ONTARIO ENERGY BOARD

The Market Surveillance Panel Report in Brief

The Market Surveillance Panel in the Renewed IESO-Administered Markets

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1 INTRODUCTION

The report, *The Market Surveillance Panel in the Renewed IESO-Administered Markets*, informs market participants and other interested parties about Ontario's Market Surveillance Panel (MSP), its mandate to monitor, investigate, review and report on activities related to the wholesale electricity markets administered by the Independent Electricity System Operator (IESO). The report also provides further details on how the MSP will continue to perform its mandate within the renewed markets following the implementation of significant reforms under the IESO's Market Renewal Program (MRP).

This "Report in Brief" highlights key topics covered in the full report. Readers should consult the full report for a more comprehensive understanding of those topics and the concepts referred to below.

THE ROLE AND RESPONSIBILITIES OF THE MARKET SURVEILLANCE PANEL

All jurisdictions with competitive wholesale electricity markets have a "market monitor" tasked with conducting day-to-day monitoring of the markets. Market monitoring plays an important role in improving the efficiency, integrity and transparency of competitive wholesale electricity markets by exposing instances where the market design or structure, system operator's activities, or conduct of market participants does not align with the goals of competition and economic efficiency.

The MSP, a statute-based panel of the Ontario Energy Board (OEB), serves as the market monitor in Ontario. The MSP's mandate is set out in the *Electricity Act, 1998*, and the OEB's By-law #2. The work of the MSP is supported by the Market Assessment Unit within the IESO, in accordance with a Protocol between the IESO and the OEB. The MSP also receives legal and communications support from employees of the OEB.

The MSP's specific responsibilities include (i) monitoring, evaluating and analyzing activities related to the IESO-administered markets and market participant conduct; (ii) investigating activities related to the IESO-administered markets or market participant conduct; (iii) reviewing actual or

potential flaws or inefficiencies identified as a result of its monitoring activities. The MSP reports publicly on the results of its monitoring and investigation activities, and at least once annually, on the MSP's general assessment of the state of the IESO-administered markets, including their efficiency and competitiveness.

The MSP's mandate does not extend to an evaluation of the merits of government directives and policies in the abstract. To the extent that the MSP studies and reports on government policy, it is to contextualize its effects on the efficiency and competitiveness of the IESO-administered markets.

Since the commencement of the electricity market in 2002, the MSP has made numerous recommendations to the IESO for changes to the pre-MRP market design that would enhance market efficiency. At least 18 past MSP recommendations have direct relevance to the introduction of the MRP. These MRP-related recommendations are detailed in Appendix A of the full report.

2 KEY MONITORING CONCEPTS

The MSP monitors the IESO-administered markets and market participant conduct for: (i) inappropriate or anomalous market conduct, including gaming or abuses of market power, (ii) activities of the IESO that have a detrimental impact on market efficiency or effective competition, and (iii) flaws in the market rules, market design, procedures and the overall market structure that result in outcomes that are inconsistent with the efficient and fair operation of a competitive market.

The MSP defines anomalous to be market outcomes or market participant conduct that is inconsistent with expectations (particularly of a competitive and efficient market), or that falls outside of predicted patterns, trends or norms.

The MSP defines gaming as conduct involving four elements:

- A defect or gap in the market design, rules or procedures governing the IESO-administered markets (market defect);
- Exploitation of the market defect by a market participant;
- Profit or benefit to the participant; and
- Expense or disadvantage to the market.

Market power is the ability of a firm (or a group of firms) to restrict output to profitably raise and maintain prices above competitive price levels. A market participant that possesses market power may exercise this power in two ways:

- Economic withholding: defined as a decision by a market participant to offer generation capacity into the market, but at a price that exceeds the short-run marginal cost of the capacity and exceeds the market clearing price.
- Physical withholding: defined as a decision by a market participant not to offer available generation capacity into the market when the short-run marginal cost of the capacity is less than or equal to the competitive market price.

An abuse of market power entails an action (anti-competitive act) on the part of a firm (or a group of firms) that aims to impede or lessen the competitive response of one or more rival firms.

The MSP monitors for evidence of the exercise of market power (withholding) as part of its evaluation of the overall efficiency of the IESO-administered markets. The MSP applies a three-part test to identify a potential exercise of market power, which consists of a Conduct Test, a Material Price Impact Test and a Profitability Test. The MSP further monitors for the exercise of market power to determine whether corrective competitive responses are being impeded by market structure, rules or procedures or other barriers. The MSP's identification of the persistent exercise of market power by a market participant may be the starting point for the assessment or investigation of a potential abuse of market power.

Competition can be defined as a rivalry where two or more parties strive for a common outcome (consumer purchases) that cannot be shared. The competitiveness of a market is generally assessed according to the following factors: the number of sellers and buyers, ease of entry, information availability and transparency and product differentiation.

When these factors align with those of a more competitive structure, buyers and sellers have no, or at least minimal, ability to control market prices, and the prevailing market prices tend to reflect the marginal cost of production (i.e., there is an absence of market power). The competitiveness of a market can be assessed in terms of evidence of the absence of a significant and sustained exercise of market power.

Competitive markets promote market efficiency, whereby supply is drawn from the lowest cost sellers at any point in time, and the output is allocated to those with the highest valued uses. Over time, consumption from more efficient sources of supply and from superior new technologies drives out the less efficient sources. In an efficient market, the collective welfare of consumers and suppliers is maximized.

