

**The Market Surveillance Panel
In Ontario's Electricity Market:
Monitoring, Investigating and Reporting**

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This paper informs market participants and other interested parties about the Market Surveillance Panel (MSP), an independent arms-length body appointed by and accountable to the Independent Directors of the Independent Electricity Market Operator (IMO).

The MSP is an important component of the ongoing surveillance regime that will be in place as Ontario moves to competitive electricity markets in May 2002. Its areas of responsibility – market oversight and surveillance – are fundamental to the development of competitive electricity markets.

1. The Role of the Market Surveillance Panel

Mandate and Structure

The *Electricity Act, 1998* requires that the Board of Directors of the Independent Electricity Market Operator (IMO) establish a Market Surveillance Panel (MSP), with a mandate and operating framework as set out in Section 3, Chapter 3 of the Market Rules¹.

When the energy market in Ontario is opened to competition beginning in May 2002, the role of the MSP will be to monitor, investigate and report on market behaviour in those markets that are administered by the IMO. The MSP's objective is to contribute to the development of an efficient, competitive and reliable market for the wholesale sale and purchase of electricity and ancillary electricity services in Ontario. It has a critical role to play in helping the energy market evolve in a way that provides the benefits of effective competition to Ontario energy users.

Who sits on the Market Surveillance Panel?

The current members of the MSP are its Chair **Fred Gorbet**, and **Don McFetridge** and **Tom Rusnov**. They bring to the Panel a broad range of experience and expertise in economics, competition law, public policy and the electricity industry.

MSP members are appointed by, and accountable to, the Committee of Independent Directors of the IMO. They work part-time, supported by the full-time professional staff in the Market Assessment Unit (MAU) of the IMO. They must "not have any material interest in a market participant" and cannot be "directors, officers or employees of the IMO or of a market participant".

¹ Rules established pursuant to the *Electricity Act* which govern the behaviour of participants in the wholesale electricity market.

The Panel's specific responsibilities include:

- **monitoring behaviour** in the marketplace,
- **investigating** and recommending on:
 - the behaviour of specific market participants,
 - the design of the rules and operating procedures of the marketplace, and
 - the structure of the marketplace, and
- **reporting** on the results of its monitoring and investigations.

The IMO's Market Assessment Unit (MAU), which supports the MSP in these areas of responsibility, undertakes the monitoring, evaluation and analysis of the conduct of market participants and the structure and performance of the IMO-administered markets, under the supervision and direction of the MSP.

Market participants are entities in the business of generating, transmitting, and distributing power. They are authorized by market rules to participate in the IMO-administered market or to cause or permit electricity to be conveyed into, through or out of the IMO-controlled grid.

The MSP is not a regulator. That responsibility falls in part to the IMO and in part to the Ontario Energy Board (OEB). As well, the MSP does not have the IMO's or the OEB's powers to sanction behaviour, impose penalties or ensure that market participants comply with the market rules.²

The MSP is empowered to make recommendations to the IMO and others, such as the OEB and the Competition Bureau. Its focus is to look at behaviour that may be consistent with the market rules but inconsistent with the effective functioning of a competitive marketplace.

² See "Competition Oversight of the Ontario Electricity Marketplace, Joint Statement of the Competition Bureau, Independent Electricity Market Operator and Ontario Energy Board", March 2002 for a joint statement of their respective roles.

Other jurisdictions with competitive electricity markets also have monitoring and surveillance units. Ontario is unique in having a statute-based independent panel – the Market Surveillance Panel – that oversees and is accountable for the work of the full-time monitoring unit.

Monitoring

Beginning in May 2002, the MAU will monitor behaviour in the marketplace on a daily basis, and will keep the MSP informed of market behaviour that warrants further attention.

The MSP is responsible for monitoring the activities and conduct of participants in the IMO-administered markets, and identifying:

- **inappropriate** or **anomalous behaviour**, including deliberately exploiting a loophole in market rules or procedures (also known as ‘gaming’), and abuse of market power;
- actual or potential design flaws and inefficiencies in **market rules**; and
- actual or potential design flaws in the overall **structure of IMO-administered markets**.

Investigating

The MSP is empowered to conduct investigations into any of the three areas – market behaviour, market rules and market structure – for which it has monitoring responsibility. These investigations must conform to specific procedures, as described below.

