Feedback Received and IESO Response

Toronto Regional Electricity Plan Public Webinar #3: Options Screening – July 10, 2025

The IESO hosted a public webinar on July 10, 2025, for the Toronto Region as part of its engagement to inform the development of a long-term regional electricity plan – Integrated Regional Resource Plan (IRRP). During the webinar, the IESO provided a re-cap of the regional electricity planning process, shared the results of the Options Screening for the Toronto IRRP and provided an update on the Local Achievable Potential Study. The presentation materials and recorded webinar are available on the engagement webpage.

The IESO appreciates the input received, which will be considered by the Technical Working Group[1] to develop the IRRP. Feedback was received from the following parties and the full submissions can be viewed on the engagement webpage:

- Alicia Excell
- Boltzmann Institute
- Canadian Association of Physicians for the Environment (CAPE), Ontario Regional Committee
- City of Toronto
- Corey Helm
- CreateTO
- David Smith
- Environmental Defence Canada
- Enwave Energy Corp.
- EverGreen Energy Corp.
- Ewa Shields
- Fiona Christie
- Jeffrey Levitt
- Joanne Kaashoek
- Kit Chapman
- Liz Addison
- Mark Freeman
- Northumberland Blue Dot
- NRStor Inc.
- Ontario Clean Air Alliance (OCAA)
- Philip Jung
- Seniors for Climate Action Now! Toronto (SCAN! Toronto)
- Stantec
- Toronto East Residents for Renewable Energy (TERRE)
- The Atmospheric Fund (TAF)
- Toronto East End Climate Collective (TEECC)

1 The Technical Working Group consists of the IESO as the lead, the local transmitter (Hydro One Networks Inc.), and the Local Distribution Company (Toronto Hydro – Electric System Limited).

- Dr. Deborah de Lange, for Toronto Metropolitan University
- Ward 12 (St. Paul's) Wards Project (ClimateFast)
- Wayne Miranda

The section below summarizes feedback received related the screening of options, as well as local issues and concerns that should be considered in the electricity planning for the Toronto Region.

Results of the wire and non-wire screening

Feedback / Common Themes	IESO Response
Participants advocated for non-wire alternatives, specifically: • Boltzmann Institute advised that district energy systems using thermal networks offer permanent, predictable reductions in energy demand and competitive capital costs. • Canadian Association of Physicians, OCAA, Scan! Toronto and Northumberland Blue Dot recommended to consider vehicle-to-grid integration. • ClimateFast emphasized utilizing a combination of renewables and non-renewables, and demand-side management and energy efficiency. • CreateTO supported non-wire solutions such as district energy and distributed resources in areas such as the Port Lands and Downsview. • David Smith encouraged the IESO to pilot and scale up non-wire solutions such as parking lot solar, microgrids, geothermal, and district energy systems. • Enwave shared there is significant potential to reduce peak electricity demand and overall electricity consumption in Toronto's downtown core and the Port Lands through non-wires measures that leverage existing and potential new district energy infrastructure (thermal energy networks) including electric boilers or heat pumps. • Kit Chapman preferred non-wire solutions.	The IESO thanks all participants for this feedback. As part of the regional planning process, the IESO has screened the potential for wire and non-wire options and is further evaluating options to develop an integrated plan best suited to meet Toronto's unique and growing needs, cost effectively while ensuring Torontonians have access to reliable, grid-sourced electricity. The non-wires options that have been screened include further action beyond the planned electricity Demand Side Management (eDSM) already assumed in the demand forecast, and those that can address specific reliability needs throughout the City. When evaluating all potential options, the IESO carefully considers technical criteria, cost, timing, impact on system reliability, and community preferences. Wires options (i.e., grid reinforcements) are being considered alongside a range of complementary non-wire solutions, such as energy efficiency, distributed energy resources (DER) and storage. Action on all of these fronts will be needed to meet growing needs, including those that are already assumed based on ongoing and future eDSM and DER programs and procurements, and additional future actions including additional behind-the-meter measures as informed by the results of the Local Achievable Potential Study (L-APS). More information was shared during the "Toronto Local Achievable Potential – Draft Results Webinar" on August 21, 2025. A recording of the webinar can be viewed here. Responses to specific non-wires options shared within the feedback submissions are provided as follows.

