

Notes for Remarks
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“The Priorities and Direction for the IESO”

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Thanks Ben, for that kind introduction. I would also like to thank the organizers of the APPrO conference, Jake Brooks, David Butters and others, for providing me the opportunity to speak at this conference once again.

I want to talk to you today about the priorities and direction of the Independent Electricity System Operator (IESO) and I hope you will see they are consistent with those of the industry.

However before doing so, I want to discuss some of the key assumptions we have made about the future that will drive our priorities.

First of all, we believe that the environment and carbon concerns in particular will continue to be the driving force for the electricity industry; not just here in Ontario but around the world. In its World Energy Outlook report released last week, the International Energy Agency (IEA) projected that if we continue on the same path we are on now, we will see a growth in energy demand of 40 per cent by 2030 and a doubling of greenhouse gas emissions by the end of the century, leading to catastrophic and irreversible climate change. The report suggested that more than half of the rise in both energy and greenhouse gases could be attributed to the power sector.

The report said that in order to stabilize the change at a rise of 2°C, we would need profound transformation, including Cap and Trade, sectoral agreements and national policies. The IEA report urged decisive action in Copenhagen in December.

Closer to home, three comprehensive energy bills are working their way through the U.S. Government with carbon trading at the centre of all of them.

In Ontario, the Green Energy Act is a reflection of this global driver. Minister John Gerritson last night talked about the climate change action plan and how climate change drives our energy and environmental policy.

My point is that this is not just an action by one minister, not just by the current government or contained to one bill. It's a first step. We may think we are being aggressive with these actions but they may not be as aggressive as we need to be. Regardless, climate concern will be a sustained, not a temporary driver.

My second assumption, and one that we can probably all agree on, is that the price or bill concerns of customers will be prominent, particularly if the economic recovery is slower than anticipated. Despite low fuel prices, the Global Adjustment is large and growing and the HST will add provincial tax to electricity. While time-of-use rates should be a good thing from an economic, environmental and reliability perspective, we can expect to continue to see pressure on price for some customers.

And finally, the provincial government has needs, as they head into the last half of their mandate. These needs include making sure reliability is maintained, that the coal shutdown proceeds, that time of use rates are implemented and that there is significant progress in implementing the Green Energy Act. In other words, progress on meeting government objectives.

The provincial deficit will focus attention on costs not just in government but in all related agencies and sectors. This will show up in salaries, expenses and also in pressure on overall costs regardless of whether those costs are being passed on to taxpayers or ratepayers.

So to sum up those three key assumptions, we can expect to see:

- 1) Continued pressure from the government on long term climate impacts;
- 2) Growing pressure from the consumer on price; and
- 3) Short term pressure from the provincial government to deliver on its policy agenda and reduce costs.

So within this context, what are the IESO's priorities?

Our number one priority will continue to be the reliable operation of the provincial power system.

Our challenges have changed significantly in the past few years.

The 18-Month Outlook the IESO released yesterday shows a better supply picture than I have ever seen before – even with the shutdown of four coal units next year. But surplus baseload generation concerns now figure prominently in our planning.

We have experienced more than 1,000 hours of surplus baseload generation so far this year and more is on the way as we continue to incorporate renewable variable generation. Bruce Campbell will outline later this morning a number of actions to deal with this. But the surplus situation we have been dealing with recently highlights the importance of having dispatch capability across all resources going forward and not just for traditional resources but for wind and non-utility generation as well.

We believe incentives are the best way to encourage generators to respond to supply and demand conditions. Contract and regulatory arrangements have removed the incentive from many resources. These arrangements are an important part of the hybrid market but we need to be careful they are integrated with the spot market to produce reliable and efficient outcomes. I was glad to see attention to the interaction of market and contracts in the Ontario Power Authority's Business Plan and we need to work together on this. Spain is an example where a huge amount of contracted wind generation has chosen to participate directly in their market. I expect there are lessons we can learn from their experience as we incorporate more wind generators in this province.

Incorporating variable generation is not just a challenge for us in Ontario.

The recent outlook from the North American Electric Reliability Council (NERC) projects as much as 260,000 MW of new variable resources will be added to the North American system over the next 10 years. IESO has been working with stakeholders to address some of the issues and recommendations raised in the NERC Planning Committee report, “Incorporating High Levels of Variable Generation.” One recommendation deals with better integration through broad regional markets. Broader regional markets will help us take advantage of natural resource diversity across a larger geographic area and increase our access to more responsive generation or demand resources.

This will require changes among ourselves and our neighbouring markets, perhaps more frequent scheduling; perhaps coordinated congestion management. We are discussing some of these with our neighbouring ISO’s as New York prepares to file plans for better loop flow management with FERC.

But as we consider some of these changes, the difficulty of making changes in our unique, unconstrained market are highlighted.

Another key recognition is that new resources require new transmission. We will be working closely with Hydro One as they develop their implementation plan for the extensive transmission projects that are being planned in Ontario. We are part of a much broader group called the Eastern Interconnection Planning Collaborative. This collection of all the ISOs and other planning authorities in eastern North America is working together to study the transmission needed to incorporate the large amounts of renewable energy on the books. This is the first time the needs have been studied on such a broad basis.

This is another example that our interties with neighbouring jurisdictions not only strengthens reliability but also helps further environmental policy objectives from various levels and jurisdictions of government.