For any investigation into the **behaviour of a market participant**:

- The MSP can proceed on its own initiative. In addition, any person, board, agency or tribunal can request an investigation, but must do so in writing, and provide details of the complaint or referral and any supporting information.
- The MSP has the discretion to terminate an investigation after it has begun. It must have grounds and reasons to do so, and must report them to the Chair of the IMO Board for review.
- When a market participant's behaviour is being investigated as a result of a complaint or referral, the participant must be notified that such an investigation is underway and, upon completion, of its outcome.
- Should the investigation conclude that the market participant acted inappropriately, the MSP must discuss its findings with the market participant before including the findings in a report, and must provide the market participant with a reasonable opportunity to respond in writing to the allegations.

An investigation into **market rules or procedures** can be undertaken by the MSP, with the concurrence of the Chair of the IMO Board or the CEO of the IMO.

The MSP can undertake an investigation into **market structure**, with the concurrence of the Chair of the IMO Board.

In conducting investigations, the Panel has the right to request information from any market participant and can apply to the Ontario Energy Board for an order compelling the provision of information if it is not forthcoming.

Reporting

Under the market rules, the MAU will provide a routine report on its activities to the MSP at least every quarter, and more frequently as necessary during the initial period after the market opens. In turn, the MSP will report to the Chair of the IMO Board annually, and include a general assessment of the state of competition within, and the efficiency of, the IMO-administered markets. During the first year after the market opens, the MSP will prepare and publish quarterly monitoring reports that review and assess the behaviour of the IMO-administered markets over that timeframe. After the first year, the frequency of such monitoring reports will be reevaluated.

In addition, outcomes of all investigations are reported to the IMO Chair and – subject to reviews with respect to confidentiality – the CEO of the IMO. Copies are also provided to the OEB. Should reports contain recommendations relating to the abuse of market power, the IMO must inform the OEB of the action it has taken or intends to take in response to such recommendations within 30 days of receiving the report.

Should reports contain confidential information pertaining to a market participant, the MSP will prepare an edited version of the report for distribution to the IMO Board.

These edited reports will be made public, unless the Board or the MSP decides that to do so would compromise the work of the MSP.

2. Monitoring the Marketplace

As it monitors the market, the MSP will focus on identifying, understanding and explaining market outcomes that are **anomalous**. The precise issues that require attention will emerge only after the market opens, but the MSP will likely focus on real-time energy price movements and market outcomes, gaming, and the exercise of local market power as reflected in congestion management payments.

Energy Price Movements

The MSP must, of course, understand what is happening in the market before it can make a sound judgement about whether any behaviour, rules or structure are appropriate or not. But understanding in itself is not enough. The MSP also must consider whether the outcomes – in other words, market prices – reflect what one would reasonably expect from an effectively competitive marketplace.

It is important to note that behaviour in a competitive market will be different from that of a regulated marketplace. Energy prices will fluctuate more in a competitive market than in a regulated marketplace. As well, there is no reason to expect that the underlying level of a competitively determined electricity price will be identical to the current regulated price, or indeed stable over extended periods of time. Price movements are in fact healthy: they send essential signals to marketplace participants about the need to use resources most efficiently by adjusting demand and supply.

The MSP will assess energy price movements by asking such critically important questions as:

- Are fluctuations in price (in other words, 'noise' in the marketplace) obscuring the signaling role of prices? If so, can one eliminate some of this through the rules or structure of the marketplace?
- Are changes in prices a reasonable reflection of the scarcity values of energy and not the result of gaming or the abuse of market power?
- Are the signals sent by price changes that reflect the scarcity values of energy leading to appropriate supply and demand responses? Will any aspects of marketplace rules or structure likely constrain such responses?

To answer these questions, the MAU, under the supervision and direction of the MSP, has developed a set of tools, including **market indicators** and **models**. These tools will allow the MSP to identify price outcomes that appear to be anomalous, and to understand what factors in the marketplace gave rise to those price outcomes.

Market Outcomes

The MAU will regularly monitor a set of **market indicators**, such as data on prices, offer curves, cost curves, outages, loads, fuel prices, exports and imports. This information will enhance understanding of the supply and demand factors underlying price movements in the marketplace – and understanding of price spikes in particular.

