RP-2004-0196

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c.O.15, Sch. B;

AND IN THE MATTER OF a Directive dated June 23, 2004 by the Minister of Energy requiring the Board to develop and report on an implementation plan for smart metering in Ontario.

COMMENTS OF THE

SCHOOL ENERGY COALITION

ON THE

BOARD STAFF DISCUSSION PAPER

Introduction

1. These are the comments of the School Energy Coalition with respect to the Board Staff Discussion Paper dated July 19, 2004 entitled "Implementation Plan for Smart Meters in Ontario".

2. As noted in our Letter of Intervention dated Aug 3, 2004, Ontario schools, as large electricity users, have a direct interest in all energy policies. That is particularly important in the case of smart meters. Since many schools in the province have experience with interval metering, they are in a good position to provide input into this process, and since schools have unique opportunities and limitations relating to both load shifting and demand management, they will experience sector-specific impacts in the case of a broad smart metering implementation plan.

3. This paper represents our initial comments based on the experience of schools that are using interval metering, and based on the initial discussion paper. We would expect to be able to provide more sophisticated and detailed input during the course of the workshops as further information and points of view are tabled and considered.

General Comments

4. Schools strongly support the principle of smart metering, and the government's plan to fast track its implementation. In our view, there are four fundamental benefits to smart meters:

    a) ***Price Signals.*** As the Discussion Paper correctly points out, price signals are in the end about information. The more detailed it is, and the more timely it is, the more the price

signals influence behaviour. Smart meters (in conjunction with time of use rates, of course) are a necessary step in improving the quality and value of the price signals being given to electricity consumers.

b) ***Load Shifting.*** Once electricity consumers get proper price signals, coupled with information on their load patterns and cost, individual decisions by consumers will produce reductions in high cost load, and at least some of the time reductions in system peak demand. While this is of limited value to schools (which have a large percentage of what the Discussion Paper calls "just-in-time" activities), on a system basis there is substantial potential, and that benefits all ratepayers.

c) ***Diagnostics.*** Conversely, schools can benefit significantly from being able to diagnose inefficient electricity use through smart metering (and in particular interval sub-metering), and schools due to their tight financial constraints are strongly motivated to implement corrective measures if they have timely information.

d) ***Conservation Paybacks.*** For uses that are focused in peak demand times (which includes many school uses, such as classroom lighting and computer use), smart meters and time of use rates reduce the payback periods of conservation opportunities and thus expand the universe of cost-effective conservation choices.

All of these benefits are driven by the quality and timeliness of the information provided to the electricity consumer. As we will note in our comments below, we will be urging the Board in its implementation plan to maintain a focus on information quality and timeliness in order to maximize the benefits of the significant investment smart metering entails.

5. In general, schools are concerned with the following overall issues:

a) ***Cost***. As is commonly known, school board budgets are under extreme pressures and face continued challenges in the years ahead. While acknowledging that a smart meter initiative has potential benefits for schools in possible lower energy rates (achieved through improved system use) and in improved information for development of energy savings initiatives, the immediate costs of smart metering cannot be ignored. Cost increases for energy or energy initiatives come directly out of budgets that would otherwise be spent on other school needs, including student and classroom needs.

b) ***Ability to use additional information afforded by smart meters.*** The Discussion Paper cites a number of studies showing that information on usage and comparative usage can influence consumer actions, particularly in shifting load. In the case of schools, the ability to shift loads is much more limited – there are few laundry or dishwasher loads that can be shifted to night operation. While the information can be useful in helping to identify conservation opportunities, the benefits of load shifting are muted.

c) ***Importance of designing the smart meter initiative in concert with energy pricing schemes***. The OEB is currently developing a Regulated Price Plan for residential and

small business consumers which will presumably include schools. The smart meter initiative needs to be developed in concert with this process, as it has implications on the technical requirements of the meters and the benefits they generate. The ability of the meter to influence energy usage – as is stated as the objective of the smart meter initiative – will only be effective where it can result in actions that reduce costs to users.