It may also suggest an opportunity for Ontario to play a bigger role in addressing renewable energy goals of the broader regional market through increased exports. Some might argue that our current surplus baseload and healthy reserve margins suggest we don't need more supply even if it is renewable. But these conditions will not last forever. And if we think beyond our borders, there could be a compelling argument to rethink our practice of building only for the needs of Ontario.

Before leaving reliability, I want to touch on an important emerging risk facing our industry, cyber security. This is a subject that has attracted considerable media interest in recent months. A recent "60 Minutes" explored what would happen if hackers penetrated the computer systems that run essential components of the world's critical infrastructure, such as power grids. On the show, several prominent intelligence sources claimed that cyber criminals had already successfully exploited vulnerabilities within the electricity system to disrupt service and cited widespread outages in Brazil in 2005 and 2007 as examples.

Through NERC, the industry has developed mandatory cyber security standards which will be in force by the end of this year. Versions 2 and 3 are already being developed to further improve and enhance these standards. About a dozen market participants are now required to implement the cyber security standards in Ontario, and are on track to meet NERC's compliance deadline later this year.

This is something that all asset owners should pay attention to. Collectively you have tens of billions of dollars worth of assets and, left unprotected, cyber attacks could disable and perhaps even destroy those assets. As we move toward a more intelligent and digitally connected grid, we have to secure against cyber threats. This has been recognized by the media and by legislators, particularly in the U.S. where draft legislation would give FERC the authority to order immediate actions by owners and operators in the face of cyber security threats.

A Cyber Security Forum, facilitated by the IESO, has been established to share information, approaches and intelligence. It also provides a network to share alerts describing threats and vulnerabilities and identify the appropriate actions and responses.

Our industry needs to be engaged and to that end, it will be a subject I will continue to address in the future.

While reliably incorporating new supply is a top priority for the IESO, operating it efficiently is critical too. From my perspective, the spot market is working well, Adam White articulated this well yesterday, and the market has played an important role in driving efficiencies.

The market has been successful in increasing unit availability, promoting regional trade, providing for an efficient dispatch of supply and sending good signals to customers who pay the market price, including the Public or MUSH (Municipalities, Universities, Schools and Hospitals) sector that moved over to market-based pricing earlier this month.

Prices are a product of the market and are fundamental to the success of efficient dispatch to suppliers. Effective prices are also essential if we are going to successfully engage consumers in needed demand response and conservation efforts, and realize the potential of a smart grid. Again, I agree with Adam that the future will focus much more on consumers.

While recent prices are generally reflective of current supply and demand conditions, there are concerns about low hourly prices we have seen, including negative price hours and rising Global Adjustment.

We are looking at and intending to move forward with specific changes to the market that would enhance the effectiveness of the Hourly Ontario Energy Price (HOEP) in achieving efficient and reliable market outcomes as well as some possibilities for dealing with the Global

Adjustment. Bruce Campbell and Brian Rivard will outline more on this in the next panel when they talk about our short and medium term market development plans.

While market efficiency will be a focus, so too will the internal efficiency of my organization. We recognize the need to demonstrate responsible management of costs internally as evidenced by some of the steps we have taken this year. In our Ontario Energy Board (OEB) submission, we have committed to not increasing our fee despite the dropping demand. And while this will constrain what we do, this is okay because it will drive us to focus on the most important things - most important to us and most important to the sector.

The sector is undergoing a lot change and more change is on the way. We have and will continue to see changes in the way electricity is produced, priced and consumed.

On the generation side, in just six years, we have gone from having coal account for more than 25 per cent of our province's energy to supplying less than seven per cent so far this year and being phased out completely within a few years.

We have also seen the emergence of new renewable sources of electricity like wind and solar giving a hint of their potential to meet future needs. But like any new source of supply, there is also no shortage of challenges.

A few weekends ago highlighted both the potential and challenge of wind. There were record highs Saturday, almost 1000 MW in one hour alone, between 3 and 4 p.m. However, the challenge was demonstrated one day later when only 7 MW was produced in the same hour. Improved forecasting will help us prepare for those swings and centralized wind forecasting is in the plans for 2010.

Our customers too are dealing with fundamental change both in terms of pricing and behaviour. The Provincial Benefit has become a noticeably big charge, time-of-use rates are

being introduced and customers are being encouraged to take a more active and engaged role with smart grid on the horizon.

My point here is, we and the industry collectively, have a lot on our plate right now. It has been a busy time. The Green Energy Act has thrown a lot on our way and we will be consumed with it over the next 12 months.

It doesn't mean that there isn't a need to continue to develop this market, there is. But that will require the input and engagement of many of us in this room and many of us who are not in this room, and that's time we just don't have a lot of right now.

Over time, we will be dealing with issues in our unconstrained market. We will be advancing storage and while I haven't talked about it today, I believe storage will be a necessary and important addition to our province. We will be addressing ramping capability and we will get consumers more engaged in the market. While all of this will need to be addressed, the timing to address them is another question.

In conclusion, let me just reiterate. There are powerful forces at play, some global some local. This will drive us to reliably integrate cleaner supply and associated transmission. It will drive us to seek efficiencies in how we manage the market and it will drive us to manage our internal operations responsibly.

The Green Energy Act has given us the power to transform our sector. It has filled our plates. And like my mother used to tell me, we need to eat what's on our plate before we reach for dessert.

Thank you very much.