COMMENTS OF THE INDEPENDENT ELECTRICITY SYSTEM OPERATOR -

OEB CONSULATION ON REGULATED PRICE PLAN TIME-OF-USE PRCING

The Independent Electricity System Operator (the "IESO") is pleased to provide its submission in response to the Ontario Energy Board's (the "Board") request for stakeholder comments on the price setting methodology and structure of time-of-use ("TOU") prices under the Regulated Price Plan ("RPP"). These comments will reflect upon the analysis set out in the consultant report[1], as well as issues identified by Board staff[2] and any others discussed at the recent stakeholder meeting.[3]

The IESO is supportive of the initiative to review the RPP and TOU pricing. The IESO is a strong proponent of broad-based consumer participation in electricity markets and believes effective retail rates allow for an efficient utilization of energy resources and operation of the integrated power system. Dynamic TOU rates combined with today's smart meters and tomorrow's smart grid technology will not only give consumers greater control over their electricity costs, but will enable a responsiveness that derives benefits to the system as a whole. Whatever changes that are ultimately adopted through this review, customer education will be an essential component of implementation.

Identifying Top Priorities

In the Board's October 18, 2010 letter, the intent of the consultation was clearly defined; "*to ensure that the design is fair and meets the objective of ultimately reducing overall power system costs*."[4] In its report, the consultant identifies a series of different priorities that the OEB could focus upon; improve the price ratio, minimize implementation burden, etc. The IESO believes this list should also include promoting economic efficiency. Economic efficiency is achieved when consumers pay prices that reflect the marginal cost of supply. When this occurs, societal resources are employed optimally within the economy and the benefits are shared by everyone. In Ontario, the wholesale market electricity price (Hourly Ontario Energy Price or HOEP) is the best indication of the hourly marginal cost of supply of energy. We recognize that not all costs are within the market and the efficiency recovery of these other costs is also important.

Price Setting Methodology: Driving Efficient Consumption

A TOU pricing structure that closely reflects the HOEP during respective off peak, mid peak, and peak periods promotes economic efficiency, and over time reduces overall power system costs. Consumers would be incentivized to shift consumption from high price periods to low price periods when it was

[1] *Assessing Ontario's Regulated Price Plan: A White Paper*, The Brattle Group, December 8, 2010.
[2] *Appendix A: List of Issues Identified by Board Staff*, OEB notice on RPP TOU consultation, December 6, 2010.
[3] Stakeholder meeting held on December 21, 2010 at the Board's West Hearing Room
[4] *Consultation on Regulated Price Plan Time of Use Prices*, OEB, October 18, 2010.

economic for them to do so. This pricing structure would also provide financial motivation for participating in acts of conservation or investing in energy efficient technologies. Consumers would be empowered with the ability to not only reduce their own energy bill, but to lower the costs of operating the system as a whole.

A TOU pricing structure that closely reflects the HOEP would also satisfy the fairness objective. As the consultant noted[5], non-TOU rates will mask varying generation costs, which creates an inequity between consumers that consume more or less during on-peak periods. A TOU pricing structure reflective of differences between marginal generation costs serves to reduce this "unfairness."

Price Setting Methodology: Recovering Out-of-Market Costs

However, it must be recognized that Ontario's hybrid market structure also includes contracted or regulated supply that receives payments outside of the market, through the global adjustment. These costs mainly reflect guaranteed fixed cost recovery, in order to encourage investment to meet long-term reliability or environment objectives. These costs are in addition to the marginal cost of supply and are borne by all Ontario consumers, with a proportionate share fully recovered through RPP rates. The need to recover the global adjustment cost through TOU prices poses a challenge for the design of rates that are both fair and economically efficient.

Critical Peak Pricing (CPP) with TOU rates is one price-setting alternative that should be considered. The TOU rates could be set to recover the marginal costs of each off-peak, mid-peak and on-peak period, while the CPP rates for a predetermined set of peak hours (when the system is most severely stressed) would be set to recover global adjustment costs. Under this approach, efficient price signals are sent to consumers in most hours with a strong incentive to reduce during key CPP hours. Over time, this could reduce the need for additional new peaking capacity. Evidence supporting the effectiveness of a CPP/TOU structure has been well documented.[6] Properly designed, a CPP/TOU approach could promote economic efficiency, support equity, facilitate customer choice, and effectively communicate prices and costs to consumers.

Price Setting Methodology: Evolving the RPP

As demand patterns evolve over time, the approach used should automatically adjust. For example, anticipated growth in the use of electric vehicles could gradually change the system load profile, with more demand during off peak periods when batteries are charged. TOU rates reflecting HOEP would automatically adjust in response to the change in demand, encouraging consumers to charge their car batteries when it was most economical to do so. In contrast, a TOU rate that targets a static price ratio could encourage too much or too little charging, by sending a price signal that is too low or too high relative to the marginal cost of generation.

The RPP should recognize the fundamental shift beginning to take place in customers' ability to interact with the electricity system and in the transformation of the grid itself that will require much more responsive consumption to help balance overall supply and demand. The current TOU structure should be viewed as a transitional mechanism to more dynamic pricing options in the future that will allow and reward consumer response, ranging from real-time to a day or days ahead.

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[5] *Assessing Ontario's Regulated Price Plan*, The Brattle Group, Presentation to Stakeholders, December 21, 2010.

[6] In fact, two papers by the consultant provide useful background on this discussion; *Transition to Dynamic Pricing*, Ahmad Faruqui and Ryan Hledik, January 27, 2009; *Pricing Programs: Time-of-Use and Real Time*, Ahmad Faruqui, 28 September 2007.

The TOU price-setting methodology should further recognize that historical demand and price relationships would change with the addition of substantial amounts of variable generation to Ontario's supply mix. The traditional price drivers of weather and resource outages will be augmented by the variability of wind and sunlight. A TOU approach reflecting the marginal cost of supply would automatically adapt to these changes.

Structural Issues: Number of Price Periods and Seasons

The use of multiple price periods is appropriate if costs in those periods are expected to be reasonably different. Wholesale market prices reflect a wide range of high, mid, and low cost hours and everywhere in between throughout the day. The pattern of when these high, mid and low cost hours occur also changes throughout the year, as intra-day demand patterns are markedly different between seasons. Summer peaks generally occur in the late afternoon, while winter exhibits both a morning and early evening peaks.

High levels of demand occur during summer or winter, with any sustained extreme heat or cold weather conditions. The observed differences between peak and off-peak market prices support the need for dynamic pricing during both seasons. These differences are sometimes muted when "shoulder" months in the spring and fall are included. Moderate temperatures limit demand during "peak" hours in these months and the resulting marginal cost of supply may be relatively low when compared to other "peak" hours. Adding two additional RPP seasons for spring and fall would improve the ability of TOU rates to reflect the marginal cost of supply during these times of the year.

Finally, it is important to recognize that any changes to structural aspects of the RPP may have implications for the Meter Data Management and Repository (MDM/R) system. The MDM/R has been designed to accommodate and support a range of time-of-use structures, including some functionality for critical peak pricing. Once clear options have been more formally defined, the IESO will be able to advise the Board as to the lead-time, costs and other implementation requirements potentially faced by the IESO, LDCs and retailers.

Respectfully submitted,
This 10th Day of January, 2011

Original signed by

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