

Northeast Ontario Regional Electricity Forum

Meeting Notes - November 22, 2018

Timmins, Ontario

Welcome and Greetings

Amanda Flude, Advisor, Regional and Community Engagement, IESO, opened the meeting noting that the purpose of the Regional Electricity Forums is to bring together communities to discuss local electricity matters and how the unique characteristics of each region can factor into the electricity planning processes. The IESO knows the importance of having these conversations at the local level and participants were encouraged to join in the day's discussion.

Cynthia Chaplin, Director, IESO Board of Directors, acknowledged that the meeting was being held in the Treaty 9 territory, as well as the traditional territories of the Anishnawbek, Oji-Cree, Cree and Algonquin peoples and welcomed participants and presenters.

Ms. Chaplin referenced that the day is one of a series of forums taking place this fall and in spring of next year and that local expertise is valued and appreciated by the IESO. She encouraged discussion around the key energy issues in the region and said the outcomes of this meeting and others will help inform regional and provincial electricity planning initiatives.

Mike Metatawabin, Manager of External Development and Communications, Five Nations Energy Inc., noted that the communities of Fort Albany, Attawapiskat, and Kashechewan are relative newcomers to the electricity industry. Prior to connecting to the grid in the year 2000, these three communities relied on diesel generation that delivered just 15 amps per household. Homes and a school have since been retrofitted for energy efficiency. The three communities are sharing their experiences with colleagues in the northwest and are pleased to be part of future discussions.

George Pirie, Mayor-Elect, City of Timmins, expressed that local generation and distribution should not be seen as a threat to the status quo. The whole Ontario economy can benefit from more options for affordable electricity to support finished products coming from the north. He noted that it is important to be involved in discussions like this and noted that he will encourage ongoing discussions for future planning.

Keynote

Terry Young, Vice President, Policy, Engagement and Innovation, IESO

Presentation: <http://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Forums/2018/NE-Keynote-Address-Terry-Young-IESO.pdf?la=en>

Mr. Young expressed that the goal of these forums is to strengthen the IESO's engagement on a local level and to ensure regional and community interests, needs and priorities are factored into the decision-making processes.

Customers are becoming increasingly engaged in the power system, and the public is encouraged to learn more about engagement in regional planning at <http://www.ieso.ca/en/Get-Involved/Regional-Planning>.

He highlighted some of the other engagement initiatives:

- Market renewal is finding new efficiencies, new technologies, better use of existing assets, and increased competition that will lead to lower costs
- Capacity auction to enable the IESO to better plan and acquire resources
- The IESO hosted its first Technical Planning Conference in September 2018 to share its planning outlooks with stakeholders and communities. Transparency is important to the IESO, and the conference will become an annual event.

Mr. Young also recognized some local achievements. Goldcorp Inc. is developing the first all-electric mine near Chapleau and plans to increase production by 20% in 2021. Diesel and propane fuels will be eliminated.

Of the 60-plus utilities in Ontario, Hearst Power Distribution and North Bay Hydro are performing the highest on achieving their energy efficiency targets.

More than 40 First Nation communities in the northeast have either completed or initiated a community energy plan using funds leveraged from IESO programs.

Important initiatives are taking place on Manitoulin Island and along the north shore of Lake Huron and at Temiskaming Shores. Participants will hear presentations on these today.

Energy efficiency is the most cost-effective resource. Energy savings in Ontario exceed 58 billion kWh since 2006.

Mr. Young concluded his remarks noting that no one knows a community's or a region's energy needs better than those within it. And it's for this reason that community engagement is a

priority for the IESO to provide opportunities to uncover a range of perspectives in the energy dialogue.

Emerging Trends in Community Energy Planning

Raili Lakanen, Program Manager, Smart Green Communities Program, reThink Green

Presentation: <http://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Forums/2018/NE-Emerging-Trends-in-Community-Energy-Planning.pdf?la=en>

reThink Green is a registered, not-for-profit organization based in Sudbury that serves areas located within a 1.5-hour drive of the city. Ms. Lakanen talked about one of the program goals of the organization being to assist with energy planning while reducing the environmental impacts of excessive energy use.

