

Smart Metering & Advanced Metering Infrastructure Conference
Panel Discussion
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Moderator: Marion Fraser, Fraser & Company
Panelists: Rick Stevens, Hydro One Networks Inc.
Paul Shervill, Ontario Power Authority
Jonathan Ziegler, ONZO Ltd.

Questions from the Floor and Panelists' Responses

- 1. We've heard a lot about the benefits that are possible with Smart Grid, but what are the barriers holding us back from achieving these?** (Marion Fraser)

Jonathan Ziegler: From ONZO's perspective, when was the last time that consumers were consulted for their point of view? When dealing with non-industry involved consumers, AMI devices need to deliver what consumers want to see. We have talked to a lot of people, for 8 years old to 85 years old to ask them what they would want to see in a device.

Paul Shervill: In Ontario we don't have particularly transparent pricing, the average consumer is likely wondering why are we spending millions and possibly billions of dollars on smart grid, and on something that doesn't even make it onto their radar screen. In the beginning I don't think consumers were driving it (Smart Grid), but rather the industry, and consumers are only evolving now to appreciate the range of choices it may provide.

Rick Stevens: In the areas of smart meters and AMI, we have a long way to go, and my worry is that customers' perceptions of what is possible will stretch the capabilities of the (AMI) technology.

- 2. In local municipalities where the customer base has decreased, what incentives are there for these local utilities to implement programs aimed at reducing the use of their product, electricity?** (Rimas Slavickas, University of South Florida)

Paul Shervill: If you are not doing what your customer expects you to do, to make wise use of the product you are selling them, you are likely to lose them. I think there is strong rational for most utilities to understand what their customer are looking for from a broad range of social improvements, not just a reduction in energy.

- 3. Historically utilities have provided customers with gold-plated services and helped them improve efficiency (e.g. adoption of compact fluorescent lighting). Now utilities are working to provide customers with (energy and load management) tools and telling them to manage their energy bills. I am worried about how much (energy cost) customers will actually be able to save?** (Peter Sissarus, Toronto Hydro)

Paul Shervill: I agree with you completely, electricity in Ontario is relatively inexpensive compared to our friends in California or New York State. As generation is replaced and coal is phased out, new generation will be new-build or a different type with a smaller footprint

and higher cost. Prices are going to go up in Ontario and it will be more important to customers to have these services and tools available in the future.

Rick Stevens: At Hydro One, we talk to a lot of people at farm and cottage shows, and one thing that plays well with them are the environmental impacts (benefits) of getting off coal. If we are able to manage the demand of the province better, there is a higher likelihood that we will be able to get away from the not so favourable types of generation.

- 4. We have heard a lot about utility control of customer loads, and of providing energy usage information to customers as ways of managing load. In your opinion, what other ways can we create customer benefits?** (Steve Montgomery, OFI Inc.)

Rick Stevens: My personal opinion is that you have to make it easy for customers. One thing we've done by providing quasi-transparent price information is created a market for innovation, and we are starting to see vendors adapting their products to take advantage of (energy) pricing to produce benefits for their customers. We are starting to see a new generation of appliances, thermostats and 2-way communication in homes coming along to deliver automation to customer so that they can set and forget devices. I think that once we have that ease-of-use and that "stickiness" in devices, the benefits will start showing up.

Jonathan Ziegler: Our market research indicates it is a combination of factors to that leads to changes in consumer behavior. It takes 21 days to create a habit and 10-minutes to break it. The habit of understanding why we do what we do, combined with high energy bills (e.g. the average electricity bill in California is \$180 per month) can lead to changes in behavior and resulting customer benefits.

Paul Shervill I agree it is the "stickiness of the product". Most consumers are now familiar with programmable thermostats, and it is not a great step to imagine a new mobile device that can be used to control the majority of devices in a house using a single protocol. Secondly I think we sometimes sell consumers short, because we are in the business. I am absolutely astounded at how quickly Ontarians have taken to Peaksaver, we have 130,000 households signed up, with only a small token payment, and 800 MW signed up through aggregators or directly with large industrials in a very short time.

- 5. When we speak of demand-side management, we often discuss the residential sector or large industrials, with less emphasis placed on small-medium enterprises (SMEs), small commercial and institutional. What can smart meters and AMI do for these customers?** (Marion Fraser)

Rick Stevens: Price transparency will give them the incentive to shift. I don't want to assume that LDCs, OPA, or government policy has to solve the entire problem. There are a lot of smart service providers, which are much more capable, and will step up to the plate. For example, Google and Microsoft have been in the game much longer than we (LDCs) have at meeting customer expectations.

Paul Shervill: I find that they are really a lost group. Utilities tend to give consumers a lot more information than they give their business customers. Large industrial - their energy cost is a large enough fraction of their total product cost that they hire someone to manage it. But the guys in the middle, the small-medium industrials, institutional, the commercials, tend to accept energy as a cost of doing business, and it is typically not on their radar screen.

Final Thoughts from the Panel on the Future of Smart Metering & AMI

Jonathan Ziegler: *I have limited experience in the Province of Ontario, but in the North America market and to a certain extent, the South American market, residential is 15 to 30% of the market place. What we are seeing from the perspective of consumer involvement, and I think that it carries over to the commercial guys, as we go to work every day ... and the trends and consideration for carbon reduction, or whether or not I decide to buy a plug-in hybrid vehicle ... and the efficiency side and the consumer side, from our perspective, is really looking towards active involvement and active participation. What I mean by that is it doesn't have to be a device. It's an educational approach; it's a marketing approach ... to getting people to understand why it is important to make the changes that they have to make; and the behavioural changes that they have to make. It starts with the children in the schools; kids are energy cops now. We need to understand that kids are aware it and they process information a lot faster than we do. We need to education more, to get the message out more in a friendly manner. A lot of the efforts that are already going on are outstanding to that effect, and we just have to do more.*

Paul Shervill: *I think the future for North American energy consumers is not that difficult to perceive to some regard. You just have to look at our European cousin – they are more constrained in terms of available space and more constrained in terms of their energy options; they are much, much more into limiting the environmental impacts of their energy consumption. Things like district energy systems, are everywhere ... their density of development is amazingly tight and leads to efficiency. I'm not suggesting that this is what is right for North America, but what I will say is the entrepreneurial spirit is alive and well here and south of the border. I think there are a lot of people thinking about how on earth can we provide the same level of energy efficiency (as Europe); without compromising our standard of living. I think there are corporations in the province that are going to engage the customer into becoming part of the system, and in finding ways to try and do it without compromising our lifestyle.*

Rick Stevens: *A lot of money is being invested today by automobile manufacturers in things like plug in hybrid vehicles (PHEVs); we see a lot of money being invested in IT platforms, web page and back office information systems; we see a lot of money being invested in telecommunications. Where we are heading towards is a lot more information (being) available to customers; customers being enabled by this technology to make better choices on how they want to manage and balance their own supply and demand. At the end of the day – in 10, 20, 30 years from now we will have a different market place out there, where customers truly will be enabled to play a more active role.*