

MARCH 12, 2020

Greater Toronto Area (GTA) West 2019 Integrated Regional Resource Plan (IRRP) Engagement Webinar #1

Objectives of Today's Engagement Webinar

- To provide an overview of the regional planning activities in the GTA West Region, including the electricity demand forecast and the needs that will be explored
- To seek feedback on the engagement plan, electricity demand forecast and needs for the development of an Integrated Regional Resource Plan (IRRP) for GTA West
- To outline next steps

Agenda

- GTA West Regional Planning Status Update
- Draft Electricity Demand Forecast
- Community Engagement and Next Steps

Seeking Input

As you listen today, consider any additional factors that should be considered in the following processes:

- Determining the electricity demand forecast for the GTA West region
 - *Are there any key developments, projects or initiatives that should be considered in the electricity planning for the region? Is there any additional information that might influence the forecast such as the expansion or retirement of large customers/electricity users, industry trends or other local activities?*

Seeking Input (continued)

- Identifying needs that need to be addressed
 - *Do you have any areas of concern or interest in relation to electricity that you would like to see considered as part of the planning process?*
- Engaging with communities and interested parties
 - *What information do you think will be important to provide throughout the engagement?*

Seeking Input (continued)

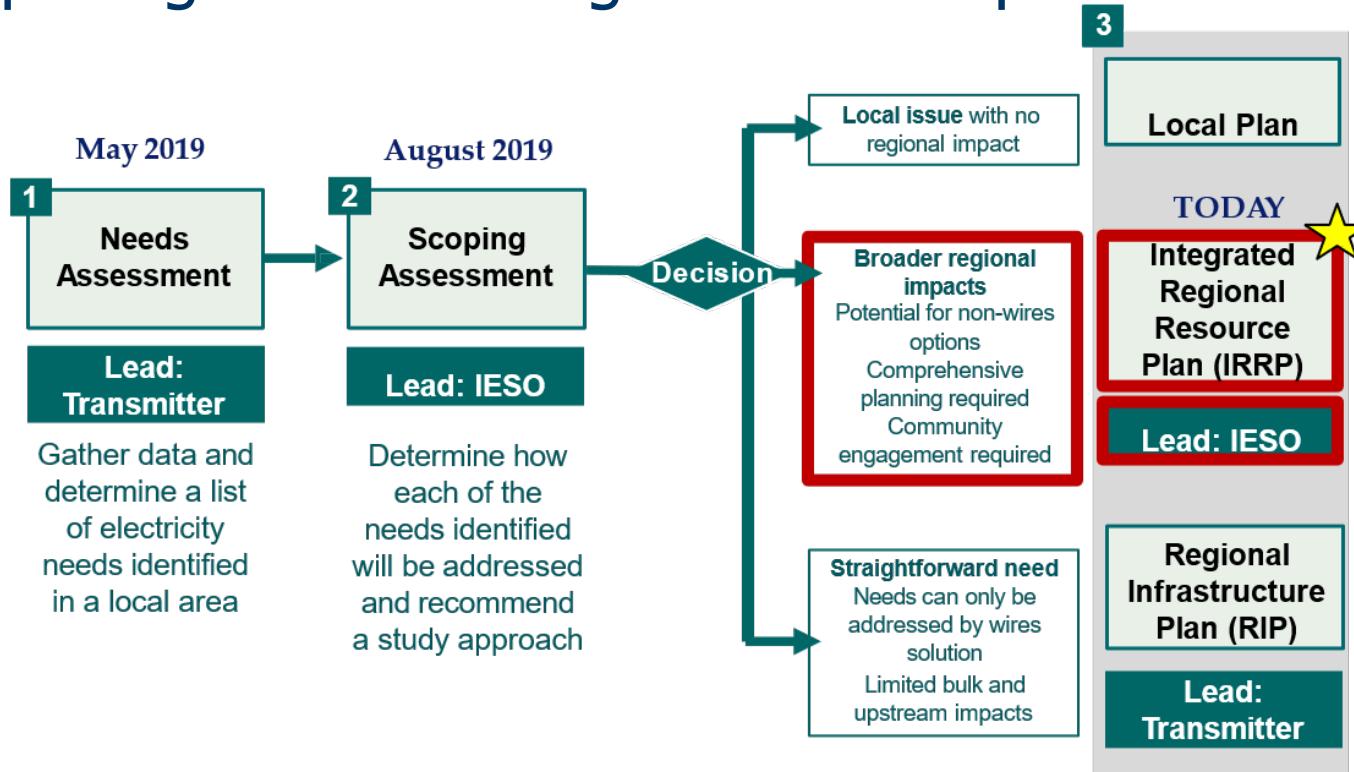
- *Does the proposed Engagement Plan provide sufficient scope and opportunities for input? What other engagement activities or methods should be considered?*

