



NOTICE OF PROPOSAL TO AMEND A CODE

PROPOSED AMENDMENTS TO THE STANDARD SERVICE SUPPLY CODE, THE RETAIL SETTLEMENT CODE AND THE DISTRIBUTION SYSTEM CODE

BOARD FILE NO.: EB-2007-0032

**To: All Licensed Electricity Distributors
All Licensed Electricity Retailers
All Participants in Proceeding RP-2004-0196
Independent Electricity System Operator
All Other Interested Parties**

Re: Code Amendments for the Smart Metering Initiative Transition Period

The Ontario Energy Board (the "Board") is giving notice under section 70.2 of the *Ontario Energy Board Act, 1998* (the "Act") of proposed amendments to the Standard Supply Service Code (the "SSS Code"), the Retail Settlement Code (the "RSC") and the Distribution System Code (the "DSC") (collectively the "Codes").

The Board will not be granting cost awards in this matter.

I. Background

The Province's smart metering initiative (the "SMI") is put into effect principally through legislation and regulation. The government's policy for implementation of the smart metering initiative requires a transition period which includes the period for the initial enrolment of smart meters into the meter data management and meter data repository (the "MDM/R") currently under development by the Independent Electricity System Operator (the "IESO"). The Board wishes to ensure that its regulatory instruments accommodate the Province's SMI and related policies and that smart metering is implemented on a cost effective basis during the transition period. The Board also considers it desirable to provide greater clarity regarding the roles and responsibilities of licensed electricity distributors in relation to settlement using smart meter data and the billing of consumers with smart meters during the transition period.

A. Transition Policies and MDM/R Responsibilities

For each licensed distributor, smart meter implementation is expected to proceed in three stages:

- The early implementation, where licensed distributors that are authorized by regulation to conduct smart metering activities proceed with the installation of AMI (which includes meters);
- The transition period that begins with the initial enrolment of a licensed distributor's advanced metering infrastructure ("AMI") with the MDM/R; and
- The end state, when there is a resolution to the issue of settlement with MDM/R-verified data on an hourly basis.

During early implementation, the data generated by AMI systems will not have been validated through the MDM/R. Licensed distributors have been and will be using cumulative reads (often manually retrieved register reads) in exactly the same way that they use conventional meter reads.

During the transition period (once a licensed distributor's AMI is enrolled in the MDM/R), the MDM/R will provide smart meter data framed either as cumulative data or as time-of-use ("TOU") data (i.e., summations of usage data into three time periods). The initial enrolments with the MDM/R will occur in early June, 2007. The end of the transition period has not been determined, but it could last until the expected end of province-wide meter installation (i.e. until the end of 2010). During the transition period, smart meters will be functioning as either TOU or conventional meters, and licensed distributors that implement smart meters therefore need only have systems capable of TOU billing during the transition period.

The MDM/R will eventually be operated by a Smart Metering Entity ("SME")¹. The complete services to be provided (or offered) by the SME have yet to be determined. It is possible that the SME might evolve to offer some or all of the following types of services through the MDM/R: retail settlement on an hourly basis; hourly (interval) billing of consumers; and hourly data presentation (web presentation).

At the end state, licensed distributors, consumers and other parties will be able to access the MDM/R-validated data framed in ways that are more useful to them, including the possibility of hourly data.

B. Managing the Transition

Current regulations generally prohibit the Board from allowing licensed distributors to recover costs associated with meter data functions that are to be performed by the SME

¹ *Electricity Act, 1998*, section 53.8.

(through the MDM/R).² Because the functions to be performed by the SME and the associated functionality of the MDM/R may evolve, the Board intends to manage the regulatory framework in a way that ensures that licensed distributors are not required to invest in any systems which would duplicate existing or potential MDM/R functionality.

Currently, smart meters meet the definition of an interval meter as set out in various Codes. However, the manner in which licensed distributors will effect hourly retail settlement or hourly billing of customers with smart meters has yet to be determined. Therefore for the transition period, the Board is proposing Code amendments that will require that smart meters be treated as non-interval meters. The amendments will also require that retail settlement on an hourly basis not be undertaken until a determination has been made as to whether this function should be performed through the licensed distributors' systems or through the MDM/R.

