

January 10, 2005

Mr. John Zych  
Board Secretary  
Ontario Energy Board  
26<sup>th</sup> Floor, 2300 Yonge Street  
Toronto, Ontario M4P 1E4

Dear Mr. Zych:

**Re: RP-2004-0196 Smart Meter Initiative – Further Consultations**

The Power Workers' Union appreciates the opportunity to provide comment on the Ontario Energy Board's Smart Meter Initiative further consultations on two-way communication systems for the transmission of data between customers and utilities.

Attached please find the PWU's comments prepared on our behalf by Judy Kwik, Senior Consultant with Elenchus Research Associates. We trust the Board will find the input helpful.

Yours truly,

Don MacKinnon  
President

Att.

## Smart Meter Initiative Further Consultations

### Power Workers' Union's Comments

Prepared by: Judy Kwik, Senior Consultant  
Elenchus Research Associates

On December 21, 2004 the Ontario Energy Board (the "Board"), via e-mail and web posting, indicated that several organizations have asked it to consider two-way communication systems for the transmission of data between customers and utilities and that it is therefore interested in obtaining further information on the following issues:

1. What are the benefits and drawbacks of mandating a two-way communication network?
2. In the event of Province-wide two-way communication, should electricity distributors be responsible for operating the communication network?
3. If not, how should a communication operator or operators be selected?
4. How would rates for the communication operators be set and/or collected?
5. If there is a two-way communication network, would an open data protocol aid the development and availability of end-devices and services?

The following are the Power Workers' Union's comments on these issues.

#### **1 WHAT ARE THE BENEFITS AND DRAWBACKS OF MANDATING A TWO-WAY COMMUNICATION NETWORK?**

The key benefit of a two-way communication network is the ability to provide real-time consumption information and pricing signals to consumers that provide them with the opportunity to react to the pricing signals. As pointed out in the Independent Electricity Market Operator's ("IMO") comments on the OEB's draft smart meter implementation plan, one-way communication will "limit consumers' ability to adjust their usage coincidentally, in response to changes in price".

The IMO also points out that "the benefits of the deployment of the smart meter program will be substantially enhanced if consumer response programs can be made more automated (e.g., demand response, load shifting, etc.)" through two-way communication between the customer and market systems.

With regard to other benefits of two-way communications, as Direct Energy comments, many "product and service innovations that are necessary to truly leverage the investment in smart meters will require: a) two way communication with the home's energy systems; and b) real time access to consumption data." In line with this view Chatham-Kent Hydro states that a two-way communication system will provide more

opportunities for efficiencies that can be passed on to the customers to help offset the cost of smart metering.

A two-way communication network as part of the minimum requirement for smart metering would also likely provide real-time consumption and price information at a more reasonable cost to consumers than if they were to procure this functionality individually as an enhanced service either from their distribution company or a third party provider.

However, while a two-way network system as part of the minimum smart metering system requirement provides benefits, some consumers may have limited ability to react to the real-time price signal while consumers on the Regulated Price Plan ("RPP") may not require real-time consumption and price information to react to the RPP's pricing signal. Therefore, there would need to be other opportunities for efficiencies and/or functional requirement to justify the extra cost of a two-way communication system. If the Board is persuaded to include a two-way communication system as a minimum requirement for smart metering in Ontario, then it should encourage the electricity distributors to seek efficiency opportunities and/or focus on functional requirements as put forth by the Demand Response Advanced Metering Coalition ("DRAM") in its comments on the Draft Implementation Plan.

## **2 IN THE EVENT OF PROVINCE-WIDE TWO-WAY COMMUNICATION, SHOULD ELECTRICITY DISTRIBUTORS BE RESPONSIBLE FOR OPERATING THE COMMUNICATION NETWORK?**

There may be differences in system infrastructure (e.g. customer information systems, billing systems) between distributors that may make the implementation of a province-wide two-way communication system problematic, requiring some distributors to undertake major system retrofits to accommodate the province-wide system. Where retrofits are not possible, entire systems may need to be replaced. It is difficult to imagine the benefits of a province-wide two-way communication system that might outweigh the costs of such system retrofits or replacements.

The distributor is responsible for metering services and the communication network will be an integral component of providing metering services. Therefore, in the event of a province-wide two-way communication system the distributor should be responsible for the communication network, which will communicate the meter data to the distributor for billing purposes. Whether a distributor carries out the actual operation of the communication network in its service area should be a decision of the distributor's just as it makes such decisions on other distribution services (e.g. billing). However, it would likely involve great complexity to enable many distributors to take responsibility for specific segments of a province-wide system requiring the specification of processes, procedures and protocols in a regulatory code.

## **3 IF NOT, HOW SHOULD A COMMUNICATION OPERATOR OR OPERATORS BE SELECTED?**

The PWU is of the view that the distributors should be responsible for a two-way communication network in their service territory if it is made a minimum requirement for smart metering. Since the distributors are responsible for the metering and billing functions that will be dependent on the communication system, and there are numerous

differences between the distributors' systems it is more efficient to allow distributors the full control over any communications network in their service territory than a province-wide approach.

**4 HOW WOULD RATES FOR THE COMMUNICATION OPERATORS BE SET AND/OR COLLECTED?**

The communication operators' cost could be allocated fairly among the distributors (e.g. by number of meters) and included in the smart meter program costs of a distributor. A distributor's smart meter program costs would be allocated fairly between the distributor's customer classes and collected through distribution rates as proposed in the draft implementation plan.

**5 IF THERE IS A TWO-WAY COMMUNICATION NETWORK, WOULD AN OPEN DATA PROTOCOL AID THE DEVELOPMENT AND AVAILABILITY OF END-DEVICES AND SERVICES?**

The flexibility provided by an open data protocol will likely aid the development and availability of end-services thereby enhancing the benefits of the minimum smart meter system. However, the Board will need to assess the benefits and costs of a two-way communication network with an open data protocol to ensure that the costs do not outweigh the benefits.