

NOVEMBER 17, 2020

East Lake Superior

Integrated Regional Resource Plan (IRRP)

Engagement Webinar #2

Objectives of Today's Engagement Webinar

- To provide an update on the electricity planning underway in the East Lake Superior region
- To seek feedback on the defined electricity needs for the region and potential options
- To outline next steps

Agenda

1. Long-term Electricity Plan Status Update
2. East Lake Superior Electricity Needs and Potential Options
3. Next Steps

Seeking Input

As you listen today, consider any additional factors that should be considered in defining the future electricity needs for the East Lake Superior region and screening and evaluation potential solutions:

- What information needs to be considered as we continue to develop solutions leading up to recommendations?
- Is there community feedback on the range of potential solutions that should be considered?
- What information should be provided in future engagements?

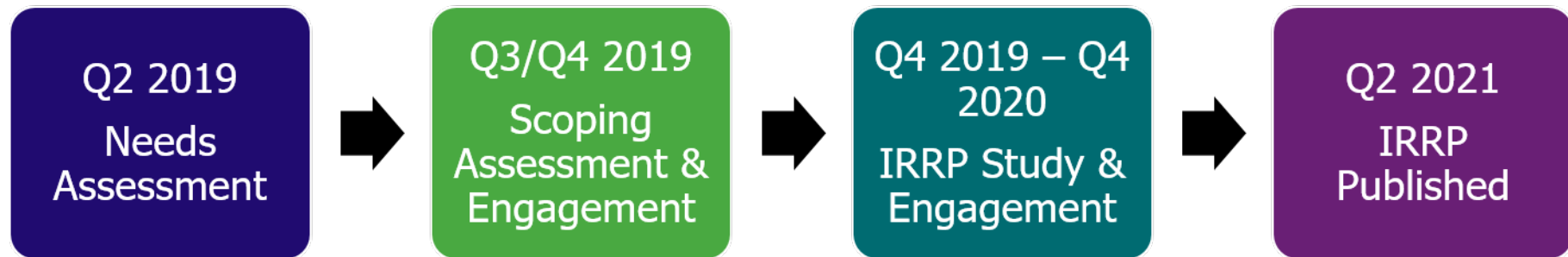
**Please submit your written comments by email to engagement@ieso.ca by
December 8**



Long-term Electricity Plan Status Update

East Lake Superior Long-term Electricity Plan Status

- IRRP study work began in Q4 2019, and is on track for completion in early Q2 2021
 - Draft electricity demand forecast has been finalized and needs have been defined
 - The next focus is on developing and evaluating potential options