Feedback / Common Themes	IESO Response
• Jeffrey Levitt stated that the contribution of non-wire alternatives like rooftop solar, storage, conservation, and district energy were underestimated and overlooked. • Liz Addison advocated for the inclusion of rooftop solar. • Mark Freeman encouraged considering non-wire alternatives, including rooftop and parking lot solar, agrivoltaics, battery storage, and geo-exchange systems. • Philip Jung strongly advocates for prioritizing non-wire options and DERs, including home energy storage, and demand-side management. • TEECC encouraged electricity demand-side management and energy efficiency be prioritized. • TEECC recommended prioritizing district energy systems. • TMU emphasized the consideration of rooftop solar, solar on parking lots and geothermal, and the consideration of local and community-level renewables and conservation. • Joanne Kaashoek urged the inclusion of non-wire options such as solar and wind. • TERRE shared the importance of pursuing distributed energy resources (DERs) to progressively reduce reliance on Portlands Energy Centre. • TERRE requested more information on the full potential of rooftop and parking lot solar. • TERRE appreciates screening-in energy efficiency, electricity demand-side management, distributed energy resources and battery storage as options.	• District energy systems (DES): The Ministry of Energy and Mines released the province's Integrated Energy Plan ('Energy for Generations ')[2] that includes direction to the IESO to identify opportunities for new and existing DES. The IESO will continue to engage with energy services providers and municipalities to understand potential for DES where the density supports such opportunities, such as in the Port Lands area, and to understand opportunities for DES to support the province's forecasted electricity system needs. • Vehicle to grid / vehicle to building (V2G/B): After careful consideration and discussion with the L-APS consultant and local utility partners, the IESO will not include bidirectional charging measures in the IRRP and L-APS as the IESO does not have confidence that V2G/B can be credibly modelled for the purposes of the studies with currently available information. More fundamentally, the IESO does not have confidence that a program of meaningful scale could be delivered cost-effectively in the near-term. Recognizing stakeholder interest in this emerging technology, the IESO has prepared a memo explaining this conclusion and how the IESO is working to advance V2G/B outside of the IRRP. More details can be found here. • Rooftop and parking lot solar: The IESO has screened-in solar generation as a distributed energy resource (DER) to help meet the needs within an integrated approach. As solar generation is an intermittent resource and Toronto's electricity needs are seasonal (transitioning from summer to winter peaking during the forecast period), solar alone cannot reliably meet the needs as a standalone solution. Given the magnitude of the projected wintertime electrical demand resulting from continued electrification of building heating systems, solar combined with battery storage also cannot fully address this need, due to the scale of long duration storage needed through the winter

[2] Energy for Generations, p.117

Feedback / Common Themes	IESO Response
	heating season. To support DER adoption going forward, the IESO and the OEB are currently conducting a DER Incentive Study to help inform compensation mechanisms for efficient deployment and participation of DERs in Ontario's electricity system. More details can be found here. • Agrivoltaics: Due to the dense-urban environment, there is no agricultural land within the City of Toronto for this to be a meaningful option. • The potential for geothermal heating/cooling systems is being explored in the L-APS. • Microgrids: The L-APS is assessing potential for behind-the-meter solar, storage, and solar plus storage systems which could contribute to microgrid arrangements. The IESO developed a guide for the current general approach for evaluating non-wire options during IRRPs. This guide summarizes the process flow diagram, screening mechanism, hourly needs characterization, development of options, and economic evaluation methodology. Plan participants and stakeholders are encouraged to refer to this guide to better understand the non-wire evaluation.
Participants shared that offshore wind should be evaluated as part of the options analysis: • Canadian Association of Physicians, Liz Addison, OCAA, Scan! Toronto and Northumberland Blue Dot, TAF, TEECC and TMU recommended offshore wind to be evaluated. • City of Toronto shared that the exclusion of offshore wind even at a high-level screening stage is a missed opportunity to ensure a comprehensive understanding of options. • Corey Helm suggests that Great Lakes wind power integrated with other renewable options should be further examined.	The IESO appreciates this feedback and notes that many participants identified a desire to see offshore wind generation be reconsidered despite the current moratorium. As part of the regional planning process, offshore wind generation is not considered to address regional electricity needs due to the provincial moratorium on offshore wind development in Ontario. The Ministry of Energy and Mines provides policy direction on this matter.

Feedback / Common Themes	IESO Response
• David Smith expresses strong interest in revisiting offshore wind. • Environmental Defense Canada noted the moratorium is not legally binding. • Environmental Defense Canada, Liz Addison and Mark Freeman strongly advocate for offshore wind. • Jeffrey Levitt stated that proper consideration for the potential of the Great Lakes wind power was not adequately assessed. • Philip Jung advocates for prioritizing onshore wind turbines along Lake Ontario. • TEECC criticized the IESO's decision to exclude offshore wind from consideration due to the provincial moratorium. • TERRE requested exploring the feasibility of integrating Great Lakes wind power with non-wire alternatives.	
Participants requested more information on the analysis of the non-wire alternatives, including land-use requirements and capacity, specifically: • Alicia Excell requested the IESO share more transparent data from independent analysis to support the assertions that onshore wind energy would require too much land. • Ewa Shields is concerned about the portrayal of solar and wind as land intensive. • Corey Helm expressed that screening out transmission connected onshore wind and solar generation due to large land requirements is not supported. • Environmental Defense Canada questioned the exclusion of transmission-connected renewables from the assessment and requested justification, including project size assumptions.	The IESO appreciates this feedback. At this stage, wire and a non-wire plus wire solutions have been assessed as feasible within an integrated approach (i.e., energy efficiency, DERs, and battery storage, in combination with specific grid reinforcements). Transmission-connected renewable generation was screened out for consideration as a standalone solution for addressing the various system capacity needs due to several factors, including: • The scale of the needs facing Toronto, given the intermittent nature of these resources and vulnerability to extended periods of low sunlight availability and wind variability. Even paired with storage, these resource types are not able to solely meet Toronto's long-term needs. • The low-capacity factor wind and solar resources results in the total installed capacity of these resources, to address growth in Toronto, would need to be higher than the incremental peak demand increase. • The nature of electrical demand growth driven in large part by electrification of building