In addition, the MAU is developing two types of **models** to build understanding of the structure, dynamics and behaviour of a competitive Ontario electricity market. The models will help inform the MSP about the outcomes that might be regarded as appropriate and will also allow the MSP to consider how changing rules or structure might impact market outcomes:

- Simulation models are designed to develop benchmarks against which one can judge outcomes and determine whether they are anomalous and hence subject to further

investigation. These models can also test the implications of changed rules or structures.

- Econometric models determine statistical relationships among variables and thus provide insights into whether there is any causal connection between or among the variables. Developing econometric models based on actual market observations will take time, but such models will become increasingly useful as data from the competitive marketplace accumulate.

These models are designed to help the panel understand *why* the market is performing the way it is, not to try and 'second-guess' the marketplace. They are intended as tools that will illustrate how the market *does* perform, not how it *should* perform. Where market outcomes differ from those predicted by the models, pursuing the reasons for the divergence will lead to both better tools and better understanding of how the market works.

In any case, a competitive electricity market is unlikely to behave according to a textbook definition of 'perfect competition'. For the initial period after the market opening, for instance, Ontario Power Generation Inc. (OPGI) will supply most of the power generation in the province and have considerable market power. The Market Power Mitigation Agreement (MPMA) was designed to deal with this transitional situation (see accompanying sidebar, **The Market Power Mitigation Agreement and the MSP** for more detail).

Once more companies get into the generating business, the market should operate more competitively. But market participants might still be able to exercise market power. Even in a competitive market, participants may at times be able to take actions that force prices up. However, when competition is effective, demand and supply will respond so

that such price increases become unsustainable. These responses can take the form of reductions in demand, the use of substitute products, or entry by new producers.

The mandate of the MSP is to investigate the *abuse* of market power, not simply the *exercise* of market power. This is an important distinction. When market power is being exercised, a workably competitive marketplace should lead to appropriate responses. If this is not happening – or unlikely to happen – then the MSP needs to understand why not, in order to protect and promote effective competition. Only then can it recommend actions that are appropriate to the circumstances. This paper provides a more detailed discussion of these issues in Section 3, **Investigating Impediments to Effective Competition**.

Gaming

'Gaming' occurs when an individual or organization deliberately exploits a loophole in market rules or procedures. It may or may not affect price behaviour.

The MSP has developed and is maintaining a watch-list of potential 'games' that market participants might 'play'. It will be on high alert for behaviour by one market participant or a

The Market Power Mitigation Agreement and the MSP

When the market opens in May 2002, a set of rules under the Market Power Mitigation Agreement (MPMA) will mitigate the market power of Ontario Power Generation Inc. (OPGI). Under this agreement, if the average energy price throughout the year exceeds 3.8 cents per kilowatt-hour, then OPGI will have to rebate the excess to consumers, on a fixed portion of its production. This portion will decline over time as OPGI sells power plants to other market participants.

The existence of the MPMA imposes some conditions on the MSP with regard to the actions of OPGI. The MSP is to have "due regard" in its activities for the following conditions of OPGI's license agreement:

- OPGI has the right to act unilaterally to attempt to achieve a price outcome of 3.8 cents per kilowatt-hour in the marketplace.
- Should prices average higher than this as a result of its actions, a rebate from OPGI is the sole remedy.

But OPGI is not immune from scrutiny by the MSP. With regard to the real-time energy price (which is the direct subject of the MPMA), the MSP cannot do a proper job of monitoring marketplace developments without monitoring and understanding the actions of OPGI. Furthermore, revenues will accrue that will not be subject to the MPMA in many areas of OPGI's activities, including congestion management payments, revenues from export, and revenues from ancillary services.

Having due regard for the conditions of the MPMA will not constrain the Panel's ability to monitor, to investigate, and to report. Should circumstances indicate that OPGI may be gaming the marketplace, or abusing its market power, the MSP will investigate. The Panel will monitor the actions of OPGI as it would the actions of any other market participant.

coordinated effort by several participants, that results in higher real-time energy prices or transfers from energy users to some energy producers through increases in the uplift³. It will quickly begin an investigation if there is evidence of gaming in the marketplace.

Congestion Payments and Local Market Power

The payments to individual market participants in response to local needs will require particular attention.

