Meeting Summary

OEB Smart Grid Advisory Committee

Meeting Date: December 17, 2013 **Time:** 9:30 am – 3:00 pm

Location: OEB Offices, 2300 Yonge Street

The Meeting Summary provides a high level review of the presentations and discussions at the Smart Grid Advisory Committee. The summary identifies key issues that arise and any conclusions or recommendations by the Committee. It will not attribute comments to any individual organization besides presenters. Agendas, presentations and meeting summaries will be available on the OEB's website under Smart Grid Advisory Committee.

Meeting Agenda

1. Introduction
2. Update from the Low Volume Data Access Working Group
3. Update from the Storage Working Group
4. Update from the Cyber-security Working Group
5. Update from the Energy Data Access (EDAP) Working Group
6. Update on sharing information regarding distributors grid modernization efforts
7. Planning for 2014 Meetings

1. Introduction

- Welcome and introductory remarks; review of meeting agenda; review of last meeting's summary
- Agenda for the meeting is to hear updates from the various working groups that have been established to date.

2. Update from the Low Volume Data Access Working Group

Overview of Low Volume Data Access Working Group's discussions and current thinking:

- The working group identified current technologies available to provide access to real-time data which include, optical readers and current transformers (which do not necessarily require LDC involvement to install) and existing proprietary protocols built into smart meters (which do require LDC involvement to enable).
- Existing options are not standard and can be expensive (prices vary); some options are more convenient / affordable than others; compatibility depends on meter stock.
- Going forward Zigbee (a smart meter to home area network communications protocol) will likely become more prevalent (for Sensus and possibly Elster as well) but Trilliant will likely maintain its proprietary protocol.
- What to do about this variation given the relatively 'young' meter stock deployed in Ontario?
- May specify a new functionality requirement (not a standard) that is imposed only as meters are 'naturally' replaced.
- Rather than trying to pick a standard you pick minimum functionality for consumers or 'outcomes' for consumers
    - Timeliness, frequency, gateway (i.e. one-to-many devices communication)
    - Challenge is how to overcome proprietary protocols and ensure that distributors meet these outcomes for consumers in a more standard way.
- The working group has discussed integrating with gas – there would be CDM benefits etc.
- End goal of making this data available was also discussed – real-time data has value if:
    - In home / building automation is easily available
    - Better price signals exist
- The working group is drafting a document responding to each of the questions assigned by the Advisory Committee and expects to provide a final product at the January 2014 SGAC meeting.

Discussion among the Committee:

- Any discussion of refresh rate for these new specs?
    - Yes, the working group agreed that new specs would have to be updated at appropriate intervals but no timeline has been determined.
- Some LDCs not far from replacing existing meters (almost 10 yrs old . . . will replace in a few years) and new growth customers get new meters
- Everyone was mandated to meet minimum specs for the first round of meters . . . value in specifying function rather than technology/standard. Can also drive cost down because it tells the meter manufacturers that certain functionality is the baseline for all Ontario meters.
- Have we done a jurisdictional scan?
    - The working group has discussed what is happening in other jurisdiction, for example, California and Texas seem to be moving toward Zigbee. A formal scan will be drafted by Board staff.
- Need to consider evolution of CDM in this.
- Need to make a distinction between provision of information and pricing (go hand and hand but are distinct) – does not seem like there is much of an appetite for moving past hourly billing but more dynamic pricing would be beneficial.
    - Similarly, in home or building automation will also take advantage of data / price signals
- In home displays (IHD) provide limited value – until we move to CPP or greater automation there may be limited value in providing real-time in addition to historical data.
- Difference between granularity and timing of data – more granularity may be helpful
- May see more value if automation and third party services are enabled – it's not just data to customers but who else gets access and provides affordable services based on that data. We can't yet know the value of that market flourishing.
- Focusing a lot on consumption data but another stream of data might come from the system about power quality issues, outage etc., it might be far off in the future but we may need to discuss this capability.
- BOMA recently completed a customer survey on value of real-time data which will be presented to the Advisory Committee in January . . . could be relevant to this discussion.