Some licensed distributors have been designated by regulation to be eligible to recover costs related to the early implementation of smart meters. It is important that licensed distributors understand that requirements for customer information systems and billing systems may be different for early and late implementers of smart meters. Discussions with both the Ministry of Energy and those responsible for the Independent Electricity System Operator's ("IESO") Smart Metering System Implementation Program would, in the Board's view, assist licensed distributors in formulating their implementation plans.

C. Time-of-Use Prices

The SSS Code establishes the rules by which licensed distributors implement the Regulated Price Plan (the "RPP").

The Board's initial consultation on RPP price setting concentrated on tiered pricing. The Board undertook to study the appropriateness of enhanced TOU pricing for Ontario, including the potential use of Critical Peak Pricing ("CPP") methodologies. In mid-2006, the Board initiated a pilot project to gauge consumers' responses to the current TOU structure and two CPP enhancements.

Initial results for this study are informative and the Board believes it important to continue the consultation on TOU pricing with an objective of refining the methodology that was implemented in 2005. Initial conclusions are that the basic three-part structure of TOU pricing does not need to be changed, but that future refinements in pricing methodology and allocation of hours (in each of the three parts of the structure) may be desirable. The question of whether or when CPP should be implemented will also be

² Ontario Regulation 416/06 (Smart Meters: Cost Recovery) made under the *Ontario Energy Board Act, 1998*. There are some exceptions noted in the Regulation. Specifically, distributors may recover costs associated with functions related to meter data that are contemplated to be performed by distributors by the "Functional Specification for Advanced Metering Infrastructure" referred to in Ontario Regulation 425/06 (Criteria and Requirements for Meters and Metering Equipment, Systems and Technology) made under the *Electricity Act, 1998*. In addition, distributors may with Board approval recover costs associated with meter data that relate to a distributor's operation of its distribution system provided that the functions are not duplicative of those to be performed by the SME.

considered in these consultations. The Board plans to consult in the summer of 2007, and will consider whether changes should be made to the TOU pricing methodology. There will be no changes to the current structure of TOU pricing prior to May 1, 2008.

D. Further Code Review

The Board will continue to review the Codes as may be required as the SMI moves from the transition to the desired end state, and once the services to be offered by the SME and the full functionality of the MDM/R is known and understood. Further amendments to the Codes may therefore be proposed as required to address new issues.

II. Summary of the Proposed Amendments

A. The SSS Code

The text of the proposed amendments to the SSS Code is set out in Attachment A to this Notice.

The principal purpose of the proposed amendments is to introduce the possibility of consumer choice in relation to TOU pricing, pending the date on which TOU pricing becomes mandatory for all consumers that have a smart meter (referred to in the SSS Code as the “mandatory TOU date”). An appropriate date for making TOU pricing mandatory has not been determined.

The SSS Code defines an “eligible time-of-use meter” as “an interval meter or a meter that measures and records electricity use during each of the periods of the day referred to in section 3.4.1 cumulatively over a meter reading period”. A smart meter meets this definition and can be used for purposes of TOU billing.

The SSS Code allows licensed distributors to implement TOU pricing in advance of the date on which TOU pricing becomes mandatory for those consumers that have an eligible time-of-use meter. Currently, once a licensed distributor elects to make TOU pricing available on an advanced basis, TOU pricing must apply to all consumers that have an eligible time-of-use meter. The Board is proposing to amend section 3.5.2 of the SSS Code to provide licensed distributors with the ability to implement TOU pricing on either a mandatory or voluntary basis for consumers with eligible time-of-use meters. Consequential amendments are also proposed to sections 3.2.5 and 3.5.3 of the SSS Code.

B. The RSC

The text of the proposed amendments to the RSC is set out in Attachment B to this Notice.

The principal purpose of these amendments is to clarify the status of smart meters for billing and settlement purposes. This will avoid the need for systems changes to

accommodate smart meters pending the final evolution and implementation of the MDM/R and the synchronization of the licensed distributors' systems with those of the MDM/R.

Definition of "Smart Meter" and "Metering Evolution Period End Date"

For purposes of giving effect to the other proposed amendments referred to below, it is necessary to amend section 1.2 of the RSC to add two new definitions; namely, a definition of "smart meter" and a definition of "metering evolution period end date".

The proposed definition of "smart meter", by referring to specified functional specifications, makes it clear that a smart meter by definition is one that communicates with the MDM/R.

