



## **Notes for Remarks:**

### **IESO Engagement Day – Innovation remarks**

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Check Against Delivery

Thank you all for joining us. I hope everyone is doing well.

Since last month's engagement days, the province has seen a steady decline in COVID-19 cases, leading to businesses re-opening across the province. This is great news, and as someone who has largely been isolated in my house during the pandemic ... I am looking forward to getting out a bit more ... social distancing included.

Summer is officially here. We've seen a couple heat waves and significant residential air conditioning load to deal with that heat and humidity. Together with the re-opening of businesses we're seeing electricity demand ramp up closer to pre-COVID levels. I encourage you to join us at an engagement session on July 6 for more insights into the demand picture and our provincial outlooks.

Also since last month, the government has extended a flat rate for time-of-use pricing until the fall, and announced an option for consumers to opt-out of time-of-use pricing altogether in the future. Our smart metering folks are starting to work with the Ontario Energy Board and local distribution companies to help make this happen.

We continue to move forward with Market Renewal, the focus of tomorrow's meetings, gathering feedback on some of the remaining market design documents. We're approaching a pivotal milestone in the project where we will be transitioning from design to implementation. The project has been underway for several years and it is really exciting to see us get closer to making this a reality. The business case has been clear – there are real efficiency savings to be realized for Ontarians.

Today's engagements are focused on energy storage design, and the implementation of phasor technology to improve real-time monitoring of the grid.

The theme here is innovation, and in my brief opening remarks, that is what I want to talk to you about this morning.

Small investments in innovation, which the IESO is making, can enhance the reliability of our electricity system and drive down costs. Innovation can create new business opportunities for stakeholders ... and it gives communities more options in meeting their energy needs ... something that communities across this province want.

Our investment in innovation has largely been supported by stakeholders ... but I know there are still a few who wonder why the IESO is in this space. But our unique position in the sector, the many relationships we have in the sector, our experience and awareness of future needs, call out for our involvement.

It's not our job to take risks with the management of the system. But where we do see a risk is ignoring the rapid innovation in the sector for the contributions to reliability and affordability. Ontario's electricity system can't be left behind.

At last month's engagement days, I talked about how I see the IESO as an integrator. This is true when we talk about innovation. Our role is to foster innovation, and to connect innovative projects with emerging system needs ... from both province wide and regional perspectives. We've been seeing a lot of opportunity for this through our regional planning efforts.

Today – there are many tools emerging to help communities achieve their goals – but they can't use these tools if we as the system operator don't accommodate new technologies in the way we manage the system.

When we're out talking to communities about their future electricity needs, one thing we often hear is that they want options. There is a growing recognition that the electricity sector has evolved, and that a new transmission line isn't necessarily the only solution to an increase in electricity demand.

Innovative projects are increasingly helping us to meet growing electricity needs in different areas of the province. There are two areas I want to focus on to demonstrate this point – Windsor-Essex and York Region.

These two regions couldn't be more different. One is rural, home to the largest concentration of greenhouses in the province. The other is distinctly urban, and growing fast.

Different as they are, what they share is a need for more electricity to support their regions' long-term economic development plans. In both regions, innovation is playing a key role in meeting their needs.

We've spent a lot of time in the Windsor-Essex region over the past year, meeting with communities and greenhouses to understand the significant growth that is happening in the area.

New and expanded greenhouses are contributing to electricity demand that is expected to double over the next five years. In the Kingsville-Leamington area specifically, it's projected to triple by 2026.

While part of the solution will come from a new transmission line that will increase supply to the area, we saw there was an opportunity for energy efficiency and innovative projects to contribute. We offered an increased incentive through our Retrofit program to help greenhouses reduce their energy use – saving them money and giving us capacity on the system.

We also issued a call for proposals through our Grid Innovation Fund to support projects that have the potential to cost-effectively reduce electricity demand from indoor agricultural facilities during local and provincial peak periods.

We were very pleased with the response we got... we received 18 proposals that included participation from 22 agricultural organizations in the region.

