

Ontario Smart Grid Forum

Ontario Smart Grid Forum Notes of Meeting

Date: **Tuesday, September 7, 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)
Keith Major	Bentall LP
Wayne Smith	Hydro One
Norm Fraser	Hydro Ottawa
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
Jatin Nathwani	University of Waterloo
Michael Angemeer	Veridian Corporation

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
Joshua Wong	Toronto Hydro

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 defer the report back from the Corporate Partners Committee (agenda item # 4) to the end of the meeting so that the electric vehicle theme discussion (agenda item # 5) could be considered immediately following the Working Group report.

Ontario Smart Grid Forum

Agenda Item # 1 – Minutes of previous meetings:

Minutes of the July 13th meeting of the Smart Grid Forum:

The minutes of the July 13th meeting were tabled as final and no further amendments were raised at the meeting.

Minutes of the August 10th meeting of the Smart Grid Forum:

The draft minutes of the August 10th meeting were tabled with a comment deadline of September 14, 2010.

Agenda Item # 2: Report Back From the Working Group: Potential Impact of Smart Grid on Rates

(see also, SGF Support Presentation)

David Curtis (Hydro One) presented the report back from the Working Group containing its preliminary estimates for smart grid incremental capital costs. He began by thanking the members of the sub-group of the Working Group which contributed to this effort. During the ensuing presentation numerous individual comments were made, in addition to various recommendations for the further refinement of the estimates:

Slide 7: Methodology – Data Sources:

- A Forum member suggested that small LDCs should be represented in the analysis to a greater extent. On this point it was further suggested that perhaps the EDA might become engaged in the review of the revised cost estimates once complete.

ACTION ITEM: Jim Huntingdon to engage the EDA on the possibility of reviewing the revised capital cost estimates once developed by the Working Group.

Slide 11: Variance Discussion – Consumer Technologies:

- David Curtis observed that a significant change in assumptions underlies the revised projections for the Consumer Technologies category. Specifically, that many behind-the-meter devices will be provided by third parties other than LDCs. There was extensive discussion on this point and various viewpoints were raised.
- There was considerable discussion of the differences between “smart grid” and “conservation” spending and also on the scope of this costing effort.
- It was generally agreed that the OPA needs to be engaged in developing this part of the estimates in order to account for their considerable expenditure and mandate in this area. However, some Forum members maintained that this still doesn’t entirely relieve the LDC’s of a potentially considerable responsibility in this area, depending on how the regulatory landscape develops.

ACTION ITEM: 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.

Ontario Smart Grid Forum

Slides 13 and 14: Distributed Energy Resources and Transmission categories:

- It was observed by a Forum member that many Distributed Energy Resources cost components should not be classified as “smart grid” costs as they do not pertain directly to the modernization of the power grid.
- It was noted that the IESO is refining its own organizational component of the estimates in this category – as it did for last year’s report.

ACTION ITEM: The Working Group should separate pure “smart grid” costs from those costs that are merely associated with expansion of infrastructure (i.e. those components that truly lend new “intelligence” to the grid).

Slides 16: Electric Vehicles

- It was clarified that the estimates in this category are based upon the assumption that building owners will largely cover any necessary EV-related retrofit costs over the next five years.

Slides 17: Innovation and the Economy:

- A Forum member suggested including demonstration and pilot projects within the estimates
- In response to a question from a forum member, it was mentioned that a substantial portion of the estimate in this category is related to standards development.
- Not clear if we should also pull-in other projects funded by the OPA and other agencies outside of the distribution sector into the estimates (?) but they should nonetheless be discussed in the Annual Report

ACTION ITEM: 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.

Following the slide presentation, there was a brief discussion regarding communications protocol. It was agreed that the revised estimates are not ready for public use for the time being. Jon Norman (Ministry of Energy) also indicated that the Ministry is currently working on a communications roll-out for the smart grid principles in anticipation of them being formalized into regulatory instruments in the near future.

{11:15 – break}

Agenda Item # 5 - Electric Vehicle Presentation

(See also, agenda item presentation and University of Waterloo report, “*Towards and Ontario Action Plan for Plug-in Electric Vehicles (PEVs)*” distributed to Forum members prior to the meeting.)

Forum member and professor Jatin Nathwani (University of Waterloo) presented a presentation entitled, “*Towards and Ontario Action Plan for Plug-in Electric Vehicles (PEVs)*” which pertains to the report by the same title.