Please submit your written comments by email to
engagement@ieso.ca by March 26

Status Update

1. GTA WEST REGIONAL PLANNING

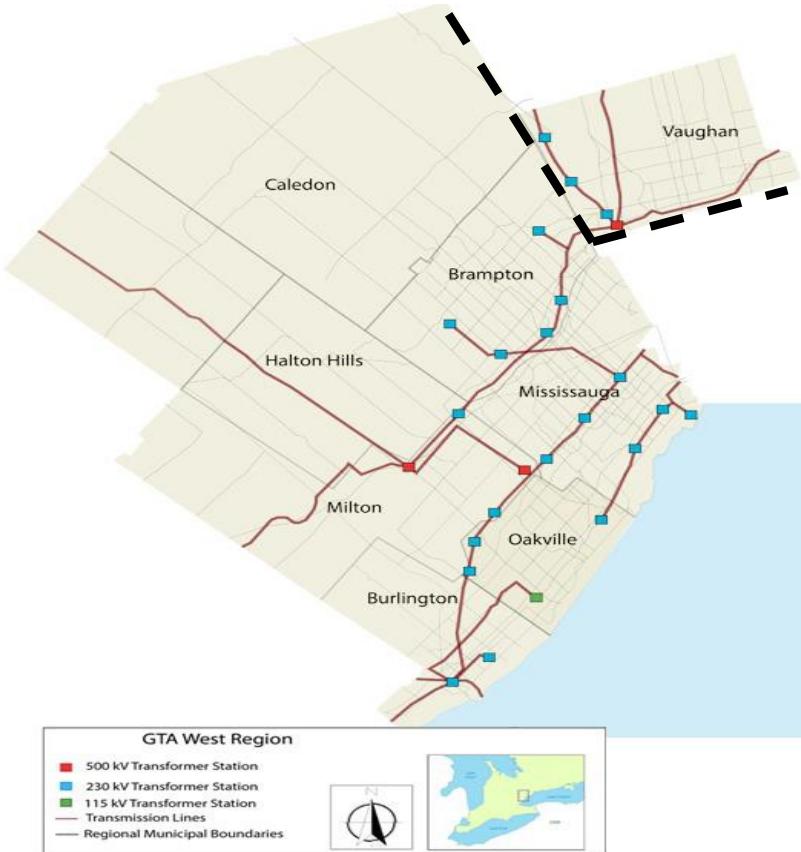
Recap: Regional Planning Process Steps



GTA West Region

Roughly encompasses:

- Regional Municipalities of Halton and Peel
- Municipalities of Brampton South Caledon, Halton Hills, Burlington, Mississauga, Milton and Oakville
- Communities of the Six Nations of the Grand
- River/HCCC and Mississaugas of the New Credit



