



November 22, 2004

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Ontario Energy Board  
2300 Yonge Street  
26th Floor  
Toronto, ON M4P 1E4

Attention: John Zych, Board Secretary

### **Comments Regarding RP-2004-0196**

Peterborough Utilities MSP & MDMA Services is a fully competitive entity in the Ontario Electricity Markets. We are a registered MSP (#1002) and provide services to both Wholesale & Retail customers as well as many Energy Service Companies, Retailers and Consultants. Our combined experience in Metering and Meter Data Management is in excess of 80 years. I have had the opportunity to read the Draft Report regarding the "Smart Meter Implementation Plan" including the Appendices and applaud the Board on its work. I agree with most of what is presented with exception of the following observations and comments...

#### **Threshold**

The draft plan identifies three (3) "classes" of customers based on demand. These are 0-50 KW, 51-200 KW and >200 KW. Traditional Interval Meters, remotely interrogated are specified for the >200 class while "Smart Meters" and/or TOU Meters are specified for the other two classes. I question whether these trigger points are appropriate.

There is a great similarity between the now defunct California Market and the Ontario Market. This should come as no surprise since many of the consultants working on the project were from the United States and many aspects of the California Market were adapted for our own. Prior to the collapse of the market in California the state government issued a directive requiring interval meters to be installed down the to 20KW level. San Diego Gas & Electric actually had an RFP prepared for the installation of interval meters on every customer in its jurisdiction. Of course the market failed and none of these initiatives were actually implemented. However, it is interesting to note that those in power recognized the paradigm that real-time markets require real-time data.

I suggest that the 200 KW level is much too high a cut-off load. I think a more appropriate means to identify classes would be as follows:

- Group 1 Residential and General Service with Peak Demand 0-20 KW
- Group 2 General Service with Peak Demand 21-50 KW
- Group 3 General Service with Peak Demand >50 KW

0-20 KW demand is what I would consider the threshold for Residential and small General Service Customers. This is based on personal experience as a residential homeowner. I had a century home, three stories with 3600 square feet (excluding the basement) that was electrically heated with a hot water boiler (25 KW) and augmented with baseboard heating. I also had the usual configuration of appliances. As part of a pilot program I had an electronic time-of-use meter installed on my electric service. No matter how hot the summer season nor how cold the winter my peak demand never exceeded 20 KW. I considered myself at the upper end of the electricity consumption spectrum with wintertime bi-monthly bills in the \$1000 range (under old declining block rate structure). I think that 20 KW demand or less will most definitely encompass 99.9% of all residential customers. Although it is intended that "Smart Meters" and/or TOU Meters would apply to this Customer Group 1, I question the value in doing so. With setback thermometers, timers and tweaking of the boiler temperature I could only realize a marginal shift in load and savings were minimal. However, newer buildings designed with home automation in mind may find more significant results.

21-50 KW demand will cover the small very small commercial customer and those residential customers with 400 amp services. "Smart Meters" and/or TOU Meters would apply to this Customer Group 2. This group will have more ability to respond to price signals than group 1.

Over 50 KW demand will cover all those customers that have traditionally been identified as "General Service" even under the old "Standard Application of Rates". These customers should be fitted with a standard interval meter that can be interrogated remotely. This group of customer class (>50 KW) will include many of the "franchise" general service customers. Having an interval meter would allow them to participate in Demand Response Programs through a licensed Energy Service Provider. The proposal to introduce a Day Ahead Market (which I personally feel is a positive innovative move forward) is designed for the Wholesale Market Participant. However, this does not preclude a retailer from entering into this market using aggregated loads from non Market Participants. The only requirement is that the loads must be verifiable. This will require Interval metering and not Time of Use Metering. Having an industry standard interval meter will provide the necessary audit trail necessary for both these programs and allow more than one entity to interrogate the meter(s).

These changes to the thresholds does not materially change the number of meters required nor significantly change the overall cost. Utilities are already equipped to install standard Interval Meters and can move forward quickly in this regard without the need of acquiring new technologies, hardware and procedures. "Smart Meter" implementation will follow of course.

### **Interval Meters, Smart Meters & TOU Meters**

A large capital investment is going to be required regardless whether the meter is a simple Time of Use (TOU) device, a "Smart Meter" or a standard Interval Meter. There appears to be a significant number of LDC's who are embracing TOU style metering. I am concerned that this solution may be inappropriate in years to come. Should electricity prices increase significantly and/or become extremely volatile then we may find that the TOU meter simply is not up to the task. **You can easily use an Interval Meter as a simple Time of Use Meter but the reverse is not the case.** Perhaps what may seem like an extremely huge investment initially may turn out to be the most cost-effective way of getting to where we need to be in the long run. A Real-Time Market requires Real-Time Data, a conclusion that was not lost on the California market but, unfortunately, not in time.

### **Hardware Standard**

I suggest that a hardware configuration standard for Interval Meters, “Smart Meters” and TOU Meters be developed. This standard should mirror the IMO hardware standard as it pertains to interval length, number of channels, units of measure, etc. There is good reason for this approach. We would have a consistent approach to metering across the province and we would mimic the IMO wholesale metering standard. You can always roll up 5-minute data into 15 or hourly data as required. As an MDMA we routinely encounter LDC’s who are unaware of Meter Programming Specifications and how important it is. A defined Retail meter Standard would mitigate this problem. Another major concern I have is many of the “Smart Meter” solutions that are being presented for consideration are actually closed proprietary systems. They do not allow independent access of the meter or the raw data itself. This is similar to the situation they originally created in the Alberta Market, which has caused significant problems and is in the process of being addressed. There is no transparency in the system nor are there any checks & balances applied where the customer, or the agent thereof, does not have direct access to the meter itself, the registers, the event logs and the raw meter data. You are relying on a single process, a single collector and a single database without any optional third-party audit trail or ability to scrutinize the results.

### **Meter Data Management Agencies**

I think it would be extremely beneficial to the market that any entity (LDC or otherwise) that is performing meter data interrogation and processing be required to hold the appropriate license from the OEB. This would require the submission of a Procedural/Q&A Manual to the OEB and allow regulatory audits to be performed by the OEB (or agent thereof).

### **Competitive Issues**

A major concern I have is that with this proposal competitive retail metering is essentially removed from the market altogether and that LDC’s are entering into practices that are traditionally the domain of Energy Service Providers. While this may make logistical sense in order to get the “Smart Meter” initiative “off the ground” in the short term we run the risk of alienating those very entities that are required to make the market function going forward. I would advise against taking this particular position and, instead, move toward creating a competitive retail metering market for the installation and maintenance of all retail meters. This is true customer choice.

I trust that you will find these comments helpful in your deliberations.

Regards,

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