How do we make an adequate case for the Smart Grid based on the field of benefits?"

- On this question there needs to be further discussion, but an individual Forum member expressed his view that the environment really needs to stand out given the underpinning of the *Green Energy Act* in Ontario.

**Slide 24:** Q: "Are we sufficiently aligned with our southern neighbours? To what extent is such alignment necessary?"

- Several members suggested that while the examination of the U.S. objectives/benefits was appropriate, we should be looking at what is happening in Europe as well in order to maintain a sufficiently broad worldview over the longer term.

**Slide 25:** Q: "Do the interaction of the smart grid principles and benefits highlight particular areas of strategic advantage to Ontario?"

## Ontario Smart Grid Forum

- Forum members generally agreed with the Working Group’s suggestions presented on this slide, with the exception of “safety” which didn’t strike most members as a sufficiently prominent area of benefits. In addition, it was suggested that the Environment be added to this list.

### **Agenda Item # 4: Report Back From the Corporate Partners Committee**

Shelley Lewis, Chair of the OEA Corporate Partners Committee (CPC) presented a slide deck entitled, “*Smart Meter Data Access*” (see presentation for further details). The presentation largely centred on an action item assigned to the CPC during the August 10<sup>th</sup> meeting of the Forum – specifically that, “*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.*” (see also, minutes of the August 10<sup>th</sup> SGF meeting). At the outset of the presentation, Shelley outlined the current state of proprietary AMI systems and data access arrangements in the province of Ontario.

The Forum then proceeded to generally discuss the technical and regulatory barriers affecting AMI data access. Members of the Forum voiced their support of the notion that action is required in both areas in order to help facilitate the development of the smart grid in this particular area. During this discussion, Brian Hewson (Ontario Energy Board) also indicated that an OEB consultation paper on data access may be forthcoming in the near future.

**OEA CPC Recommendation 1:** “Clarify to the (greater) market who is responsible for controlling access to consumption data.”

- Forum members generally would welcome this clarification. At present, the OEB largely determines data access rules for retailers and LDCs using the EBT system. However, there is a looming question as to what regulatory authority is needed in order to give other types of service providers access to AMI data – either in real-time or for billing purposes.
- A member suggested that general principle here would be that the customer retains ultimate authority over who has access to smart metering data and must approve the release of such data to any party other than their local distribution company.

**OEA CPC Recommendation 2:** “Establish an administrative process for customers and their agents to access their data...”

- both at the meter and at the LDC/MDM/R
- with appropriate granularity and frequency
- It was agreed that the clarifications made as part of recommendation # 1 would likely encompass different types of administrative rules and technical means of access depending on whether a party is trying to access real-time data directly from the AMI system, or billing quantity data from the LDC, MDM/R and/or EBT Hub.

## Ontario Smart Grid Forum

- During the discussion it was clarified that this recommendation applies to individual customer data and not aggregated smart meter data for research purposes.

**OEA CPC Recommendation 3.** “Form an independent technical evaluation team to determine whether existing installed meters can be accessed by in home equipment and publish the standards for each existing vendor.”

- During this part of the discussion a Forum member alluded to a previous presentation by Michael Martin of IBM Canada (“*Home Energy Management in Ontario*”) at the August 10<sup>th</sup> Forum meeting. There are several proprietary AMI standards currently in use in the province today and this creates a natural technical barrier to entry – particularly for products and services that make use of real-time data.
- A member observed that the current technical landscape in the province is shaped by decisions made several years ago to limit the functionality of the AMI infrastructure to the implementation of time-of-use billing.

**OEA CPC Recommendation 4.** “Determine and publish a set of communications standards for all meter vendors in Ontario (e.g. Zigbee, ANSI C12.xx).”

- Members generally agreed that common access standards would go a long way to solving the technical portions of the AMI data access problem. However, a member cautioned that Ontario should seek out broadly accepted international standards, as opposed to unilaterally developing one that is unique to Ontario. On this point, another member observed that standards are still being developed and that it may be some time before one clearly emerges as mature and stable enough to base Ontario’s AMI data access rules upon it.

**OEA CPC Recommendation 5.** “LDCs should require that all future purchases of meters meet the communications standards established in {recommendation} 4 above”

- On this point, Forum members generally agreed with this notion, though it was again reiterated that this would have to account for the reality that a significant infrastructure investment has already been made in various proprietary AMI technologies within the province of Ontario.

**OEA CPC Recommendation 6.** “OPA (or MEI) to negotiate bulk procurement of the proprietary native communication access licenses of the three primary AMI technologies currently in Ontario. Then allow open access for all third party vendors who wish to develop solutions that communicate over their network for a standard pass through fee.”

- During the discussion of recommendation 6 it was clarified that the spirit and intent of this recommendation would be that third party service providers making use of AMI data access would ultimately bear the cost of the above-mentioned access licenses— as opposed to being spread across the entire rate base.

## Ontario Smart Grid Forum

- There was significant discussion around which parties might be best suited to lead such negotiations, though no clear consensus emerged. Suggestions included the EDA, the Smart Metering Entity, third party service providers and the OEB.

**OEA CPC Recommendation 7.** “Establish a certification and test environment for Ontario’s smart grid to allow testing of products and demonstrations to ensure compatibility with LDC infrastructure (meters, etc.)”

- Forum members generally felt that such a test bed could prove useful – particularly in the present context of multiple, proprietary AMI standards. However, from the discussion there was no particular consensus as to who would be responsible for the building, operation or maintenance of such a test environment – or an appropriate means for funding it.