The organization hosts various public events and membership-based programs. The Green Expo and tradeshow focus on climate change mitigation. The Green Economy North program helps small and medium-sized businesses reduce their greenhouse gas emissions and set sustainability goals. The Forge is a co-working space for social enterprises and entrepreneurs in Sudbury. Shared platform services, such as website hosting, are offered to grassroots environmental groups. The Smart Green Communities program grew out of a need to expand support to municipalities and First Nation communities. This program helps small communities complete energy emission inventories required by the province, and helps with energy audits and action plans. People can share their experiences at training and networking events.

In 2017-2018, five communities on Manitoulin Island and along the north shore of Lake Huron were surveyed either in person or online about their energy needs. Training sessions were provided to local leadership teams to bring them up to speed on the economic and environmental benefits that can result from energy plans.

Four of the five communities have no access to natural gas and rely on propane, oil, wood stoves, wood pellets, and electricity to heat their homes. Many residents use energy-efficient furnaces, doors, windows, and lighting; however, as in other northern regions, the cost of home heating is a challenge.

A shortage of local tradespeople in the five communities poses a barrier to doing energy upgrades. Some residents are concerned that renewable energy might cost too much. Others feel that there are enough windmills already—a controversial topic among the islanders.

An appetite for training sessions and community events was identified. reThink Green hosted public information sessions in the communities as well as a community energy planning conference on Manitoulin Island.

Overwhelmingly, community staff say they have neither the time nor the money to tackle energy plans. To address this challenge, the Smart Green Communities program staff offer direct support to municipal staff who are starting these projects and assist in finding funding sources.

reThink Green also delves into communicating regional technological and design innovations, in hopes of inspiring similar projects elsewhere. For example, gases produced from the Sudbury landfill site are captured for use by Greater Sudbury Utilities. Shared ownership of distributed energy resources is of interest to some communities, as is fuel switching. Students at Laurentian University's McEwen School of Architecture are interested in building for northern climates.

Northerners are interested in incentive programs to do energy efficient upgrades. The cancellation of the GreenON program has led to confusion and disappointment for many. They are waiting to hear what will happen with the new provincial government.

reThink Green has received a capacity-building grant from the IESO that will be used to continue regional outreach, provide educational opportunities, and work with more communities on Manitoulin Island. Visit www.smartgreencommunities.ca to learn more.

Local Spotlight

Douglas Walsh, Director of Public Works, City of Temiskaming Shores

Presentation: <http://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Forums/2018/NE-Local-Spotlight-G-Douglas-Walsh.pdf?la=en>

The City of Temiskaming Shores is located on the shore of Lake Temiskaming, 25 kilometres from the Quebec border. It was formed through the amalgamation of Haileybury, New Liskeard, and Dymond in 2004, each community with its unique assets and issues.

Mr. Walsh talked about how after the first Conservation and Demand Management Plan was completed in 2014 there was much consultation between people working in hospitality and transportation sectors, as well as energy and fuel suppliers wanting to reduce costs and improve the environment. An energy management team now meets quarterly to discuss best practices and to ensure that the plan remains a priority.

A Municipal Energy Plan was initiated in 2016. This comprehensive, long-term plan plays a key role in economic growth. A greenhouse gas reduction plan is also slated for completion in early 2019.

The greatest conservation opportunities in Temiskaming Shores, which has a population of 10,600, are to be found within the commercial and residential sectors, where per capita electricity consumption is higher than the Ontario average (33 equivalent kilowatt-hours versus 10 equivalent kilowatt-hours).

The city completed an energy consumption inventory in 2013, including electricity and natural gas. Municipal buildings accounted for approximately 7% of the electricity consumed. Half of the budget went to water supply and wastewater treatment. About one-quarter went to streetlights. Hydro costs from 2011 to 2012 were \$135 per capita, which is a substantial cost for someone paying property tax of \$2,000 to \$3,000, Mr. Walsh said.

Transportation contributes greatly to energy consumption in the area (approximately 30%), compared with municipal energy use (approximately 15%). Most homes have two or three vehicles, predominantly half-ton trucks. The area is responsible for approximately 60,000 tonnes of carbon dioxide equivalent emissions, or 5.65 tonnes per capita, based on 2014 data.

Since the energy inventory and plans were completed, Temiskaming Shores has achieved many energy efficiencies and cost savings. Mr. Walsh shared some of the successes.

A total of 955 streetlights have been upgraded. Energy efficiency programs covered roughly 36% of the cost, resulting in a payback period of 0.7 years.

