SEPTEMBER 8, 2021

Parry Sound/Muskoka Integrated Regional Resource Plan (IRRP) Engagement Webinar #1

Transmission Planning
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Objectives of Today's Webinar

- To provide an overview of the regional planning process in order to prepare all interested parties for this engagement
- To seek feedback on:
  - The electricity demand forecast
  - Additional needs that should be considered
  - The draft engagement plan
- To outline next steps

Seeking Input

As you listen today, please consider the following items to help guide your feedback after today's webinar:

- What are some of your key developments, projects or initiatives that might be considered in developing the electricity demand forecast?
- Please tell us about any local concerns that you may be experiencing
- What information do you need to participate in this engagement?
- Does the proposed Engagement Plan provide sufficient scope and opportunities for input?

Please submit your written comments by email to engagement@ieso.ca by September 29

Community input integral to electricity planning

Importance of climate goals.

Exploring alternatives to traditional infrastructure and technologies.

Working to attract commercial, industrial businesses development.

Accommodating emerging expansion plans in the industrial sector.

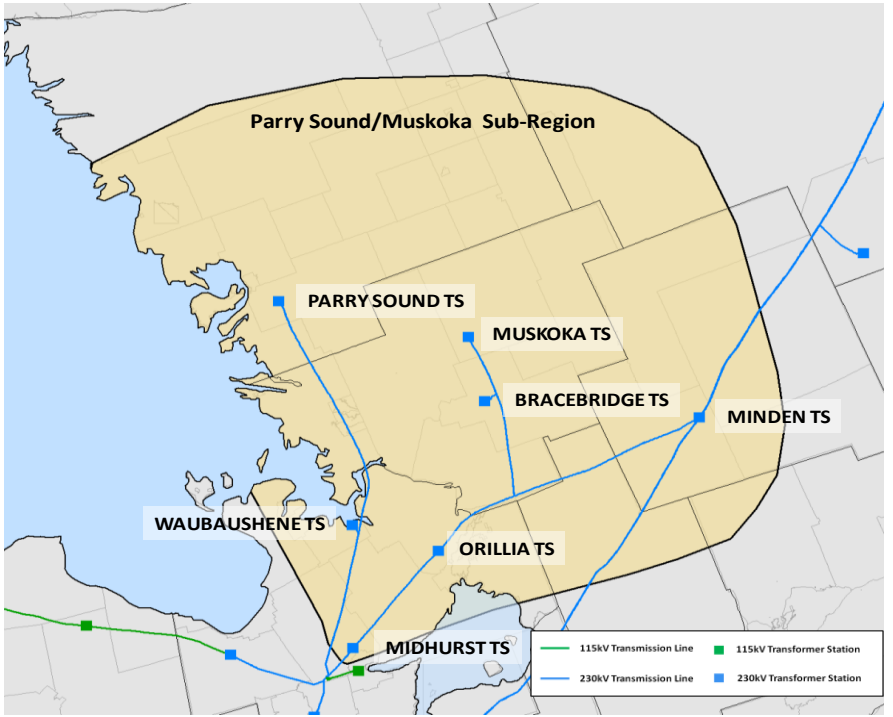
Tools for businesses to earn revenue, reduce demand.

Community energy plans helping to outline goals for the future.