Currently, smart meters meet the RSC definition of an "interval meter" but cannot be fully utilized for hourly billing and settlement purposes. Hourly billing and settlement capability based on MDM/R-verified data may occur at different times for different licensed distributors, depending on when their systems become synchronized with the MDM/R. Accordingly, the proposed definition of "metering evolution period end date" provides flexibility by allowing the Board to determine when smart meters can be fully utilized for hourly billing and settlement purposes, and can thus be treated as interval meters, and to make that determination at different times for different licensed distributors as may be required.

Billing determinants

Section 3.3 of the RSC is proposed to be amended by adding a new section 3.3.3 that clarifies that smart meters are to be treated the same as non-interval meters for settlement purposes during the metering evolution period. Section 3.4 is also proposed to be amended in order to clarify that smart meters will, for that same period, be treated as non-interval meters for the purposes of calculating the Net System Load Shape.

Settlement timelines

Section 5.2 of the RSC, which prescribes timelines for the settlement of accounts, is proposed to be amended to clarify that smart meters are to be treated the same as MOST meters and non-interval meters in relation to meter-reading cycles and settlement timelines.

Provision of data to consumers and retailers

The proposed amendments to Chapter 11 of the RSC clarify that, during the metering evolution period, smart meters are to be treated in the same manner as non-interval meters for the purposes of the provision of usage data to consumers and retailers.

C. The DSC

The text of the proposed amendments to the DSC is set out in Attachment C to this Notice.

The principal purpose of these amendments is to ensure that, once a licensed distributor's systems are synchronized to the MDM/R, the licensed distributor will not be performing activities in relation to meter data that are expected to be done by the MDM/R. The proposed amendments also clarify that a consumer cannot compel a licensed distributor to install a smart meter.

Definition of "Smart Meter"

For purposes of giving effect to the other proposed amendments referred to below, it is necessary to amend section 1.2 of the DSC to add a new definition of "smart meter". The definition is the same as that proposed for the RSC, as described above.

Validation, Estimating and Editing

The DSC currently provides for a validation, estimating and editing ("VEE") process for meter data and requires that the VEE process be established and undertaken by licensed distributors. Regulations relating to cost recovery associated with smart metering contemplate that the SME (through the MDM/R) will be responsible for VEE activities in respect of smart meters. As noted above, the regulations prohibit distributors from recovering costs associated with meter data functions that will be performed by the SME (these functions specifically include VEE activities). The Board is therefore proposing to add a new section to section 5.3 of the DSC to clarify that the VEE function for smart meters will be performed through the MDM/R. The Board is also proposing to add a new section 5.4 to the DSC to require licensed distributors to enter into an agreement with the IESO or the SME in a form approved by the Board in relation to metering.

Provision of Metering Installations

The Board is proposing to add a new section to section 5.1 of the DSC to clarify that, during the metering evolution period and for the purposes of the provision of meters and metering services, a smart meter is not an interval meter. This would prevent a consumer from compelling a licensed distributor to install a smart meter, reflecting the fact that only a sub-set of licensed distributors are currently authorized by regulation under the *Electricity Act, 1998* to deploy smart meters.

D. Early Implementers of Smart Meters

The Board understands that some licensed distributors have been recognized by the government as priority installations in relation to smart meter implementation. Should the proposed amendments referred to above be adopted, the Board recognizes that those licensed distributors may need to apply for exemptions to certain of the amendments to enable them to use new technologies (outside of the MDM/R), including billing and settlement systems.

III. Anticipated Costs and Benefits of the Proposed Amendments

Under the SSS Code, a licensed distributor may implement TOU pricing once it has determined it is prepared to do so and has provided notice in the manner required by

the SSS Code. The proposed amendments to the SSS Code would allow licensed distributors to implement TOU pricing on either a mandatory or voluntary basis. This provides additional flexibility for licensed distributors. The selection of customer choice may create additional costs for licensed distributors, but will benefit consumers.

Under the RSC as currently drafted, smart meters would qualify as interval meters, with the attendant requirements for settlement and provision of data to retailers. These requirements would obligate licensed distributors to invest in information systems that are capable of settling with retailers on an hourly basis. Currently, licensed distributors that implement smart meters need only have systems capable of time-of-use billing. Given that the activities to be performed by the SME have yet to be finally determined, the provision of hourly settlement services by the SME remains a possible outcome. If this were to be the case, then licensed distributor investments to undertake these functions could be stranded. While the cost implications of adding hourly system capability are not clear at this time, the proposed amendments to the RSC ensure that licensed distributors are not required to make changes that may become obsolete at the end of the transition period. Changes to licensed distributor systems and infrastructure, and the associated investments, should be minimized until the full functionality of the MDM/R and the complete slate of services to be offered or provided by the SME are known.

