

Notes for remarks for
Bruce Campbell
Vice President, Corporate & Legal Affairs
Independent Electricity Market Operator
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Introduction

Good Morning. On behalf of the IMO, one of the conference's sponsoring associations, it is a pleasure to welcome you to the conference and to Toronto. If any of you were expecting to hear Dave Goulding this morning, I hope that you are not disappointed. But if you are, please let me know – Dave likes to hear that he was missed. In any event, there are no refunds.

You have come to Ontario at a time when we are facing substantial institutional and regulatory change in the electricity sector. While the same statement could have been made two years or even five years ago, it is particularly true today in light of the Government's introduction of Bill 100. This comprehensive legislation, when passed, will significantly restructure how the Province plans for, procures, prices and regulates electricity supply. While some of you will be familiar with the provisions of the Bill, I am going to review its status and main features – and in particular some of the key features that relate to the IMO's continuing role in Ontario's evolving electricity sector.

Before starting on my discussion of Bill 100, I'd like to briefly introduce the IMO for the benefit of those who may not be familiar with us. The IMO was created five years ago as part of the break-up of Ontario Hydro. The IMO's responsibilities include directing the flow of electricity across the high-voltage, province-wide network owned by Hydro One and other transmission companies. We are also responsible for managing and operating the competitive wholesale electricity market and working with neighbouring jurisdictions to manage an integrated North American electricity network.

The IMO is an independent, not-for-profit entity. We are governed by a board whose directors are appointed by the government of Ontario. Our Board makes the market rules, subject to review by the Minister of Energy. Our fees and licence are approved by the Ontario Energy Board and, most importantly, we operate independently of all participants in the electricity market for the benefit of Ontario. And if I can encourage you to visit our booth at the trade show – its number 128.

Bill 100

With that brief commercial message out of the way, let me turn to Bill 100 and begin by reviewing its status. The Bill received a first reading on June 15th of this year. Over the summer, the Government consulted extensively throughout the Province on the Bill. With some amendments, the Bill was carried by the Standing Committee on Social Policy on September 16th. The amended legislation will be referred for second reading when the Legislature resumes on October 12, 2004. All indications are that the Bill will be addressed quickly as it remains a Government priority for a number of reasons.

Moving to the substance of Bill 100, the Explanatory Note at its beginning provides a good sense of its wide range. According to the note:

The purpose of the Bill is to restructure Ontario's electricity sector, promote the expansion of electricity supply and capacity, including supply and capacity from alternative and renewable energy sources, facilitate load management and electricity demand management, encourage electricity conservation and the efficient use of electricity and regulate prices in parts of the electricity sector.

That's quite a bit to cover in 20 minutes, so I'll stick to the main features, focussing on the impacts on the IMO.

Under Bill 100, the Independent Market Operator will become the Independent Electricity System Operator to highlight our focus on overall system operations – but I'm going to continue using the acronym IMO in my talk today.

Bill 100 will enhance our independence by changing the composition of our Board. The new board will be composed of the CEO and 10 directors to be appointed by the Minister of Energy. Bill 100 requires that the directors be completely independent of any interest in the market. This is a change from our current Board which includes both independent directors and directors chosen to represent particular stakeholder interests such as generators, distributors, transmitters, and retailers.

Our independence is crucial for a number of reasons. As the Minister of Energy has remarked, Ontario urgently needs new supply, transmission and demand initiatives to address potential future shortfalls. Our generation plants are aging, and demand continues to grow. The minister uses a range of 25 to 40 billion dollars as indicating the investment that will be required in the sector over the next 15 years.

An independent system and market operator is key to investor confidence. Investors want a level playing field. They want a level playing field for their transactions and they want a level playing field for their investments. As an independent entity with an independent Board, the IMO has no bias when balancing competing commercial interests among different parties and across a variety of operational fields. We operate in a transparent manner, providing the information and data that participants need to make sound commercial and operational decisions.

Our independent board will be complemented stakeholder input. Bill 100 obliges the IMO to establish one or more stakeholder consultation processes. We expect that stakeholders will provide ongoing advice on policy and transitional matters, including technical ones. At the IMO, we view stakeholder consultation as an important, indeed vital, part of the way we do business. We believe that our stakeholdering processes will provide critical guidance as we move forward.