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• Fiona Christie shared solar and battery storage have the potential to meet a significant portion of Toronto's future energy demands. • NRStor estimated 100MWh of storage capacity requires about one acre of land, to help in evaluating land constraints. • Stantec requested clarification on the assumed energy density used for the analysis of the battery energy storage systems (BESS). • TERRE requested more information on screening out a combination of solar, wind and batteries due to large land requirements. • TAF inquired why utility-scale energy storage systems (BESS) were excluded in some areas but not others. • TAF requested greater transparency regarding how DERs are being considered • TEECC suggests that battery storage technology is rapidly changing, and the decisions which resulted in battery storage being screened out should re-evaluated on an ongoing basis.	heating loads results in an extended peak period and an even greater mismatch between variable resources and the need; coupling these resources with battery storage results in a significant amount of storage resources that would be needed to cover the long duration need in excess of 4 hours per day. • The scale of the resource requirements, if the need were to be addressed by these non-wires solutions, results in the significant land requirements in excess of the land that is available in Toronto's dense urban environment after accounting for the physical footprint of the infrastructure, and terrain, occupied space, and setback requirements. Land-use requirements were informed by industry standard assumptions, sourced from the following: • The IESO's approach to evaluating the land-use requirements for wind was based on guidance from the National Renewable Energy Laboratory's (NREL) Technical Report on the Land-Use Requirements of Modern Wind Power Plants in the United States. • The land-use requirements for solar PV are 3.04 hectares/MW. Assumptions can be found here: https://www.nrel.gov/docs/fy13osti/56290.pdf • The land-use requirements for battery energy storage systems are based on a local battery project under development by Capital Power. For clarity, the total land-use requirements for wind, solar and battery facilities include not only the direct physical footprint of the infrastructure itself, but the impacted area that may be influenced by terrain, current land uses, and setback regulations. Lastly, DERs are being considered as part of an integrated approach, along with wires solutions, to meet electricity needs. In addition to the analysis of utility-scale wind, solar, and batteries, the IESO with support from Toronto Hydro is currently undertaking the Toronto L-APS to better understand the amount of

Feedback / Common Themes	IESO Response
	achievable behind-the-meter DER potential. These results will inform the IRRP recommendations in how DERs could be cost-effectively implemented to reduce or defer electricity needs. More information was provided during the 'Toronto Local Achievable Potential – Draft Results Webinar" on August 21. A recording of the webinar can be viewed here.
Participant support for a mix of wire and non-wire options, including: • CreateTO shared support for both wire and non-wire options, including batteries and energy efficiency. • NRStor Inc. commended the Technical Working Group on their detailed analysis and options screening for Toronto and supports the inclusion of energy storage as standalone options and complementary transmission assets for wire solutions. • Stantec agreed with wires and new stations being screened-in as options to meet the needs.	The IESO appreciates these insights and acknowledges the preference of including non-wires options in combination with the evaluation of wire options. This feedback will be considered as the detailed options analysis is being completed.
City of Toronto welcomed the inclusion of multiple transmission options, and recommended several additional considerations: • Clarify the strategy for assessing the preferred route, including how land constraints, cost, stakeholder input, and alignment with future growth areas are being considered. • Clear coordination on siting, land use, and alignment with local planning priorities is key. • Prioritize solutions that align with the City's priorities specifically preserving land for development, housing while also enabling emissions reduction.	Thank you for this feedback and support for preliminary transmission options. The IESO is undertaking a detailed options analysis of the preliminary wire options (including the third supply line) based on technical feasibility, ability to meet the need, cost, lead-time and other considerations such as community preference, municipal insight, as well as Indigenous and stakeholder feedback. As part of this evaluation process, options are evaluated on a comparative basis to understand the best option. Details of the options evaluation, including cost, will be shared during an upcoming engagement to further understand feedback and perspectives. At this phase of the regional planning process, the IESO is considering the feedback received on the options screening public webinar as it continues to the options evaluation phase. The next step of the regional planning process, the 'Toronto Regional Plan -

Feedback / Common Themes	IESO Response
• More information is needed on the third line's route and its impact on areas like the Meadoway and Golden Mile.	Options Analysis and Draft Recommendations' public webinar will take place in September to share the detailed options analysis and draft recommendations. All transmission projects will be required to comply with provincial environmental assessment requirements, where there will be continued engagement with the community to ensure the community is informed on next steps including project siting and/or route selection, and to ensure that environment impacts are addressed.
CreateTO requested further information to understand land impacts and offered recommendations for coordination with municipal planning efforts, including: • Proposed transmission projects may affect lands under its management and urge the IESO to prioritize low-impact options, coordinate with City planning efforts, and provide timelines to align infrastructure with redevelopment. • Recommended planning to minimize land and infrastructure impacts, especially on public lands slated for redevelopment. • Request for early identification of affected properties to proactively address risks and opportunities. • Request for more detailed maps and clarity on land needs for proposed transmission routes to support informed input.	Thank you for this feedback and providing these insights. At this phase of the regional planning process, the IESO is considering the feedback received on the options screening public webinar as it continues the options evaluation phase. The next step of the regional planning process, the 'Toronto Regional Plan - Options Analysis and Draft Recommendations' public webinar will take place in September to share the detailed options analysis and draft recommendations of all feasible wire and non-wire options within the IRRP. Once the IRRP is finalized, any recommended infrastructure projects will undergo detailed development and engineering and will be subject to environmental assessment requirements and further engagement with the community to ensure siting, property and environmental impacts are fully considered.
Participants shared support for the exclusion of new gas generation: • TAF supports the exclusion of new gas-fired generation and continued to stress the importance of aligning with Toronto City Council resolution and net-zero goals aimed at reducing emissions from the Portlands Energy Centre.	Thank you for the support regarding the screening outcomes. In response to community feedback regarding aligning the IRRP with the City's decarbonization goals, new gas-powered facilities were not assessed as potential solutions. Additionally, while not an objective of the IRRP, decarbonization has been contemplated at multiple levels as part of Toronto regional planning process, including:

