



**AUGUST 20, 2026**

# GTA West Regional Electricity Planning

## Webinar #3 Detailed Options Analysis

# Land Acknowledgement

The IESO acknowledges that the GTA West is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee, and the Wendat peoples, including those covered by the Williams Treaties.

The IESO would also like to acknowledge all First Nations, Inuit and Métis peoples and their valuable past and present contributions to this land.

# Agenda

1. Ontario's Electricity Sector and IESO's Role
2. Recap: Regional Electricity Planning Process, the Demand Forecast, Electricity Needs & Option Screening
3. Detailed Options Analysis
4. Additional Considerations and Linkages to Other Plans
5. Next Steps and Discussion

# Our Commitment to Respectful Participation

- One speaker at a time; please raise your hand to enter the speaking queue.
- Keep remarks concise (approximately 60-90 seconds) and focused on the agenda topic.
- Avoid repeating points already covered; detailed feedback may be submitted in writing for follow-up.
- Maintain a respectful tone at all times.
- The IESO may redirect discussion to keep the agenda on track.
- Participants that are unable to participate respectfully by adhering to these principles may have their microphone disabled.



Connecting Today.  
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We work with:



# Summary

- **Significant electricity needs are emerging in the GTA West region**, due to new housing, industrial growth, and electrification. Many of these needs are immediate, as the current infrastructure cannot keep pace with projected growth in the region, especially in areas that have little to no transmission infrastructure today.
- To meet this growing demand, **large-scale long-term investments**, such as new transmission lines and stations, and interim measures that can help maintain reliability while major projects are built, are required. Together, these long-term investments and interim actions will form an integrated plan that ensures communities and businesses in GTA West continue to receive reliable, cost-effective electricity as the region expands.
- At this stage, **a detailed options analysis has been completed** to inform draft recommendations. The analysis considers a range of new transmission infrastructure, upgrades to existing infrastructure, non-wires alternatives, as well as findings from recent corridor plans and bulk studies.
- Your input will help ensure that local perspectives and relevant information are considered as the recommendations for the Integrated Regional Resource Plan (IRRP) are developed.

# Seeking Input

**Local considerations and feedback are a critical component to the development of an Integrated Regional Resource Plan (IRR). The IESO wants to understand:**

- What feedback is there on the detailed options analysis?
- How can the IESO continue to engage with communities and stakeholders as these recommendations are refined?

**Please submit your written comments by email to [engagement@ieso.ca](mailto:engagement@ieso.ca) by September 4.**



# Recap: Regional Electricity Planning Process, Demand Forecast, Electricity Needs & Option Screening

# Electricity Planning in Ontario



## Provincial/Bulk System Planning

Addresses provincial electricity system needs and policy directions

Underway: [South and Central Bulk Plan](#)



## Regional Planning

Addresses local electricity system needs at the transmission system level

Underway: [GTA West Integrated Regional Resource Plan](#)



## Distribution Planning

Addresses local electricity system needs and priorities at the distribution system level

Led by local distribution companies

# Background on Electricity Planning in GTA West

Since 2015, the IESO has undertaken electricity planning work to address capacity needs to the GTA West electrical area. The previous regional plan was completed in 2022 and recommended upsizing of circuits and building new stations to meet growing electricity demand.

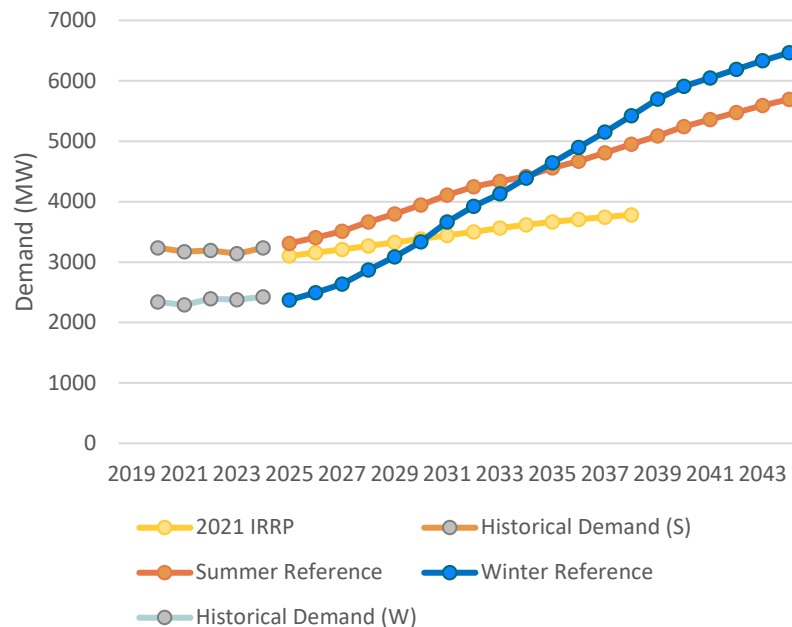
These solutions ensured a reliable supply of electricity to the area. However, continued demand growth will require more planning:

- The South and Central Bulk Plan will determine the electricity infrastructure required to enable economic development in the GTA more broadly and confirm transmission reinforcements required to enable the connection of expanded nuclear and other objectives. Learn more [here](#).
- The IESO and the Ministry of Energy and Mines conducted a joint study to identify land to be protected for a future transmission corridor (adjacent to Highway 413) to support anticipated long-term electricity demand growth in the western and northern GTA regions.