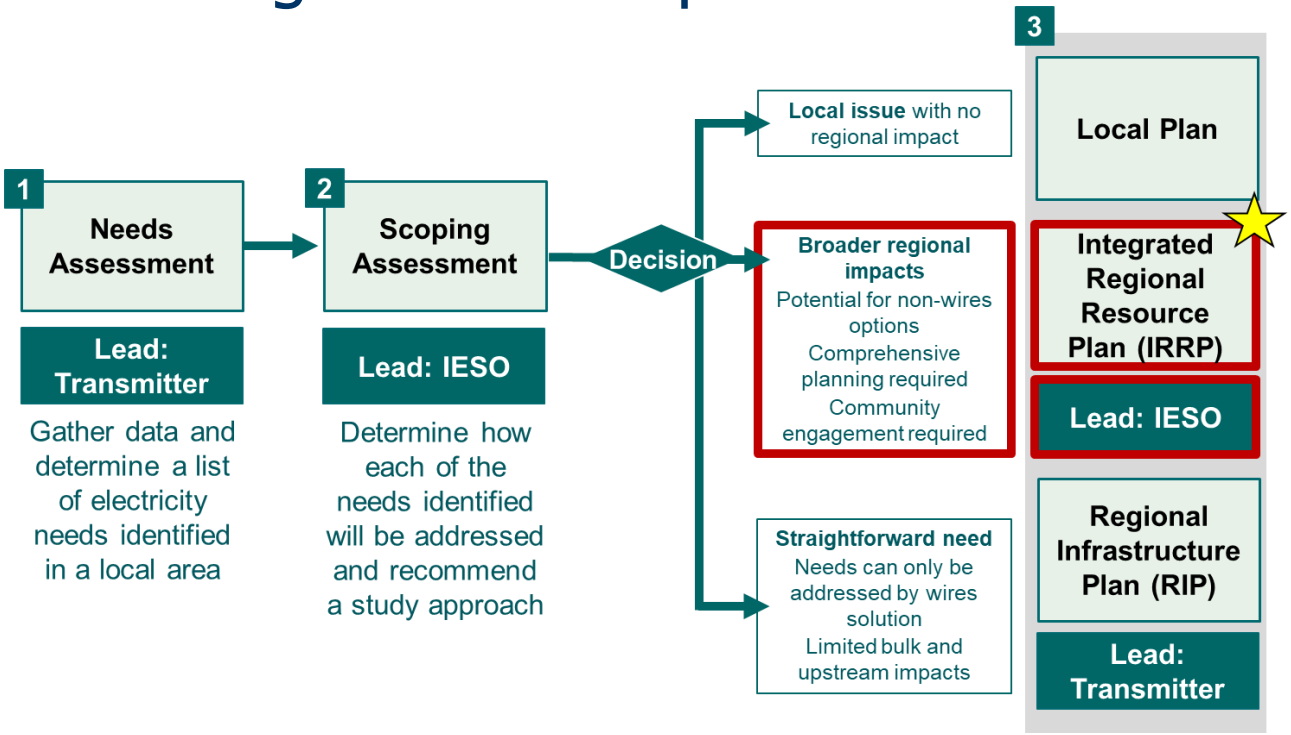
Regional Electricity Planning in the Parry Sound/Muskoka Sub-Region

Parry Sound/Muskoka Sub-Region

- The first regional planning cycle for South Georgian Bay/Muskoka divided the area into two sub-regions: Barrie/Innisfil and Parry Sound/Muskoka
- Parry Sound/Muskoka sub-region roughly encompasses the Districts of Muskoka and Parry Sound
- Both IRRPs were published in December 2016, followed by a Regional Infrastructure Plan (RIP) in August 2017