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• TEECC appreciates the screening out of new gas generation. • TERRE is pleased to see new gas generation has been screened-out and some non-wire options, including distributed energy resources and energy efficiency, screened-in.	• Forecast scenarios have been developed to consider pockets of growth, alignment with TransformTO, and shift to electrification. • Electricity needs across the city will be determined based on the forecast scenarios, including through scenarios that focus on decarbonization. These scenarios will address the City of Toronto's request to reduce reliance on Portlands Energy Centre by assessing a plan for a future without Portlands Energy Centre and understanding the options and timing to ensure a reliable and affordable supply of power. • Recommended solutions, such as wire and non-wire options, will be assessed to ensure a reliable supply of electricity over the next 20 years, including to address the impacts of reducing reliance over the medium to long term on Portlands Energy Centre.

Preliminary Transmission Wire Options

Feedback / Common Themes	IESO Response
Participants shared their perspectives regarding the importance of phasing out Portlands Energy Centre (PEC) and requested a commitment to a timeline for phase-out of PEC, specifically: • City of Toronto welcomed the inclusion of multiple transmission options and recommended the IESO explore opportunities to substantially reduce reliance on the Portlands Energy Centre (PEC) by accelerating the deployment of DERs.	Thank you for this feedback and for providing recommendations for a reduced reliance on Portlands Energy Centre (PEC). The Technical Working Group is evaluating options and timing to reduce reliance on PEC, for local reliability. A replacement solution must ensure a continued reliable and affordable supply of power to the City of Toronto. The IRRP is not making a specific recommendation concerning PEC, as PEC is a provincial resource that contributes to provincial resource adequacy as well as local system reliability; however, an objective of the IRRP is to create the enabling conditions that will allow for local reliability

Feedback / Common Themes	IESO Response
• ClimateFast, the Toronto East Residents for Renewable Energy and some private citizens requested a detailed timeline and/or a target date for phasing out the Portlands Energy Centre (PEC).	- determined by reliability standards and planning criteria that have been established for the North American power system, to be maintained without PEC in-service.
A strong call for the IESO to align its electricity planning with the City of Toronto's priorities, specifically: • Alicia Excell shared that the presented options seem to be moving in the opposite direction from the City of Toronto and do not support the City's approach to meet its net zero targets by 2040. • David Smith notes the screened in options are misaligned with Toronto's climate goals and preference for clean, distributed energy. There is a call for more ambitious renewable energy targets and a shift away from centralized, high-risk infrastructure. • Jeffrey Levitt emphasizes the need to align with the City's goals for sustainability and reduced emissions. • Liz Addison emphasizes integrating renewables and non-wire solutions to align with the City's climate and sustainability goals. • Philip Jung supports aligning with the City of Toronto's climate goals, emphasizing the importance of clean, low-carbon, and community-supported energy solutions. • Wayne Miranda supports the City of Toronto's 2024 resolution to phase out PEC, advocating for its use only in emergencies.	Thank you for providing this feedback. The IRRP is developed by a Technical Working Group that is led by the IESO and includes Toronto Hydro. Toronto Hydro was instrumental in turning key City of Toronto plans, such as the Official Plan, Transform TO Net Zero Strategy, Green Bus Program and more, into the forecasts used for the IRRP. The Toronto IRRP supports net zero, climate goals, and will enable a range of futures including DERs, clean, low-carbon, and would also add resilience to the system. Additionally, decarbonization is being contemplated at multiple levels as part of Toronto regional planning, including: • Forecast scenarios have been developed to consider pockets of growth, alignment with TransformTO, and shift to electrification. • Electricity needs across the city will be determined based on the forecast scenarios, including through scenarios that focus on decarbonization. These scenarios will address the City of Toronto's request to reduce reliance on Portlands Energy Centre by assessing a plan for a future without Portlands Energy Centre and understanding the options and timing to ensure a reliable and affordable supply of power. • Recommended solutions, such as wire and non-wire options, will be assessed to ensure a reliable supply of electricity over the next 20 years, including to address the impacts of reducing reliance over the medium to long term on Portlands Energy Centre. Community feedback was considered in the screening of options and the IESO screened out the consideration for new gas generation. The IESO will

