

January 10, 2005

Ontario Energy Board  
P.O. Box 2319  
2300 Yonge Street  
Toronto, Ontario  
Canada M4P 1E4

Attn: John Zych  
Board Secretary

**Re: RP 2004-0196 Smart Meter initiatives – further consultations  
Comments of Transac Inc. on Two-Way communications of data between Consumers and Utilities**

Dear Mr. Zych,

I write to you on behalf of Transac Inc. in response to the Board's draft Smart Meter Implementation Plan request for further comments issued on December 21<sup>st</sup>, 2004. Six (6) copies of these comments are enclosed, together with a soft copy in Adobe PDF format.

Transac is in the business of providing Utility consumer and small / mid-sized businesses, 'Customer Centric' Interfaces, and Operational Consolidation solutions. We are in support of any initiative that both help's the Utility clients to manage their energy usage, while assisting in lowering operational costs for the Utilities.

Transac supports many of the aspects of the Plan, and offers the comments herein to further assist the Board in finalizing its report for approval by the Minister of Energy.

Sincerely,

Marc Lamoureux  
VP Regulatory Services  
Transac Inc.

Email: [Marc.Lamoureux@eTransac.com](mailto:Marc.Lamoureux@eTransac.com)  
Fax: 905-847-5780  
Tel: 416-456-7954



## SMART METER INITIATIVE – FURTHER CONSULTATIONS

### ‘TWO-WAY COMMUNICATIONS’

#### BOARD FILE NO. RP2004-0196

In regards to the consultations the OEB has received from various organizations in regards to the Smart Meter initiative, the Board has asked for further comment.

Several organizations have asked the Board to consider two-way communication systems for the transmission of data between ‘consumers’ and utilities.

The Board has asked for comment on the following issues, for which Transac Inc. replies:

#### General Comments:

- What is the Two-Way communications, communicating with?
  - A two-way communication channel to the consumers directly, with the ability to manage their usage, costs, etc. is already a requirement. The consumer would communicate through various existing channels (Call Center, IVR, and Internet) with the Utility for that information.
  - However the Utilities ability to communicate with the Meter itself (meter bound communications) has significant operational benefits, although difficult to quantify.
  - Potentially 3<sup>rd</sup> party devices (intelligent appliances etc.) could also use the communication channels on a ‘fee’ basis
- What are the ‘Meter Bound’ communications?
  - The nature and requirements of the inbound data will significantly affect the communications requirements. There needs to be an agreement with the meter manufacturer / vendor’s, and communication vendor’s with the various Utilities on these requirements. These are some examples;
    - Turn On / Off the Meter and Services to the location.
    - Updating of Meter Controls, and other ‘Software’ based implementations, remotely
    - Requesting re-transmits, communication verification, and other operational requirements.
    - Remote control by the Utilities of individual appliances, overriding local control as appropriate, and ‘mandated’. I.e. Turning Off / On Air conditioners during periods of peak risk.
    - A standardized ‘Interface Point’ for other ‘Intelligent’ Consumer items such as ‘X.12’ devices (turning lights on remotely, managing home heating & cooling, etc).
      - This potentially may allow for other revenue streams to offset operational / implementation costs.



- The definition of ‘consumer’ aligned with meter type is ‘key’ to the determination of communication requirements.
  - Smaller Residential Meters;
    - While significantly larger in volume (and lower in individual revenue) are the most difficult, requiring a number of factors to be present for a successful implementation. Often the available communication method will not only be determined by meter location, but property location as well. This needs to be accurately determined on a ‘case by case’ basis. Additionally some sort of automated ‘prioritization’ / ‘scheduling’ process need’s to be developed to make maximum use of available implementation teams ‘aligned’ with meter and communication ‘types’.
    - This group of ‘consumers’ traditionally are the most rigid in their consumption cycles, in addition to requiring the most ‘assistance’ from existing utility ‘call centers’. The sheer size of this group requires significant flexibility on behalf of the utilities in determining the communications requirements. An outsourced call center vendor ‘aggregating’ this type of information request / help calls would alleviate the pressure, while lowering the cost to the utility ‘members’ of the aggregated group.
  - Small – Mid-sized businesses;
    - This represents a larger ‘revenue per meter’ group of ‘consumers’, while smaller than ‘Residential’ in actual number of meter implementations. These businesses invariably already have a communication structure in place, whether as complex as ‘Direct Fiber’, or as simplistic as a ‘POTS’ (**P**lain **O**ld **T**elephone **S**ervice) line. This group provides for the easiest implementation segment for two-way communication based meters, with the highest impact.
    - The actual ability for these customers to understand and modify their Hydro usage is varied. While often ‘under serviced’ by the Utilities in terms of communicating usage information, this group is often the most sensitive to price change, and is most able to flexibly change it’s usage patterns. Again providing the information will be key to this groups management of it’s usage, however the additional overhead required to connect a two-way system would be likely be manageable, as they mostly have something in place already.
  - Large Commercial
    - This is the largest revenue stream per meter. This group is often well served by the Utilities with existing energy management implementations, either provided by the Utilities or the companies themselves. Communications are often already in place for Energy usage management with existing meters.
    - This group is a sophisticated ‘consumer’ where the ability to manage energy usage is often already in place. However, the ability to alter usage patterns may be limited. A significant incentive would be required to ‘change’ the pattern of usage. Despite the ease of implementation, ‘inbound’ communications with the company would be of more benefit than communications with the meter itself.