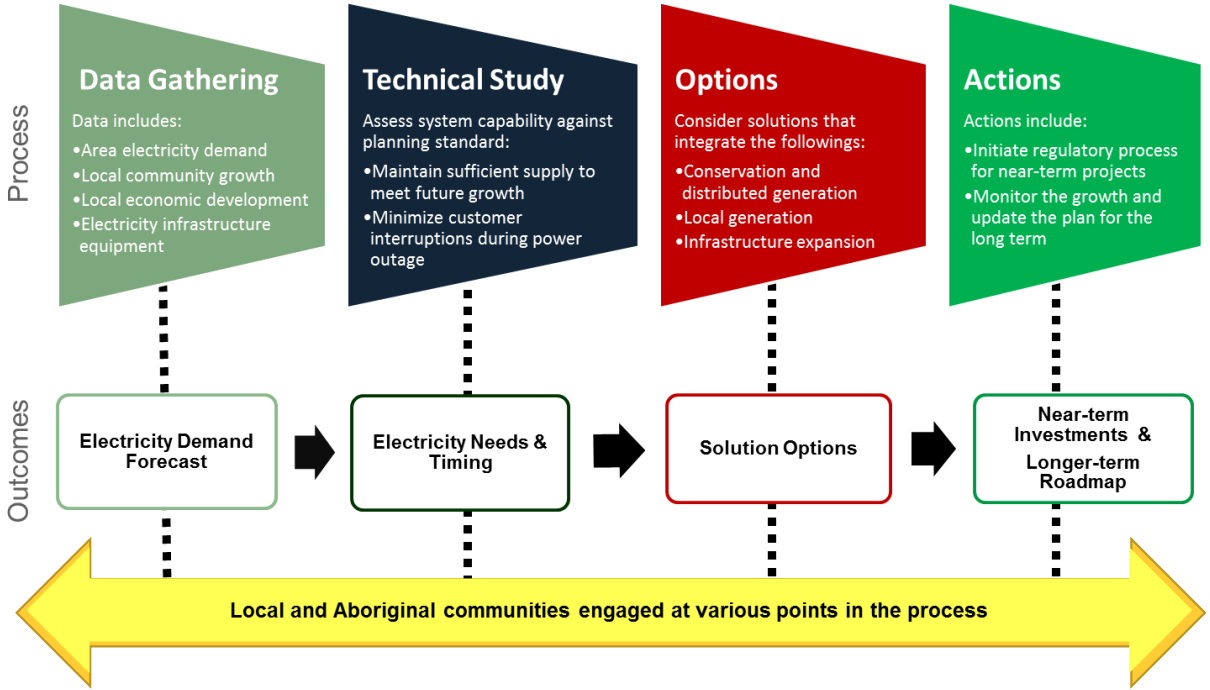
Regional Planning Process Steps



IRRP Study Team ("Technical Working Group")

Team Lead, System Operator	• Independent Electricity System Operator
Lead Transmitter	• Hydro One Networks Inc. (Transmission)
Local Distribution Companies (LDC)	• Hydro One Networks Inc. (Distribution) • Alectra Utilities • Elexicon Energy • Lakeland Power • EPCOR Electricity Distribution Ontario Inc. • Newmarket-Tay Power Distribution Ltd.

IRRP Process Overview



Previous Planning Cycle: Projects Underway

Sub-Region	Description of Need	Solution and Timing
Parry Sound/ Muskoka Sub-Region	• Insufficient capacity at Parry Sound TS • EOL Parry Sound transformers	• Transformer upsizing (new 230/44 kV 83 MVA) • In-service in 2022
	• Load restoration criteria violations under M6E+M7E contingency	• Installation of 230 kV switches on M6E/M7E at Orillia TS • In-service in 2021
	• EOL 230/44 kV 42 MVA Minden TS transformers	• Replacement with 83 MVA units • In-service in 2021

Activities to Date

- Engagement launched on the South Georgian Bay/Muskoka Scoping Assessment – October 1, 2020
- Public webinar on Scoping Assessment – October 14, 2020
- Final Scoping Assessment Outcome Report posted with IESO responses to feedback received – November 30, 2020
- Outreach with targeted communities conducted to help inform IRRP engagement characteristics – Q4 2020

Current Status – Parry Sound/Muskoka IRRP

- The electricity demand forecast for existing distributors has been completed
- Detailed technical studies to quantify electricity needs are underway

Q2 2020	Q4 2020	Q1 2021	...	Q2 2022	Q2 2022
Needs Assessment	Scoping Assessment and Engagement	IRRP Study and Engagement			IRRP Published