# GTA IRRP Demand Forecasts

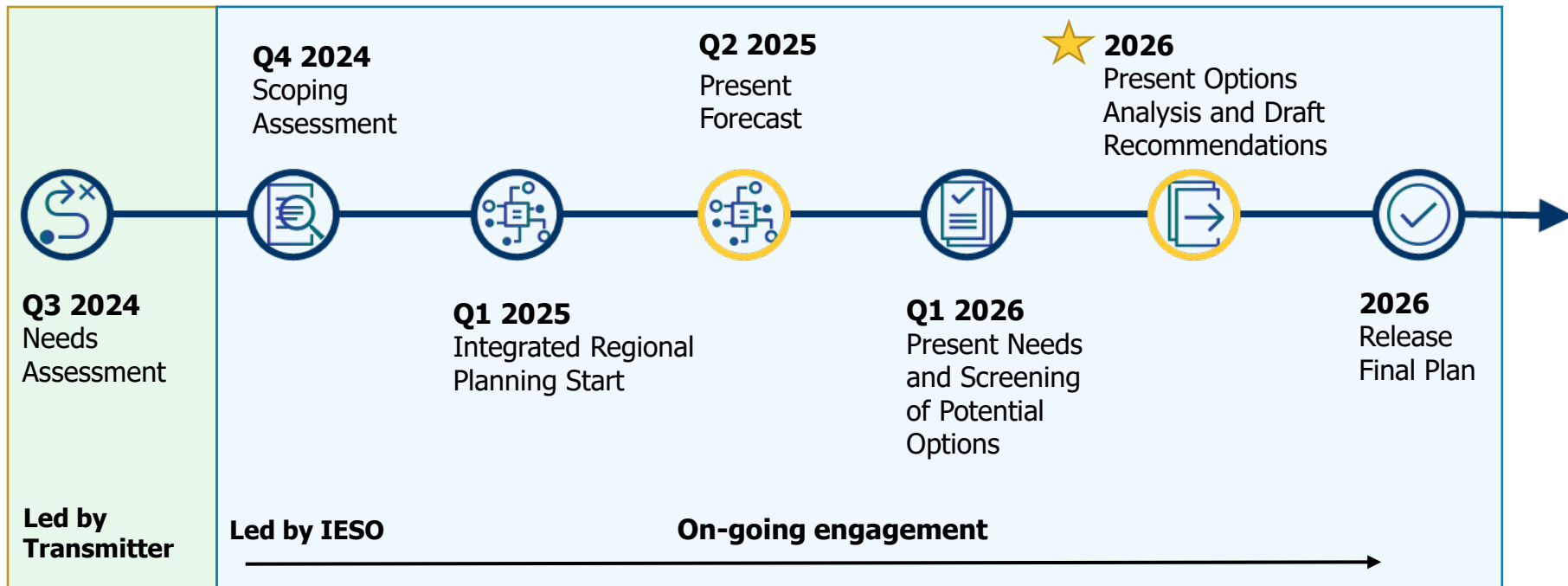
- The electricity demand forecasts are developed in partnership between local distribution companies and the IESO.
- Forecasts are informed by municipal policies, including decarbonization plans, municipal growth plans, community energy plans, economic development, data centres, etc.
- In the GTA West region, the forecast growth rate is 3.4% (**growth of 89% by 2044**) – by comparison, the current provincial growth rate is 2% (growth of 65% by 2050).
  - Electrification of buildings, vehicles, and numerous expected projects are a significant contributor to increasing electricity demand.

GTA West Forecast Overview\*



\* The forecasts shown are GTA West coincident, net, extreme weather cases. This forecast does not include potential transmission-connected large-scale customers.

# Regional Planning Milestones for GTA West

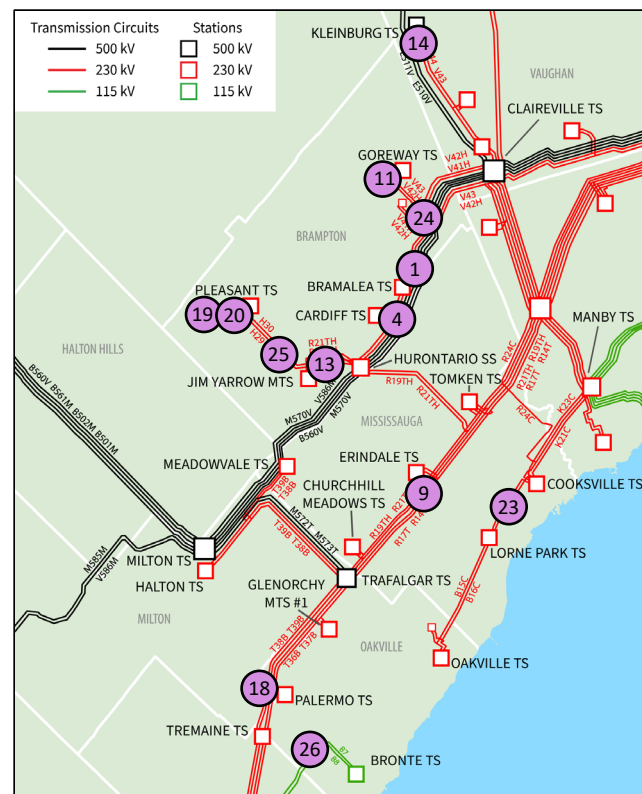


# Near-Term Needs in GTA West

Based on forecasted growth, the following needs have been identified:

| Timing                                                                                        | Impacted Equipment                                  |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------|
|  Near-term   | 9 station capacity needs<br>4 system capacity needs |
|  Medium-term | 5 station capacity needs<br>1 load security need    |
|  Long-term   | 8 station capacity need<br>5 load security need     |

The numbers correspond to the needs detailed in slides 22 to 30.

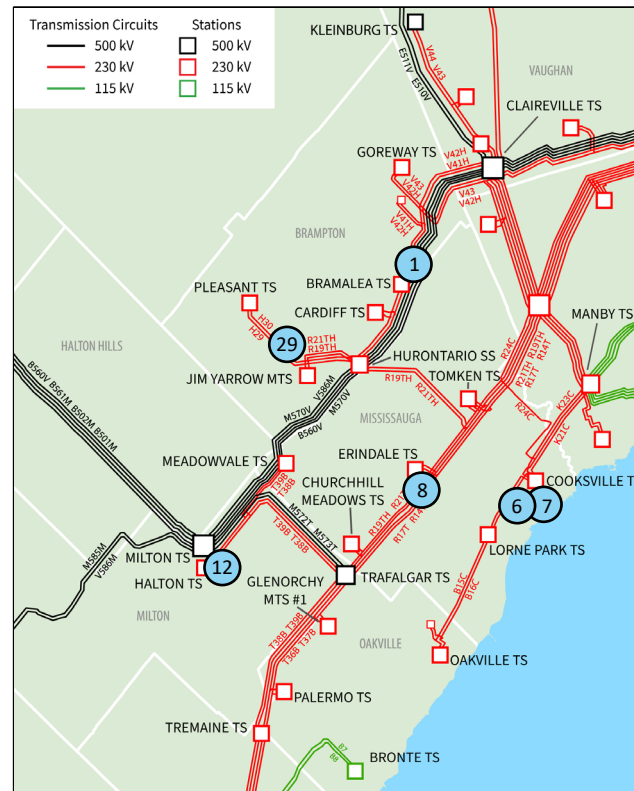


# Medium-Term Needs in GTA West

Based on forecasted growth, the following needs have been identified:

| Timing                                                                                        | Impacted Equipment                                  |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------|
|  Near-term   | 9 station capacity needs<br>4 system capacity needs |
|  Medium-term | 5 station capacity needs<br>1 load security need    |
|  Long-term   | 8 station capacity need<br>5 load security need     |

The numbers correspond to the needs detailed in slides 22 to 30.