Bill 100-OPA

Bill 100 will create a new entity - the Ontario Power Authority or OPA – with a governance structure identical to that of the IESO. (Good market for independent directors.) The OPA will undertake medium and long-term forecasting of electricity demand and long-term system adequacy. The IMO will continue to be responsible for operating the system and shorter-term planning. Obviously, close coordination between the IMO and the OPA will be essential to ensure consistency in planning assumptions, methodology and criteria. Decisions made over the short-term will inevitably affect the viability of future plans but, equally, the plans for the future will have an impact right through to real-time operations.

The OPA planning window will have to mesh very tightly with the IMO time frame and will extend into the longer term. Both the IMO and the OPA will need to recognize that the plans and decisions they make under their own accountabilities have the potential to affect plans and decisions made by their counterpart. Longer-term actions must lead to a system that can be operated reliably in real time.

The IMO is well equipped for these types of handoffs because a number of them occur within our organization today. These hand-offs can be from one function to another, but they also occur between real-time and the various stages of our operational planning. These hand-offs are part of our broad range of accountabilities around integration of the system, managing reliability, directing the operations on the power system and managing the competitive wholesale market.

Similar hand-offs will be required between the IMO and the OPA, certainly in the domain of adequacy – and there will be a need for both organizations to work together. We must have a seamless organizational flow, if you like, from the long term down to real time.

Given these linkages, it is not at all surprising that the draft legislation provides the OPA with the ability to delegate any of its powers or duties to either a committee of the board, to a panel established by the board, or to any other body such as the IMO. In creating the OPA, I would expect that there would be a desire to limit the size of the organization to ensure that resources in the new structure do not present a significant increase in the level of resources that currently exist in today's structure.

Many of you will be familiar with the IMO's 10-year outlook, which has, over the last number of years, served as a planning tool for the industry as a whole. We will undoubtedly be discussing with the OPA how best to leverage the expertise used to prepare this document in areas such as forecasting electricity needs and assessing the power system. Good co-ordination can contribute to the effectiveness of the new structure ... again, while limiting the need for new resources.

Periodically, the OPA will develop an integrated system plan for Ontario and submit it to the Ontario Energy Board for approval. This plan is intended to assist in meeting the Province's goals for adequacy and reliability of supply, including alternative and renewable generation, demand management and conservation.

The major change in Bill 100 is that going forward, the OPA will have the additional responsibility of ensuring an adequate and reliable electricity supply ... this is a responsibility which does not exist within Ontario's electricity sector today. The OPA will also play a lead role in tapping the potential of conservation and other demand management programs in order to better meet long-term energy needs.

It is important to note, however, that the OPA procurement role for both generation and demand-side services is only to be undertaken after it has made an assessment, in consultation with the IMO and the OEB, about the ability of the market to meet the needs for supply and demand side resources. In other words,

it is the market and market mechanisms that are intended to be the primary mechanism for attracting new resources; not the OPA procurement contracts.

Bill 100 - OEB

Bill 100 significantly expands the OEB's role in regulating Ontario's electricity sector. First and foremost, the Board will set annual regulated electricity rates for certain consumers as designated by regulation. These rates will consist of a blend of forecast market prices, the cost of resources contracted to the OPA, and Ontario Power Generation's regulated resources. The regulated rate will be trued up to account for any difference between forecast and actual market prices. In the short-term, the OPA will be responsible for holding any surplus or deficit between the regulated rate and market prices.

To ensure a cost-based component of the regulated rate, the Board will eventually regulate certain of Ontario Power Generation's baseload resources on a cost of service/rate of return basis. In the initial period, the Government will establish the cost of service rates for those OPG facilities by regulation. The current draft of this regulation identifies the hydroelectric stations in the Niagara region, the Saunders station on the St. Lawrence River and all of OPG's nuclear units at Pickering and Darlington as regulated facilities.

With regard to the OPA, the Board will be required to review and approve the integrated system plan it prepares. Additionally, the Board will be required to approve the OPA's procurement processes for both supply and demand resources.