IRRP Working Group



**Team Lead
System Operator and Planner**



Local Distribution Company



Transmitter and Local Distribution Company



Current Status of GTA West Regional Planning

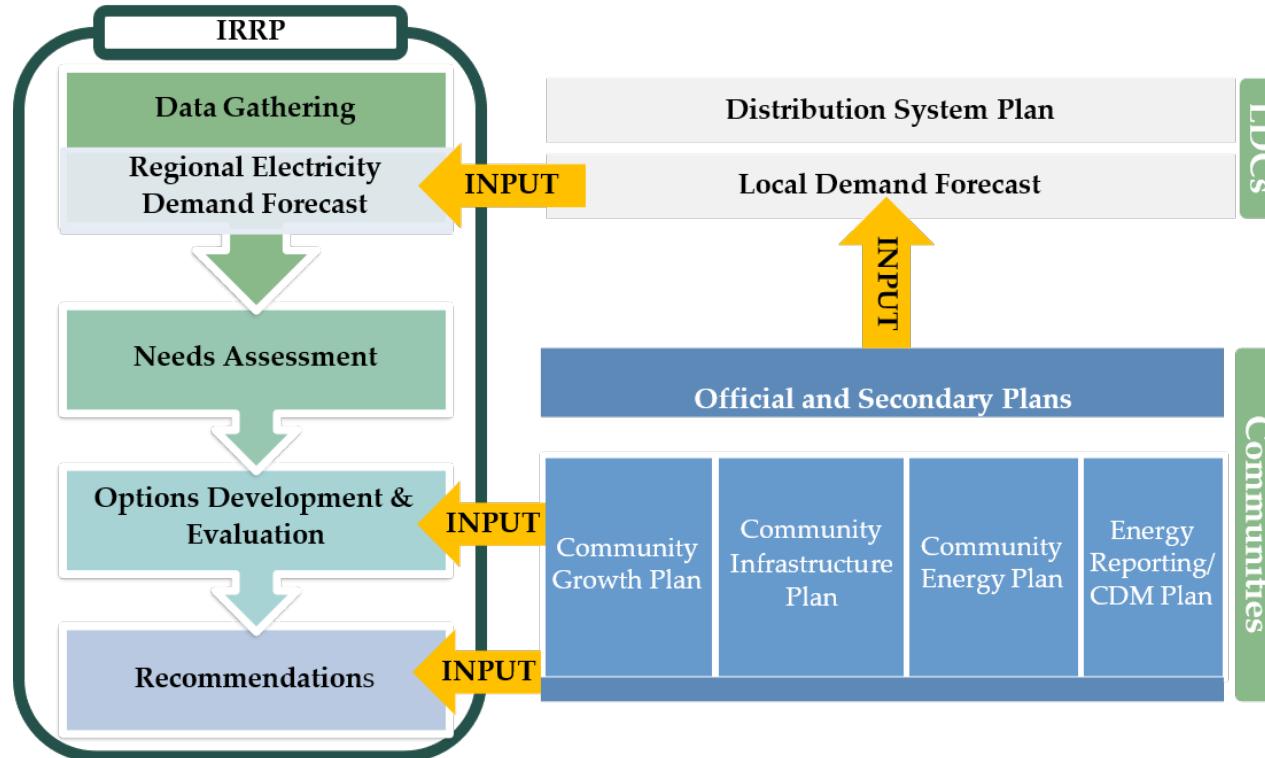
IRRP study work began in Q3 2019, and is on track for completion early 2021

- Draft electricity demand forecast has been completed
- Studying the underlying factors driving the forecast to determine and assess the needs to be addressed in this planning cycle and develop a detailed description of needs to better screen and evaluate options

Study Timeline

| Q2 2019 | Q2/Q3 2019 | Q3 2019 | Q1 2020 | ... | Q4 2020 | Q1 2021 |
|------------------|-----------------------------------|---------|---------------------------|-----|---------|----------------|
| Needs Assessment | Scoping Assessment and Engagement | | IRRP Study and Engagement | | | IRRP Published |

Coordinating Local Planning Activities



Activities to Date

- Engagement launched on GTA West Scoping Assessment – June 6, 2019
- Draft GTA West Scoping Assessment posted for public comment – June 20, 2019
- Public webinar on GTA West regional planning and Scoping
- Assessment – June 24, 2019
- Final GTA West Scoping Assessment posted with IESO responses to comments received – August 8
- November 6 & 7 – meetings with municipalities to discuss regional planning underway, high level areas of needs and planned engagement activities

What we've heard so far...

- Strong interest to understand how electricity forecasts are developed, and its key components
- Continue to consider community energy plans and other key planning initiatives throughout the planning process
- Strong level of interest and discussion around the parallel NW GTA Transmission Corridor Identification Study
- Concern from local aviation organizations and groups regarding potential transmission solutions that may be examined to address regional needs given the pocket of growth in Northern Brampton and South Caledon