Feedback / Common Themes	IESO Response
	continue to evaluate non-wire options, within an integrated approach with wire options, to meet the City's growing needs. The IESO also encourages Torontonians to participate in the IESO's Save on Energy programming for opportunities to save electricity in energy efficiency and demand response programs, including the new commercial solar PV program. For more information, please visit Save on Energy website.
Participants encouraged a more transparent and comprehensive evaluation of the proposed third transmission line, including detailed cost projections and consideration of non-wire alternatives: • Alicia Excell would like more detailed cost projections for a third line so the City can make an informed decision. • Boltzmann Institute shared the proposed routes for the third line faces significant challenges including concerns about Electric and Magnetic Fields (EMF), tunnelling cost uncertainties and approvals for submarine cables in recreational waters. The Boltzmann Institute also shared that a third transmission line is likely less economical than building new generation at the PEC site as the transmission options would require both new transmission infrastructure and additional generation elsewhere, making it more costly. • ClimateFast encouraged the IESO to provide more transparency regarding the affordability of wire options in comparison to non-wire alternatives. • Environmental Defense Canada emphasized that the third transmission line must be evaluated alongside non-wire	The IESO appreciates this feedback and is committed to an open and transparent planning process. The IESO is undertaking a detailed options analysis of the preliminary third transmission line based on technical feasibility, ability to meet the need, cost, lead-time and other considerations such as community preference and feedback. As part of this evaluation process, options are evaluated on a comparative basis to understand the best option. Details of the options evaluation, including cost, will be shared during an upcoming engagement to further understand feedback and perspectives. The options screening results for the Eastern Toronto needs found that local renewable generation, standalone and paired with Battery Energy Storage Systems (BESS), and BESS alone, were not feasible to meet the needs. Technically feasible generation options such as new gas generation and a combination of BESS and small modular reactors were screened-out due to community preferences and the proximity to the dense-urban environment. Electricity demand-side management (eDSM), and distributed energy resources were screened out due to inability to meet the need. However, eDSM and DERs will be useful tools to help reduce peak demand for other needs and help to reduce reliance on PEC until other solutions are in place.

Feedback / Common Themes	IESO Response
alternatives, and that current justification for the third line is insufficient. • Jeffrey Levitt highlights that the third line is questionable due to the lack of transparent data and analysis. The potential for renewables, storage, and demand-side solutions to reduce the need for a third line was not adequately explored and the presentation did not provide an analysis of the cost and timeline for the proposed third transmission line. • Joanne Kaashoek and Kit Chapman asked the IESO to provide detailed costing of a third line as compared to other non-wire options. • Liz Addison questions the rationale for a third transmission line, especially if it assumes that SMRs will be operational. • Mark Freeman suggests that demand reductions and DER deployment outside the GTA could free up existing capacity for Toronto, potentially reducing the need for new transmission infrastructure. • OCAA inquired whether the need for a new transmission line from Pickering or Darlington could be avoided by an integrated combination of energy efficiency, demand management, roof top and parking lot solar, Lake Ontario offshore wind power and local stationary and mobile (EV) battery storage. • TAF stressed the need for transparent, evidence-based cost-benefit evaluation of all alternatives, including non-wire solutions, before deciding on infrastructure like a third transmission line, and expressed concern that such decisions may be premature.	

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• TERRE requested a cost analysis of the preliminary transmission wire options in comparison to renewable options. • Wayne Miranda argues against a costly new transmission line, suggesting that investments should instead focus on electricity DSM, rooftop solar, energy storage, and utility-scale renewables which are more economical and sustainable.	
TRCA supports the IRRP process but strongly advises early, detailed consultation to identify potential impacts before selecting a preferred route for the third line, including: • TRCA cautions that all proposed line options may disrupt TRCA interests, including trail and greenspace projects, as well as waterfront restoration and shoreline initiatives. This includes the intersection with regulated TRCA areas that will require permits and mitigation measures under Conservation Authorities Act. • TRCA recommends leveraging its restoration science, monitoring, and planning expertise to ensure electricity infrastructure is integrated with environmental and community priorities.	Thank you for this feedback. The IESO agrees that early engagement in the planning process reduces potential conflicts and impacts to the interests of impacted parties. All feedback is considered throughout the development of each IRRP milestone. The objective of the regional plan is to evaluate all technically feasible, cost-effective, and reliable options to meet electricity needs. Siting considerations for preferred routes are outside the scope of the regional plan. Once the regional plan is published as final, the selected transmitter will lead the development of the Regional Infrastructure Plan, which details costs and next steps for the wire solution. As part of this process, there will be an environmental assessment (EA) and engagement with the community to ensure the community is informed on next steps including project siting and environment and property impacts. The EA process evaluates the options and selection of the preferred route. Once selected, the transmitter will submit a Leave to Construct, EA Report, and all other required permits and approvals before construction of new infrastructure commences.
OCAA inquired whether Mayor Chow endorsed the IESO's proposal to build a new transmission line from the Pickering or Darlington Nuclear Stations to downtown Toronto.	Thank you for this clarification. The announcement on June 4th by Minister Lecce and Mayor Chow was to recognize the need for a third supply line into the City of Toronto to address rapid growth. The announcement did not include a preference for any of the three options for this third supply line, currently under review by the IESO. The IESO will submit a

