DRAFT Position of the SGF Working Group Regarding real-time smart meter data access

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Purpose of this Paper:

This paper has been prepared by the Smart Grid Forum Working Group to help clarify its position regarding the facilitation of 3rd party access to **real-time data originating from an LDC's smart meter**.

Background:

3rd party data access has been a topic of discussion within the Smart Grid Forum and Corporate Partners Committee for the past year, and has figured prominently in Forum's May 2011 Report Recommendations. More recently, the following developments in this debate have taken place:

- **September 6th:** Working Group presents its views on the "Energy Services Interface" (ESI) to the Forum**.**
- **October 27th:** Corporate Partners Committee reviews working group's findings and debates some of the positions put forward, regarding the LDC role with respect to the ESI
- **November 8th:** 3rd party data access and facilitating of the behind-the-meter services **i**dentified as part of a "Key Issue" area in the OEB smart grid staff discussion paper.
- **November 17th** Working Group Position paper sent to the Technical Architecture Team of the Corporate Partners Committee
- **Dec. 6th:** Corporate Partners Committee Technical Architecture Team presentation to Forum

Third Party Meter Access to Real-time Data:

LDCs have a fiduciary and regulatory responsibility to protect the privacy of their customers' information where and when it resides within their systems. Customers have largely seen the LDC as the independent unbiased source of information on electricity use and management. A "customer" in this case is referred to as a retail consumer or generator.

Access to specific customer data has been a point of contention between the LDCs that see (and have) a fiduciary responsibility to protect the traceable data and third parties that wish to use the data. Arrangements between LDCs and third parties for aggregated, non-traceable, data access are usually negotiated with the utility and are not an issue, and are not the subject of this paper.

Third party access to smart metering data is an issue which is integral to several issues raised in the OEB's November 8th staff discussion paper, "*In regard to the Establishment, Implementation and Promotion of a Smart Grid in Ontario - EB-2011-0004*". Several facets of this issue are raised throughout the OEB staff paper and are noted below. The Working Group acknowledges that with the recent publication of this paper, the OEB's subsequent regulatory processes may prove to be the ultimate arbiter of some of the issues raised in this paper and member organizations of the Working Group may participate in that process – and are not bound by any positions put forward in this paper.

There are two types of data availability: **real time**, defined as data available within five minutes of registering; and **latent data**, defined as data available several hours or up to the next-day later**. This paper focuses specifically on access to real-time data from an LDC's smart meter.**

The quality of the data to be exchanged depends on the type of data availability requested and thus the LDCs and third parties need to be clear in setting customer expectations:

- **Real time data:** this is not billing quality data. However, it is useful for aiding customer behavioural change and the data can be used to control – manually or automatically – usage, as cause and effect is more "immediate."
- **Latent data:** this is billing quality data and useful for customer tracking of performance (i.e., usage, cost, carbon footprint) for informational purpose and for manual gross adjustments to usage. Presently, latent data coming from meters other than smart meters is transacted from LDC's to licenced retailers through the EBT Hub after demonstrated, auditable proof of customer a customer relationship with the retailer is provided through the system. The EBT system is not available to unlicensed parties – an issue beyond the scope of this paper. The province's Meter Data Management Repository (MDM/R) is also architected around a similar principle for smart meter data.

How the data is provided to a 3rd party is also dependent on the type of data availability requested. The U.S. National Institute of Standards and Technology (NIST) contemplates that an "Energy Services Interface" (ESI) will facilitate the transacting of data between customers, LDCs and Third Party Service providers in its official architecture. At issue in Ontario however, is who should be responsible for providing, controlling and paying for such an interface. While the CPC, Forum and Working Group seem to agree that the customer should have the ultimate authority over the disclosure of their real-time data to third parties, the role of the LDC in helping to ***facilitate*** that access has become a point of intense debate.

For real time data access, we know that devices exist that can provide that data to the authorized third party or the customer without need of LDC involvement (e.g. 'clamp-on' devices that make measurements outside of the meter). However, many contend that this is neither an economical or technically practical method of access for the vast majority of customers in Ontario over the long term – particularly if the same data can be provided by smart metering technology. There are several technical methods by which a third party may acquire real-time data from a smart meter – most of which are NOT presently available through the Advanced Metering Infrastructure (AMI) infrastructure which has been installed thus far in the province of Ontario as part of the Smart Metering Initiative.

Working Group Position:

1) **Push vs. pull:** The Working Group contends that anytime an interface involves pulling real-time data out of a smart meter belonging to the LDC, the LDC is required by law to ensure that the customer has authorized that access. LDC's are subject to an array of audit requirements to assure the integrity of all data used from meter/bill, which among other things includes access control to all data used in that process. This is also consistent with the NAESB standard (Request No.: R10012 "*Third Party Access to Smart Meter-based Information*") reviewed by the Working Group and brought to the attention of the Forum. On the other hand, if the real-time data is actively pushed by the meter to an ESI, then the distribution of that real-time data to third parties could be controlled by the customer

without the LDC. However, such a mechanism is not readily available in today's AMI systems in Ontario. The Working Group notes that the OEB's November 8th staff discussion paper "*In regard to the Establishment, Implementation and Promotion of a Smart Grid in Ontario - EB-2011-0004*" also raises crucial questions regarding the demarcation point between LDC and 3rd party systems (section 4.2.4).

2) **Today's smart meters vs. Tomorrow's smart meters**: The Working Group does not have a philosophical problem with allowing customers in the future to have full control over the release of real-time data to third parties without LDC approval or intervention. However, the practical reality of today's AMI infrastructure, is that that the establishment of the ESI will require some combination of an upgrade to the smart meter and/or or a proprietary gateway device that pulls data from the meter. Such arrangements inevitably must involve the LDC. The working group is interested in further reviewing a proposal originally discussed at the September 22nd Corporate Partners Committee meeting regarding an "opt-in" approach for customers who wish to upgrade their smart meter before the end of the service life for their present smart meter. The Working Group notes that this matter is also raised in the OEB's November 8th staff discussion paper "*In regard to the Establishment, Implementation and Promotion of a Smart Grid in Ontario - EB-2011-0004*" (section 4.2.3)
3) **Liability:** As pointed out by the North American Energy Standards Board (NAESB Request No.: R10012 "*Third Party Access to Smart Meter-based Information*") there needs to be identification of a clear demarcation point of where and when data is taken outside of the boundary of an LDC's system and becomes the liability of the 3rd party.
4) **Allowable Technology:** for access methods that involve smart meter modification, the LDC may wish to specify the acceptable type and may want to provide the device as a way to control quality and trust in functionality. So long as the LDC is being held ultimately responsible for the reliability, security and integrity of its AMI systems, including the smart meter it must have a say over the type of technology employed.
5) **Privacy:** Adherence to the Ontario Information and Privacy Commissioner's "Privacy by Design" principles is seen as a best practice, and should be followed by the utilities as per the recommendation of the second report of the Ontario Smart Grid Forum.

Other Issues to consider:

- **Device Warranty:** who will be responsible for guaranteeing performance of the ESI device i.e., maintaining, replacing, fixing? The Working Group has considered various cost components of the ESI and identified potential issues to the Forum at its October 11th meeting – though there is much detail to be addressed from a regulatory standpoint.
- **Resealing:** would adding a module – even a duplicator – necessitate breaking the seal and thus force a reseal? If so, this further highlights need for an LDC to help facilitate the Energy Services Interface.
- **Move/in - Move-Out**: LDC process for deactivating the customer-third party agreement and thus the meter-module or ESI device once the customer moves out? Cost recovery by the LDC for such transactions is another area that would need to be considered.