The successful proponents, which we'll be announcing soon, will make a real impact in managing the region's growing electricity needs. They give us additional capacity in the area, and they show how community members can participate and become a part of the solution.

The IESO's Grid Innovation Fund received almost double the number of applicants this year compared to 2019 through our open intake window, a trend that shows us more companies are coming forward with innovative ideas that can help to improve the reliability and affordability of our system. And that increased interest came in the midst of the pandemic.

In York Region, we're using a very different solution to help address their growing electricity needs.

This year we'll be launching a new demonstration project which will test how a local electricity market could function alongside the provincial wholesale electricity market,

looking at whether it can provide a cost-effective and reliable option to help address local increases in electricity demand.

The project is funded equally through the IESO's Grid Innovation Fund and Natural Resources Canada, and will be led by the IESO with Alectra Utilities as the delivery partner.

The goal of the three-year market test is to harness existing and potentially new resources that are connected to local distribution grids—distributed energy resources (DER)—and allow them to compete in a market framework, identifying ways to use them to support the local and centralized power grid.

In Ontario, more than 4,000 megawatts of DERs have been contracted or installed over the past decade. They currently make up about 10 per cent of the province's electricity capacity.

Building on the auction format that the IESO is using for the provincial capacity auction, the local electricity market will allow DER owners, aggregators and large customers to compete, with the most competitive offers being selected. Smaller customers can also be part of the market when they sign up with an aggregator.

The competitive format provides successful bidders an opportunity to participate day-to-day in an energy market, giving them access to a potential new revenue source.

With DERs we don't need to bring electricity across long-distance transmission wires from large provincial sources of generation. They're also scalable – which means they can be deployed quickly to adjust to changing supply and demand conditions, avoiding investments in more capital intensive, large-scale assets with less ability to respond to change.

Our goal is to ensure that electricity is available when and where it's needed across this province. DERs can play a part in meeting that goal.

Since DERs that provide grid services are often owned by customers who also leverage their capabilities for their own needs, the capital costs recovered from other ratepayers may be lower than traditional electricity infrastructure. This can make them a very

attractive alternative from a cost perspective, especially if new infrastructure is being considered from a regional planning perspective.

York Region is an ideal place to test this new pilot. Electricity demand in this area is expected to grow and exceed system capability in the next 10 years. The IESO will be looking to see if the market can reliably source 10 to 20 megawatts of electricity locally, watch how the local market functions alongside the provincial electricity market, and start thinking about whether it can help address the long-term electricity needs for regional planning.

To further contribute to our understanding of how we can leverage DERs in the future, we have been releasing a series of white papers with input from stakeholders. These white papers will help us to create a shared understanding across the sector of the opportunities available, and give us a reference point to inform decisions and discussions going forward.

Whether it's addressing the demand challenges in York Region or Windsor-Essex, the key is finding a solution that matches communities' unique needs and ensuring the solution is both cost-effective, and reliable.

What's happening in these two areas serve as a great reminder of the role innovation is having in our electricity sector, and specifically in providing local solutions for communities.

To come back to one of the topics of today's meetings, these examples are also a reminder of the potential for energy storage, which could be a resource that competes in local electricity markets, or that helps businesses like greenhouses to better manage their energy use.

Today's discussion will continue to move forward efforts to make necessary changes that will help ensure energy storage can fully compete to provide services to the grid.

The team will walk stakeholders through the process for reviewing the draft market rule and manual amendments being proposed for the interim period, as well as the proposal for the application of uplift charges for the long-term period.

In the afternoon we'll shift the conversation to phasor technology – this technology will give us more granular, accurate and detailed data about the real-time operation of the grid.

You may recall there was an event in Florida in 2019 where one generator caused power and frequency oscillations that were felt across the eastern interconnection. This was a good reminder of the interconnected nature of our system, but it was also an event that was not captured by the IESO's tools.

This is just one example of how phasor technology provides greater situational awareness – the Florida event was observed by some of our neighbouring jurisdictions who had already implemented the technology.

We're going to take a break before we get into the morning discussion on energy storage – but first I'll answer any questions you might have.