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	Report Back on a recommendation for the third supply line to the Ministry of Energy and Mines by the end of August 2025.
Participants shared concern for the implications of considering U.S designed nuclear reactors over local solutions to replace PEC, including. • OCAA, Scan! Toronto and Northumberland Blue Dot shared concerns that the IESO may have prematurely concluded that Portlands Energy Centre cannot be phased out by 2035 or meet future electricity needs through local, sustainable solutions. They questioned the reliance on U.S. designed nuclear reactors and new transmission infrastructure, suggesting this approach could increase costs, delay decarbonization, and pose national security risks.	Thank you for this feedback. The IESO understands that we are currently experiencing a rapidly evolving trade environment and is adhering to procurement policies as laid out by the Ontario government. Given the growing electricity demand, and the consideration to reduce reliance on PEC, a third transmission supply line into the city will be required. It is important to note that any reduction in reliance on PEC will require a replacement solution. New transmission will replace PEC while maintaining the high levels of reliability that electricity consumers in Toronto have today. This third transmission line will connect the city to the provincial grid which is supplied by a cost-effective diverse mix of resources.
Participants provided additional information and suggestions for consideration, including: • EverGreen shared an alternative to the preliminary transmission wire options would be using customizable Magnetic Transducer Generator (MTG) and Waste-to-Energy (W-t-E) systems. • NRStor supports new transmission for Toronto and proposes its 200 MW / 1600 MWh storage project near Hearn Station as a flexible, grid-supporting solution that complements transmission while providing capacity and ancillary services. • Philip Jung suggests that underground or underwater transmission options should	Thank you for this information. At this time, Magnetic Transducer Generator (MTG) and Waste-to-Energy (W-t-E) systems will not be considered as part of this regional plan. The Technical Working Group has identified locations where BESS has been screened in. A BESS near Hearn SS will have to be evaluated with the recommended Third Line Option. The IESO will submit a Report Back on a recommendation for the third supply line to the Ministry of Energy and Mines by the end of August 2025. Regarding the transmission options, given the growing electricity demand, and consideration to reduce reliance on PEC, a third transmission supply line will be required. Three transmission options have been identified. Each option has been defined to minimize land-use impacts by using existing infrastructure

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be prioritized to minimize land disturbance and better reflect community preferences. • Stantec inquired if undergrounding and increasing the ampacity and number of the existing overhead transmission lines between Cherrywood TS and Leaside TS was considered as an option to improve reliability and reduce reliance on Manby and Portlands Energy Centre. Stantec requested a comparison of underground and overhead transmission lines.	corridors, underground segments, or underwater routes: • An overland route from Cherrywood TS to Leaside TS in Toronto. • A mix of overland and underground route segments from Cherrywood TS to the Port Lands in Toronto. • A submarine route from Bowmanville SS or Cherrywood TS to the Port Lands in Toronto. These options will be evaluated based on technical feasibility, their ability to meet the need, cost, lead-time and other considerations. Outcomes of the analysis will be shared during upcoming engagement opportunities to understand feedback and answer questions. All interested parties will have an opportunity to provide feedback on the draft recommendations prior to completion of the IRRP.

Informing the Options Analysis and Draft Recommendations

Feedback / Common Themes	IESO Response
Participants emphasized the need for greater transparency in the IESO's analysis, including sharing detailed cost projections, clear risk assessments, and access to underlying data and methodologies, specifically: • Alicia Excell requested the IESO provide more cost projections associated with the proposed options. • Corey Helm and Kit Chapman stated there needs to be more complete and transparent reporting of sources and analysis. • David Smith suggests the IESO provide clear risk assessments for both wire and non-wire options.	The IESO appreciates this feedback and is committed to an open and transparent planning process. Now that the regional electricity needs have been identified and options have been screened-in, the IESO is completing a detailed options analysis. The options will be evaluated based on technical feasibility, their ability to meet the need, cost, lead-time and other considerations. Outcomes of the analysis will be shared during upcoming engagement opportunities to understand feedback and answer questions. The IESO has posted unserved energy profiles for the largest identified needs in Toronto. They can be found here. The IESO developed a guide for the current general approach for evaluating non-wires alternatives (NWAs) during IRRPs. This guide summarizes the process flow diagram, screening mechanism, hourly

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• Fiona Christie states the IESO needs to be transparent and thorough in its analysis of the electricity needs for Toronto, share cost analysis and work in partnership with the City. • Joanne Kaashoek calls for full transparency in IESO's data analysis. • Jeffrey Levitt highlights frustration that the IESO did not provide the underlying data or methodologies used in its conclusions, making it difficult for the public to evaluate the recommendations, and that the term "no regrets" is vague and potentially a way to avoid accountability. • Wayne Miranda requested more detailed data on past and recent energy installations, including their projected versus actual costs, timelines, and electricity output. • City of Toronto and Environmental Defence Canada recommended that future engagements provide more accessible data, rationale for decisions and evaluation criteria. • Environmental Defense Canada urged no recommendations be made until all options to meet future electricity demand and phase out emitting sources like the Portlands Energy Centre are thoroughly and transparently assessed. • TMU suggested the analysis is biased and needs to be based on the latest innovations and costs.	needs characterization, development of options, and economic evaluation methodology. Planning participants and stakeholders are encouraged to refer to this guide to better understand the NWA process. The IESO makes recommendations for energy infrastructure but does not own any assets. Any information related to past and recent energy installations costs and timelines would be found within the respective Transmitters or Distributors' leave to construct applications. The "no regrets" decision framework is employed within the IESO's planning work to be pro-active and prepared within a longer-term planning horizon. This means the IESO pro-actively begins the advanced work (such as engagement with communities and Indigenous communities, environmental assessments, etc.) for potential large infrastructure needed in the future, so that when the time comes to make a decision, the groundwork is in place. The IESO continues to re-evaluate and update plans based on best available information and this approach does not obfuscate accountability for decision-making.
Participants requested to release the L-APS report prior to completing the IRRP to ensure transparency, specifically: • Corey Helm stated it is premature to finalize recommendations before the L-	The IESO hosted the 'Toronto Local Achievable Potential – Draft Results Webinar" on August 21. A recording of the webinar can be viewed here. An update for L-APS will be included in the September 'Toronto Regional Plan - Options Analysis and Draft Recommendations' webinar. Participants are welcome