As noted above, the legislative framework currently contemplates that the SME will perform VEE activities in relation to smart meters. The proposed amendments to the DSC align the DSC with the legislative framework, and thereby also ensure that licensed distributors do not make investments that would become stranded when these activities are performed by the SME. The amendments to the DSC that clarify that a smart meter will be treated in the same manner as a non-interval meter are not expected to create additional costs for licensed distributors as they already have systems in place to settle and bill non-interval meters. These amendments also reduce the potential for the stranding of assets.

IV. Coming Into Force

The Board proposes that the proposed amendments to the SSS Code, the RSC and the DSC described above and set out more fully in Attachments A, B and C to this Notice come into force on the date that the final amendments are published on the Board's website.

V. Invitation to Comment

All interested parties are invited to make written submissions on the Board's proposed amendments to the SSS Code, the RSC and the DSC. Any person who wishes to make a written submission with respect to the proposed amendments must file eight (8) paper copies of the submission and, if possible, electronic copies in searchable Adobe Acrobat (PDF) and Word formats with the Board Secretary by **4:30 p.m. on June 1,**

2007. Your submission must quote file number **EB-2007-0032** and include your name, address, telephone number and, where available, your e-mail address and fax number.

Written submissions should be sent to:

Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street
Suite 2700
Toronto, Ontario
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Electronic copies may be submitted on CD/diskette or by e-mail to boardsec@oeb.gov.on.ca.

This Notice, including the attached proposed amendments to the SSS Code, the DSC and the RSC, and all written submissions received by the Board in response to this Notice, will be available for public viewing on the Board's website at www.oeb.gov.on.ca and at the office of the Board during normal business hours.

If you have any questions regarding the proposed amendments described in this Notice, please contact Laurie Reid at 416-440-7623. The Board's toll free number is 1-888-632-6273.

DATED at Toronto, May 14, 2007.

ONTARIO ENERGY BOARD

Original Signed By

Kirsten Walli
Board Secretary

Attachments:

Attachment A: Proposed Amendments to the Standard Supply Service Code
Attachment B: Proposed Amendments to the Retail Settlement Code
Attachment C: Proposed Amendments to the Distribution System Code

Attachment A**Proposed Amendments to the Standard Supply Service Code**

Note: The text of the proposed amendments is set out in italics below, for ease of identification only.

1. Section 3.2.5 of the SSS Code is amended by deleting paragraph (a) and replacing it with the following:
 - (a) *if it has made the election referred to in section 3.5.1:*
 - i. *charge the electing spot consumer the commodity price for electricity determined in accordance with section 3.4 where the distributor is electing to implement pricing under section 3.4 on a mandatory basis under section 3.5.2(a); or*
 - ii. *charge the electing spot consumer the commodity price for electricity determined in accordance with either section 3.3 or section 3.4, as the consumer may elect, where the distributor is electing to implement pricing under section 3.4 on a voluntary basis under section 3.5.2(b);*
2. Section 3.5.2 of the Standard Supply Service Code is deleted and replaced with the following:

3.5.2 *Where a distributor has made the election referred to in section 3.5.1, the distributor shall also determine whether the implementation of pricing under section 3.4 will be:*

 - (a) *mandatory for all RPP consumers in its service area that have eligible time-of-use meters; or*
 - (b) *voluntary, at the option of each RPP consumer in its service area that has an eligible time-of-use meter.*

Where the distributor selects the option referred to in paragraph (a) and has given the notice referred to in section 3.5.3, the distributor shall charge each RPP consumer served by that distributor that has an eligible time-of-use meter the commodity price for electricity determined in accordance with section 3.4 as of the first day of the first billing period that commences after the date on which the eligible time-of-use meter becomes useable for billing purposes. Where the distributor selects the option referred to in paragraph (b) and has given the notice referred to in section 3.5.3, the distributor shall charge each RPP consumer served by that distributor that has

an eligible time-of-use meter the commodity price for electricity determined in accordance with either section 3.3 or section 3.4, as the RPP consumer may elect.