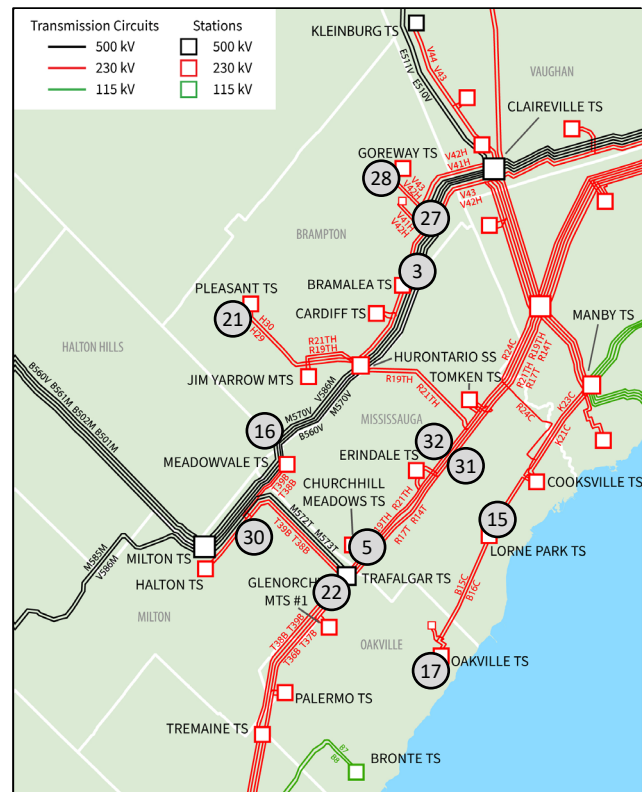


# Long-Term Needs in GTA West

Based on forecasted growth, the following needs have been identified:

| Timing                                                                                        | Impacted Equipment                                  |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------|
|  Near-term   | 9 station capacity needs<br>4 system capacity needs |
|  Medium-term | 5 station capacity needs<br>1 load security need    |
|  Long-term   | 8 station capacity need<br>5 load security need     |

The numbers correspond to the needs detailed in slides 22 to 30.



# Recap: Summary of Options Screening Results

| Type of Needs                                                                                                                                                        | Screened in - further evaluated in the plan                                                                                                                                                                                                                                                                                                                           | Screened out – cannot be relied on to meet the need(s)                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Station Capacity</b><br>(Ability to step power down from the transmission system to supply the local distribution network)                                        | <ul style="list-style-type: none"> <li>• <b>Wires</b> (such as new or expanded station or line infrastructure); and</li> <li>• <b>Wires plus integrated solutions</b> including eDSM, and DERs* including battery storage, renewables and district energy</li> <li>• <b>Local generation (transmission connected)</b></li> </ul>                                      | <ul style="list-style-type: none"> <li>• Transmission connected large generation such as wind and solar generation, and wind and/or solar + Battery Energy Storage System</li> </ul> |
| <b>Supply Capacity</b><br>(Ability to deliver sufficient power through the transmission lines to supply step-down stations)                                          | <ul style="list-style-type: none"> <li>• <b>Wires</b> (such as new or expanded station or line infrastructure); and</li> <li>• <b>Wires plus integrated solutions</b> including eDSM, transmission connected Battery Energy Storage System, and DERs* including battery storage and renewables</li> <li>• <b>Local generation (transmission connected)</b></li> </ul> |                                                                                                                                                                                      |
| <b>Load Restoration &amp; Security</b><br>(The system's ability to restore power after an outage or the maximum load it can shed under specific planning conditions) | <ul style="list-style-type: none"> <li>• <b>Wires</b> (such as breakers)</li> </ul>                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>• Distributed generation and transmission-connected generation</li> </ul>                                                                     |

# Feedback Received (1/2)

| Key Areas of Feedback                                                                      | Incorporating Feedback/Considering Feedback                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Early, continued engagement as well as the utilization of existing corridors is important. | <p>The IESO agrees that early engagement in the planning process reduces potential conflicts and impacts to the interests of impacted parties. As the plan continues to be developed, the IESO will continue to engage and offer opportunities for input in support of the plan development.</p> <p>The IESO also notes the feedback shared regarding prioritizing existing corridors. As part of the planning process, where possible, the IESO is considering options within existing corridors, while also evaluating technically feasible, cost-effective, and reliable options to meet electricity needs.</p> <p>The precise siting or routing considerations for individual transmission options are outside the scope of the regional plan. Once the regional plan is published, a transmitter will lead the development, construction, operation and maintenance of any transmission options, including the outreach and consultation.</p> |
| Requested additional clarification on the final forecast                                   | <p>The Technical Working Group (TWG) shared for public review the draft demand forecast that considers economic growth, residential growth, and electrification in June 2025. The IESO published the IRRP Forecast Methodology Document, and the corresponding data tables, to the GTA West engagement site.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Feedback Received (2/2)

| Key Areas of Feedback                                                                                             | Incorporating Feedback/Considering Feedback                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Provide information around how incremental eDSM is defined                                                        | Incremental eDSM refers to additional peak demand savings above and beyond forecasted peak demand savings from the IESO's electricity Demand Side Management programs.                                                                                                                                                                                                                                                                                                                                        |
| Provide more information about how wire and non-wire options were evaluated                                       | The assessment is based on an IESO-developed Non-wire Analysis Assessment for the Integrated Regional Resource Plans (IRRP). The IESO is completing detailed evaluations of wires plus wires in combination with non-wires options to address the system needs identified, as well as other interim and operational measures to maintain system reliability. Local perspectives regarding community priorities, such as preference for non-wire options, will be considered as planning continues to advance. |
| Concern that the planning is relying too heavily on a reference demand forecast instead of a high-growth scenario | The timing of recommendations is based on the electricity needs, informed by the load forecast and customer commitments, as well as implementation timelines of the optimal solution. Regional planning is completed at regular intervals to ensure planning is flexible and responsive to a range of future outcomes. Should higher growth materialize, the TWG can discuss whether an accelerated timeline is feasible for regional planning.                                                               |

To review the feedback and IESO response, please visit the [GTA West engagement webpage](#).



# Option Analysis

# Observations: Outcomes of the Option Analysis

Meeting the pace of growth in the GTA West region will require significant new electricity infrastructure—including both large-scale long-term investments, such as new transmission lines and stations, and interim measures that can help maintain reliability while major projects are built.

- **Numerous station capacity upgrades are required.** The approach under consideration is to share load growth as much as possible between existing stations before building new stations. The new stations can then address multiple station capacity needs. These additional stations are largely unable to be located on existing infrastructure due to supply capacity and load security constraints.
- **New transmission is needed to supply new areas of load growth** which continues to extend outwardly from existing transmission (Example: North Brampton and Caledon). New transmission is also required in developed areas where upgrades to existing infrastructure are challenging. Findings from parallel studies (i.e. NWGTA corridor and South and Central Bulk Plan) are being leveraged to examine and incorporate new transmission development.
- **Non-wires options are being studied** to address station capacity needs and interim supply capacity shortfalls but are likely unable to address supply and load security needs as an alternative to new transmission in the medium/long term due to their nature, timing and magnitude.