Transmission lines and associated equipment can only transport power within certain design limits. But what if a local area requires more power than the transmission system can support? The resultant situation is called 'congestion'. In order to avoid overloading the transmission system, a local generator, which might be more expensive than a generator elsewhere in the system, will have to be 'constrained-on' (required to produce more power). And to balance the power generated with this load on the system, lower-cost generation in another area may have to be 'constrained-off' (required to produce less power than its owner originally offered). In both circumstances, the generators' owners will receive a congestion management payment to compensate them for their excess costs

³ These are costs consumers will pay to cover intangibles necessary to ensure reliability of energy and the transmission of power. When electricity is transmitted, for instance, there are resistance losses associated with moving power across transmission lines. The cost of paying for those losses is part of uplift – as is the cost of the operating reserve, other ancillary services, and inertia offer credits. Uplift costs are in addition to and separate from the real-time market price for electrical energy.

or lost profits. This congestion payment is based on the price the generator quotes for selling power – and it therefore holds potential for gaming.

The MAU reviews congestion payments, and also has the right to mitigate congestion payments and levy penalties in certain circumstances. It carries out these functions through a well-defined process⁴, and reports directly to the CEO of the IMO, not the MSP.

The MSP also plays a role in this arena.

First, the MSP has developed a price screening mechanism as part of its procedures for the review of local market power. Should the price offered by a generating unit that is constrained-on or constrained-off fall within set price screens, this is effectively a 'safe harbour' and the outcome is not subject to any further review or possible mitigation by the IMO.

Second, the MSP has a continuing responsibility to review behaviour with regard to local market power. Even though the IMO may be mitigating particular situations, the MSP will be concerned if patterns of behaviour suggest that the marketplace is being gamed to the advantage of particular producers, importers or exporters of energy. The MSP is concerned that some aspects of the congestion management payment system appear to be conducive to gaming, and will monitor behaviour in these areas closely. It will recommend corrective action when appropriate.

⁴ The procedures for reviewing congestion management payments are set out in Appendix 7.6 of the Market Rules, which has two Market Manuals associated with Local Market Power – *Market Manual 2: Market Administration, Part 2.12: Treatment of Local Market Power*, and *Local Market Power Mitigation - Price Screen Duration Factors*.

3. Investigating Impediments to Effective Competition

While the MSP's role in monitoring is to identify, understand, and explain behaviour that is anomalous, the MSP will also investigate behaviour that the MSP considers inappropriate. Its approach will be guided by its main objective – to improve the way in which the competitive energy market works.

The MSP will focus on the impediments to effective competition and on recommending actions to mitigate them. Investigations may result in recommendations to sanction market participants, change market rules or procedures, or possibly alter the structure of the energy marketplace.

Potential impediments to effective competition:

- The behaviour of market participants.
- Regulations, policies and procedures that are external to the IMO-administered markets but that affect their operation.
- The framework of market rules and operational procedures.

An important test of whether to investigate or not will be whether the structure, rules and behaviour of the marketplace facilitate or impede the kind of dynamic adjustments one would expect to see in a competitive market. And it is essential to focus not only on the short-term behaviour of participants but also on the nature of electricity, and the medium- to longer-term characteristics of the market that may impede adjustment.

The history of oil prices after the embargo by the Organization of Petroleum-Exporting Countries (OPEC) in the mid-1970s provides a clear demonstration of the way in which competitive markets respond to the exercise of market power. When prices rose, market participants reacted to bid away excess profits through reducing demand, turning to substitute energy forms, and developing new supplies.

But electricity is not oil. It is an extraordinary – if not unique – product:

- It cannot be stored in any meaningful quantities.
- Demand for it is not highly responsive to its price, particularly in the short run.
- There are long lags associated with bringing on new generation.
- There are short-term operating constraints inherent in existing transmission systems.

In the electricity marketplace, the potential impediments to effective competition include the **behaviour of market participants; regulations, policies and procedures** that are external to the IMO-administered markets but that affect their operation; and the **framework of market rules and operational procedures**.

The Behaviour of Market Participants

The exercise of market power in itself will not necessarily trigger an investigation into the behaviour of a market participant. The MSP would proceed when there is an apparent abuse of power, such as participants consistently exercising market power, and acting in a way that constrains or precludes mitigating market reactions.

What kinds of actions might constitute the abuse of market power? Some examples could be:

- tacit or explicit agreement on price, output or any other aspect of competition
- predatory price-cutting or any other action taken by market participants, singly or in concert, that would effectively retard new entry into the marketplace.

