



SEPTEMBER 28, 2022

North & East of Sudbury Regional Electricity Planning

Engagement Webinar #2

Objectives of Today's Engagement Webinar

- To provide an update on the electricity planning activities for the North & East of Sudbury Region
- To seek feedback on the defined electricity needs and screening of high-level potential options
- To outline next steps


Agenda

1. North & East of Sudbury Regional Electricity Planning Status Update and Recap
2. Defined Electricity Needs
3. Screening for Potential Options
4. Engagement and Next Steps

Seeking Input

- What feedback do you have on the defined needs?
- What information should be considered as high-level potential options are screened?
- What information should be provided in future engagements?

Please submit your written comments by email to engagement@ieso.ca by October 19.



North & East of Sudbury Regional Electricity Planning Status Update and Recap

Summary of Electricity Planning Progress to Date

- The electricity demand forecast has been finalized informed by engagement on key developments, projects, priorities, and initiatives
- Since the last public webinar, the working group completed studies to define the electricity system needs in the region, which we are presenting today the next step is the screening of high-level potential options
- The first electricity plan – Integrated Regional Resource Plan (IRRP) – for this region is on track to be completed in early 2023

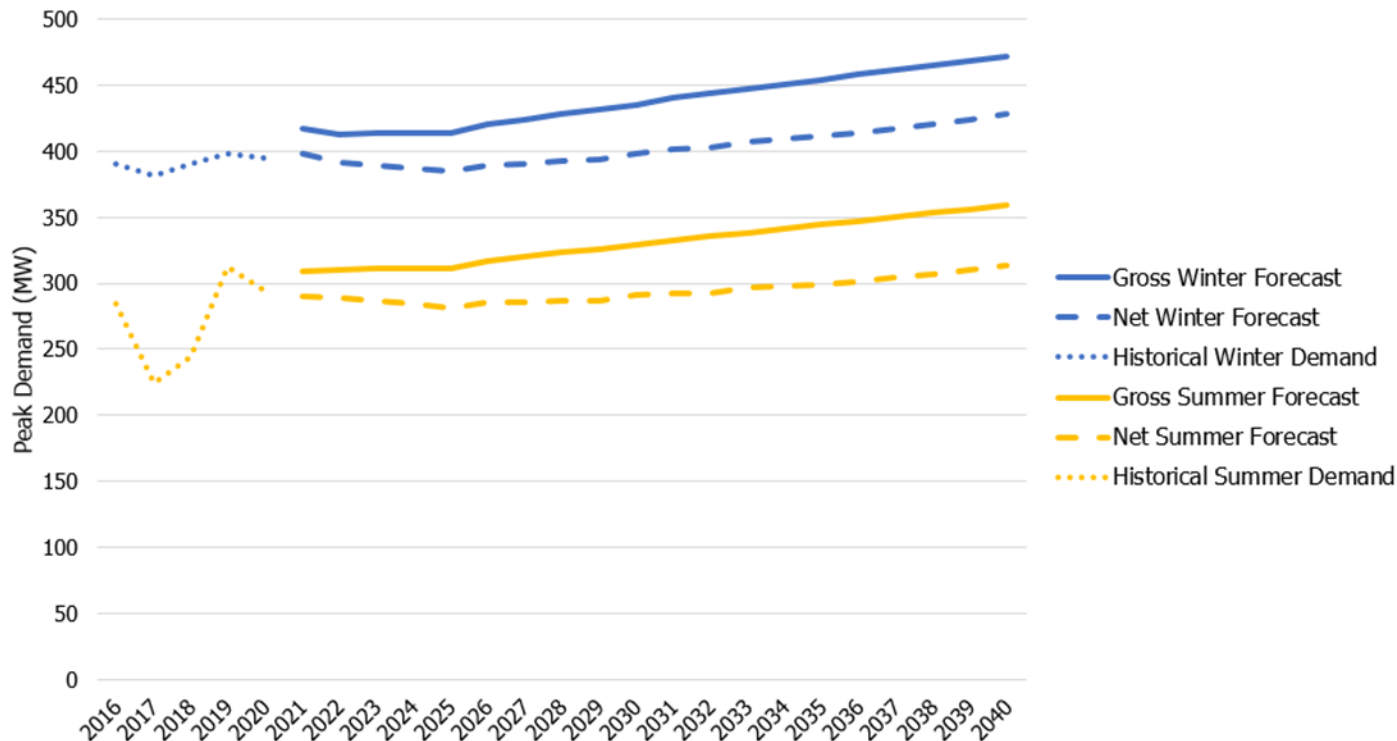
Recap: Engagement Activities to Date

- [Engagement](#) began to inform electricity planning in the North & East of Sudbury region – June 2021
 - Final [Scoping Assessment Report](#) posted following public [webinar](#) and written comment period that determined the need to develop an electricity plan for the region – August 2021
- Meetings with local municipalities to discuss planned growth and development, projects and priorities to help inform electricity demand forecast and engagement plans
- Public webinar #1 held on [March 31](#) to seek input on draft electricity demand forecast and planned engagement activities
 - Detailed forecast [data](#) and IESO [responses to feedback](#) posted

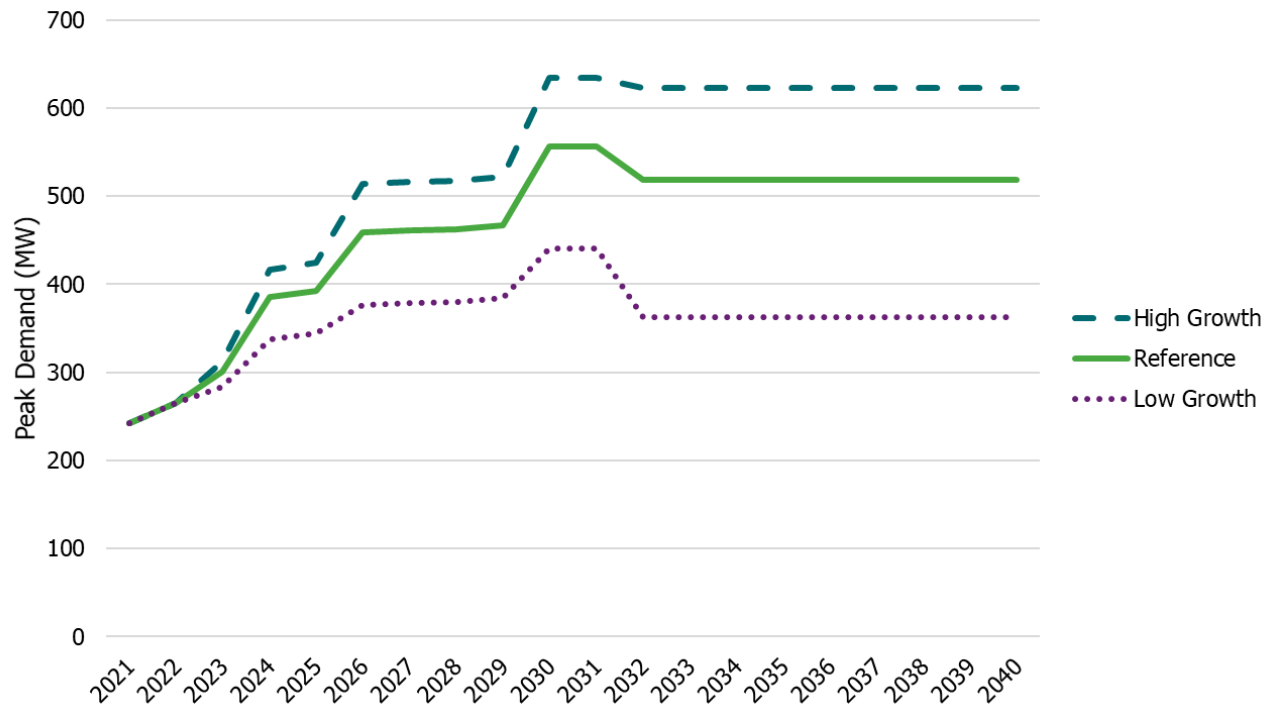
What we've heard so far

- Pockets of industrial development expected in the City of Temiskaming Shores and Town of Iroquois Falls
- Interest in exploring DERs and other non-wires alternatives such as energy efficiency to address regional needs and defer the need for new transmission or large-scale generation