Recap: Engagement Activities to Date

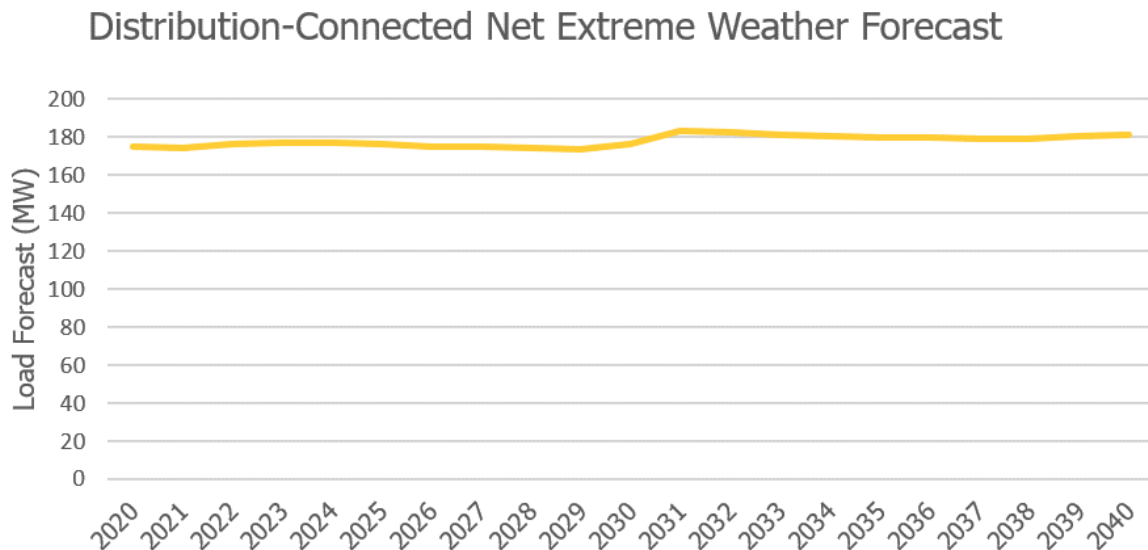
- [Engagement launched](#) on East Lake Superior Scoping Assessment – August 2019
 - Draft report posted for public comment and [webinar](#) held – August 27, 2019
 - [Final report](#) posted with [IESO responses](#) to comments received – October 3, 2019
- [IRRPP engagement launched](#) – May 14, 2020
- Meetings with City of Sault Ste. Marie – December 3 2019, May 20 and October 29, 2020
- Public webinar #1 to seek input on draft electricity demand forecast and planned engagement activities – June 4, 2020
 - Several comments and feedback received during the webinar requesting further details/clarification on the forecast values and assumptions – [formal responses](#) provided and posted

What we've heard so far...

- Planned industrial developments and expansions and initiatives are major economic drivers with potentially significant future electricity needs
- Strong local priorities and interest in alternative energy such as microgrids, biogas and renewables
- Work underway to set GHG targets and identify projects such as electrification of transit and heating processes

Final Electricity Demand Forecast

- The reference electricity demand forecast for the ELS region over the 20 year planning horizon was used to identify needs
- This forecast is specific to customers connected to the distribution system (e.g. residential, commercial and some industrial)



Final Electricity Demand Forecast – cont'd

- The forecast initially contemplated potential significant growth in industrial loads connected directly to the high voltage transmission system, and considered a high industrial growth scenario
 - Further analysis determined that this high industrial growth would result in electricity needs beyond East Lake Superior and as a result is instead being considered as part of the IESO's bulk planning studies and will continue in 2021



East Lake Superior Electricity Needs and Potential Options

How Needs Are Assessed

- Capacity vs. energy
 - The infrastructure must be capable of supplying the peak electricity demand (e.g., megawatts)
 - Energy is the amount of electricity flowing through the system over time (e.g., megawatt-hours)
- A “contingency” is the loss of part, or parts, of the power system
 - Contingencies studied are defined by Ontario Resource and Transmission Assessment Criteria (ORTAC), standards set by the Northeast Power Coordinating Council (NPCC) and standards set by the North American Electric Reliability Corporation (NERC)

Summary of East Lake Superior Electricity Needs

- Needs identified are related to the risk of the local transmission network not meeting their technical requirements to deliver a reliable supply of electricity to the East Lake Superior region
- Specific electricity infrastructure has been identified as facing challenges with reliably supplying electricity as per planning criteria under certain contingency events
 - This includes the circuits to and transformer station at Third Line TS, one of Sault Ste. Marie's main points of supply
 - Other circuits within Sault Ste. Marie

Identifying Options

- After needs have been identified, the IESO leads the development of options
 - Technical Working Group can identify and provide input on scope of wires options to be evaluated
 - Where applicable, LDCs may also provide information to help inform the development of non-wires alternatives
- Potential options:
 - Wires (e.g. step down station, transmission line, etc.)
 - Non-Wires Alternatives (e.g. distributed energy resources, energy efficiency measures, demand response, etc.)
 - Generation (e.g. utility-scale storage, gas-fired peaking plant, etc.)