Declining to offer electricity into the market is another action that deserves comment. Should a company withhold electricity supply, either directly or by offering at prices so high that it expects not to be chosen, it is essentially exercising market power. Such actions are, however, consistent with the Market Rules. The MSP's position is that

instances of withholding do not necessarily constitute an abuse of market power. However, a pattern of withholding that effectively leads to persistent higher prices, and where available but withheld production constrains new entries into the market, would be a matter of concern to the MSP and would likely lead to an investigation.

Regulations, Policies and Procedures

It is possible that a competitive market will not operate effectively even without abusive market behaviour by participants. This may be due to certain regulations, policies or procedures that make it difficult for demand to adjust quickly and appropriately to price signals and for new supply to come on stream expeditiously. For instance:

- **On the demand side of the market**, the lack of affordable interval metering and two-way communications between consumers and suppliers makes it virtually impossible for retail consumers to obtain information about the variability of electricity prices throughout the day. This does not allow them to adjust their electricity usage from peak to off-peak times to take advantage of lower prices. Should the MSP come to the view that this is a serious impediment to the kind of adjustment that is essential to make the market workably competitive, it will conduct an investigation and make appropriate recommendations.
- **On the supply side of the market**, there may be inefficiencies or delays in the authorization processes for new supply, or aspects of the transmission system that make it difficult or impossible to bring on new supply where it is most needed. In these cases as well, the Panel would be prepared to investigate and recommend changes that would improve the competitiveness of the marketplace.

The Framework of Market Rules and Operational Procedures

While it is not anticipated that the current set of market rules and operational procedures is likely to constrain adjustment in the marketplace, it may create opportunities for gaming. In that event, the MSP will investigate.

After market opening, the market will continue to evolve, necessitating a possible need to revisit the rules and procedures. The IMO has, for instance, already released a document outlining issues that need to be prioritized and pursued to ensure that the structure of the electricity market continues to develop in a way that will ensure that Ontario secures the benefits of competitive markets.⁵ Market participants also met with the IMO to review the issues and begin the process of setting priorities. A number of initiatives, such as the development of forward markets and the introduction of locational marginal pricing, might well improve the competitive dynamics of the marketplace. To the extent that such initiatives would do so, the MSP would expect to be involved in their analysis and in processes to support their development and implementation.

4. Reporting to the Marketplace

The Market Assessment Unit, in fulfilling its obligations to the MSP and in carrying out its mitigating responsibilities with regard to local market power, will have close and continuing contact with market participants. The MSP may also, from time to time, have discussions with market participants in the course of its monitoring or investigation activities or to discuss specific issues as they arise. However, in general, the MSP will communicate with the marketplace through its reports. The MSP will speak as a Panel,

⁵ See "Participant Priorities for Future Market Development" at http://www.theimo.com/imoweb/pubs/marketDev/md_IMO_REP_0055_PrioritiesFutureMarketDevConsultReport.pdf

not as individuals. It will not comment on market activities or investigations until it has concluded its analysis.

The MSP will release periodic monitoring reports that comment on events in the marketplace. After the release of a report on its monitoring activities, the MSP will be prepared to meet with interested parties to explain its results and conclusions.

As indicated above, the MSP will report outcomes of all investigations to the Chair of the IMO and – subject to reviews with respect to confidentiality – the CEO of the IMO. Copies are also provided to the OEB.

The MSP's annual report will provide a summary of investigations undertaken. As the Market Rules envisage, the IMO Board will generally release edited versions of these investigation reports. These reports will speak for themselves. The MSP will not comment publicly on an investigation report that deals with market conduct and makes recommendations with respect to individual market participants. It will be for those with the power to implement those recommendations to comment on whether they choose to accept them or not.

In the case of investigative reports that deal more generally with market rules, or the structure of the marketplace, the MSP will meet with interested parties to explain the results and conclusions.

5. Conclusions

As Ontario's competitive electricity marketplace evolves, the Market Surveillance Panel will play an important role in protecting and enhancing competition. Should market participants act to try to take advantage of the rules or abuse their market power, the MSP will be vigilant and will respond swiftly and forcefully. But the Panel will do more than police the marketplace. It will also carefully scrutinize any aspect of the market that could inhibit the normal adjustments to supply and demand that one would expect to see in a competitive marketplace. The IMO's Market Assessment Unit (MAU), under the Panel's supervision, has dedicated itself to building the tools needed to do this job. The Panel is committed to contributing to the development of a competitive electricity market that will benefit all Ontarians.

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