

ONTARIO ENERGY BOARD

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

AND IN THE MATTER OF the Ontario Energy Board's (the "Board") notice advising stakeholders of the Board's approach to fulfilling the Minister's Directive to the Board on smart electricity meters and to invite stakeholder participation.

COMMENTS

OF THE INDEPENDENT ELECTRICITY MARKET OPERATOR

Introduction

1. On July 16, 2004, the Ontario Energy Board (the "Board") received a directive (the "Directive") from the Ontario Minister of Energy under section 27.1 of the *Ontario Energy Board Act, 1998*. In it, the Minister directs the Board to consult with stakeholders, identify options and address issues with respect to the Government of Ontario's targets for the installation of 800,000 smart electricity meters by December 31, 2007 and installation of smart meters for all Ontario customers by December 31, 2010. By February 15, 2005, the Board is to provide the Minister with an implementation plan for the achievement of the Government of Ontario's smart meter targets.
2. The Independent Electricity Market Operator (the "IMO") appreciates the opportunity to participate in the process and to make written a submission in response to the Board's invitation for comments on the Board Staff discussion paper dated July 19, 2004.
3. The IMO is established under the *Electricity Act, 1998* to administer the Ontario wholesale power markets and to direct the operations and maintain the reliability of the IMO-controlled grid. The IMO is a non-profit, non-share capital corporation independent of all other participants in the Ontario electricity industry. The IMO does not own any electric power generation facilities but it directs the operation of transmission and generation facilities, including interconnections that are situated in Ontario. The roles of the IMO are established by legislation, its licence issued by the Board, and the Market Rules.

4. The IMO is also responsible for the financial settlement of the wholesale electricity markets. In this regard, the IMO collects and validates the integrity of metering data required for wholesale settlements. Effective metering systems and associated business processes are essential to the effective operation of the electricity markets. This is recognized in the Ontario Market Rules, wherein the IMO is mandated to set and administer wholesale electricity meter and metering data standards for the IMO-administered markets.

5. The Market Rules made under the authority of the *Electricity Act, 1998*, provide the framework for wholesale revenue metering standards. The IMO utilizes Registered Wholesale Meters for the settlement of wholesale market charges, including transmission, and other wholesale market services. Specifically, Chapter 6 of the Market Rules establishes the rules for the installation, commissioning, registration and maintenance, and reporting and auditing requirements to ensure compliance with wholesale metering standards.

6. The IMO is a strong proponent of wide-based consumer participation in electricity markets. The smart meter proposal, complemented by effective retail rates and regulatory framework, has the potential to enable greater participation from a wide range of consumers in the electricity markets. Smart meters can also enhance the linkages between wholesale and retail systems allowing for more efficient utilization of energy resources and operation of the integrated power system.

7. This submission promotes a smart metering initiative that includes the following:

- i. Customer participation in the electricity markets;
- ii. Compatibility of metering-related specifications where appropriate;
- iii. Effective linkages between wholesale prices and retail rates;
- iv. A viable and robust Metering Service Provider sector in Ontario;
- v. An implementation approach that gives priority to areas of Ontario that are in most need of supply; and
- vi. An implementation approach that recognizes that many consumers will not have direct exposure to wholesale real-time prices.

Compatibility of Metering-Related Specifications

8. The Board's Staff discussion paper notes that the objective of developing technical requirements for metering and metering functions would be "to provide enough standardization to ensure that systems are compatible and economies of scale can be realised while allowing enough flexibility so that individual needs of regions and applications can be accommodated"¹. The IMO supports this approach. Standardization can offer a variety of benefits, including ease of integration, reliability of data collection, facilitation of data validation, consistent billing, increased transparency in estimation procedures, rationalization of data storage requirements, and auditing. As such, standardization should be encouraged where appropriate. The IMO proposes that meters for service over 50kW should be targeted for standardization with respect to their design, functionality and operation and maintenance requirements. To the extent possible, these standards should converge with wholesale metering requirements. This would impact approximately 450,000 of the estimated 4 million meters currently installed in Ontario.

9. In contrast, meters for service under 50kW may be an area where the incorporation of compatibility of features and design can be encouraged.