Ontario Smart Grid Forum

During the presentation there were both questions and informal discussion between professor Nathwani and the other members present. Some of the topics of discussion included:

- The overall capacity of the grid to handle the near-term introduction of the first electric vehicles over the next 3 to 5 years in Ontario.
- Consideration of 2-way services between the vehicle and the grid – both from a manufacturer’s standpoint and that of potential service providers.
- There was considerable interest in the methodology and approach to some of the various estimates and models set out in the report.
- The group deliberated on the current state of EV standards, their timeframes for development and ongoing implications.

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

Shelley Lewis (The SPi Group), Chair of the SGF Corporate Partners Committee (CPC) reported back on the work of the Committee. In addition, Shelley noted that the CPC has a strong reciprocal interest in keeping abreast of the proceedings of the Smart Grid Forum.

The recent meeting of the CPC including a discussion of the ongoing action time from the Forum to consider success metrics for the Forum. In this regard, the CPC has resolved to set up a set of sub-groups devoted to each of the three Green Energy Act focus areas in order to deliberate on each of these criteria in more detail. It was also mentioned that representation by an AMI vendor would be considered helpful.

Shelley then turned her attention to the current list of barriers and issues, which was distributed to Forum members in support of this agenda item. During this discussion the status of the Smart Grid Opportunities Fund came up and it was suggested that perhaps the CPC should undertake to write to the Minister of Energy in regards to the status of the fund and the enthusiasm of the industry to see it activated as soon as possible.

During the discussion of potential barriers to smart grid development, Advanced Metering Infrastructure (AMI) standards and access to real-time smart metering data became a major topic of interest. The current state of affairs in Ontario with multiple, proprietary standards was seen by many on the CPC as a potential impediment to allowing for consumer management of energy costs.

In closing, it was agreed that the smart grid cost projections presented at today’s meeting should not be disclosed to the CPC at this time until they are further refined by the Working Group, but the University of Waterloo’s Electric Vehicle report could be distributed.

Next Meeting:

Tuesday, October 12th, 2010 – morning. (details to follow).

13:10 – Adjournment.

Ontario Smart Grid Forum

APPENDIX 'A'

S.G.F. **OPEN** Action Items as of September 7, 2010

Action Item	Date Assigned	Assigned To	Target Completion	Status
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 separate pure "smart grid" costs from those costs that are merely associated with expansion of infrastructure (i.e. those components that truly lend new "intelligence" to the grid).	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 th 2010	OPEN (update provided on Sept. 7 th)
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 th 2010	OPEN (update provided on Sept. 7 th)
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 th	Working Group	Sept. 7 th 2010	OPEN (update provided on Sept. 7 th)
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 th	Jon Norman	TBD	OPEN (update provided on June 8 th)
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

Ontario Smart Grid Forum

APPENDIX 'B'

S.G.F. **CLOSED** Action Items as of September 7, 2010

Action Item	Date Assigned	Assigned To	Completion Date	Status
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 th , 2010	Jatin Nathwani	Sept. 7, 2010	CLOSED
Working Group should commence the development of smart grid costing model	June 8 th	Working Group	TBD	CLOSED
Distributor members of the Forum should contribute their experience to the working groups examination of smart grid costs.	June 8 th	LDC Forum members	TBD	CLOSED
Report back to the Forum on potential nominations for the Corporate Partners Committee.	May 17 th	Don Tench, Gregor Robinson and Jon Norman	June 8 th	CLOSED
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 " Smart Privacy for the Smart Grid: Embedding Privacy into the Design of Electricity Conservation November 2009 "	April 19 th 2010	All Forum Members	May 17 th	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 th , 2010	Edward Arlitt	May 17 th	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 th 2010	Working Group	May 17 th	Initial report made on May 17 th . 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 th , 2010	SGF Working Group	April 19 th 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 th , 2010	SGF Working Group	April 19 th 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 th , 2010	Wayne Smith	April 19 th 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 th , 2010 and Feb. 22 nd , 2010	Forum Members	April 19 th 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 th , 2010	Forum Members	April 19 th 2010	CLOSED
The SGF Working Group should identify those principles that are truly unique to the smart grid where	March 9 th , 2010	SGF Working Group	April 19 th 2010	CLOSED

Ontario Smart Grid Forum

Action Item	Date Assigned	Assigned To	Completion Date	Status
new roles and responsibilities might need to be defined.				
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 th , 2010	SGF Working Group	April 19 th 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 th , 2010	Ministry Staff and Forum Chair	April 19 th 2010	CLOSED