LDC Forecast – Extreme Weather Net of CDM & DG



Transmission Connected Mining Forecast





Defined Electricity Needs

Recap: Categories of Needs

Capacity Needs

- Station capacity refers to the ability to convert power from the transmission system down to distribution system voltages
- System capacity (or “load meeting capability”) refers to the ability of the electricity system to supply power to customers in the area, either by generating the power locally, or bringing it in through the transmission system

End-of-Life Asset Replacement Needs

- Based on the best available asset condition information at the time
- Evaluated to decide if the facility should be replaced “like-for-like”, “right-sized”, or retired

Load Restoration and Supply Security Needs

- Load restoration describes the electricity system’s ability to restore power to those affected by a major transmission outage within reasonable timeframes
- Supply security describes the total amount of load interrupted following major transmission outages

Needs

Kirkland Lake Area Capacity Needs

- Station Capacity needs start emerge in early 2030s in Ramore TS followed by Kirkland Lake TS in 2040.
 - Non-wires alternatives are a possible solution.
- Circuit Capacity needs also emerge in 2030. A remedial action scheme¹ will be in place to address this need.

¹Remedial Action Scheme: A scheme designed to detect predetermined system conditions and automatically take corrective actions that may include, but are not limited to, curtailing or tripping generation or other sources, curtailing or tripping load, or reconfiguring a System(s).

Needs

500 kV Supply Security Needs

- Existing system was designed prior to development of planning standards (ORTAC) that we follow today.
- As such there are remedial action schemes that are being used in lieu of adhering to these planning standards.
- Updating the system to adhere to planning standards will require a bulk system study and likely involve significant capital investment. Thus, any issues on the 500 kV system are out of scope of this regional plan.

Needs

Operational Considerations

- The Working Group is also considering input from the system operators when identifying needs of the system and in the recommended solutions.
- Most considerations include ensuring there is enough reactive power support to enable operation of the grid and to explore existing reliance on remedial action schemes when connecting new customers and its implications on future reliability.

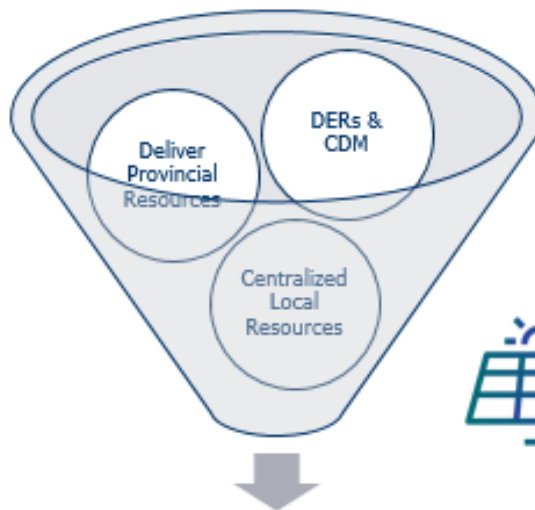
End-of-Life Asset Needs

- Hydro One identified some circuits and transformers that are at end of life in their Needs Assessment report.
- The Working Group will take the opportunity to recommend right-sizing assets at end-of-life, when appropriate.
 - For example, circuits A8K and A9K were identified to be at end-of-life. The IESO and Hydro One are working to increase the capacity of replacement circuits in order to serve future expected load growth.

Possible Options in IRRPs



Traditional “wires” option to supply the local area with system resources (may include operational actions and remedial action schemes)



Recommendations



Non-wires alternatives (NWAs) like distributed generation (DG) or conservation & demand management (CDM)



Strategically-sited local generation to address transmission infrastructure limitations



Next Steps

Next Steps

- October 19 – Deadline for written feedback on defined needs
- November 7 – Responses to written feedback and additional data posted
- Q1 2023 – Final public webinar to seek input on options analysis and draft recommendations
- Q1 2023 – Final IRRP
- Q1 2023 – Northeast Regional Electricity Network Forum

Seeking Input

- What feedback do you have on the defined needs?
- What information should be considered as high-level potential options are screened?
- What information should be provided in future engagements?

**Please submit your written comments by email to
engagement@ieso.ca by October 19.**

Keeping in Touch

- Subscribe to receive updates on the North & East of Sudbury regional initiatives on the [IESO website](#) > select North & East of Sudbury region
- Follow the [North & East of Sudbury](#) 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