3. Update from the Storage Working Group

Overview of Storage Working Group's discussions and current thinking:

- Two important changes since this work has begun: California storage target and LTEP.
    - California has identified 21 storage services and defined value of each which the working group used as a starting point. In the context of Ontario's electricity sector and in light of the ten smart grid evaluation criteria established by the Board the working group identified 7 scenarios for storage.
- For each scenario the working group is looking at more than just regulatory barriers, market and cost barriers are also being discussed.
    - Primary focus is the regulatory barriers, lower hanging fruit.
    - Looking at suggesting regulation and market rule changes, license classifications (storage currently defined as a generator), accrual of benefits (and to whom), rates and charges – are they appropriate? Perverse incentives? Gaps in ESA code etc.

Discussion among the Committee:

- Ministry is aware we are doing this – looking to us to identify most of the issues etc., and follow-up on issues specific to them.
- Still looking at February for a final document scoping all the scenarios and issues that need to be addressed.
- Intelligent load management committee . . . seems like there is some overlap here. Might be worthwhile for someone from this working group to attend the next ILM committee meeting. . .
    - IESO participates on both, may be some connection there already
    - Expect that information from these other groups (including SGF) is feeding into this working group so we can develop something concrete for the Board and government to consider.

4. Update from the Cyber-security Working Group

Overview of Cyber-security Working Group's discussions and current thinking:

- Group has developed a short questionnaire with clear questions that CEOs will understand and provide answers to that are useful for the OEB and SGAC.
- Draft questionnaire circulated, to be finalized in January.
- Should be high-level enough to get baseline and executive level response.

- May proceed to a phase 2 questionnaire that is more detailed / technical after the first questionnaire goes out.

Discussion among the Committee:

- How can we ensure we get responses? Board staff will send it out on behalf of the Advisory Committee.
- To be finalized for presentation to SGAC in January
    - SGAC LDC contact list may be leveraged for distribution of questionnaire.
    - Staff to send note to working groups to make aware of new timelines

5. Update from the Energy Data Access (EDAP) Working Group

Overview of EDAP Working Group's discussions and current thinking on Greenbutton:

- Document with responses to SGAC is almost finalized (to be completed in January)
- The EDAP working group has determined that upgrading to GB DMD is relatively simple and cheap if LDCs already have a web-platform for providing consumption data to consumers – in addition, many IT companies are planning to include GB DMD as part of their off-the-shelf product
    - In terms of utility involvement (to implement), early adopters / pilot LDCs spent more but costs should be relatively low for the rest.
- The EDAP working group have not estimated yet costs for LDCs who don't have any sort of existing online portal (no example yet to help us determine costs) but costs should be roughly comparable to adopting any new online portal capability.
- Lifetime costs rolled into any ongoing maintenance of existing web-portal (no incremental cost)
- Privacy concerns have been considered and addressed by the EDAP working group – GB is 'by customer consent only' meaning customers always have control over who accesses their data.
- GB is viewed as integral to the government's consumer engagement and conservation efforts, the value of 'feedback' to consumers has been assessed broadly, as the GB pilots continue more specific information about benefits will become available.

Discussion among Committee:

- Any discussion about using MDM/R to provide this?

    - Much of the DMD data already comes from MDM/R. Some utilities are using their own ODS to support GB DMD, some are tapping in directly to MDM/R. It varies.
    - MDM/R needs to work on increasing capacity to support this more broadly.
    - On DMD no significant increase / changes in use by consumers compared to existing web portals.
- How does this fit with real-time data access? Could GB supersede the need for real-time data?
    - Unlikely, in fact, most are asking when green button can be used to access real-time data? Real-time data is still ultimate goal of the market.
    - Given functionality /services that can be achieved based on historical data is it worth the incremental cost to go to real-time?
- In terms of privacy concerns . . . consumer consent is always required. Terms and conditions need to be clear and understandable to consumers and utilities need to make it clear that they are not affiliated with third parties providing GB based services. . . bottom line, consumers need to understand what they are signing up for and how their data can be used.
- With respect to CMD pilots two reports are expected – interim in Q2 (on progress to date) and final in Q4 (on final results).
- Final recommendations / deliverable for SGAC from EDAP at January meeting.
- Data benchmarking is also useful . . . is GB going to enable generic consumption data to be used for benchmarking?
    - Because this is consent based access data for benchmarking purposes can only be aggregated from those consumers who have elected to participation. OPA is piloting the reverse - your data is included unless you opt out.

