The SPi Group Inc.
214 King St. West, Suite 500, Toronto, ON M5H 3S6 Canada
Tel: 416. 408.1395 | Fax: 416. 408. 1396 | www.thespigroup.com

connect integrate evolve

John Zych
Board Secretary
Ontario Energy Board
2300 Yonge Street, 26th floor
Toronto, Ontario M4P 1E4

November 24, 2004

Re: Comments on the Ontario Energy Board Draft Smart Meter Implementation Plan

Dear Sir,

The SPi Group (SPi) wishes to submit the following comments in response to the Ontario Energy Board (OEB) Draft Smart Meter Implementation Plan. SPi contends that our skills and experience with the EBT Hub Clearinghouse, related billing & settlement systems, high volume data transport and large scale data storage in the Ontario retail market are extremely valuable to this initiative. We look forward to contributing to the plan.

1. *The OEB has encouraged distributors to carry out pilot programs during 2005 to gain useful information about the installation and operation of Smart Meter systems.* SPi agrees with this approach, and views these pilots as crucial to a successful production implementation of Smart Metering systems. SPi has already engaged in discussions with Smart Meter system vendors and Local Distribution Companies (LDCs) to begin pilot projects in Ontario. The purpose of these projects is to test the AMR meters, communications and software infrastructure for storing, processing and accessing the Smart Meter data. The "lessons learned" through these pilots will enable the participants, including SPi, to be prepared for potential obstacles which are certain to exist in a project of this magnitude.

2. *The regulatory framework for Smart Meters, to be established by the OEB, may include province-wide standards for distributor business processes, such as data presentment to customers*. SPi supports this, and contends that the same theory should apply to IT standards which are essential to the success of any industry-wide technology initiative involving multiple participants that requires disparate systems to communicate effectively with each other. When there are common protocols and interfaces, the whole industry can evolve around those common characteristics and provide value-added innovations on that standards-based platform. Standards allow the industry to move forward without each individual company having its own unique implementation from the ground up. With standards, everyone can innovate and all products can interoperate.

   Open, certifiable standards have a number of benefits that cannot be ignored when contemplating the likelihood of the success of the Smart Meter Initiative (SMI):

   - An LDC that certifies its internal systems against one implementation of an EBT network or a meter data repository almost guarantees that it will interact with any other similarly certified implementation. In practice, this means that an LDC should be able to switch from one meter data repository provider to another with few or no significant changes to its systems at the interface level.

- LDCs are less likely to be committed to a particular vendor's implementation. They have the ability to select a vendor on the basis of factors such as solution quality, features or competitiveness. The risk to LDCs of their vendor failing in any way also is mitigated to a large extent, as they could switch easily to an alternative provider. With a locked-in proprietary implementation, such a change would typically result in a major and costly disruption of an LDC's IT systems and operations.

- The use of open standards and certified implementations fosters a competitive but compatible vendor marketplace where different solution providers vie for a share of the customer base. As well, the standards allow for the vendor to build once, test once and provide the solution to many. The net result is that vendors are compelled to provide higher quality and more competitive solutions to the marketplace while reducing the overall cost and implementation timelines for all.

3. *In order to meet the aggressive timelines, the OEB will begin the setup of stakeholder working groups to develop detailed standards for supporting processes in January 2005*. SPi firmly believes that, a consensus-based working group structure operating under the auspices of the OEB is essential to the success of the project. In fact, SPi has already initiated the creation of the Data Representation and Data Workflow Working Group (please see: http://www.xmlenergy.net/smi_overview.htm) because we want to ensure that the aggressive timetable can be met. The following charter explains the mandate of the Working Group:

   - **Define a model for Smart Meter data workflow**. Understanding and defining both how and which data flows between the various entities in the SMI is an essential prerequisite for a successful implementation. The scope of this model could extend to encompass data that flows to and from AMR systems, through a meter data repository and to billing, settlement and customer presentment systems.

   - **Define a standard XML representation of the meter data that will flow between entities involved in the SMI**. A precisely defined data definition and representation will allow all parties in the SMI to communicate with each other without having to adapt to many different data formats and without dealing with the idiosyncrasies of various vendor-specific implementations. These data standards are intended to provide a vendor-neutral format that allows meter and related data to flow between parties regardless of the meters and vendor systems they have installed. Standardizing these types of data will greatly reduce the integration efforts between SMI participants and their software systems and will help to foster a competitive market where solution vendors can offer alternative systems that can fit into the SMI infrastructure with relative ease.

   - **Become the authoritative standards body for all matters relating to the meter data workflow and data representation.** It is important that only one body be responsible for defining these standards. Spreading the definition and authoring responsibilities of the standards across multiple working groups or other entities will result in considerable confusion, inefficiencies, disagreements and wasted time, none of which will help the cause of the SMI.

   - **Be accepted by the government and its agencies as the body that can guide the verification and certification of implementations of the working group's standards.** It is also important that a body exists that can define the verification and certification processes for implementations of SMI standards. To further ensure compliance, it is possible that this body would also have the authority to issue certifications, rather than relying on a self-certification process. Despite the clear

benefits of ensuring compliance and the resultant contribution to a successful operation of the SMI, the latter approach is likely to be a contentious proposition.

The Data Representation and Data Workflow Working Group is comprised of Smart Meter vendors, LDCs and other third party vendors. The working group meets and collaborates on a regular basis to determine a recommended standard for the data flowing in a Smart Meter system.

