

### **I. Introduction and Background**

The purpose of this initiative is to examine the implications on stakeholders and market efficiency of changing how Ontario's real-time electricity price is calculated, by making the calculation better reflect the impacts of the transmission system. Currently, the price is calculated using a parallel version of the algorithm used by the IESO to dispatch resources in the province, however the pricing run differs from the actual dispatch version in several ways. The most significant difference is that the pricing algorithm creates a single price for energy across the province by ignoring any transmission bottlenecks within the province. In effect, it calculates the price as if all resources within Ontario were able to supply any of the demand for electricity, regardless of location.

The IESO will address pricing model options beginning with a pricing study that examines the various forms of locational pricing that are used across the industry. This study is being conducted at this time for the following reasons:

- stakeholder interest<sup>1</sup>,
- increasing congestion management settlement credit complexities,
- a recommendation in the latest market surveillance panel report to introduce locational pricing, and
- as work begins on a day-ahead market design, the fundamental question of how prices will be calculated needs to be addressed.

The study results will be taken into consideration in design of the day-ahead market.

#### **Background**

The current uniform price is determined through bids and offers against a model of the grid that ignores locational considerations such as transmission limitations, marginal losses and local area reserve requirements. The costs associated with locational constraints are handled as separate uplifted costs (CMSC) to the market.

In contrast, locational marginal pricing (LMP) is a pricing methodology in which market clearing prices are calculated for a number of points on the transmission grid called nodes where energy can be injected or withdrawn. These nodal prices represent the actual value of energy at each node, which includes the marginal cost of the energy and the marginal cost of delivering it. One common option used in other

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<sup>1</sup> Minutes Stakeholder Advisory Committee July 12th, 2006 – “Be it resolved that the Stakeholder Advisory Committee recommend to the IESO Board and senior management that the IESO proactively study through an open stakeholdering process the potential introduction of LMP (Local Market Pricing) in Ontario as a priority for development of the Ontario electricity market. This resolution was unanimously approved.”

markets is to create zones in which the nodal prices are usually similar, and calculate average zonal prices that can then be used to pay all suppliers and charge all consumers within the zone.

The dispatch algorithm automatically calculates nodal prices, and the IESO has been publishing the relevant nodal prices (referred to as shadow prices) since market opening for information purposes only. The historical nodal price data, experiences of locational pricing in neighbouring jurisdiction and past research will provide a good starting point for our study.

## **II. Stakeholders**

Locational pricing is of interest to all stakeholder sectors.

### **Stakeholder Engagement Goals and Objectives**

#### Goal

The goal of this plan is to seek stakeholder input on the possible models for locational pricing in Ontario.

#### Objectives

1. To seek stakeholder input on the scope of the study
2. To provide stakeholders the opportunity to comment on possible models for locational pricing in Ontario and the impacts they will have on their operation
3. To provide stakeholders the opportunity to comment on possible models for locational pricing in Ontario and the impacts they might have on the IESO administered markets and the day-ahead market design work

This stakeholder engagement process will **not** result in a recommendation to the IESO's Stakeholder Advisory Committee or Board to implement (or not) any form of locational pricing. It is intended to gather some of the background information necessary to make a future decision on locational pricing in Ontario.

## **III. Stakeholder Engagement Approach and Methods**

Stakeholder input will be used to assist us in identifying possible impacts of various locational pricing models for introduction into Ontario. The results will provide input to the Stakeholder Advisory Committee, IESO Management, and the IESO Board as they consider possible courses of action for the evolution of the market and provide input to the day-ahead market design. The implementation of the stakeholder engagement process will be in accordance with the IESO's approved stakeholder engagement principles.

The stakeholder engagement methods to be employed will be a combination of a working group, stakeholder advisory committee session and web-based postings with the opportunity for comment.

### *Stakeholder Working Group*

The stakeholder working group will permit most directly affected stakeholders to provide more detailed working level input into the identification of possible locational pricing models for introduction in Ontario. The proposed working group is the current Market Pricing Working Group. Non-represented sectors will be invited to participate. This existing group consists of a representation of stakeholders as listed at: [http://www.ieso.ca/imoweb/pubs/consult/mep/MP\\_WG\\_MemberList.pdf](http://www.ieso.ca/imoweb/pubs/consult/mep/MP_WG_MemberList.pdf).

Terms of reference for this working group have already been established and can be found at: [http://www.ieso.ca/imoweb/pubs/consult/mep/MP\\_WG\\_TermsOfReference.pdf](http://www.ieso.ca/imoweb/pubs/consult/mep/MP_WG_TermsOfReference.pdf)

To the extent possible, members of the working group also represent the views of their constituency.

Working group meeting agendas and documentation from the meetings will be made public through the Market Pricing Working Group's pages on our web site.

([http://www.ieso.ca/imoweb/consult/mep\\_mp.asp](http://www.ieso.ca/imoweb/consult/mep_mp.asp)). Notes from the meetings will be posted to provide an opportunity for all stakeholders that are not participating in the working group to provide comments. Comments can be provided directly in writing or through a sector representative.

### *Stakeholder Advisory Committee Session*

The study of possible locational pricing models for introduction in Ontario will be presented to the Stakeholder Advisory Committee. The Committee will consider these results and may use this information to provide input to the IESO Board and senior management on the potential impacts of the introduction of locational pricing in Ontario, and on the priority that should be applied to this issue for development of the Ontario electricity market.

### *Web-Based Postings*

Web-based postings enable those non-represented sectors with a lower cost alternative to keep informed of the process and to provide input as desired. This will provide the opportunity for all interested stakeholders to offer feedback on any proposed changes as a result of the working group meetings.

This is a public consultation and feedback supplied will be posted on the IESO website including the identification of the participant.

#### IV. Schedule of Activities

| Stakeholder Engagement Schedule   |             |
|---|-------------|
| Activity  | Target Date |
| 1. Post and communicate Locational Pricing stakeholder plan.  | August 25   |
| 2. Finalize Study Scope and Schedule at Market Price Working Group.   | September 1 |
| 3. Locational Pricing study results presented to Market Pricing Working Group for feedback and input on impact. | October 6   |
| 4. Post Locational Pricing Study Results.   | October 18  |
| 5. Present results of Locational Pricing Study to Stakeholder Advisory Committee.                               | November 1  |
| 6. Locational Pricing study results presented to the IESO Board of Directors for their information.             | November 17 |

#### V. Next Steps

The issue of whether to adopt some form of locational pricing is key to the design of the Day Ahead Market and as such will be addressed as part of that stakeholder engagement effort. The results of this locational pricing study will inform that process. Please refer to SE-21 for further information regarding the Day Ahead Market ([http://www.ieso.ca/imoweb/consult/consult\\_se21.asp](http://www.ieso.ca/imoweb/consult/consult_se21.asp))