

Notes for Remarks

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Smart Grid – The Home Grown Experience

Green energy, smart grid, investment opportunities and challenges in the electricity sector ... this conference is focused on some of the key issues facing this sector, and I see many decision makers in the sector in the audience.

Our focus of this panel is smart grid ... in particular our home grown experience. We have a really good story to tell.

While I expect that my colleagues on this panel ... Carmine and Gerry ... are going to talk about their experience from their utility or community perspectives, I am going to take a different approach, given our different responsibilities at the IESO.

I would like to update you on the provincial perspective with a look at some of the work of Ontario's Smart Grid Forum, which I chair.

I would also like to give you a progress report on our role in implementing Ontario's Smart Meter Initiative, and in particular our work with LDCs around implementation of the MDM/R ... the central data storage and retrieval system.

But the main focus of my remarks will be directed at what we (the industry) need to do to bring the consumer along with us on our smart grid journey as well as discuss some recent research we've conducted.

Smart Grid Forum

Ontario's Smart Grid Forum has been together for three years and I would like to acknowledge the great contributions of several distribution members of the Forum ... as well as the work groups that have been supporting the Forum from the beginning.

We produced our first report in 2008 which outlined a vision for Ontario ... a vision where consumers, producers and distributors of electricity would be empowered by two-way information and electricity flow.

The smart grid was included in the Green Energy Act and there is recognition of the critical role that a smart grid will play in the implementation of government policy whether that is in the supply mix, achieving conservation targets or creating green jobs.

Like almost all of us in the industry, the Forum has turned its attention to how to enable implementation of the Act ... turning aspiration into reality.

Let me give you some insight into what we have been doing.

After discussions with the Ministry of Energy and Infrastructure, the focus of the Forum is now on three key areas:

- Customer Control – enabling conservation and demand management
- Distribution Automation – enabling the widespread use of distributed generation
- And Adaptive Infrastructure – creating the system that will accommodate the expected changes in the future ... including electric cars

Within these areas we are helping government define principles to guide implementation. Basic principles like – investments must benefit consumers to ensuring cybersecurity and protecting privacy. We are also outlining roles and responsibilities and identifying potential projects and mechanisms for investing the \$50 million that was earmarked in the budget for smart grids.

The goal is to provide LDCs, the OEB and others with a framework of consistent principles to guide the implementation of projects.

Smart Meters

I don't have to tell you that smart meters form part of the foundation for developing and implementing a smart grid.

The progress in implementing the government's Smart Meter Initiative well positions Ontario for the next steps in the development of a smart grid.

Ontario is truly a leader in North America. Three million meters installed ... more than 500,000 on time-of-use rates now with an additional three million expected to follow in the next 18 months. Eight LDCs are operating in the MDM/R production operations environment. Meter read data from almost 400,000 smart meters are being received and processed by the MDM/R.

At this point, I would like to express the IESO's appreciation to the many LDCs we have been working with over the past three years. We have each had our challenges over this period. But I am pleased to report that together we have successfully cleared the hurdles that were in front of us, and that a recent hardware upgrade is being fine-tuned for the large volume of meters expected shortly ... and all of this while staying on budget.

As many of you know, we have had a number of information sessions and workshops to better enable your integration into the production environment and more are scheduled this year.

I know that governance of the MDM/R is of interest to many of you and I can assure you discussions are continuing with the EDA and the Ministry of Energy and Infrastructure. We will be filing a licence application and smart meter charge application with the OEB next month.

Engaging the consumer

Smart grids and the supporting technology start the process of encouraging consumers to think not only about how much they use electricity, but when they use it. But you will know engaging the consumer is a long-term, evolving process and communication and education will be essential.

I am encouraged by some research we did recently with 850 homeowners – residential consumers – where 55 per cent of those surveyed said they had heard of the term “smart grid.”

Almost 90 per cent of the respondents said they would use less electricity when the price is high with more than 60 per cent of the respondents

saying they would be interested in purchasing appliances that could respond to prices.

Consumers today are managing their lives in a very different way than even 10 years ago. Things such as ordering pizza, scheduling deliveries, paying bills, and even watching TV can all be done on a cell phone today. Consumers are increasingly using technology to access and control all sorts of aspects of their daily lives.

We need to think in that context. My daughter's iPod gives her access to a much greater range of music than I ever had as a teenager. When I gave this iPod to her, I thought it would be a nice touch if I preloaded it with some of my own choices in music. Not a good move.

Not surprisingly, my music didn't last long ... and my concern is that now she never will know who Johnny Cash is. But her iPod allows her to listen to music in whatever order she wants, whenever she wants. It even looks up the album covers for her and displays them in a way that makes it easy to manage such a large music library.

This generation, once they grow up and start getting mortgages and paying bills (with their own money) will expect to be able to manage their energy use with the same amount of ease and control ... determining what their

needs are, programming to those needs and being able to respond to factors such as pricing, without even thinking about it.

It's stunning the tools that are now emerging to help consumers better manage their energy use. Take, for example "The Energy Detective" ... or TED ... this device gives you second-to-second information about how much energy you are using ... (or, if you have a microFiT contract, how much energy you are producing) and then packages all that information up and sends it to your mobile phone through iGoogle. Google has published an application that any manufacturer can design to.

Our research found that roughly 20 per cent of Ontario homeowners were VERY interested in using a mobile device to control their home energy use while they are away. That's quite a high number when you consider these technologies are not readily available on widespread basis. There's a market sitting and waiting to be tapped ... and we need to be aware that once more options are readily available, consumer activity will blossom.

So given all that, what is the best way that we as managers, distributors or generators of power can best communicate or educate our customers?

While there is no doubt that distributors are well regarded by their customers, I think we need to ask whether we need to find new partners that are seen by customers as even more innovative than we are.

Research from the U.S. that I came across recently showed that consumers see their utility as a credible provider for in-home energy management solutions. But that credibility is given a further boost when partnered with technology players. Google, Home Depot, HP, AT&T are hot on the heels of electricity providers in this space. They are leveraging their brands to enter this market.

As utilities, we need to expand our relationships with consumers – and build on the trust they place in us. We need to help consumers understand their options and make well-informed choices about their own energy use.

Many LDCs are embarking on partnerships with non-traditional energy companies... Even the IESO is jumping into the social media waters with new twitter and facebook pages.

Conclusion

Let me leave you with a few thoughts in closing ...

Through smart meters and time-of-use pricing, the province is laying the foundation for the development of a smart grid ... and many of you in the room are helping to make that happen. But consumers are the real end game.

Many new non-traditional players are entering this field ... and some are doing it without needing our support, with the ability to bypass LDCs and other traditional industry participants completely.

LDCS have worked hard to become a trusted entity among their customers.

But the customer may be best served through a partnership: combining that trust and commitment to service from an LDC with the innovation represented by others and bringing new services and opportunities that customers can utilize.

Thank you very much. I look forward to your questions.