2. GTA WEST REGIONAL ELECTRICITY FORECAST

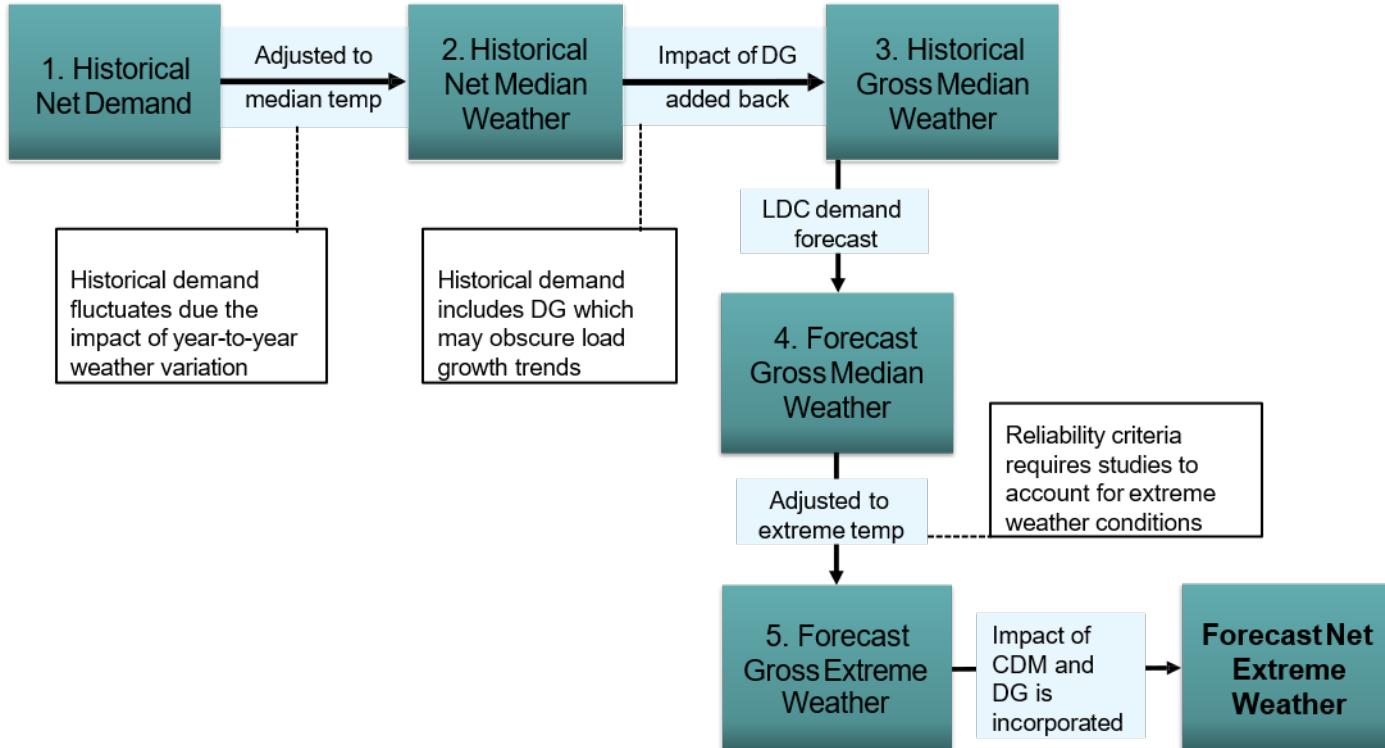
Data Gathering – Demand Forecast

- The IRRP assesses the electricity needs based on a 20-year forecast of peak electricity demand
- A peak demand forecast for the region is created by
 - Collecting electricity demand forecast information from each LDC in the region
 - Since electricity demand is weather sensitive, demand forecast information from LDCs are created assuming median weather conditions