**OEA CPC Recommendation 8.** “OEB to direct that electricity retailers and agents be given access to smart meter data and ask the OEB EBT working group to enable this through their existing process. Invite the IESO to join the working group for this purpose.”

- A forum member pointed out that the current objective of implementing Time-of-Use rates has temporarily set-aside detailed discussion of this particular topic in the LDC community.
- Forum members acknowledged that there are several different technical options for providing retailer access to smart meter data, but there was no detailed discussion as to their specific pros and cons.

The Forum found the very focussed recommendations from the Partners Committee to be an excellent basis for discussion. The discussion demonstrated some of the challenges and complexities with many of the recommendations and it was recognized that further consideration would be required to determine which should be moved forward and how best to do it.

### **Agenda Item # 5: Structure of the Annual Report**

(Reference: draft table of contents distributed with the meeting materials for this meeting)

Given the limited amount of time remaining in the meeting the Chair assigned the following action item to all Forum members with a view to finalizing the structure of the 2010 Annual Report as soon as possible:

**ACTION ITEM:** Forum members should review the draft structure of the 2010 Annual Report distributed with the materials for the October 12<sup>th</sup> 2010 and provide any final comments to IESO staff (Don Tench and/or Edward Arlitt) in advance of the November 9<sup>th</sup> meeting.

### **Agenda Item # 6: Time-of-Use rates and potential messaging**

(Reference: draft talking points regarding TOU rates distributed at the meeting)

The Chair assigned the following action item to all Forum members:

## Ontario Smart Grid Forum

**ACTION ITEM:** Forum members should consider the present discourse regarding smart metering and time of use rates and provide any suggestions for key public messages.

### **Agenda Item # 7: NIST announcement concerning its identification of Five “Foundational” Smart Grid Standards to FERC Chairman Jon Wellinghoff.**

Forum members were reminded of the recent announcement by the U.S. Commerce Department's National Institute of Standards and Technology (NIST) recommendations to the U.S. Federal Energy Regulatory Commission (FERC) regarding the recognition of five important smart grid interoperability standards. The initial announcement and links to additional reference materials may be found at the following link:

[http://www.nist.gov/public\\_affairs/releases/smartgrid\\_100710.cfm](http://www.nist.gov/public_affairs/releases/smartgrid_100710.cfm)

Forum members will likely consider this matter and other developments with regards to interoperability issues at a meeting of the Forum in the near future.

### **Agenda Item # 8 General Action Item for November meeting**

**(Reference – Recommendation Tracking Document distributed with meeting materials)**

The Chair reminded Forum members of the following general action item for all Forum members which is due at the next Forum meeting on November 9<sup>th</sup>:

**ACTION ITEM:** At the November 9<sup>th</sup> meeting, each member organization of the Forum shall provide a state of the world synopsis of their smart grid activities in regards to the Forum's previous smart grid recommendations (brief verbal report should be sufficient).

### **Next Meeting:**

Tuesday, November 9<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 October 12, 2010

Action Item	Date Assigned	Assigned To	Target Completion	Status
At the November 9th meeting, each member organization of the Forum shall provide a state of the world synopsis of their smart grid activities in regards to the Forum's previous smart grid recommendations (brief verbal report should be sufficient).	October 12, 2010	All Forum Members	November 9, 2010	OPEN
Forum members should consider the present discourse regarding smart metering and time of use rates and provide any suggestions for key public messages.	October 12, 2010	All Forum Members	November 9, 2010	OPEN
Forum members should review the draft structure of the 2010 Annual Report distributed with the materials for the October 12th 2010 and provide any final comments to IESO staff (Don Tench and/or Edward Arlitt) in advance of the November 9th meeting.	October 12, 2010	All Forum Members	November 9, 2010	OPEN
<ol style="list-style-type: none"> <li>1) Re-examine the capital cost estimates in the context of comparative deployment rates amongst the smaller LDCs to ensure the model accounts for such differences.</li> <li>2) OPA conservation and demand management costs need to be included in the estimates, but still reported as a separate number.</li> <li>3) Isolate all capital expenditure estimates related to distributed generation.</li> </ol>	October 12, 2010	Working Group	November 9, 2010	OPEN
Jim Huntingdon to engage the EDA on the possibility of reviewing the revised capital cost estimates once developed by the Working Group.	Sept. 7, 2010	Jim Huntingdon	Oct. 12, 2010	OPEN
The Working Group and IESO staff to engage the OPA in order to include their expenditures in the Consumer Technologies category within the revised smart grid capital cost estimates	Sept. 7, 2010	Working Group	Oct. 12, 2010	OPEN
The Working Group should account for other sources of public-sourced research and development funding from all levels of government (where applicable to Ontario) as part of the cost estimates in the Innovation and the Economy category – beyond anticipated spending by the distribution sector.	Sept. 7, 2010	Working Group	Oct. 12, 2010	OPEN
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> 2010	OPEN (update provided on Sept. 7 <sup>th</sup> )
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> )
Examine the <i>IESO Market Rules</i> form the standpoint of whether or not they present any barriers to	Feb. 9, 2010	IESO Staff	TBD	OPEN

## Ontario Smart Grid Forum

Action Item	Date Assigned	Assigned To	Target Completion	Status
participation of load aggregators, and scheduling service providers in the wholesale market or otherwise conflict with the smart grid interoperability framework.				

### APPENDIX 'B' – CLOSED Action Items:

**NOTE:** 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, 2010 Forum meeting. The removal of an open action item from the list in Appendix 'A' (above) constitutes the completion of that item.