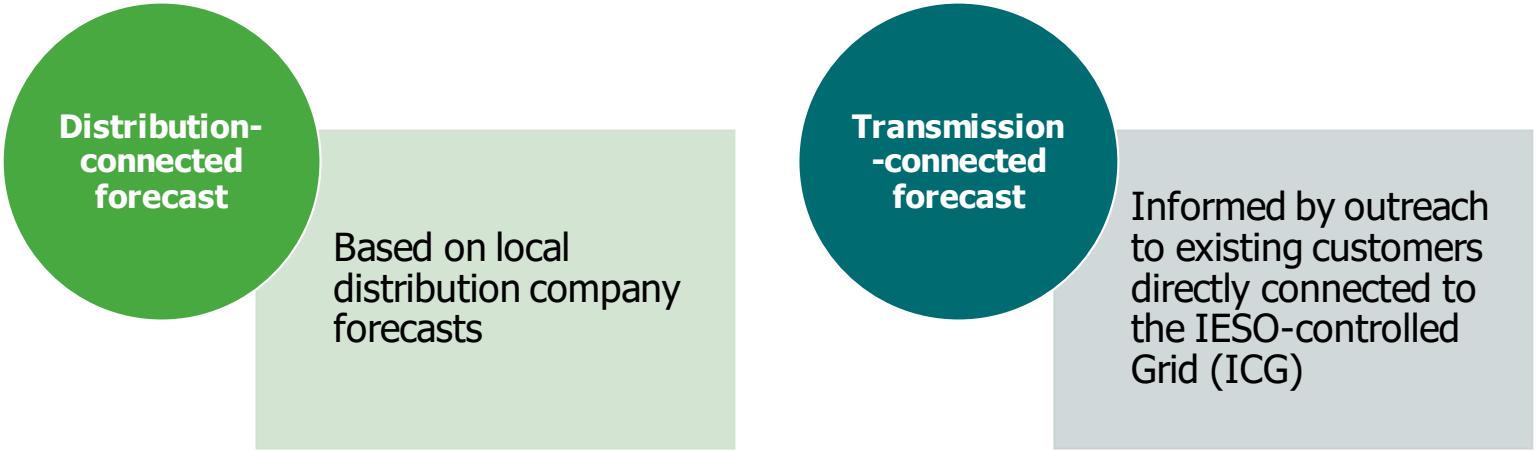
What we've heard so far

- Providing insights to help inform long-term load forecasts is challenging; interest rates are spurring development but hard to say what behavior is temporary and what is permanent
- Electrification is an emerging area of interest
- High-density planning and development is one way that communities are looking to achieve sustainability targets
- A robust and reliable supply of electricity is crucial to support healthy economic development

Electricity Demand Forecast and Data Gathering

Electricity Demand Forecast

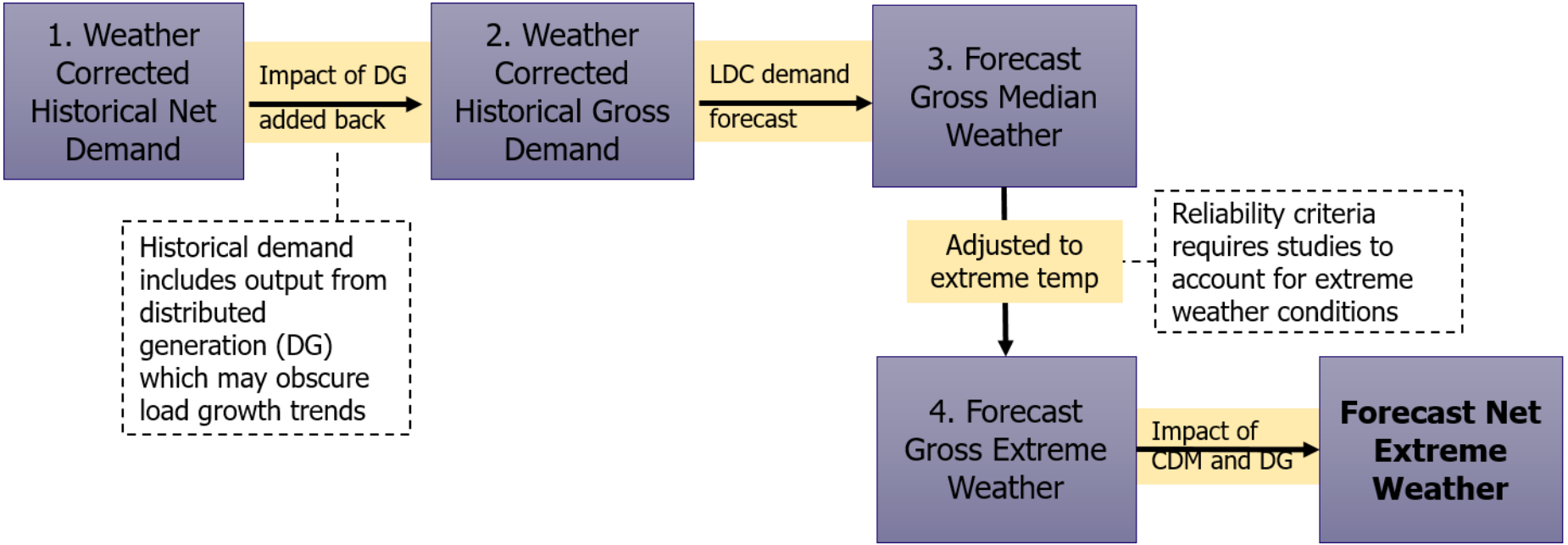
- An IRRP typically uses a 20-year forecast which includes the following two components:



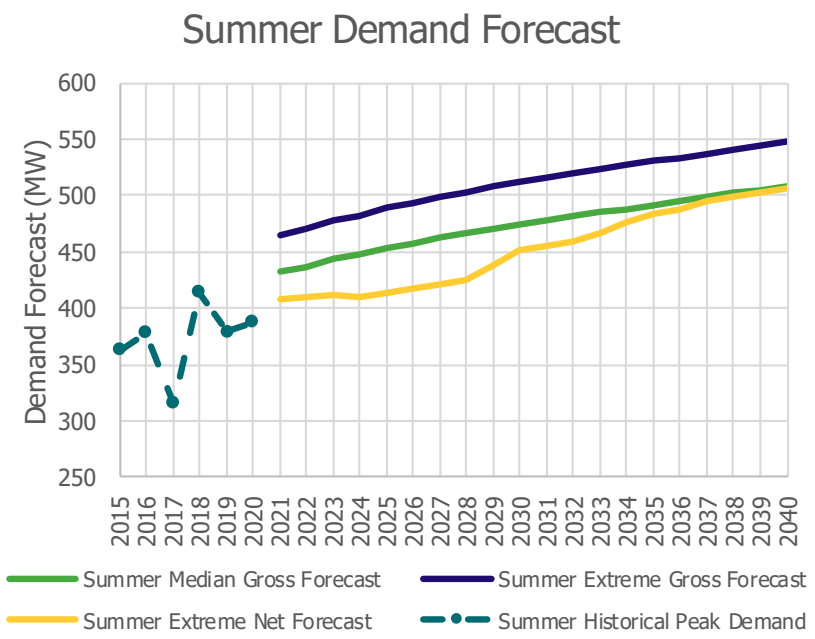
Distribution-connected Forecast: LDC Role

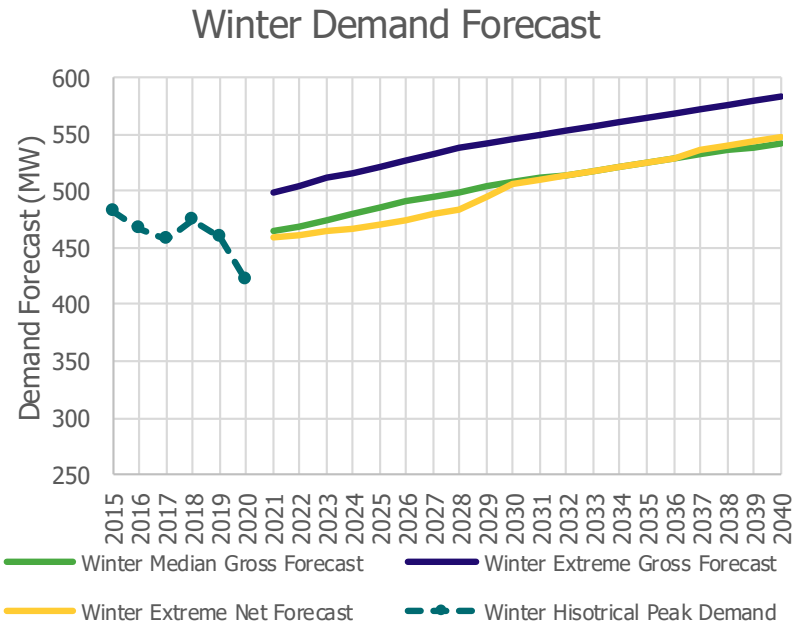
- The regional planning process relies on local distribution companies (LDCs) to provide an electricity demand forecast for their service territory
- LDCs play a crucial role translating municipal official plans, community energy plans, development proposals, and other data sources into annual peak demand forecasts for their service territory
- These forecasts are then aggregated and adjusted to account for extreme weather, distributed generation (DG), and conservation and demand management (CDM) programs

Distribution-connected Forecast: Development



IRRP Demand Forecast





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Data Gathering – Demand Forecast