At the Haileybury wastewater treatment plant, a 150-horsepower blower was replaced with a 75-horsepower blower, resulting in significant savings. This work was completed with help from engineers at the Ontario Clean Water Agency.

Installation of a new aeration blower at the New Liskeard lagoon is expected to result in energy savings of 190,500 kWh.

Other strategic projects include landfill waste reductions, solar farms, and pumping station upgrades.

In summary, streetlight retrofits, boiler efficiencies, a fitness centre audit, and a wastewater facility audit are expected to bring savings of \$115,000 per year with an implementation cost of \$630,000.

Innovation and the Changing Electricity Landscape

Nick MacMackin, Environmental Energy Institute, University of Windsor

Presentation: <http://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Forums/2018/NE-Innovation-and-the-Changing-Electricity-Landscape.pdf?la=en>

Mr. MacMackin highlighted changes occurring within the North American electricity sector.

Non-utility procurement is becoming prominent. For example, Nevada Power recently lost two of its largest customers in Las Vegas: MGM Grand and Wynn Resorts. Small companies are making the switch to non-utility procurement through group contracts to share power from a single renewable generating area.

Peer-to-peer transaction is growing. For example, the New York City borough of Brooklyn has a new microgrid. Customers with solar panels are able to produce their own power and sell it to their neighbours using blockchain technology.

In California, high solar penetration creates dips in energy demand that happen in the morning, and this causes lower utilization and very high ramp rates.

The penetration of electric vehicles is creating a need for scheduled charging protocols. Smart charging protocols to match storage and demand will reduce energy supply. Electric vehicles are predicted to cost the same as gasoline models by 2025, pushing the global fleet to 530 million by 2040.

A fully electric mine being developed by Goldcorp in Borden, is expected to eliminate 7,000 tons of carbon dioxide per year. The mine will also require 50% less ventilation than an underground diesel mine.

There are more than 4300 MW of distributed energy resources (DERs) connected to distribution systems across Ontario. Increasing DER penetration is increasing the complexity of bulk electricity operations. Mr. MacMackin said the IESO, local distribution companies (LDCs), and DER owner-operators will have to expand coordination efforts to maintain reliability and resilience.

The Climate Led Energy Revolution Network 2040 (CLEEN2040) is made up of energy providers, consumers, regulators, and ancillary players. The network aims to prepare system operators, utilities, market participants, and consumers for future change. The ultimate goal is to create opportunities for commerce and increased employment.

Researchers at the Environmental Energy Institute at the University of Windsor have produced a modelling tool to identify sectors with unique demand curves. Modifying factors can be applied to adjust the magnitude of the curves based on potential technological and policy scenarios.

Participants were polled on what is important to them when considering ways to meet their electricity needs. Polling results indicated that cost, environment, reliability, and diversification were most important.

Participants were also asked what they believe is most likely to occur by 2040. They offered the following:

- Ontario will have 50% less demand for bulk electricity from power plants
- More than 75% of new cars sold in Ontario will be electric
- Energy supply will be more reliable and resilient than it is today

Participants were also asked what they believe is least likely to occur by 2040. They suggested the following:

- Electricity will be relatively cheaper than it is today
- More than 75% of new houses in Ontario will be net zero energy homes
- All new homes in Ontario will be part of a community-managed system

A participant asked how the role of nuclear energy fits in. Mr. MacMackin noted that nuclear power is for baseload demand. It cannot be ramped up or down quickly, so it is a good option when a more balanced supply can be maintained.

A participant asked for an explanation of an extreme duck curve. Mr. MacMackin explained that a duck curve is seen when high solar penetration causes a big demand dip in the morning followed by a big dip in the afternoon.

Aligning Regional and Local Energy Planning—Panel Discussion

Ahmed Maria, Director, Transmission Planning, IESO

Maury O'Neill, CEO, Economic Development Corporation of Wawa

Rod Reimer, CFO, Five Nations Energy Inc.

Moderator: Carrie Aloussis, Senior Manager, Customer, Stakeholder and Community Engagement, IESO

Link to video: https://www.youtube.com/watch?v=Nt8q8cBG_BI&t=127s

Presentation: <http://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Forums/2018/NE-Aligning-Regional-and-Local-Energy-Planning.pdf?la=en>

Following a video presentation highlighting the importance of community engagement, participants were polled on two points: Asked whether they had been involved in the development of community energy plans, 40% of participants said they had. Asked how familiar they were with the IESO's regional planning process, 43% of the participants said they were somewhat familiar, and 15% said they were very familiar.