Electricity markets are different from general economy “free markets.” Whereas general economy markets can emerge and function with minimal or occasional regulatory oversight, electricity markets require constant oversight by a designated regulator (i.e., a system and market operator). Electricity markets are regulatory constructions, designed by system operators, academics and stakeholders, and approved by regulators or government. They require market rules and system operator procedures to govern the buying and selling of electricity and define the roles of participants, how electricity is priced and how the system is operated.

Ontario’s wholesale electricity market is particularly unique. It is a hybrid market that combines a competitive wholesale market with long-term planning and procurement contracts. It also includes a provincially-owned, rate-regulated generator that controls roughly 51 per cent of the province’s generation capacity.

The market rules, IESO procedures and contracts influence (often intentionally) the decisions of electricity market participants; they affect how competition amongst participants occurs. The MSP must account for these influences when assessing the competitiveness of the IESO-administered markets. In particular, the MSP considers the extent to which the rules, procedures and contracts induce a participant to behave (i.e., bid or offer) as if it were competing in a perfectly competitive market (i.e., bidding or offering in a manner that reflects its true value of consumption or its marginal cost of generating). Assessing competitiveness in this manner puts the emphasis on the ultimate outcome of a competitive market, which is economic efficiency.

In electricity markets, economic efficiency is often discussed in terms of dispatch, consumption and investment efficiency. Dispatch efficiency (productive efficiency) occurs when electricity demand is supplied moment by moment by the lowest cost available generation sources. Consumption efficiency (allocative efficiency) occurs when only consumers that value electricity consumption equal to or more than the system marginal cost consume, and those that value electricity consumption less than system marginal cost do not consume. Investment efficiency occurs when participants, in the long run, invest in assets in a manner that ensures that industry resources are allocated in a way that maximizes overall societal benefit over time (i.e., promote dispatch and consumption efficiency over time).

In Ontario's hybrid market, investment decisions are largely influenced by central planning and government procurement directives. However, short-run prices can inform investment. The MSP's observations in support of short-run efficiencies and efficient pricing therefore support long-run efficiency. Where competitive procurements (including the IESO Capacity Auctions) are used, the MSP assesses the competitiveness of the design and structure of the procurements, and the incentive effects of the contracts or financial arrangements for inducing competitive behaviour in the IESO-administered markets. The MSP believes that a competitive process should be the default procurement approach, barring other non-efficiency objectives.

3 MONITORING OF THE RENEWED MARKETS

The MSP's mandate carries forward in the renewed markets. The various changes made to the IESO-administered markets through the MRP have required the MSP to incorporate new indicia and tools to monitor the renewed markets. The full report provides a sample of the data series, indicia and analytic tools that the MSP used to monitor the pre-MRP markets, some of which remain relevant in the renewed markets.

The full report also provides a sample of the additional data series, indicia and tools that the MSP will employ in monitoring the renewed markets, including:

- **Locational Marginal Pricing**: Under the renewed markets, day-ahead market (DAM), pre-dispatch and real-time prices shift from unconstrained, Ontario-wide prices to locational marginal prices (LMPs) and zonal prices, which are variously applicable to different classes of market participants. The MSP will continue to use indicia such as the cost of the highest cost peaking natural gas generators as an initial screen to trigger study of potentially anomalous LMPs. The MSP will use different statistical models of individual LMP trends to identify price trends that fall outside of statistical norms.

- **Operating Reserve shortage penalty prices:** The MSP will review all outcomes when the new reserve shortage penalty prices (used by the IESO to address constraint violations and ensure that mandatory reserve requirements are respected) are applied. This review is intended to identify the causes for the shortages and potential anomalies in market design or inappropriate conduct used to drive up prices.

- **Make-Whole Payments:** Make-Whole Payments (MWPs) are a financial mechanism to encourage market participants to follow their dispatch instructions, even if doing so leads to higher participant costs or lost opportunities, by ensuring they are financially "made whole." As it did with the predecessor Congestion Management Settlement Credits, the MSP will monitor large MWP amounts in the overall market and in certain electrical zones, as well as MWPs paid

to individual market participants or in respect of specific facilities, on an hourly, daily and seasonal basis, as triggers for further study of potential flaws in the market or anomalous or inappropriate conduct.

- **New operating characteristics and parameters:** In the renewed markets, non-quick start generation facilities, hydroelectric facilities and variable generation facilities will be required to submit new (additional) data on operating characteristics and parameters. The MSP will monitor changes to individual facility data to assess the effects that the changes may have on dispatch and economic efficiency.

- **Day-Ahead to Real-Time Price Convergence:** The MSP will monitor persistent price differences between DAM and real-time to understand the underlying causes for the divergence, and to ensure that such differences are not a result of illiquid markets (i.e., few buyers and sellers or low trading volumes), persistent IESO forecast errors or inappropriate conduct such as gaming.

- **Market Power Mitigation (MPM) Framework:** A new MPM framework has been introduced in the renewed markets to address the potential for suppliers to exercise market power, both in an ex-ante and ex-post context. The MSP will regularly monitor and evaluate the effectiveness of the MPM framework against its three-part test for an exercise of market power to identify “false positives” and “false negatives.” The MSP considers a false positive to have occurred when the IESO mitigates a participant’s offer price ex-ante in either the DAM or real-time, and when the participant’s offer did not trigger or fail the MSP’s three-part test. The MSP considers a false negative to have occurred when the IESO does not mitigate a participant’s offer price ex-ante in either the DAM or real-time, when the participant’s offer did trigger or fail the MSP’s three-part test.