The OEB will also have new powers with respect to the IMO. The Board, rather than the Minister will review amendments to the market rules and will have the power to revoke them. The Market Surveillance Panel (MSP) will now report to the OEB rather than to the IMO's Board of Directors. In this regard, we are developing arrangements with the OEB to have the IMO's Market Assessment and Compliance Unit continue providing independent support to the MSP, while at the same time continuing their support of IMO management's daily review of market operations. These developing arrangements should be efficient, effective and responsive to the needs and requirements of the IMO, the OEB and MSP – and will further the objective of continuing to provide fair and comprehensive oversight of the wholesale market.

DAM and RAM

Leaving the realm of institutional and regulatory matters, I'd like to talk a bit about the structural changes we see taking place in Ontario's markets. One of the major challenges for the IMO over the next few years is to continue to evolve Ontario's electricity markets and reinforce an efficient and reliable power system in a manner that meshes with the evolving institutional context. Of course, while all of this goes on, we must continue to reliably meet the province's electricity needs every day.

Ontario's electricity system currently operates on a real-time basis. Generators are asked to produce and consumers purchase electricity on a real-time basis. While this "just-in-time" system has worked well over the last few years to maintain reliability, this system needs to evolve further to provide a greater level of price stability and supply security.

Adding both a Day Ahead Market (DAM) and a Resource Adequacy Market (RAM) for reliability assurance to the existing real-time market would establish a more robust and comprehensive approach to meeting Ontario's power needs. These markets would allow customers to better anticipate and respond to demand requirements in the near-term, and encourage new demand and supply side investments over the long-term.

Starting with the DAM, let me set out where we are and what we hope to accomplish. The design of the DAM is scheduled for completion by the end of January 2005. If approved by our Board of Directors, the next phase will be to build and test the market systems and processes. The commitment of this phase would represent a considerable capital program for the IMO.

In terms of what we are seeking to accomplish by implementing the DAM, we have a number of objectives for the Day Ahead Market:

- Our first objective is to provide price certainty in advance of real-time dispatch. To the extent that generators and loads take day-ahead positions on supply or consumption, they undertake a financial commitment to generate or consume specific quantities in real-time. If their real-time activities match their positions in the day-ahead market, they have complete price certainty. Even if there is a gap between their day-ahead and real-time positions however, they are only exposed to spot market price volatility on the difference.
- Second, the DAM will provide an improved price index to support forward markets. The existence of a transparent day-ahead price can form the basis for

futures and forward contracts and strengthened bilateral activity, all of which help promote new capacity.

- Our third objective is to provide greater operational certainty for suppliers and consumers ahead of real-time operations. Suppliers and consumers that are selected day-ahead will have a financial commitment to generate or consume a quantity in real-time equal to the amount selected day-ahead. The bid and offer structure of the DAM allows all consumers and suppliers to reflect their physical and financial characteristics, increasing market efficiency.
- Our fourth objective is to increase load participation and promote greater resource adequacy in the IMO-administered markets through demand-side response. Our preliminary estimates are that a DAM could promote a possible load reduction of 200-560 MW in response to peak period prices.
- Our fifth objective is to assure that sufficient resources are on-line in real-time for inclusion in the market through a day-ahead financial commitment, and an IMO-coordinated day-ahead unit commitment process. The unit commitment process will allow the IMO to commit sufficient resources to meet forecast load and IMO-specified operating reserve requirements. The DAM design provides an incentive for resources including dispatchable generators, price-responsive loads and imports to be on-line due to their financial commitment and the reduced risk associated with their unit commitment decisions.
- Our final objective was to design a DAM that increased compatibility between Ontario and neighbouring markets. This increased compatibility will facilitate efficient and reliable trade between markets by reducing seams issues. The New York ISO, ISO-New England, PJM Interconnect and the

Midwest ISO employ or anticipate DAM designs that are largely similar to the proposed Ontario DAM design.

Turning to the Resource Adequacy Market or RAM, let me first explain what the RAM is intended to accomplish and then discuss its status. If implemented, RAM will address long-term commitments for power generation and demand management resources to meet the province's needs over the coming decades. This initiative would complement the responsibilities of the proposed Ontario Power Authority as the "buyer of last resort." Taking the form of an auction, the RAM would procure specified levels of resources and require their participation in the IESO administered markets. The required resource mix and regional requirements identified in the integrated system plan would be incorporated into the auction process.