**OEB specific questions;**

It must be noted that these issues are far more complex, and interrelated than can be determined in a short period. An absolute 'requirement' may make implementation of the 'Smart Meter initiative' difficult to implement in the required timelines.

That said, a two-way communication system has the potential to transform Ontario as a whole to one of the most technologically advanced 'economic communities' in North America, and perhaps internationally. The expertise gained by Ontario Utilities and Vendors will be of immense benefit both provincially, and can be 'exported' internationally.

Q 1: What are the benefits, and drawbacks of mandating a two-way communication network?

C 1: Benefits;

- The ability to communicate with the meters depends upon the information, and functionality of the meters themselves. A wide range of information can be exchanged depending upon the meter capability, and the infrastructure in place.
- Provides for a potential 'revenue stream' for the utilities in usage of the communications network for non-meter data transfer.
  - Smart Appliances, Security Services, etc.
- Potentially reducing the physical meter servicing (updating) of Smart Meters
- Providing for remote Turn On / Off servicing
- Allow for overrides of devices as necessary, and mandated, to prevent / manage high risk events.

Drawbacks;

- Potential Costs. These can be significant, and the impact on the rate payers may be more significant than estimated. At a one time per meter cost of \$100 – \$150, the communications element may add up to 50% additional cost to the implementation. This can be managed by carefully selecting the implementation sequences on a cost recovery / benefit basis.
- Complexity. A two-way communication requirement adds complexity to the implementation of the initiative. It is a complex issue, and the ability of any one Utility to provide a local solution is not part of their 'core' services, and may distract them from other internal projects that may lower their operational, or customer service costs. The Smart Meter initiative needs to involve a multiple of local utilities to maintain standards, and lower individual cost.



Q 2: In the event of Province-wide two-way communication, should electricity distributors be responsible for operating the communications network?

C 2: No. The management of such a complex communications network is a specialized function. There are a number of vendors in the province that specialize in the management of communication networks. However, the capability of such a network would allow for some possible additional 'revenue streams' for the electricity distributors. This should not be ignored, and the 'consumer' is potentially a client for the communications network as well. *The Province / LDC provide the client, and they should benefit.*

Q 3: If not, how should the communication operator or operators be selected?

C 3: A flexible solution is key. The local electricity distributor should be allowed to select its local provider through the normal tender channels. The vendor who offers an aggregated solution for a number of utilities simultaneously could be given some additional weighting in the solution. The local nature of the provider would not only provide incentive to the provider for quick response to issues, and/or changes, but additionally would provide for local revenues to both the community and the LDC itself.

The nature of the large communication providers, while apparently a 'safe' provider, often make 'change' a difficult, and expensive prospect.

Q 4: How would the rates for the communication operators be set and/or collected?

C 4: There are a number of possible scenarios. The complexity would require some investigation based on the final requirements.

However, one suggested scenario would be a transactional based solution. I.e. The number of successful reads delivered to the LDC, and communications to the Meter would provide a self regulated solution. The provider only gets paid when the communication network works, and the LDC is encouraged not to communicate 'Meter Bound' unless essential (Turn On / off, etc). There would be a capped fee depending on the capabilities implemented, and could be collected through the existing rate structure, or perhaps self funded based on 'additional services' provided to the utility client from the communications vendor.

Q 5: If there is a two-way communications network, would an open data protocol aid in the development and availability of end-devices and services?

C 5: Yes. There is no doubt that a standardized structure would assist developers in communicating with their devices. The risk of the meter manufactures providing a 'proprietary' environment for communications would allow for long term revenue for them, but carries risk. However restricting the ability to communicate outside their technology restricts the incentive to develop other solutions that can benefit the consumer, the LDC, and the Province.

### **Closing Comments;**

Transac Inc. believes a two-way communication network would be of advantage to both the Province and the Utilities. Balanced against the cost of operation, the potentials of such a system would ultimately outweigh the risks of implementation, and cost of operation. We additionally suggest that the communication channels be opened to other Utilities for use as well, such as natural gas and municipal based services, on a fee basis.

Thank you for your time.