6. Update on sharing information regarding distributors grid modernization efforts

- Board staff are looking at establishing a smart grid repository for reports on pilot and demonstration projects (will be publicly available).
    - Is it worth leveraging the Smart Grid Canada repository? Issue is that the existing repository is incomplete.
        - But if requirement to provide reports is mandatory than providing the information should not be an issue going forward. Is it mandatory regardless of how the pilot is being funded? (e.g. SGF, OPA fund etc.)

    - Utilities should be engaged and want to provide information . . . should not need to 'mandate' it.
    - Is information provided hindered or diluted by the fact that it is publicly available?
- The E8 group's information sharing is particularly valuable partly because it's a small group of LDCs and discussions are confidential allowing for more detailed and frank discussions.
- Under a recent rate application / decision Hydro One agreed to share information with other utilities about grid modernization . . . joined the E8, E8 is now looking at how to share information more broadly. In discussions with the EDA.
    - Working on a matrix of SG initiatives, can identify gaps and overlaps in respect of pilots.
    - May also capture work of SG development in Ontario in the form of a white paper.
    - What about LDC observers of the E8 group?
- EDA has stated that any member can convene a special interest meeting – has not been followed up with any formal proposal for this type of discussion.
- Perhaps providing general information about what each LDC is working on and LDC contact is enough? Then LDCs can pick up the phone and have a frank discussion about different initiatives because you'll know who to call.
- Could also use the SGAC LDC contact list as a tool to ask questions to everyone or get responses to an initial / general questionnaire on who's doing what (would help us fill out matrix and know who to call regarding certain types of initiatives)
- Should we set up a small group to discuss the appropriate guidelines for 'using' the SGAC LDC contact list and sharing of information?
    - To avoid OEB becoming the moderator, the SGAC LDC contact list could be sent to all LDCs with 'guidance' about using it to share information and as a resource to gain information from others.
    - Spectrum from Chatham-house rules governing discussions to everything being shared on a publicly available website . . . there may be some middle ground.
- This could augment information that is shared through regional planning, helps share information among LDCs that are not in the same region.
- Different sized LDCs will relate to each other differently in respect of SG initiatives (different areas of interest / concern, levels of engagement, levels of staff involved)
- It's good to avoid duplication but sometimes LDCs need to learn certain lessons for themselves because it is very 'system' specific and everyone's system is a little different.

    - Information sharing can help us balance the two. Determine where it makes sense to conduct a similar pilot and where it makes sense to simply learn from others.
- CHEC representative to take a first cut at categories for matrix / questionnaire about what types of projects are being undertaken.
    - Could be used both so LDCs know who to contact about certain types of smart grid initiatives
    - Could also be useful for internal business planning purposes (benchmarking against other LDCs).
- What timeframe should be captured by matrix? Where are we now (including what's been done up to now).
- A repository / matrix will demonstrate some of the innovation undertaken by utilities and highlight the cost sharing that goes on (rate-payer funds augmented by grants from different funds / agencies etc. for grid modernization initiatives)

7. Closing and Planning for Future Meetings

- January and March meetings will be covered by discussion of final products from each of the working groups (as well as further discussion on information sharing)
- Board staff will prepare a jurisdictional review to accompany the low-volume data access working group's deliverable.
- Ministry's EV group will be monitored
- Other topics?
    - Data analytics to help inform asset management decisions . . . might be an issue for discussion.
        - It's a very LDC specific topic . . .
        - Given new customer behaviour you can't necessarily rely on historical assumptions about asset management . . . need more visibility to understand and put it into context to take an action.
        - Next two meetings are pretty full . . . maybe for May meeting?
        - Need to make sure discussion is framed in a way so that the topic is sufficiently scoped so as to be useful to all members of the group.
- Future meeting dates:
    - January 21
    - March 4
    - May 6