Evaluating Options

- How large is the need? When does it arise? How long does it persist?
- What are the feasible options that could be considered? What are their costs?
- What options is the local community suggesting?
- What's the added benefit of the option? Will it increase the supply/station capacity? Or does it reduce the load? Will the option enable us to restore more load in the event of an outage?
- Does the option provide the flexibility for future system configurations? How sensitive is the option to long-term scenarios?
- Does the option impact the ability to serve existing customers? Can we utilize existing infrastructure instead of implementing something new?

Potential Options

- The majority of needs are expected to be most effectively addressed through transmission solutions including ways to manage the demand on the system, via load rejection, following a contingency while respecting planning criteria
- Non-wires alternatives such as energy efficiency, demand response and generation are also being explored for due diligence
- Ongoing monitoring of growth and development in the East Lake Superior region will be critical to ensuring the adequacy and reliability of the electricity infrastructure post-IRRP



Next Steps

Seeking Input

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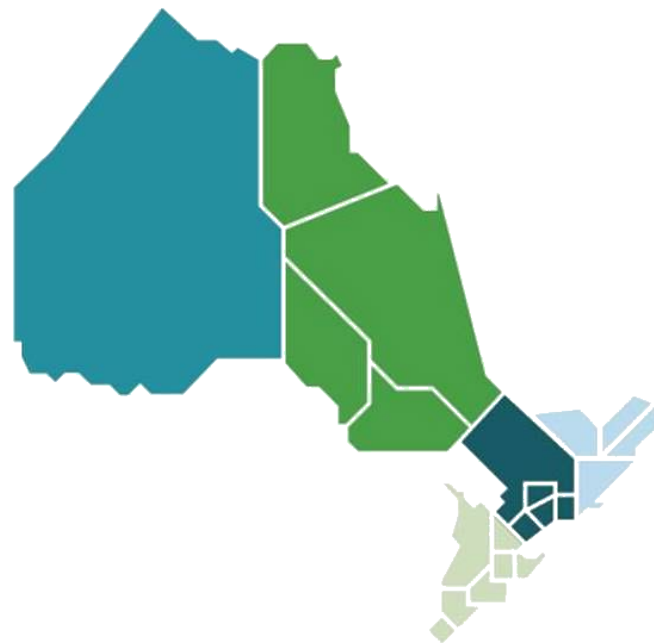
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Upcoming Engagement Activities

- December 8 – Deadline for written feedback on defined needs and potential options
- January 14 – Northeast Regional Electricity Network Forum
- Final public webinar in Q1 2021 to seek input on draft recommendations

Ongoing Dialogue through Regional Electricity Networks

- Five networks – NW, NE, SW, E and central/GTA
- Promote ongoing dialogue between and among network members and the IESO
- Build understanding, awareness of electricity system
- Share local perspectives
- Shape future discussions
- Provide opportunity for meaningful engagement in IESO decision-making



What members can expect

IESO's commitment to maintaining a continuous dialogue with our growing Network membership (approx. 2300 members, nearly 400 in the Northeast)

- Annual Forum
- Webinars
- Newsletters
- Emails
- Online engagement...

Online engagement ... coming soon

- Broaden IESO's engagement efforts
- Provide an additional opportunity for network members to offer focussed input in a quick, easy way... when, where and how they choose
- Create an online community
- Support IESO's efforts to better understand needs of communities, consider priorities in IESO initiatives
- Inform future discussion topics

Keeping in Touch

- [Subscribe](#) to receive updates on the East Lake Superior regional electricity planning initiatives on the IESO website – select East Lake Superior
- Follow the [East Lake Superior regional planning](#) activities online
- Dedicated engagement [webpage](#)
- [Regional Electricity Networks](#) provide a platform for ongoing engagement on electricity issues – join Northeast Network

Questions?

Do you have any questions for clarification on the material presented today?

Submit questions via the web portal on the webinar window, or by email to engagement@ieso.ca

Seeking Input on the Webinar

- Tell us about today
- Was the material clear? Did it cover what you expected?
- Was there enough opportunity to ask questions?
- Is there any way to improve these gatherings, e.g., speakers, presentations or technology?

Chat section is open for comments