The Technical Working Group will continue to further evaluate a range of options to develop recommendations that meet the identified needs, maintain compliance with reliability and planning criteria, and enable growth.

# Options Evaluation

Wire and Non-Wire Options are evaluated based on the following key considerations:

## Technical Feasibility

- Can the option be executed? i.e., outlook for technology, proximity to customers, routing and spacing considerations, operation

## Ability to Address Needs

- Does it address the need while complying with the established reliability standards and criteria for the electric power system?

## Cost-Effectiveness

- Is there the ability to solve multiple needs simultaneously?
- How much can it cost and what are the benefits?

## Lead Time

- New transmission infrastructure is expected to take at least 5-7 years – how does this compare to the timing of needs?

## Community Considerations

- Input from community preferences and feedback regarding potential options, for example does it improve resilience for extreme weather?

# Options Analysis: Station Capacity Needs (1 of 5)

| # | Need                                     | Options Assessed                                                                                                         | Costs and Benefits                                                                                                                                                                                                                               |
|---|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Bramalea T1/T2<br>(Brampton/Mississauga) | <ul style="list-style-type: none"><li>• Load transfer + new station</li><li>• Incremental eDSM</li></ul>                 | <ul style="list-style-type: none"><li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li><li>• New station cost: \$60 million*, 3-4 year lead time, brings in new capacity for future growth.</li></ul> |
| 2 | Bramalea T3/T4<br>(Brampton/Mississauga) | <ul style="list-style-type: none"><li>• Load transfer</li><li>• Incremental eDSM</li><li>• Transformer upgrade</li></ul> | <ul style="list-style-type: none"><li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li><li>• Transformer Upgrade: Also addresses EOL need.</li></ul>                                                  |
| 3 | Bramalea T5/T6<br>(Brampton/Mississauga) | <ul style="list-style-type: none"><li>• Load transfer</li><li>• Incremental eDSM</li></ul>                               | <ul style="list-style-type: none"><li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li></ul>                                                                                                          |
| 4 | Cardiff TS<br>(Mississauga)              | <ul style="list-style-type: none"><li>• Load transfer + new station</li><li>• Incremental eDSM</li></ul>                 | <ul style="list-style-type: none"><li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li><li>• New station cost: \$60 million*, 3-4 year lead time, brings in new capacity for future growth.</li></ul> |
| 5 | Churchill Meadows TS<br>(Mississauga)    | <ul style="list-style-type: none"><li>• Monitor growth</li><li>• Incremental eDSM</li></ul>                              | <ul style="list-style-type: none"><li>• Cost-effective measures that can defer need until next planning cycle (2029).</li></ul>                                                                                                                  |

## Options Analysis: Station Capacity Needs (2 of 5)

| # | Need                           | Options Assessed                                                                                         | Costs and Benefits                                                                                                                                                                                                                               |
|---|--------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | Cooksville T1/T2 (Mississauga) | <ul style="list-style-type: none"><li>• Load transfer + new station</li><li>• Incremental eDSM</li></ul> | <ul style="list-style-type: none"><li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li><li>• New station cost: \$60 million*, 3-4 year lead time, brings in new capacity for future growth.</li></ul> |
| 7 | Cooksville T3/T4 (Mississauga) | <ul style="list-style-type: none"><li>• Load transfer + new station</li><li>• Incremental eDSM</li></ul> | <ul style="list-style-type: none"><li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li><li>• New station cost: \$60 million*, 3-4 year lead time, brings in new capacity for future growth.</li></ul> |
| 8 | Erindale T1/T2 (Mississauga)   | <ul style="list-style-type: none"><li>• Load transfer + new station</li><li>• Incremental eDSM</li></ul> | <ul style="list-style-type: none"><li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li><li>• New station cost: \$60 million*, 3-4 year lead time, brings in new capacity for future growth.</li></ul> |
| 9 | Erindale T3/T4 (Mississauga)   | <ul style="list-style-type: none"><li>• Load transfer</li><li>• Incremental eDSM</li></ul>               | <ul style="list-style-type: none"><li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li></ul>                                                                                                          |

## Options Analysis: Station Capacity Needs (3 of 5)

| #  | Need                         | Options Assessed                                                                                                         | Costs and Benefits                                                                                                                                                                                                                               |
|----|------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | Erindale T5/T6 (Mississauga) | <ul style="list-style-type: none"><li>• Load transfer</li><li>• Incremental eDSM</li></ul>                               | <ul style="list-style-type: none"><li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li></ul>                                                                                                          |
| 11 | Goreway T5/T6 (Brampton)     | <ul style="list-style-type: none"><li>• Load transfer + new station</li><li>• Incremental eDSM</li></ul>                 | <ul style="list-style-type: none"><li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li><li>• New station cost: \$60 million*, 3-4 year lead time, brings in new capacity for future growth.</li></ul> |
| 12 | Halton TS (Milton)           | <ul style="list-style-type: none"><li>• New station</li><li>• Incremental eDSM</li><li>• Non-wires alternative</li></ul> | <ul style="list-style-type: none"><li>• New station cost: \$60 million, 3-4 year lead time, brings in new capacity for future growth.</li><li>• Non-wires analysis underway</li></ul>                                                            |
| 13 | Jim Yarrow MTS (Brampton)    | <ul style="list-style-type: none"><li>• Load transfer + new station</li><li>• Incremental eDSM</li></ul>                 | <ul style="list-style-type: none"><li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li><li>• New station cost: \$60 million*, 3-4 year lead time, brings in new capacity for future growth.</li></ul> |