Feedback / Common Themes	IESO Response
APS is complete and open for public comment. • Environmental Defence Canada, Joanne Kaashoek and Kit Chapman requested a thorough and completed L-APS should be publicized before finalizing the IRRP, and energy efficiency and demand management should be considered in the recommendations. • OCAA inquired whether the IESO will seek feedback on the L-APS before releasing the final IRRP report. • NRStor shared the L-APS should engage directly with proponents to more accurately reflect the economic potential of active fleet projects including access to grants. • TERRE recommended completing the L-APS before finalizing the Toronto IRRP.	to submit comments and feedback post-webinar to be considered before the final IRRP is published in the Fall.
Screened-in options should be evaluated using a multi-criteria approach, specifically: • City of Toronto recommends extreme weather patterns associated with climate change, GHG impacts, equity, resilience, environmental impacts, Indigenous and heritage issues, land use considerations and alignment with local policy, including the City's TransformTO Net Zero Strategy. • TEECC recommends the IESO include metrics such as GHG emissions reductions in the options analysis to include impacts on the environment and health.	Thank you for this feedback. The IESO is currently completing a detailed options analysis which follows an evaluation process. The options are evaluated based on technical feasibility, their ability to meet the need, cost, lead-time and other considerations, such as community preference. The IESO does consider resiliency, land use considerations, and municipal planning/policy within the planning process. At this time, the IESO does not account for GHG emissions reductions, environmental and health impacts, or equity impacts in the analysis as quantitative inputs or metrics. However, participants are encouraged to provide feedback on these themes to be considered as part of community preference.

General Comments

Feedback / Common Themes	IESO Response
Participants requested a transparent clean energy plan that prioritizes climate, health, innovation and alignment with global sustainability goals, specifically: • Canadian Association of Physicians for the Environment (CAPE) requests the IESO aligns with the United Nations' global call to triple renewable energy capacity. CAPE is concerned that investments in non-renewable energy risks financial and health burdens and could leave the province behind in the global economy. • Canadian Association of Physicians for the Environment requests the IESO thoroughly assess the transition to clean, renewable energy for Ontario' future. • Ewa Shields stresses the importance of phasing out the PEC to improve air quality and mitigate climate change impacts like wildfires. • Ewa Shields, Philip Jung and Wayne Miranda emphasized renewables as more sustainable, cost-effective, and globally aligned. • Fiona Christie expresses Toronto residents expect the IESO to prioritize clean, innovative energy solutions over status quo approaches like continued reliance on the PEC. With major investments transforming the Port Lands into a vibrant urban hub, the presence of high emissions from PEC threatens public health,	Thank you for sharing this feedback. The IESO is the electricity system planner and operator for the province of Ontario. Our mandate is to manage the supply and flow of electricity to every home, business and community province-wide, coordinating with electricity generators, transmitters and local distribution companies to ensure the entire system operates reliably and cost-effectively. To ensure an adequate and reliable supply of power, the IESO also leads the forecasting and planning work to ensure future electricity needs are understood and met. The Ministry of Energy and Mines determines energy policy, including procuring supply. At this time, the Ministry has designated an "all of the above approach" to energy policy[3] to help meet energy demand across the province. The Technical Working Group, however, has contemplated decarbonization as part of this IRRP, including the commitment to studying the impacts of reducing reliance on Portlands Energy Centre and not including new gas generation within the city. The IESO has also published the Pathways to Decarbonization report in 2022 for the Minister of Energy to evaluate a moratorium on new natural gas generation in Ontario and to develop an achievable pathway to decarbonization in the electricity system. The scenarios presented in the report identify potential opportunities and challenges to consider, particularly as demand for electricity grows and Ontario's resource mix evolves. While not a plan for the future, the Report provides valuable insights into the sheer scope and magnitude of the effort that will be required to decarbonize provincially.

[3] Ontario Ready to Meet the Challenge of Soaring Energy Demand | Ontario Newsroom

Feedback / Common Themes	IESO Response
economic confidence, and the long-term success of the area's revitalization. • Jeffrey Levitt emphasizes the need to prioritize public health and climate considerations. • Joanne Kaashoek urged the IESO to prioritize a long-term shift to renewable energy for the health and climate well-being of Toronto residents. • Mark Freeman urged the IESO to adopt a plan consistent with the Paris Agreement, targeting a 50% reduction in energy-related GHGs by 2030, and to support policies that promote clean energy and discourage fossil fuel reliance. • SCAN! Toronto strongly recommends that the renewables procurement by the IESO be increased to three times the current renewable capacity of Ontario's electricity system by 2035. • Stantec emphasized reducing or eliminating reliance on Portlands Energy Centre is essential to improving air quality and economy. • TMU emphasized the need to provide an analysis for a complete transition to 100% renewable energy.	
TAF recommended better integration and compensation for underutilized large-scale, consumer-sited BESS to unlock their full grid value.	Thanks for this feedback and recommendation. As part of the regional planning process, implementation mechanisms for non-wire solutions for new resources will be determined following the IRRP's publication. Provincially, the IESO has developed the Resource Adequacy Framework which sets out a long-term competitive strategy to acquire resources while balancing ratepayer and supplier risks and recognizing