Comments on the Specific Issues in the Discussion Paper

6. With respect to issues which were identified in the Discussion Paper, the School Energy Coalition has the following more detailed comments.

7. "Essential Elements of An Implementation Plan" – comments:

   a) ***3.1 Procurement Strategy.*** Clearly any strategy should be designed so as to minimize costs and maximize effectiveness, both measured on a long term basis. In our view it is not obvious that a single purchasing agent is the optimum approach. That is normally most effective when the item being procured has some level of commodity status, so that there is effective competition when the purchasing agent goes to the market. Where, as here, it is likely that over time the market price will drop substantially, it may be preferable to have a more open market to promote increased price competition. For example, it may be preferable to have a single entity certify or qualify the first group of suppliers, and establish the price level for the initial, say, 50,000 meters. After that it may be preferable to let those suppliers compete against each other on price and other factors in dealing with the individual LDCs, in order to force the overall cost lower. The workshop process may be a useful forum for exploring the options on this point.

   b) ***3.2 Implementation Priorities.*** While priority should given to groups or customer classes that will provide the greatest benefits, both from a system wide perspective and on an individual customer basis, the Board should not ignore the leadership benefits of participation by "early adopters". As we note in our comments on contestability, below, it may be possible to include both quite effectively, focusing in the organized implementation on "low hanging fruit" but welcoming early adopters on favourable terms. In addition, obviously new installations should meet all smart meter requirements to avoid the stranded assets problem highlighted in the Discussion Paper.

   c) ***3.3 Targets.*** As translated into monthly installation requirements, the Minister's directive may appear to be quite ambitious. However, in our view the prioritization decisions will (and should) drive the monthly targets in a bottom-up analysis of how quickly smart meters can be deployed. If the number one priority were to be larger users, for example, that may mean smaller numbers of installations in the first several months, but larger benefits overall.

   d) ***3.4 Process Driver.*** Once more it is not clear to us that some kind of centralized agency is required to drive the process. Once an implementation plan and a set of required technical standards are established, that may be enough. This is especially true if, during

the course of regulating the electricity LDCs, the Board is able to foster development of a formal or informal infrastructure in which the LDCs can act jointly or co-operatively on issues of common concern. Smart metering is a likely candidate for co-operative action.

8. "Cost Recovery" comments:

   a) ***General.*** In general we believe that smart meters are an integral part of the distribution system and their costs should – absent any arguments for special treatment – be allocated as normal capital costs to rate base and should be recovered from ratepayers on a rate class basis primarily in the fixed charges per customer. This socializes the costs throughout each rate class, reflecting standard cost allocation principles, and also ensuring that, since all ratepayers benefit from improving system efficiency, all pay the cost.

   b) ***General - Idem.*** A number of ratepayers, including some schools, have already paid the cost of interval meters. Where those meters will remain in place (ie. where they qualify under the new technical standards), we believe it is important that those early users not be disadvantaged. The solution may be to give them a bill credit equal to the cost the utility would have incurred to install their smart meter today. This also fits well with our suggestion, below, for the use of credits in the case of advanced or "smarter" meters.

   c) ***4.1 Meter Charge.*** As the benefits of the initiative will be to the overall system, spreading the capital costs over all customers would be appropriate.

   d) ***4.2 Third Tranche.*** With the announcement that the third tranche of MBRR was to be devoted to DSM activities, given the short period of time with which utilities have to develop such programs, and due to the impending implementation of the Conservation secretariat, it may make some sense to devote all or a portion of these funds in the first year to the smart meter initiative. However, in general afte the first year we do not think that scarce DSM funds should be used to fund smart meters on a broad scale. The smart meters initiative should save at least as much as the incremental bill impact to ratepayers, and those savings should continue indefinitely. No subsidy is required once the price starts to move toward a commodity level. Therefore, except in the beginning where a DSM-type subsidy may be necessary for a short time to make smart meters cost-effective, we think that they should be treated as a normal capital cost.

   e) ***4.4 Third Party Financing.*** To the extent that third party financing is available and cost effective, this should be encouraged.