# Options Analysis: Station Capacity Needs (4 of 5)

| #  | Need                                           | Options Assessed                                                                                                    | Costs and Benefits                                                                                                                                                                                                                              |
|----|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14 | Kleinburg TS<br>(Caledon/Vaughan)              | <ul style="list-style-type: none"> <li>Load transfer + new station</li> <li>Incremental eDSM</li> </ul>             | <ul style="list-style-type: none"> <li>Load transfers maximize the use of existing stations and transmission infrastructure.</li> <li>New station cost: \$60 million*, 3-4 year lead time, brings in new capacity for future growth.</li> </ul> |
| 15 | Lorne Park TS<br>(Mississauga)                 | <ul style="list-style-type: none"> <li>Monitor growth</li> <li>Incremental eDSM</li> </ul>                          | <ul style="list-style-type: none"> <li>Cost-effective measures that can defer need until next planning cycle (2029).</li> </ul>                                                                                                                 |
| 16 | Meadowvale TS<br>(Mississauga)                 | <ul style="list-style-type: none"> <li>Monitor growth</li> <li>Incremental eDSM</li> </ul>                          | <ul style="list-style-type: none"> <li>Cost-effective measures that can defer need until next planning cycle (2029).</li> </ul>                                                                                                                 |
| 17 | Oakville TS                                    | <ul style="list-style-type: none"> <li>Monitor growth</li> <li>Incremental eDSM</li> </ul>                          | <ul style="list-style-type: none"> <li>Cost-effective measures that can defer need until next planning cycle (2029).</li> </ul>                                                                                                                 |
| 18 | Palermo TS<br>(Milton/Burlington/<br>Oakville) | <ul style="list-style-type: none"> <li>Load transfer</li> <li>New station</li> <li>Non-wires alternative</li> </ul> | <ul style="list-style-type: none"> <li>New station cost: \$60 million, 3-4 year lead time, brings in new capacity for future growth.</li> <li>Non-wires analysis underway</li> </ul>                                                            |

# Options Analysis: Station Capacity Needs (5 of 5)

|    | Need                                           | Options Assessed                                                                                                                             | Costs and Benefits                                                                                                                                                                                                                                                                         |
|----|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 19 | Pleasant T1/T2 (Brampton/Caledon/Halton Hills) | <ul style="list-style-type: none"> <li>• Load transfer + new station</li> <li>• Incremental eDSM</li> <li>• Non-wires alternative</li> </ul> | <ul style="list-style-type: none"> <li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li> <li>• New station cost: \$60 million*, 3-4 year lead time, brings in new capacity for future growth.</li> <li>• Non-wires analysis underway</li> </ul> |
| 20 | Pleasant T5/T6 (Brampton)                      | <ul style="list-style-type: none"> <li>• Load transfer + new station</li> <li>• Incremental eDSM</li> </ul>                                  | <ul style="list-style-type: none"> <li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li> <li>• New station cost: \$60 million*, 3-4 year lead time, brings in new capacity for future growth.</li> </ul>                                        |
| 21 | Pleasant T7/T8 (Brampton)                      | <ul style="list-style-type: none"> <li>• Load transfer + new station</li> <li>• Incremental eDSM</li> </ul>                                  | <ul style="list-style-type: none"> <li>• Load transfers maximize the use of existing stations and transmission infrastructure.</li> <li>• New station cost: \$60 million*, 3-4 year lead time, brings in new capacity for future growth.</li> </ul>                                        |
| 22 | Trafalgar DESN (Oakville)                      | <ul style="list-style-type: none"> <li>• Monitor growth</li> <li>• Incremental eDSM</li> </ul>                                               | <ul style="list-style-type: none"> <li>• Cost-effective measures that can defer need until next planning cycle (2029).</li> </ul>                                                                                                                                                          |

# Options Analysis: Supply Capacity Needs (1 of 2)

|    | Need                                  | Options Assessed                                                                                                                                                                                                                                                                                                           | Costs and Benefits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 23 | Cooksville Tap (Mississauga/Oakville) | <ul style="list-style-type: none"> <li>Existing circuit upgrades</li> <li>New 230kV Richview-Cooksville line</li> <li>New 230kV Trafalgar-Oakville lines</li> <li>Non-wires alternative</li> </ul>                                                                                                                         | <ul style="list-style-type: none"> <li>Existing circuit upgrades: maximizes existing infrastructure.</li> <li>New 230kV Richview-Cooksville line: offers alternative path of supply.</li> <li>New Trafalgar-Oakville line: \$200 million, brings new supply to area which is currently radially supplied from Toronto.</li> <li>Non-wires analysis underway. May serve as an interim option.</li> </ul>                                                                                                                           |
| 24 | VxH Circuits (Mississauga/Brampton)   | <ul style="list-style-type: none"> <li>Existing circuit upgrades</li> <li>New 230kV Meadowvale-Hurontario lines</li> <li>Hurontario station reconfiguration</li> <li>New Hurontario switching station</li> <li>Non-wires alternative</li> <li>Cap load and site future growth on new stations on NWGTA corridor</li> </ul> | <ul style="list-style-type: none"> <li>Existing circuit upgrades: \$12 million, 2-year lead time</li> <li>New 230kV circuits: ~\$10 million/km*, 4-5 year lead time, bring new supply from Milton.</li> <li>Station reconfiguration: \$10 million, 1-2 year lead time</li> <li>New switching station: \$200 million, 5-6 year lead time</li> <li>NWGTA corridor transmission buildout: \$5-12 million/km, bridges supply to new areas of growth.</li> <li>Non-wires analysis underway. May serve as an interim option.</li> </ul> |

## Options Analysis: Supply Capacity Needs (2 of 2)

|    | Need                                        | Options Assessed                                                                                                                                                                                                  | Costs and Benefits                                                                                                                                                                                                                                                                                                                                                              |
|----|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 25 | H29/H30 Circuits<br>(Brampton/<br>Caledon)  | <ul style="list-style-type: none"><li>• Cap load and site future growth on new stations on NWGTA corridor</li></ul>                                                                                               | <ul style="list-style-type: none"><li>• NWGTA corridor transmission buildout: \$5-12 million/km, bridges supply to new areas of growth.</li></ul>                                                                                                                                                                                                                               |
| 26 | B7/B8 Circuits<br>(Burlington/<br>Oakville) | <ul style="list-style-type: none"><li>• Existing circuit upgrades</li><li>• Non-wires alternative</li><li>• Convert circuits to 230kV</li><li>• Site future growth on new station on different circuits</li></ul> | <ul style="list-style-type: none"><li>• Circuit upgrades: \$18-20 million, maximizes existing infrastructure before new buildout.</li><li>• Non-wires analysis underway</li><li>• 230kV conversion: \$125 million, enables capacity for the long-term future.</li><li>• New station cost: \$60 million, 3-4 year lead time, brings in new capacity for future growth.</li></ul> |