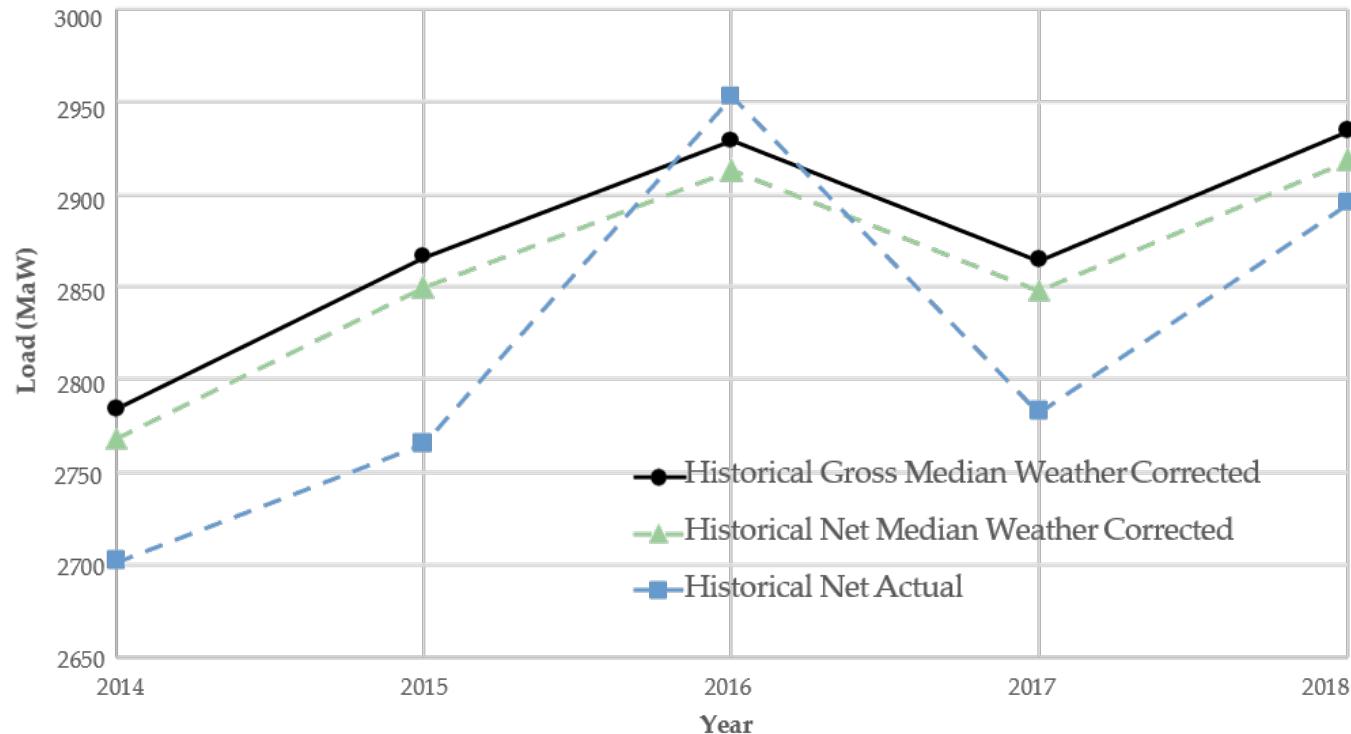
Data Gathering – Demand Forecast (continued)

- Estimated impact of province-wide Conservation and Demand Management (“CDM”) targets on the region’s peak demand
 - Calculating the forecast peak demand contribution of contracted distributed generation (“DG”)
 - Adjusting the forecast to account for the impact of extreme weather conditions