- Important considerations that influence the load forecast include:
  - Municipal/regional growth plans
  - Climate change action plans
  - Community energy plans
  - Business plans of major electricity consumers or large projects
- Some of the plans above may have implications on the load forecast that are difficult to quantify (e.g. accelerated electrification)

Feedback– Demand Forecast

- As you listen today, are there additional factors that should be considered in developing the electricity demand forecast for this region, such as:
  - Key developments, projects or initiatives
  - Planned expansions or retirements of large customers/electricity users
  - Local industry trends or other local activities
  - Municipal policy decisions/plans

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

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

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

Preliminary Needs*

Preliminary Needs

- Summer Station Capacity Need at Waubaushene TS

- System Capacity need (thermal) at circuits M6E and M7E* under certain generation assumptions
- M6E and M7E supply Muskoka TS, Midhurst TS, Orillia TS and Bracebridge TS

- End-of-life needs at the following assets
  - M6E and M7E**
  - E8V and E9V
  - D1M and D2M

*Technical studies are still being completed and will be updated by the next webinar

**Note that the sections of M6E and M7E that are at end-of-life are different than the thermally limited sections

IRRP Immediate Next Steps

1. Finalize needs study and determine timing of all needs identified
2. Assess possible options to address needs, including any non-wires alternative options, if appropriate
3. Recommend options based on balance of reliability, feasibility of timely implementation, and cost.

What Can Regional Planning Do?

- Regional planning is an opportunity to consider local energy solutions
- Provide information on which entity is best positioned to address concerns that do not fall within the scope of regional planning
- For performance issues that stem from the IESO-controlled grid, investigate the cause and document options to improve performance
  - Note that the IRRP will not make firm recommendations on options to improve performance beyond criteria – these improvements must be customer driven
- Where reinforcements are being considered for other system needs, look for opportunities to incrementally improve performance

Engagement and Next Steps

Who Should Participate in the Engagement Process?

- Municipalities
- Communities
- Chambers of Commerce/Boards of Trade
- Large energy users
- Community groups and associations
- Academia and research organizations
- Environmental and sustainability groups organizations
- General public

Engagement Plan – draft Timeline

- A draft engagement plan for the region is now posted on the engagement webpage for comment until September 29

Milestone	Webinar & Written Comment Period
Demand forecast, preliminary needs, proposed engagement plan	**September 8; written comments due by September 29** ** Response to feedback and final engagement plan posted by October 13*
Define need and potential solutions being examined	**Late Q4 2021; feedback deadline TBC** ** With permission, all feedback will be posted and responded to*
Options evaluated and draft recommendations	**Q1 2022; feedback deadline TBC** ** With permission, all feedback will be posted and responded to*
Final IRRP	**Q2 2022** (Plan will be posted along with responses to feedback received)

*** Additional engagement activities may be undertaken as needs and potential solutions are studied, such as the ability to invite and conduct 1:1 outreach throughout the engagement which will inform the discussions**

Next Steps for Engagement

- Proposed approach to engagement is posted on the Parry Sound/Muskoka engagement webpage
- Written feedback on draft engagement plan is due September 29
- Final engagement plan and response to feedback will be posted by October 13
- Ongoing engagement will continue throughout the development of the IRRP; such as the ability to invite and conduct 1:1 outreach throughout the engagement which will inform the discussions

Seeking Your Input

- What are some of your key developments, projects or initiatives that might be considered in developing the electricity demand forecast?
- Please tell us about any local concerns that you may be experiencing
- What information do you need to meaningfully participate in this engagement?

Please submit your written comments by email to engagement@ieso.ca by September 29

Keeping in Touch

- Subscribe to receive **updates on the South Georgian Bay/Muskoka** region on IESO's website www.ieso.ca/subscribe > select region
- Visit the **Parry Sound/Muskoka regional planning and engagement webpages**
- Join the **GTA/Central Regional Electricity Network** to participate in a broader regional dialogue

Questions

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

Submit questions via the web portal on the webinar window, 'raise your hand' at the top of the screen, or email us at engagement@ieso.ca

Seeking Input on Today's Webinar

Tell us about today

- Was the material presented clearly?
- Did it cover what you expected?
- Was there enough opportunity to ask questions?
- Is there any way that we can improve these gatherings? i.e. speakers, presentations or technology

Chat section is open for comments

Questions?

Thank You

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