# Options Analysis: Load Security Needs (1 of 2)

|    | Need                                    | Options Assessed                                                                                                                                                           | Costs and Benefits                                                                                                                                                                                                                                                                                  |
|----|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 27 | V41H/V42H<br>(Mississauga/<br>Brampton) | <ul style="list-style-type: none"><li>• Cap load and site future growth on new stations on NWGTA corridor</li><li>• In-line breakers</li><li>• Switching station</li></ul> | <ul style="list-style-type: none"><li>• NWGTA corridor transmission buildout: \$5-12 million/km, bridges supply to new areas of growth.</li><li>• In-line breakers: splits large load group.</li><li>• New switching station: \$200 million, 5-6 year lead time, splits large load group.</li></ul> |
| 28 | Goreway TS<br>(Brampton)                | <ul style="list-style-type: none"><li>• Monitor growth</li><li>• Cap load and site future growth on new stations on NWGTA corridor</li></ul>                               | <ul style="list-style-type: none"><li>• Long-term need, growth could be monitored and addressed in the next planning cycle.</li><li>• NWGTA corridor transmission buildout: \$5-12 million/km, bridges supply to new areas of growth.</li></ul>                                                     |
| 29 | H29/H30<br>(Brampton)                   | <ul style="list-style-type: none"><li>• Cap load and site future growth on new stations on NWGTA corridor</li></ul>                                                        | <ul style="list-style-type: none"><li>• NWGTA corridor transmission buildout: \$5-12 million/km, bridges supply to new areas of growth.</li></ul>                                                                                                                                                   |

## Options Analysis: Load Security Needs (2 of 2)

|    | Need                                          | Options Assessed                                                                                                                         | Costs and Benefits                                                                                                                                                                                                                                                                           |
|----|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 30 | T38B/T39B<br>(Milton/Oakville/<br>Burlington) | <ul style="list-style-type: none"><li>• Milton reconfiguration</li></ul>                                                                 | <ul style="list-style-type: none"><li>• Outcome of incorporation of new Milton bulk supply point.</li></ul>                                                                                                                                                                                  |
| 31 | R14T/R17T<br>(Mississauga)                    | <ul style="list-style-type: none"><li>• Monitor growth</li><li>• Circuit sectionalizing</li></ul>                                        | <ul style="list-style-type: none"><li>• Long-term need, growth could be monitored and addressed in the next planning cycle.</li><li>• Circuit sectionalizing: Splits large load group.</li></ul>                                                                                             |
| 32 | R19TH/R21TH<br>(Mississauga)                  | <ul style="list-style-type: none"><li>• Monitor growth</li><li>• Circuit sectionalizing</li><li>• Hurontario switching station</li></ul> | <ul style="list-style-type: none"><li>• Long-term need, growth could be monitored and addressed in the next planning cycle.</li><li>• Circuit sectionalizing: Splits large load group.</li><li>• New switching station: \$200 million, 5-6 year lead time, splits large load group</li></ul> |

# Approach to enabling reduced reliance on gas generation

- Brampton's Sithe Goreway Generating Station (GS) in Brampton and Halton Hills GS are two gas generation stations whose contracts are set to expire in 2035.
- Decisions regarding potential extension of contracts and/or continued use of gas resources have not been made and are outside the scope of regional planning.
- Scenarios where both gas generation stations have been taken out of service in 2035 have been explored and continue to be studied.
- The priority of the 2026 IRRP recommendations will be to address near/medium term needs.
- The approach is to pursue a set of options that preserves flexibility to trigger incremental development that can accommodate expiring gas contracts in the longer term.
- Depending on the outcome, recommendations required to reduce reliance on gas will be further studied and made in the next planning cycle.



# Additional Considerations and Linkages with Other Plans

# Protecting Strategic Corridors

To ensure we can build the transmission infrastructure needed to support electrification, residential and economic intensification, early action is being taken to identify and protect strategic corridors.

Three key studies are identified in high-growth areas where land is limited and electricity systems are nearing capacity:

- **Parkway Belt West Corridor:** Exploring future high-voltage transmission lines and transformer stations to support GTA growth and to enable new generation resources.
- **Barrie to Markham Corridor:** Preserving land for a future transmission line to further link Northern and Southern Ontario, to enable growth in Northern Ontario and to supply Southern Ontario with diversified resources.
- **Northwest GTA Corridor:** Refining plans near Highway 413 to support future infrastructure in York, Peel, and Halton.

These important studies will play a role in understanding options and preserving land for future, long term needs in York Region. More opportunities for engagement will be shared in the future.



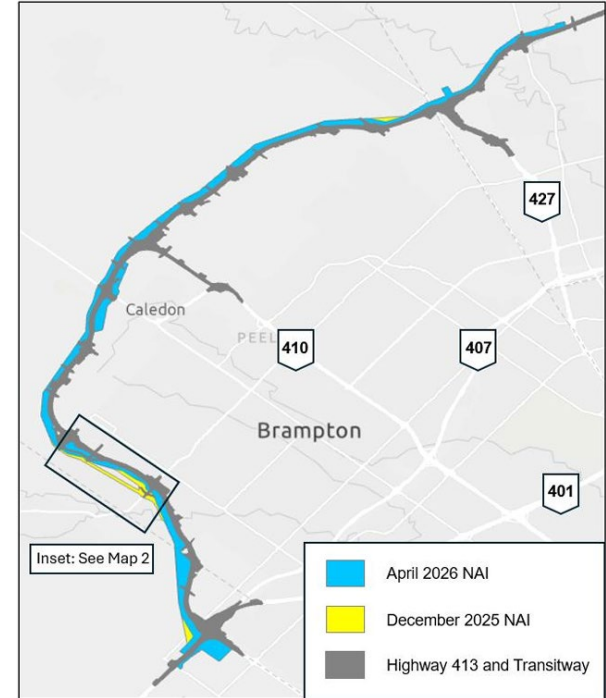
# Northwest GTA Transmission Corridor

To ensure we can build transmission infrastructure when needed, early action is being taken to identify and protect strategic corridors, including the Northwest GTA corridor.

In April 2026, the IESO, Ministry of Energy and Mines (MEM), and Ministry of Transportation (MTO) refined the Narrowed Area of Interest (NAI) which included a reduced area to protect only the land that is necessary to support updated electricity system and transportation needs in the region.

The NAI has been designed to accommodate both 500 kV and 230 kV transmission infrastructure, allowing enhancements to the bulk power system, and local supply to the GTA West region.

Sign up for continued updates from MEM [here](#).



# South and Central Bulk Plan

In addition to the GTA West IRRP, the IESO is also conducting a South and Central Bulk Plan, which is examining broader system-level needs and opportunities across southern and central Ontario.

Given the scale and complexity of electricity needs in GTA West, the bulk study plays a key role in connecting the near-term recommendations from the IRRP to the bulk transmission system. This includes:

- Creating a new bulk supply point at Milton TS to support load growth and enable new transmission expansion throughout the GTA West region
- Creating a new bulk supply point at Kleinburg TS to support provincial and local needs in both GTA West and GTA North regions
- Determining transmission required to enable decreased bulk system reliance on local Gas generation

By aligning regional and bulk planning efforts, the IESO aims to develop a coordinated and cost-effective approach to meeting electricity demand across the province.

Draft recommendations were presented in Q4 2025. [Final report will be released in mid-2026](#) and will focus on early, “future-ready” investments, as well as longer term direction to preserve options, if needed in the future.