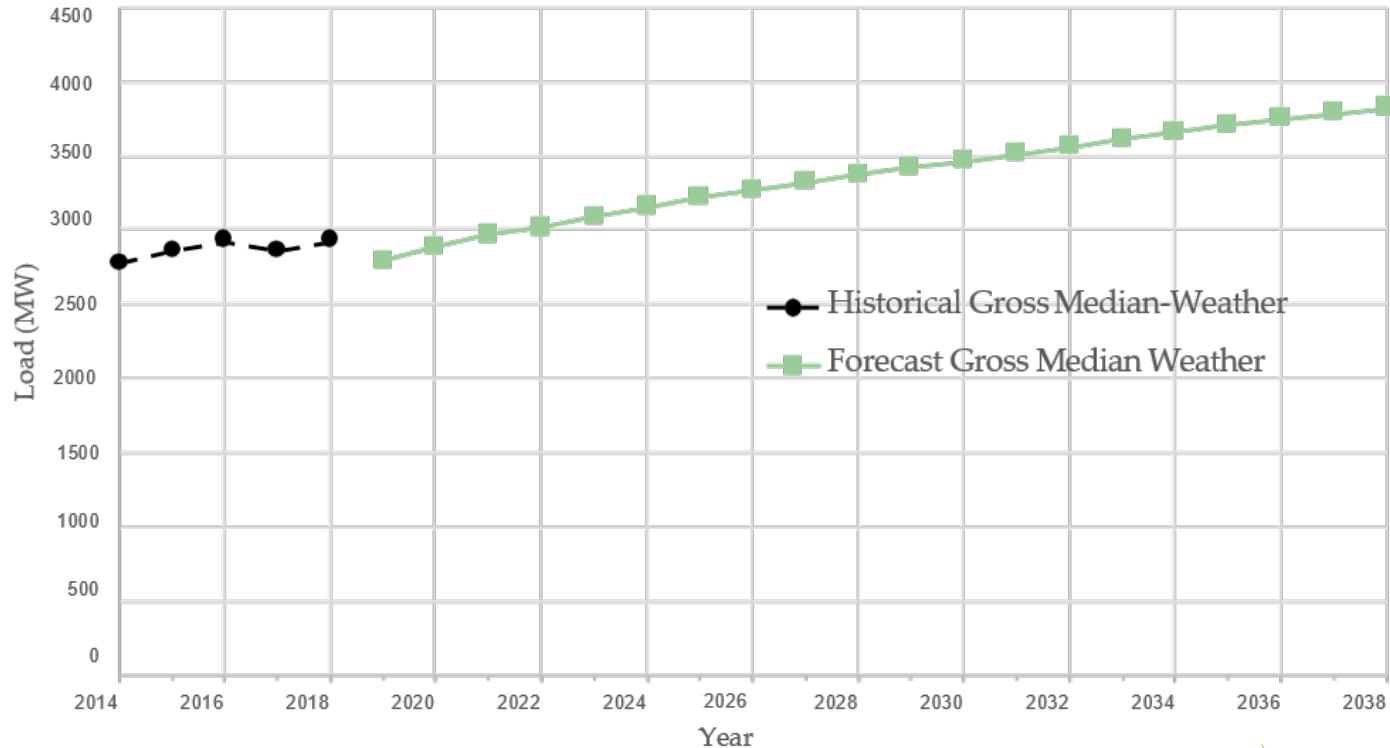
Development of Demand Forecast



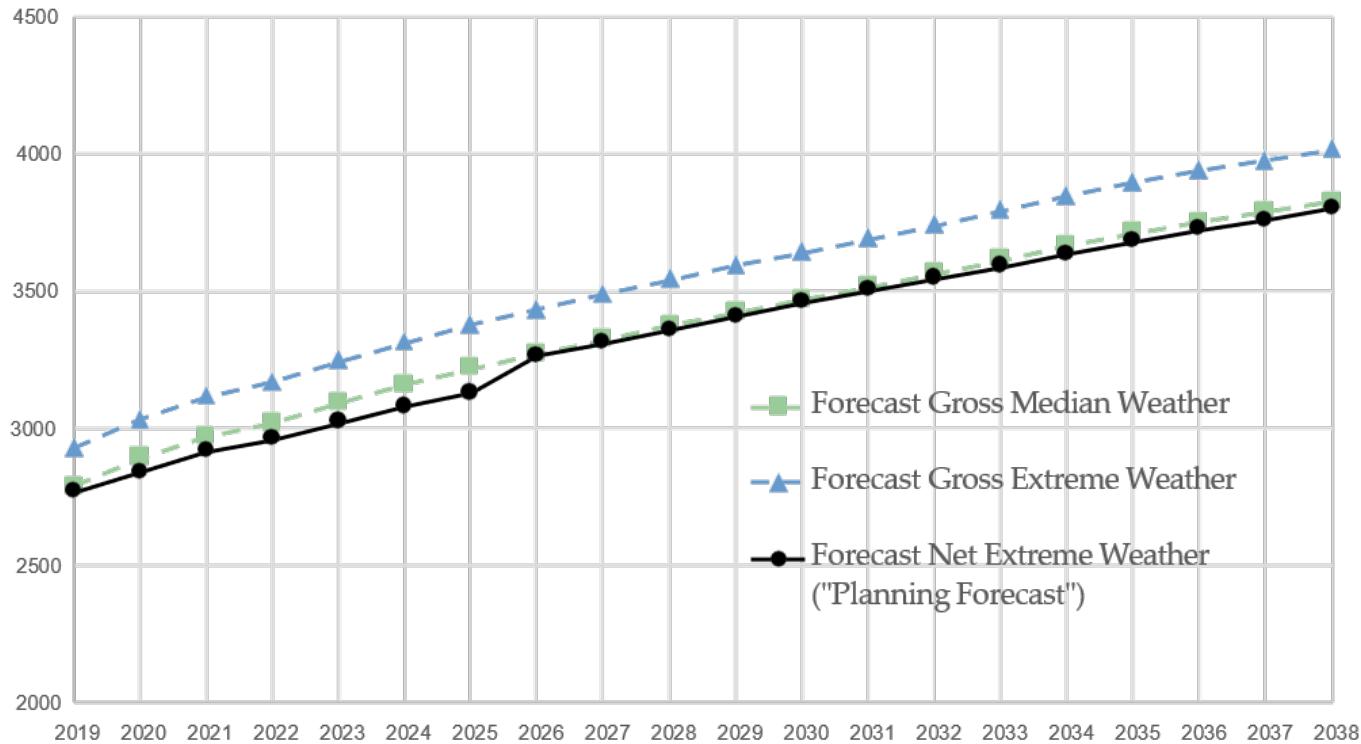
Historical 'Unbundling'