Effective Linkages between Wholesale Prices and Retail Rates

10. It is stated in the Board Staff discussion paper that an objective of the Government policy on smart meters "is to give consumers more control over the energy part of their electricity bill"². Such responsiveness brings about various benefits to consumers, the power system, markets, and other stakeholders. However, as the Staff Paper goes on to note, smart meters are a tool, and that in order for consumers to change the amount or timing of their consumption, they require:

- i. a price that changes over time in response to demand and supply conditions;
- ii. the ability to see and respond to a price signal; and
- iii. measurement of the response so they can be credited accordingly³.

¹ Ontario Energy Board Staff Discussion Paper. *Implementation Plan for Smart Meters in Ontario*. July 19, 2004. RP-2004-0196. p.16

² Ibid., p.6

³ Ibid., p.3

Indeed, while metering technology is an important enabler of demand response in the retail market, effective response is predicated on the ability of retail consumers to see a rate signal that is reflective of underlying system conditions. We make the point later in this submission that it is unlikely that all customers will be exposed to real time wholesale market prices. Accordingly, the IMO encourages the coordinated development of a smart metering regime and associated retail rate structure that will support the desired behavioural drivers.

11. We also support aspects of the smart meter implementation plan that would facilitate the entry and participation of load aggregators, whether in the retail or wholesale markets. We recognize the importance of supportive technical specifications and regulatory decisions in this regard.

A Viable and Robust Metering Service Provider Sector in Ontario

12. The IMO is supportive of a viable and robust Metering Service Provider (“MSP”) sector. To the extent that competition within the MSP sector might encourage such objectives by, for instance, providing opportunities for entry and participation, driving innovation, lowering prices, and adding value to consumers, the notion of meter service contestability might deserve further study and consideration at some point in the evolution of Ontario’s smart meter regime. In the meantime, the IMO submits that the Board’s smart meter development and implementation plan should seek to take advantage of existing infrastructure and business processes (e.g., settlement processes and systems, communication systems) while promoting the development of innovative solutions to maximize benefits to consumers.

A Meter Implementation Approach that Starts in Areas in Need of Supply

13. The IMO is supportive of prioritizing the deployment of meter installments in areas in most need of additional supply. For example, prioritization could be given to areas either currently experiencing or expecting to experience inadequate transmission capacity, or where circuits are overloaded - particularly in those areas identified in the IMO’s Outlooks. Having regard to such conditions would facilitate achievement of the benefits discussed in sections 3.2.2 and 3.2.3 of the Staff Paper, including reduction of system operational costs, deferral of infrastructure investments, and reducing the strain on the existing power system.

Many Consumers Will Not have Direct Exposure to Wholesale Real Time Prices

14. We recognize that as Ontario's markets evolve and mature, large consumers may increasingly take advantage of opportunities for contracting options that reduce their exposure to real time prices. The experience in other markets is that more consumers elect or are required, over time, to enter into day-ahead and other forward contracting arrangements. Smaller consumers are more likely to be on regulated retail rates.

15. In recognition of this likelihood, we recommend that the implementation plan give sufficient consideration and weight to opportunities and objectives that are not premised on real-time price exposure, particularly for low volume consumers. As examples of opportunities that are independent of real time prices, we refer to the sections in the Staff Paper that discuss consumer awareness, enabling time differentiated rate structures, as well as energy management opportunities driven by such rate structures.

The IMO Intends to Participate in Subsequent Phases of this Proceeding

16. The IMO supports efforts to promote wider-based consumer participation in electricity markets. As such, the IMO intends to participate in further phases of the Board's proceeding in this matter.

Conclusion

17. In sum, the IMO encourages:

- i. the development of a smart meter implementation plan that promotes standardization and compatibility of metering-related specifications and functions where appropriate (e.g. promoting *standardization* for meters greater than 50kW, while promoting *compatibility* for meters under 50kW) – in view of attaining benefits of standardization and compatibility while maximizing flexibility and avoiding undue costs;
- ii. the development of a smart metering plan and related retail rate structure that ensures effective linkages between wholesale prices and retail rates and that facilitates the participation of retail load aggregators;
- iii. the development of a robust Metering Service Provider sector in Ontario;

- iv. the deployment of smart meters in such a manner that gives priority to areas of Ontario that are in most need of supply; and
- v. an implementation approach that recognizes that many consumers will not have direct exposure to wholesale real-time prices.

RESPECTFULLY SUBMITTED THIS 13TH DAY OF
AUGUST, 2004

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