4. *The effort to meet the timelines and objectives set out in the draft Smart Meter Implementation plan will require an intense and well-coordinated effort by the Ministry, LDCs, OEB, provincial implementation coordinator, retailers, Electronic Business Transaction hubs as well as the cooperation of customers.* The experience gained in the development and deployment of the EBT hub is invaluable when considering the implementation of the SMI. The OEB sponsored and administered the EBT standards and its certification processes, requiring distributors to follow a self-certification process.

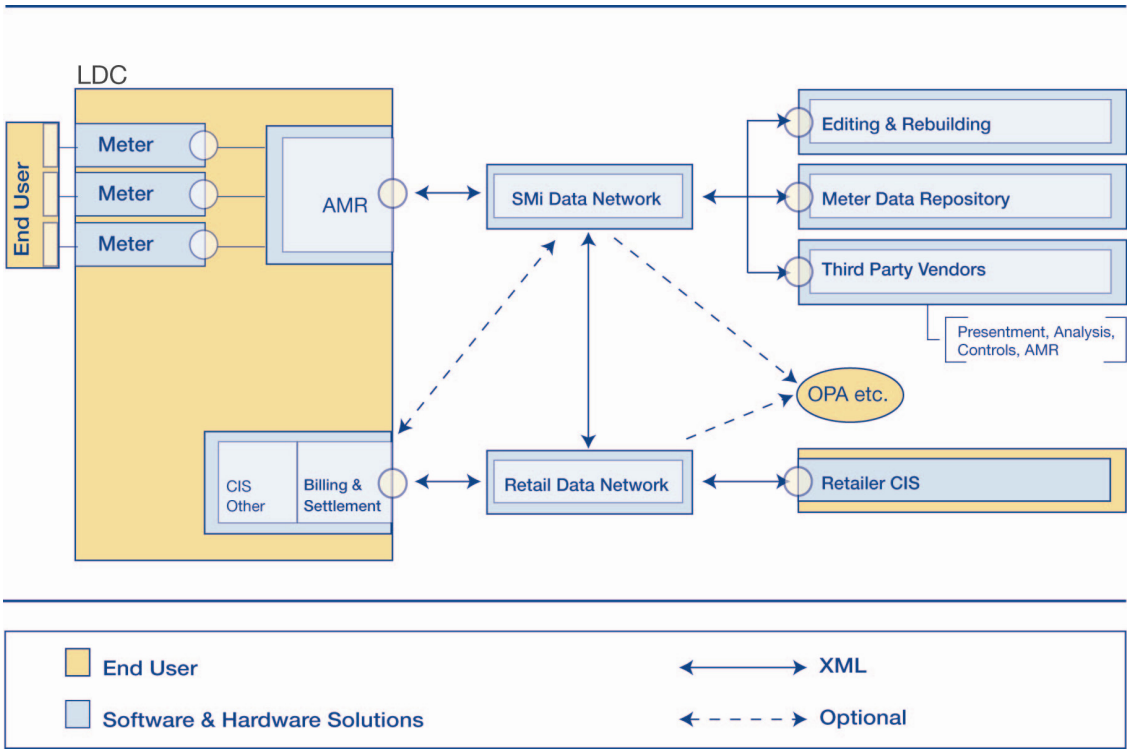
   To give some idea of the scope of the standards definition, testing and certification processes, the testing and certification of the EBT networks and the 94 LDCs required:

   - design testing that lasted 15 weeks
   - completion by the LDCs of a 34 page self-certification questionnaire containing 152 questions
   - self-certification verification that lasted 7 weeks
   - participant testing that lasted 18 weeks

   All this effort was expended to ensure that as market opening commenced, all the participants and the numerous software systems involved could talk to each other efficiently, reliably and effectively. If these open EBT standards and certification mechanisms had not been in place and enforced, then the possibility of the market operating with anything approaching success would have been negligible.

   The timelines of the EBT certification effort should be a reminder of the extensive work required, although this does not mean the timelines cannot be condensed. Through the use of proven testing tools and the testing methodologies used in the last rollout of the EBT standards, the timelines can be reduced because there is a smaller learning curve and testing tools have already been developed. However, if a new or non-standardized solution is put in place there is clearly a substantial risk of timelines not being met.

5. *The suggested supporting network depicted in the draft implementation plan has the potential for inducing risk due to its complexity.* In order to simplify the transport of data between participants and entities, a more streamlined system of components is required for the SMI. By limiting the number of interfaces, the degree of complexity and therefore the implementation risks and costs are reduced.



This system architecture provides all participants with secure access to the data for auditing and reporting purposes, including the Ministry, LDCs, OEB, provincial implementation coordinator, and retailers.

6. *Development of the editing and rebuilding standards for Smart Meter data presents a significant challenge.* The existing Independent Market Operator (IMO) standards (Validating, Estimating and Editing, Issue 3.0) for editing and rebuilding interval data encompass a wide and complex set of conditions for editing. This has the potential to create an operational bottleneck and delay delivery of energy usage information to consumers. In light of the requirements that edited (i.e. “scrubbed”) data must replace initial data within three days, a simpler, more streamlined set of criteria is required. This set of criteria could be similar to meter reading validation that typical utility CIS (billing) systems perform on the register meter reading data currently used in billing processes. SPi suggests that a separate, consensus-based sub-working group be created to determine the standards for editing and rebuilding meter data resulting from the SMI.

The draft Smart Meter Implementation plan presents a challenge in terms of scope and timeline, but SPi believes the potential benefits warrant the effort. We thank you for your consideration of this submission. Please do not hesitate to contact me should you have any questions or concerns.

Sincerely,

Brent Williams
Consultant – Smart Meter Initiative
The SPi Group Inc.