Gross Demand Forecast



Arriving at the 'Planning Forecast'



Forecast Considerations

- 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

Forecast Considerations (continued)

- Some of the plans above may have implications on the load forecast that are difficult to quantify (e.g. accelerated electrification)
 - As needs are identified in the IRRP, the study may develop forecast scenarios for specific pockets in the region to capture a range of possible forecast outcomes

Feedback on Electricity Demand Forecast and Needs

As you listen today, consider any additional factors that should be considered in the following processes:

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 - *Are there any key developments, projects or initiatives that should be considered in the electricity planning for the region? Is there any additional information that might influence the forecast such as the expansion or retirement of large customers/electricity users, industry trends or other local activities?*

Feedback on Electricity Demand Forecast and Needs (continued)

- Identifying needs that should be addressed
 - *Do you have any areas of concern or interest in relation to electricity that you would like to see considered as part of the planning process?*
- Engaging with communities and interested parties
 - *What information do you think will be important to provide throughout the engagement?*
 - *Does the proposed Engagement Plan provide sufficient scope and opportunities for input? What other engagement activities or methods should be considered?*

Feedback on Electricity Demand Forecast and Needs (continued)

Please submit your written comments by email to
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ENGAGEMENT AND NEXT STEPS

Key Elements of the Engagement Plan

Engagement Initiative

- Draft Engagement Plan posted for public comment February 20
- To inform and seek input from the broader public at various junctures during IRRP development
- Includes webinars and targeted municipal outreach

Technical Working Group

- Comprises of IESO, LDC(s), and transmitter(s) in the region
- Members conduct the regional planning process to identify local electricity needs and options

Key Areas for Input

TODAY

| Process | Outcome | Community Input |
|-----------------|---|---|
| Data Gathering | Electricity demand forecast | <p>Are there any economic development or other growth or project plans that might influence the regional load forecast?</p> <p>Is there additional information that should be considered?</p> |
| Technical Study | Electricity needs and timing | Is there additional information that should be considered in the study assumptions? |
| Options | Solutions options | <p>Is there community feedback to the solutions proposed that should be considered in further development of the IRRP?</p> <p>Are there any other options that should be considered?</p> |
| Action | Near-term projects and longer-term activities | <p>What further discussions are needed to initiate near-term projects?</p> <p>What should communities consider in their plans in the medium- and long-term? (e.g. Official Plan review, Secondary Plan development, etc.)</p> |

Engagement Plan – Timeline

| Date | Major Milestones |
|---------------------|---|
| February 20, 2020 | Launch engagement initiative for IRRP and post draft engagement plan for public comment |
| March 12, 2020 | Engagement webinar #1 (seek input on draft engagement plan, load forecast, preliminary local needs/issues identified and timelines) |
| March 26, 2020 | Deadline to submit feedback on draft engagement plan, load forecast, preliminary local needs/issues identified |
| April 13, 2020 | IESO response to feedback received, and posting of final engagement plan |
| Mid-June 2020 | Engagement webinar #2 (seek input on defined needs, screening of potential options and considerations for broader engagement) |
| Early November 2020 | Engagement webinar #3 (seek input on draft IRRP recommendations) |
| Q1 2021 | Final GTA West IRRP posted with IESO responses to feedback on draft recommendations |