3. Section 3.5.3 of the Standard Service Supply Code is amended by adding the following to the beginning of the last paragraph:

Such notice shall describe whether the distributor will implement pricing under section 3.4 on a mandatory basis as referred to in section 3.5.2(a) or on a voluntary basis as referred to in section 3.5.2(b). Where the distributor has selected implementation on a voluntary basis, such notice shall also include details of the manner in which RPP consumers with eligible time-of-use meters may exercise their election.

Attachment B

Proposed Amendments to the Retail Settlement Code

Note: The text of the proposed amendments is set out in italics below, for ease of identification only.

1. Section 1.2 of the Retail Settlement Code is amended by adding the following immediately after the definition of “meter installation:

“metering evolution period end date” means, in relation to a distributor, the date determined for that purpose by the Board;

2. Section 1.2 of the Retail Settlement Code is amended by adding the following immediately after the definition of “service transaction request”:

“smart meter” means a meter that is part of an advanced metering infrastructure that meets the functional specification referenced in the Criteria and Requirements for Meters and Metering Equipment, Systems and Technology, O. Reg. 425/06;

3. Section 3.3 of the Retail Settlement Code is amended by adding the following new section 3.3.3 immediately after section 3.3.2:

3.3.3. Consumers With Smart Meters

Until the metering evolution period end date, a distributor shall determine settlement costs for consumers with smart meters in accordance with section 3.3.2.

4. Section 3.4 of the Retail Settlement Code is amended by deleting the first sentence and replacing it with the following:

As indicated in sections 3.3.1, 3.3.2 and 3.3.3, determining settlement costs for competitive electricity services requires weighting hourly wholesale prices by hourly usage for individual consumers. Until the metering evolution period end date, a smart meter shall be treated as a non-interval meter for the purposes of this section.

5. Section 5.2 of the Retail Settlement Code is amended by deleting the first sentence of the second paragraph and replacing it with the following:

A distributor shall read all MOST meters, non-interval meters and smart meters according to a meter-reading cycle established by the distributor.

6. Section 11 of the Retail Settlement Code is amended by adding the following immediately following the paragraph set out under the heading "ACCESS TO CONSUMER INFORMATION":

Until the metering evolution period end date, a distributor shall for all purposes under sections 11.1 to 11.3 inclusive treat a smart meter as a non-interval meter.

7. Section 11.1 of the Retail Settlement Code is amended by deleting the first sentence of the second paragraph and replacing it with the following:

The schedule of meter reading and posting of data to the EBT System for interval, non-interval and smart metered data is described in section 5.2.

Attachment C**Proposed Amendments to the Distribution System Code**

Note: The text of the proposed amendments is set out in italics below, for ease of identification only.

1. Section 1.2 of the DSC is amended by adding the following immediately after the definition of “small embedded generation facility”:

“smart meter” means a meter that is part of an advanced metering infrastructure that meets the functional specification referenced in the Criteria and Requirements for Meters and Metering Equipment, Systems and Technology, O. Reg. 425/06;

2. Section 5.1 of the DSC is amended by adding the following new sections 5.1.7 and 5.1.8:

5.1.7 For the purposes of sections 5.1.2 to 5.1.5 inclusive, a smart meter is not an interval meter.

5.1.8 Section 5.1.7 ceases to have effect in relation to a distributor on the date determined for that purpose by the Board.

3. Section 5.3 of the DSC is amended by adding the following new section 5.3.13:

5.3.13 Notwithstanding any other provision of section 5.3, the VEE process for all data from a smart meter shall be completed by either:

- a. *the Smart Metering Entity; or*
- b. *the IESO, in its capacity, given by regulation, to plan, manage and implement the smart metering initiative or any aspect of that initiative,*

in accordance with the VEE process established by the Smart Metering Entity or the IESO.

4. Section 5 of the DSC is amended by adding the following new section 5.4:

5.4 Agreement with SME or IESO Relating to Metering

5.4.1 A distributor shall, upon being requested to do so, enter into an agreement with the Smart Metering Entity or the IESO, in a form approved by the Board, which sets out the respective roles and responsibilities of the distributor and the Smart Metering Entity or the IESO in relation to

metering and the information required to be exchanged to allow for the conduct of these respective roles and responsibilities.