9. "Metering Functions" comments:

   a) ***General.*** The approach to functionality taken in Victoria, Australia, appears initially to be very attractive. By mandating a "plain vanilla" set of functions, and then letting the market offer additional functionality to those who want it, the Australian regulator is engaging the market early, not just on price, but also on innovation and value added.

b) ***General.*** One approach the workshop participants could consider for recommendation to the Board would be to establish a base case functionality, and a standard cost model to go with it. Each LDC would install base case meters, and would charge the capital and operating costs in the normal course to all members of the relevant rate classes. However, any ratepayer who wished to acquire their own advanced smart meter could do so instead of taking the plain vanilla version. If they did, three things would happen:

   i) The ratepayer would be entitled to choose any model, with any level of increased functionality, as long as the minimum required functionality and compatibility was achieved. For ratepayers (like some school boards) who want to make maximum use of advanced metering, for example in their DSM activities, they would be free to do so. This should produce added system benefits (because these would not just be "early adopters", but also "heavy adopters") at no incremental cost.

   ii) The utility would make a capital grant payment to the ratepayer equal to the capital cost of the minimum standard meter, representing part of the cost to the ratepayer of the advanced meter. In effect, the advanced meter would cost the LDC the same as a plain vanilla smart meter. The ratepayer would pick up the difference.

   iii) Notwithstanding the grant from the utility, the customer would own the advanced meter. In the case of plain vanilla smart meters, they would be owned by the LDC as with all components of rate base. This creates an incentive for customers to purchase advanced meters.

c) ***5.1 Measurement.*** Schools believe that at a minimum smart meters should be required to record usage on an hourly basis. While the RPP may be a simpler system, not initially be based on HOEP, we believe it is likely that some differentiation beyond "peak vs. off-peak" will be necessary in the relatively near term. The Ontario load profile is not binary in shape, and sooner or later it will be important for us to cut back daily system peak demand (e.g. at 6:00 PM) separately from overall usage during the entire high demand period of the day (ie. 6:00 AM to 8:00 PM).

d) ***5.2 Reporting.*** Each of the benefits we discuss in paragraph 4 above is driven primarily by the availability <u>to the ratepayer</u> of comprehensive and timely information. It follows that the minimum requirements should include the delivery of information to the ratepayer, so that the ratepayer can react to those signals by load shifting, fixing inefficiencies, or expanded DSM implementations. Once it gets beyond the minimum - delivery of the raw data to the user (for example daily) - it is all a cost/benefit analysis. Graphical displays, normative comparisons, real-time feedback, etc., are all useful to varying degrees, and at a reasonably low cost should be pursued. At a higher cost, they may be better made part of the optional advanced metering that customers can opt for. The same balancing act applies to simple or complex bi-directional communication. Bi-directional communication is intrinsically attractive, but only at a reasonable cost.

10. “Ownership” comments:

    a) ***General.*** To the extent that there can be a market for meter services at the consumer level, it should be encouraged, both on the basis of price and on the basis of features and innovation. We have earlier proposed one possible approach in which the default would be utility ownership of the meter (just as is the case today – we just change the standard for a basic meter from dumb to smart), but that ratepayers would have the option of buying premium meters, which would be owned by the ratepayer.

    b) ***General.*** Utilities, which have experience in meter services, should not be precluded from the market for meter services, though they may be required to set up separate unregulated affiliates to ensure a level playing field.

Conclusions

11. The School Energy Coalition appreciates the opportunity to participate at this early stage in the Board’s consideration of this Directive. The Discussion Paper, which sets out background and then provides open-ended questions about relevant issues, is an effective means of getting early input to help focus and inform the workshops and the development of the draft recommendations.

12. The School Energy Coalition hopes these comments have been of assistance. The Coalition believes that it can make a significant and unique contribution to this initiative and looks forward to continued participation.

All of which is respectfully submitted on behalf of the School Energy Coalition this 13th day of August, 2004.

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Per: _____
Jay Shepherd