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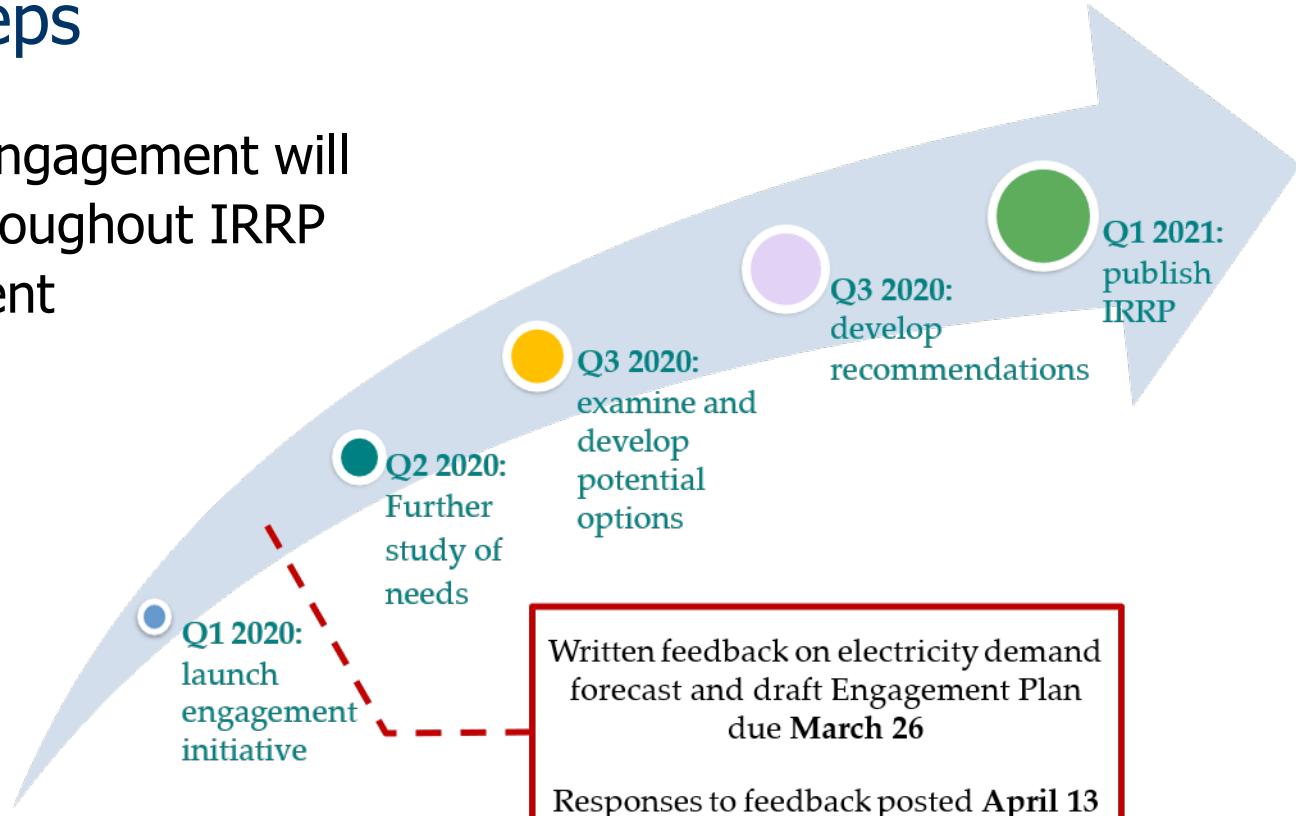
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Next Steps

Ongoing engagement will endure throughout IRRP development



Related: North West GTA Corridor Study

- A joint IESO and Ministry of Energy, Northern Development and Mines initiative is underway to identify land for transmission infrastructure to ensure that long-term needs in the northern portion of the GTA West region can be accommodated if and when they arise
- The North West GTA Corridor study is proceeding in parallel with the GTA West IRRP and the Ministry of Transportation's GTA West Transportation Corridor Route Planning and Environmental Assessment (EA) Study

Related: North West GTA Corridor Study (continued)

- Further engagement on the North West GTA Corridor Study will be available at the link below when they are announced:

<http://www.ieso.ca/en/Get-Involved/Regional-Planning/GTA-and-Central-Ontario/GTA-West>

Keeping in Touch

- Subscribe to receive updates on the GTA West regional initiatives on the IESO website <http://www.ieso.ca/subscribe> > select GTA West
- Follow the GTA West regional planning activities online
<http://www.ieso.ca/Get-Involved/Regional-Planning/GTA-and-Central-Ontario/GTA-West>
- Regional Electricity Networks provide a platform for ongoing engagement on broader electricity issues:
<http://ieso.ca/en/Get-Involved/Regional-Planning/Electricity-Networks/2019-2020-Regional-Electricity-Networks> > Select GTA and Central Ontario

Keeping in Touch (continued)

- Regional Electricity Planning for GTA West – engagement webpage
<http://www.ieso.ca/Sector-Participants/Engagement-Initiatives/Engagements/Regional-Planning-GTA-West>

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

Thank You

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