Mr. Maria talked about the importance of understanding the effects of local initiatives on energy consumption and demand. For example, greenhouse gas emissions can be reduced by switching to district heating or by installing solar cells which would reduce electricity consumption. However, increasing electric space heating and introducing electric vehicles will have the opposite effect by increasing electricity consumption.

Ontario has 21 planning regions, including four in the northeast:

- The East Lake Superior region covers Wawa to Sault Ste. Marie.
- The Sudbury-Algoma region covers Sudbury and surrounding areas.
- The North/East of Sudbury region covers North Bay, Timmins, Kirkland Lake, and Moosonee.
- The North of Moosonee region is supplied by Five Nations Energy Inc.

Electricity plans for each region are generally produced by the IESO every five years. The plans focus on transmission; but also consider distribution lines that take power to homes and businesses.

There are three stages to regional planning: the needs assessment, the scoping assessment, and the Integrated Regional Resource Plan (IRRP) or Regional Infrastructure Planning (RIP). The IRRP stage includes community engagement and can last 18 months or longer.

The planning schedule for Northeastern Ontario is as follows:

- East Lake Superior: early 2019
- Sudbury-Algoma: late 2019
- North/East of Sudbury: mid 2020
- North of Moosonee: 2021

Ms. O'Neill talked about the five hydro generating stations in Wawa, and that the municipality once had the lowest electricity rates in Ontario. Since deregulation, however, Wawa pays the third-highest rates in the province. Thus, when the city embarked on its energy plan five years ago, the local council was concerned only with the cost of its power, and not with reducing greenhouse gas emissions.

Wawa has a population of less than 20,000. It does not have natural gas, so business leaders took a look at liquefied natural gas as a way to potentially reduce cost. Approximately one-third of the homes use wood as a heat source. For a home heated with electricity, it is not uncommon to see a monthly heating bill of \$1,200 in winter, and winter lasts six to eight months.

For the IESO to achieve meaningful consultations with small northern communities like Wawa, Ms. O'Neill advised the IESO to reach out to the communities, because the communities do not know to reach out to the IESO. She looks forward to more engagement for northern communities and the IESO, possibly through broadband technology because of the great distances involved. She recommended that the IESO attend community events, offer incentives for people to participate, and encourage the undertaking of energy plans.

Mr. Reimer said the first discussions to extend a transmission line north of Moosonee to the First Nation communities of Fort Albany, Kashechewan, and Attawapiskat took place in 1985. The motivating factors were reliability, capacity, and environmental benefits. There were pollution concerns with five million litres of diesel fuel being transported annually by tractor-trailer and barge. Since these communities are not connected to natural gas and cannot take advantage of commercial wood harvesting, they will resort to electric space heating. Reliability of supply matters in the north because since all of the homes are now connected to water and sewer services, the homes require consistent temperatures and can no longer go without heat in the winter months.

Five Nations Energy Inc. partnered with the IESO to pilot electricity conservation and demand management potential. The development of community energy plans began in 2014 with the goal of making the houses more energy efficient. The three communities undertook upgrades made through the Save on Energy programs which improved their quality of life.

Ms. Aloussis asked each panel member what they consider to be the biggest challenge in realizing a community energy plan.

Mr. Maria said communication is the challenge when trying to integrate community and provincial energy plans. When community planning is carried out to reduce greenhouse gas emissions, it is important to determine and communicate the impact this will have on demand, especially peak demand, because that information would be required to integrate those community plans with electricity plans. Provincial planning is done on a five-year cycle, but community plans are not, creating uncertainties for integration and investment.

Ms. O'Neill replied that affordability is the challenge. It is difficult for a community of 3,000 with no industrial tax base to think beyond cost. When the previous provincial government

offered a cash incentive to homeowners to upgrade their wood-burning stoves and fuel sources, 31 applications were received. These incentives have since been removed.

Mr. Reimer noted managing expectations as the challenge. It is important that consultants understand the long-term operating costs. Implementation of an energy plan can be problematic. As the Manitoulin experience showed, there may be no local tradespeople available in the community to do the work. In the case of remote communities, there may be no local hardware stores.