Feedback / Common Themes	IESO Response
	the unique characteristics and contributions of different resource types. Designed to facilitate the transition to a more competitive procurement environment and better aligning acquisitions with evolving needs, the framework incorporates the mechanisms that will be used to purchase capacity in all time frames: short, medium and long term. To maximize competition, acquisition mechanisms are expected to be open to all resource types that meet eligibility requirements. Engagement on these procurements is in various stages, and more information can be found on the IESO's website.
Participants recommended to prioritize renewable and distributed energy solutions over gas and nuclear, citing concerns about cost, risk, transparency, and long-term sustainability, specifically: • Canadian Association of Physicians for the Environment recommended offshore wind, solar, EV integration, and hydro imports from Quebec instead of nuclear or gas. • Canadian Association of Physicians for the Environment, TMU, Philip Jung, and Wayne Miranda argued that gas projects are incompatible with climate goals and more expensive than renewable alternatives. • Corey Helm, David Smith, Jeffrey Levitt, Mark Freeman, and Philip Jung raised concerns about SMRs being unproven, expensive, and risky, with potential delays undermining decarbonization goals. • David Smith and Wayne Miranda called for clear risk assessments for all options, especially high-risk technologies like SMRs.	Thank you for sharing this feedback. Based on this community feedback the IESO decided not to screen new gas generation or nuclear as potential options within the City of Toronto. The IRRP will also evaluate a scenario to reduce reliance on PEC. Given the growing electricity demand, and consideration to reduce reliance on PEC, a third transmission supply line will be required for the city. The third supply line will connect the city to the provincial grid which is supplied by a cost-effective and diverse mix of resources.

Feedback / Common Themes	IESO Response
• Ewa Shields, Fiona Christie and TERRE requested cost comparisons between renewables, nuclear, and gas to assess affordability and sustainability. • Kit Chapman stated non-wire options are more affordable than gas and nuclear. • Mark Freeman shared a robust rollout of renewables and DERs could eliminate the need for both gas plants and SMRs. • Philip Jung and David Smith questioned the prioritization of nuclear over renewables and called for clearer risk assessments. • Philip Jung highlighted unresolved nuclear waste issues and the need for lifecycle carbon data. • SCAN! Toronto and Liz Addison questioned the objectivity of IESO's analysis, suggesting it may reflect political priorities rather than independent evaluation. • TERRE expressed concern that SMR delays could prolong reliance on the Portlands gas plant and that the third transmission line may be tied to costly nuclear power. • TMU advocated for a 100% renewable energy future, opposing gas and nuclear entirely.	
Participants appreciated the consideration of district energy systems as part of the Toronto IRRP and provided some considerations to further support this technology, including: • Boltzmann Institute appreciated the IESO engaging with energy service providers	Thank you for sharing this feedback. Recently, the Ministry of Energy and Mines recently released the province's Integrated Energy Plan (Energy for Generations) that includes direction to the IESO to identify opportunities for new and existing district energy systems. The IESO looks forward to engaging more to understand opportunities for district energy systems to support the provinces broader electricity

Feedback / Common Themes	IESO Response
and the City of Toronto to understand the potential for district energy systems within the city and recommends the province should encourage municipalities to engage in thermal energy planning. • Enwave supported the IESO and Ontario's new energy plan for recognizing the value of district energy systems. • Enwave shared district-scale, peak-shifting electric boilers and heat pumps can reduce peak electricity demand more efficiently than individual building electrification and offer benefits like improved reliability, lower costs, better use of infrastructure, and alignment with provincial energy goals. • Enwave urged the IESO to develop new contracting mechanisms to reflect the full value of these technologies. • Enwave recommends the IESO assess the cost-effective and overall electricity demand reduction and energy efficiency potential of district energy solutions for other fast-growing areas of Toronto including Downsview, Golden Mile and Rexdale. • TEECC recommended completing a heating planning study to identify thermal energy sources.	system needs. Given that this Regional Plan will be released in October 2025, the IESO will consider this feedback in upcoming regional planning work. Provincially, the IESO has developed the Resource Adequacy Framework which sets out long-term competitive strategy to acquire resources while balancing ratepayer and supplier risks and recognizing the unique characteristics and contributions of different resource types. Designed to facilitate the transition to a more competitive procurement environment and better aligning acquisitions with evolving needs, the framework incorporates the mechanisms that will be used to purchase capacity in all timeframes: short, medium and long term. To maximize competition, acquisition mechanisms are expected to be open to all resource types that meet eligibility requirements. Engagement on these procurements is in various stages, and more information can be found on the IESO's website.
TMU suggested including the Auditor General of Ontario in the analysis.	Thank you for sharing this feedback.
Participants suggested enhancing imports from Quebec, specifically: • Canadian Association of Physicians for the Environment recommended hydro imports	Thank you for this feedback. Given the growing electricity demand, the IESO acknowledges the role and importance that interconnections, such as with Hydro Quebec, can play within the "all of the above" approach to meeting electricity needs.

Feedback / Common Themes	IESO Response
from Quebec as a cleaner alternative to energy. • TMU supports a wire connection to bring Quebec's hydro power to Ontario.	In 2023, the IESO secured a Memorandum of Understanding with Hydro-Québec to optimize the use of existing electricity generation capacity. In 2024, the IESO launched the Eastern Ontario Bulk Study which will assess whether the bulk transmission system is sufficient to reliably supply the demand growth expected in Eastern Ontario. Part of this study includes assessing opportunities for expanding interties with neighbouring Quebec and New York. Interested parties are encouraged to participate in the bulk planning engagement and share feedback.