# GTA West Implications: South & Central Bulk Plan Recommendations

Need for autotransformers in Milton:

- A new regional supply point from the provincial/bulk system located at Milton TS is required to supply a new 230 kV line along the NWGTA corridor (supply to northern Peel)

Need for a new 230 kV line between Milton TS and Hurontario SS as well as station work and Hurontario SS in Mississauga

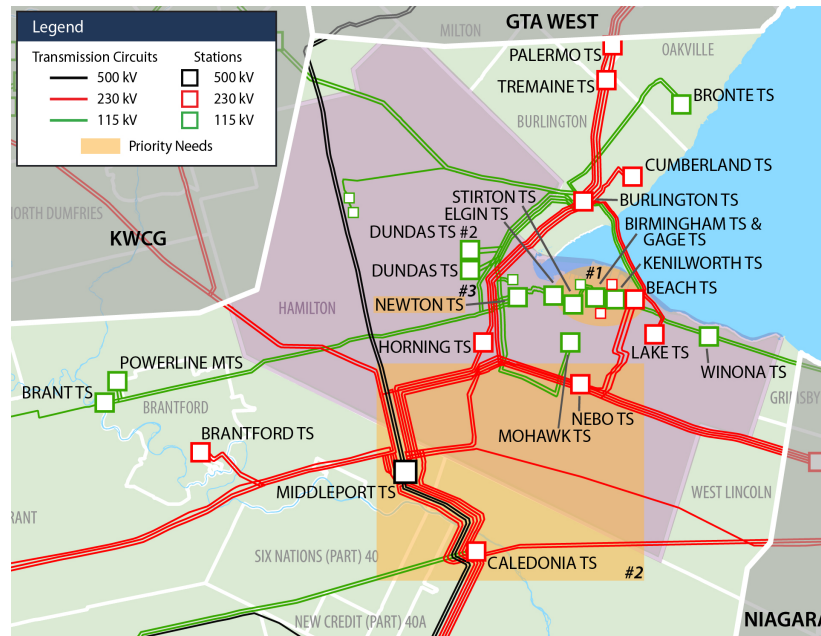
- The transmission infrastructure upgrades utilize Milton's new regional supply point to reinforce the existing transmission system, which will address the supply capacity needed as load intensifies in Brampton and Mississauga



# Hamilton Area Addendum and Niagara Bulk

The IESO is conducting two parallel electricity planning initiatives the [Hamilton Addendum Study](#) and the [Niagara Bulk Plan](#), that overlap with parts of the GTA West region.

The IESO will align regional and bulk planning efforts to develop a coordinated and cost-effective approach to meeting electricity demand across the province.



# Niagara Bulk Plan

- Through [bulk electricity planning studies](#), the IESO develops bulk system-level infrastructure plans to meet Ontario's future electricity needs.
- The IESO will align regional and bulk planning efforts to develop a coordinated and cost-effective approach to meeting electricity demand across the province.
- The IESO has launched a new bulk planning initiative for the Niagara Region and surrounding areas to address electricity demand growth and examine emerging needs.



**Note:** Map for illustrative purposes only



## Next Steps and Discussion

# Energy Efficiency Opportunities

- To help meet the province's rapidly growing demand for electricity, the IESO's energy efficiency programs, through Save on Energy, has been expanded from \$1 billion over four years, to \$10.9 billion over 12 years.
- Key programs of interest to your municipality, residents and small businesses include:
  - [Peak Perks](#) – Residential and small business electricity customers with an eligible smart thermostat can be rewarded for reducing their energy use when demand for electricity is high in the summer.
  - [Home Renovation Savings](#) – Homeowners can get rebates up to 30% for home energy efficiency renovations and improvements.
  - [Retrofit](#) – Facility/building owners and lessees can get up to 50% of eligible project costs covered for targeted energy efficiency retrofits. [Learn how Lear Corporation in Ajax used the retrofit program to save on annual costs.](#)
  - [Energy Affordability Program](#) – Support for income-eligible electricity customers to better manage monthly electricity costs and increase their home comfort.
- Use the [Funding Finder](#) to easily identify which Save on Energy programs can best suit your needs.

# Next Steps

**Participants can expect to hear from the IESO at these milestones:**

**September 4, 2026 :** Deadline for feedback to the IESO on the detailed options analysis.

**Q4 2026:** Draft recommendations are presented during a public engagement webinar with an opportunity for participants to provide feedback

**Q4 2026:** IRRP report will be completed and published on the GTA West engagement webpage.

Depending on the recommendations of the IRRP, the following next steps can be expected:

- For wires solutions, the local transmitter will lead the development of a Regional Infrastructure Plan, which assesses and develops a detailed plan on how wire options can be implemented.
- For non-wire solutions, implementation mechanisms for new resources and energy efficiency programs will be determined following plan publication.

# Seeking Input

**Local considerations and feedback are a critical component to the development of an Integrated Regional Resource Plan (IRR). As the options phase of the IRRP continues to identify how to best meet the area's infrastructure needs, the IESO wants to hear your perspectives about:**

- What feedback is there on the detailed options analysis?
- How can the IESO continue to engage with communities and stakeholders as these recommendations are refined?

**IESO welcomes written feedback until September 4, 2026. Please submit feedback to [engagement@ieso.ca](mailto:engagement@ieso.ca) using the feedback form on the [engagement webpage](#).**

# Thank You

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# Appendix

# Station Capacity Needs 1/3

|                                                                                                        |   |                      |                                                                                                                    | Magnitude* |                 |
|--------------------------------------------------------------------------------------------------------|---|----------------------|--------------------------------------------------------------------------------------------------------------------|------------|-----------------|
| Electricity Need                                                                                       |   | Impacted Asset       | Drivers of Growth                                                                                                  | 2026       | 2044            |
| <b>Station Capacity:</b><br>the ability of a station to deliver power from grid to distribution system | 1 | Bramalea T1/T2       | <ul style="list-style-type: none"> <li>Station peaks driven by residential/commercial growth</li> </ul>            | 0 MW       | 74 MW<br>302 MW |
|                                                                                                        | 2 | Bramalea T3/T4       | <ul style="list-style-type: none"> <li>Industrial developments</li> <li>Large scale projects</li> </ul>            | 13 MW      | 34 MW<br>53 MW  |
|                                                                                                        | 3 | Bramalea T5/T6       | <ul style="list-style-type: none"> <li>Airport expansion</li> <li>EV usage</li> </ul>                              | 0 MW       | 4 MW<br>6 MW    |
|                                                                                                        | 4 | Cardiff TS           | <ul style="list-style-type: none"> <li>Residential/commercial growth, transit project, EV usage</li> </ul>         | 22 MW      | 63 MW<br>30 MW  |
|                                                                                                        | 5 | Churchill Meadows TS | <ul style="list-style-type: none"> <li>Residential/commercial growth, large scale project, EV usage</li> </ul>     | 0 MW       | 11 MW           |
|                                                                                                        | 6 | Cooksville T1/T2     | <ul style="list-style-type: none"> <li>Residential/commercial growth</li> <li>New community development</li> </ul> | 0 MW       | 52 MW<br>118 MW |
|                                                                                                        | 7 | Cooksville T3/T4     | <ul style="list-style-type: none"> <li>District energy project</li> <li>Large scale projects</li> </ul>            | 0 MW       | 47 MW<br>122 MW |