A participant suggested that community energy plans highlight specific key parts of the plan that might inform the regional planning process.

A participant asked for input from the panel on how best to educate the public. Mr. Maria replied that the IESO organizes education/information sessions with each regional planning initiative and will look for more opportunities in other outlets such as these forums.

Ms. O'Neill answered that simple solutions could work. In Wawa, two heat guns were purchased and loaned out to community members. Community leaders should try to make the energy story something that people care about.

Mr. Reimer suggested finding local champions to build relationships, conduct forums, and show people opportunities to save energy and costs.

Planning to Meet the Needs of Ontario's Electricity System

Chuck Farmer, Director, Resource Planning, IESO

Presentation: <http://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Forums/2018/NE-Planning-to-Meet-the-Needs-of-Ontarios-Electricity-System.pdf?la=en>

A Technical Planning Conference was held on September 13, 2018, to inform the sector about the work of the IESO. Transparency is important in energy planning, and this conference will inform the sector about planning – it will be held annually.

Mr. Farmer explained that the IESO provincial electricity planning consists of a demand forecast one day ahead as well as 18-month forecast scenarios and ends in a 20-year time frame. Gross demand is what demand would be if nothing changes. Net demand is what the IESO expects to serve based on anticipated impacts of conservation programs. Grid demand is what is delivered to LDCs. Demand has dropped since 2002 because of conservation, uptake of distributed energy, and the shift to a more service-based economy. Demand forecasts for summer and winter are relatively flat at this time.

The conservation forecast of about 15 terawatt-hours of efficiency during the next 20 years, assumes that government programs continue and factors in building codes and standards.

Demand forecasting also considers uncertainties around trade barriers, auto sector tariffs, and the Industrial Conservation Initiative (ICI). Mining is a big driver of demand in the north. In southwest Ontario, the driver is greenhouses. Forecasting also considers how energy demand changes throughout each day.

Demand planning also includes a reserve requirement for when things do not go well. For example, the refurbished nuclear units may not come back on line when expected, or they may not perform as well.

Over the next 20 years, most nuclear units will be taken out of service for two or three years at various times for refurbishing. Meanwhile, 20-year contracts with gas generators will expire, creating a turnover of this type of generation. Whatever is not locked up in contracts will become opportunities for the sector.

The current outlook is that demand will be met until 2022, followed by a gap caused by the retirement of the Pickering Nuclear Generating Station. The gap will create a shortfall of 3,000 megawatts.

The IESO planners are now preparing for 2023. Ontario's gas fleet is currently underutilized and will contribute to filling the gap. It is forecasted that there may be approximately 100 to 150 hours where demand will not be met. To fill this shortfall, the power system will need things that can operate for short periods and are inexpensive to operate. This may involve imports from neighbouring jurisdictions. Voltage support, black start, flexibility, ramping services, and battery storage will be needed.

Generators will bid into the energy market on a level playing field, and competition will push prices down in the capacity markets, day-ahead markets, real-time unit commitment, and single-schedule markets. The IESO anticipates that market renewal will reduce the cost of electricity services in Ontario by \$3.4 billion over 10 years.

The IESO will continue to share information as the market evolves. Active engagements are posted to www.ieso.ca/en/Sector-Participants/Engagement-Initiatives.

A participant asked about the value of importing power from neighbouring jurisdictions. Mr. Farmer replied that an agreement negotiated between the previous Ontario government and Quebec is still in effect. It involves a capacity swap arrangement whereby Ontario sends capacity to Quebec in winter while having the right to recall that capacity over a specified time

period. For 2023, the agreement is for 500 megawatts. The IESO prefers to do things on a market basis rather than with long-term contracts, however.

Community Café

Susan Harrison, Supervisor, Regional and Community Engagement, IESO

Ms. Harrison highlighted some of her key takeaways from the morning portion of the meeting:

- Participants heard about planning initiatives on both provincial and local levels and the value of networking and energy planning.
- It is important to keep an eye on new technologies as they emerge and to expand coordination efforts in order to maintain the reliability and resiliency of the power system.
- Participants said cost, environment, reliability, and diversity are most valued when meeting electricity needs in the northeast.
- Municipalities and industries are learning from each other.