With regard to RAM's status, the design of the proposed initiative is currently in the final stages of consultation with the objective of developing the RAM market rules for consideration by the IMO Board of Directors at their December 2004 meeting. If approved, this approach would accommodate the implementation of a RAM on relatively short notice - potentially as early as the second quarter of 2005 - but to date there is no decision or approval to proceed with implementation.

In talking about the OPA's ability to contract for new supply and demand-side resources, I made the point that the OPA's resource acquisition activities are intended to backstop market processes ... not replace them. Accordingly, the RAM could be a strong tool, in fact, a key tool, in obtaining the necessary resources for Ontario through robust markets. The fact is that the RAM will

complement the OPA's long-term planning role, as the outcome from that resource planning process, once available, will be the primary determinant defining the new resources to be acquired through the RAM.

Future System Needs

In its most recent 10-Year Outlook, the IMO indicated that it expects demand within the province to increase approximately one per cent each year for the next decade. By 2014, roughly 13,000 MW of Ontario's electricity requirements will need to be met with new supply, refurbished generation or conservation measures.

In moving to address this challenge, the Ontario government is seeking 2,500 MW of new electrical generation capacity and/or demand-side management initiatives to be in place as early as 2005. This is in addition to the up to 300 MW of renewable energy capacity for which the Government has already sought proposals. To accommodate these resources, the IMO is focusing its efforts on the internal organizational units necessary to support the integration of new resources into the IMO-controlled grid. These functions include specification of system requirements, connection assessments, support for the RFP process, and participation in the associated regulatory proceedings.

The restructuring will also dramatically change Ontario's generation profile, with the potential to significantly impact the transmission system that was developed with that generation. With new generation coming online and the retirement of existing facilities, there is a need to review and revise the Operating Security Limits that are used in directing the flow of power across the province safely and reliably, and to take best advantage of the current transmission system.

We are already seeing an example of this work in connection with the Government's decision to shut down the Lakeview Generating station by the end of April 2005. As many of you know, Lakeview is 1,150 MW coal-fired generating station located about 15 kilometres southwest of here. It plays a significant role in providing voltage support in the Greater Toronto Area. The work necessary to analyze replacement alternatives for this one station has been significant, but this is only a hint of things to come, as the Government proceeds with its plan to shut down additional coal fired generation stations by 2007 or as soon thereafter as replacement facilities are available.

The government has also set a conservation target of five per cent by 2007, which represents approximately 1,350 MW at peak demand. The IMO will promote increased demand response to the price signals set in the market. For example, the Transitional Demand Response Program will provide a catalyst for wholesale consumers to invest in energy management technology and expertise. The IMO will also increase its efforts to promote awareness and action among wholesale customers to help them better manage their electricity costs.

While the majority of customers in Ontario will be eligible for a fixed rate, between 40,000 to 60,000 customers are still paying the market price for electricity or have signed with retailers. These customers represent approximately 55% of the total demand for electricity in Ontario.

Most of these customers have a limited knowledge of the electricity market or, more importantly, the ways that are available to them even now to realize the benefits of a market-based system. Awareness and education are necessary, and

the IMO will be working with local distribution companies and trade associations to get these customers the information and tools they need to better manage their electricity costs.

Our Web site - theIMO.com - which, by the way, I would encourage you to visit, has lots of readily available information on the market, including information to help customers track price, supply and demand trends.

Conclusion

I started my talk by indicating that this was a time of unprecedented change for Ontario's electricity sector. While I have only briefly surveyed the ongoing changes, I hope that I've succeeded in giving you a sense of them, and how they are impacting on the IMO as the system and market operator in Ontario. Thank you for your attention; I will be happy to answer your questions, as time permits. As I alluded to earlier, the IMO was created as part of the break up of Ontario Hydro. This was another period of great change. In fact, at the IMO we have only known periods of great change – we're used to it. And we are proud of our efforts - all of us work hard to successfully dispatch Ontario's complex electricity system and operate and develop its electricity marketplace. Whatever else may happen, that won't change.