# Station Capacity Needs 2/3

|                                                                                                        |                   |                                                                                                                                                                                                 | Magnitude*    |                  |
|--------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------|
| Electricity Need                                                                                       | Impacted Asset    | Drivers of Growth                                                                                                                                                                               | 2026          | 2044             |
| <b>Station Capacity:</b><br>the ability of a station to deliver power from grid to distribution system | 8 Erindale T1/T2  | <ul style="list-style-type: none"> <li>Residential/commercial growth</li> <li>LRT transit project</li> <li>Large scale projects</li> <li>New community development</li> <li>EV usage</li> </ul> | 0 MW          | 41 MW<br>77 MW   |
|                                                                                                        | 9 Erindale T3/T4  |                                                                                                                                                                                                 | 0 MW          | 78 MW<br>37 MW   |
|                                                                                                        | 10 Erindale T5/T6 |                                                                                                                                                                                                 | 0 MW          | 37 MW            |
|                                                                                                        | 11 Goreway T5/T6  | <ul style="list-style-type: none"> <li>Residential/commercial growth, large scale commercial development, EV usage</li> </ul>                                                                   | 19 MW         | 135 MW<br>243 MW |
|                                                                                                        | 12 Halton TS      | <ul style="list-style-type: none"> <li>Residential/commercial growth</li> <li>Large scale projects</li> </ul>                                                                                   | 0 MW          | 88 MW<br>19 MW   |
|                                                                                                        | 13 Jim Yarrow MTS | <ul style="list-style-type: none"> <li>Residential/commercial growth, large scale project, EV usage</li> </ul>                                                                                  | 0 MW          | 81 MW<br>125 MW  |
|                                                                                                        | 14 Kleinburg TS   | <ul style="list-style-type: none"> <li>Town of Caledon infill development and industrial growth</li> </ul>                                                                                      | 22 MW<br>9 MW | 220 MW<br>157 MW |
|                                                                                                        | 15 Lorne Park TS  | <ul style="list-style-type: none"> <li>Residential/commercial growth, new community development, EV usage</li> </ul>                                                                            | 0 MW          | 10 MW<br>12 MW   |

# Station Capacity Needs 3/3

| Electricity Need                                                                                    |    | Impacted Asset | Drivers of Growth                                                         | Magnitude* |                  |
|-----------------------------------------------------------------------------------------------------|----|----------------|---------------------------------------------------------------------------|------------|------------------|
|                                                                                                     |    |                |                                                                           | 2026       | 2044             |
| <b>Station Capacity:</b> the ability of a station to deliver power from grid to distribution system | 16 | Meadowvale TS  | • Residential/commercial growth, large scale project, EV usage            | 0 MW       | 23 MW            |
|                                                                                                     | 17 | Oakville TS    | • Residential growth, transit electrification, and EV usage               | 0 MW       | 11 MW<br>2 MW    |
|                                                                                                     | 18 | Palermo TS     | • Residential growth, large scale projects, electrification, and EV usage | 0 MW       | 41 MW<br>4 MW    |
|                                                                                                     | 19 | Pleasant T1/T2 | • Residential/commercial growth                                           | 0 MW       | 276 MW<br>243 MW |
|                                                                                                     | 20 | Pleasant T5/T6 | • Large scale projects                                                    |            |                  |
|                                                                                                     |    |                | • New community development                                               | 11 MW      | 130 MW           |
|                                                                                                     |    |                | • EV usage                                                                |            | 226 MW           |
|                                                                                                     | 21 | Pleasant T7/T8 | • Town of Caledon infill development and industrial growth                | 0 MW       | 24 MW<br>81 MW   |
|                                                                                                     | 22 | Trafalgar DESN | • Residential growth, transit electrification, and EV usage               | 0 MW       | 15 MW<br>6 MW    |

# Supply Capacity Needs

|                                                                                                                     |                     |                                                                                                                                                   | Magnitude* |                  |
|---------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------|
| Electricity Need                                                                                                    | Impacted Asset      | Circumstance of Need                                                                                                                              | 2026       | 2044             |
| <b>Supply Capacity:</b><br>the ability of the system to supply power through the transmission lines to a local area | 23 Cooksville Tap   | <ul style="list-style-type: none"> <li>Supplies Cooksville TS, Lorne Park TS, Oakville TS, and a Customer station</li> </ul>                      | 0 MW       | 238 MW<br>183 MW |
|                                                                                                                     | 24 VxH Circuits     | <ul style="list-style-type: none"> <li>Supplies Bramalea TS, Cardiff TS, and Goreway TS</li> <li>Receives supply from Sithe Goreway GS</li> </ul> | 0 MW       | 294 MW<br>427 MW |
|                                                                                                                     | 25 H29/H30 Circuits | <ul style="list-style-type: none"> <li>Supplies Pleasant TS</li> </ul>                                                                            | 13 MW      | 186 MW<br>279 MW |
|                                                                                                                     | 26 B7/B8 Circuits   | <ul style="list-style-type: none"> <li>Supplies Bronte TS</li> </ul>                                                                              | 0 MW       | 23 MW<br>16 MW   |

# Load Security Needs

|                                                                                               |                |                         | Magnitude* |                  |
|-----------------------------------------------------------------------------------------------|----------------|-------------------------|------------|------------------|
| Electricity Need                                                                              | Impacted Asset | Circumstance of Need    | 2026       | 2044             |
| <b>Load Security:</b><br>Maximum amount of power that can be lost during select contingencies | 27             | V41H/V42H               | 0 MW       | 152 MW<br>334 MW |
|                                                                                               | 28             | Goreway TS (V42H + V43) | 0 MW       | 21 MW            |
|                                                                                               | 29             | H29/H30                 | 0 MW       | 303 MW<br>508 MW |
|                                                                                               | 30             | T38B/T39B               | 0 MW       | 142 MW<br>87 MW  |
|                                                                                               | 31             | R14T/R17T               | 0 MW       | 127 MW<br>169 MW |
|                                                                                               | 32             | R19TH/R21TH             | 0 MW       | 21 MW<br>81 MW   |