Participants then divided into small groups to discuss the following questions:

- What are some opportunities to meet your own or your community's needs? What are the barriers?
- What can we do as a sector to leverage emerging opportunities and overcome potential barriers that were discussed? What do you need to further explore your options?

Through tabletop discussions, participants shared the following viewpoints:

Barriers

- There is too much focus on corporations and not enough on individuals
- There is a lack of understanding of electricity among small businesses and the general public; people do not think of power until it is gone
- Language and geography are barriers
- Policy is made in one area without considering how it would work in other areas. For example, electric vehicles do not work well in the north. Also, the focus is on electricity, but the north wants thermal energy
- There is uncertainty about the future of provincial policies; government continuity is an issue; when the government changes, so do the programs and policies
- Regulatory and environmental legislation prohibits selling to the grid; connecting to the grid is difficult and can be a barrier
- No one wants to go first; early adoption of new technology is risky; unknown costs create uncertainty i.e. unknown whether fuels will be cost-effective; potential for large capital costs with low return on investment

- Electricity needs are not always clearly identified; limited access to have conversations with everyone involved in the decision making process
- Northern Ontario is a unique part of the province with different needs and practices than the rest of Ontario; there is a lack of reliability; low population density; sharing thermal energy means sharing over large distances; housing in the north is sparse and spread out, and innovations in housing are adopted only slowly
- Municipalities fear risk. Where is the evidence? How are things done elsewhere?
- There is a lack of staff capacity, time, and resources
- For industries under sustainability indexes, there are greenhouse gas (GHG) reduction targets; increased GHG per megawatt-hour over the next five to 10 years means having to reduce elsewhere to compensate
- How long will the ICI last? Uncertainty inhibits investment

Opportunities

- There is a need for education about conservation and for building expertise; courses by experts would be helpful; understanding perspectives from other countries
- Increased access to natural gas would reduce electric heating needs
- Economic development is seen as an opportunity
- Community ownership would be welcomed
- Combined heat and power, thermal energy, biomass, microgrids, district heating, participation in small feed-in tariff contracts, flow batteries are all of interest
- Local power generation would create versatility and keep money in communities
- Early adoption of new technology is seen as an opportunity
- A power line to the Ring of Fire and water power sites were mentioned as opportunities

Solutions

- Explore alternative fuel uses: Fuel cells for transportation, hydrogen fuel cells, liquefied natural gas
- Explore alternative delivery methods: microgrids
- More government grants, financial incentives for consumers and private investment
- Do a needs assessment and develop a business case analysis for communities to consider components like delivery charge waiver/timing, renewable generation options, value of grid connection, storage; developing metrics for one's community or region, reporting and sharing
- Mandate reinvestment in local infrastructure
- Dedicated staff resources needed
- There needs to be more communication and integration among sector players, and literacy of knowing who's who

- Basic energy education including learning from each other; opportunities for community discussion and acceptance; education on conservation and how the markets work; leverage local champions (maybe these could be facilitated by government agencies)
- Skills training for low-carbon economy: college programs, skills transfer for new technology on the job (continuous professional learning), pathways, providing information for informed consumer choices
- Base education in high school or post-secondary school for financial literacy, government policy, and how markets work
- Education around grid requirements
- Making the province as a whole more aware of electricity conservation regardless of supply, and the impact that it has on the provincial system
- Alignment of multiple government policies and/or better communication from local to provincial to federal levels; one Ontario—everyone deserves access
- Create access/transportation opportunities
- Better understanding for program eligibility
- Improved delivery standards for electricity
- Make everyone accountable for carbon footprints, not just big companies

Closing Remarks

Ms. Harrison thanked everyone for participating in the forum. She mentioned that the meeting notes will be posted on the IESO website and sent out as soon as they are available. Participants will also have access to meeting notes from other regional forums, including Kitchener (November 2018), Kingston (spring 2019) and Thunder Bay (spring 2019). These will be posted to www.ieso.ca/en/Sector-Participants/Engagement-Initiatives. A report encompassing all four regional forums will be published next spring.

The IESO supports transparency in all of its engagement activities. A number of engagement initiatives are going on now. To stay informed about these engagements, join in webinars, participants are invited to subscribe to the IESO weekly e-bulletin, published every Thursday. Go to www.ieso.ca/subscribe.