

Feedback Form

Regional Electricity Planning in Toronto – April 16, 2024

Feedback Provided by:

Name: Gabriella Kalapos

Title: Executive Director

Organization: Clean Air Partnership

Email: [REDACTED]

Date: May 7th, 2024

To promote transparency, feedback submitted will be posted on the Toronto region [engagement webpage](#) unless otherwise requested by the sender.

Following the Toronto Region electricity planning engagement webinar held on April 16, 2024, the Independent Electricity System Operator (IESO) is seeking feedback on the draft electricity demand forecast scenarios and Engagement Plan. A copy of the presentation as well as a recording of the session can be accessed from the [engagement web page](#).

Please submit feedback to engagement@ieso.ca by May 7, 2024.

Topic	Feedback
<p>What additional information, if any, should be incorporated in the proposed electricity demand scenarios? What are some of your key developments, projects or initiatives that should be considered in developing an electricity demand forecast for the Toronto region?</p>	<p>It is also recommended that the Toronto Region Electricity Plan provide more clarity and transparency in the assumptions that are being used. For example: • What is the individual scenarios that are being used for the aggregated assumptions (high, medium, low and BAU)? For example, what are the EV uptake, heating electrification and data center assumptions, respectively? Providing more clarity on each of the assumptions that add up to the aggregated demand assumptions is key to providing stakeholders with the information they need to provide their input on the overall assumptions.</p>
<p>What local issues and concerns should be considered in the electricity planning?</p>	<p>CAP and the CAC undertook a review of the Pathways to Decarbonization report released by the IESO, and the resulting document Assessment of IESO's Pathways to Decarbonization Study identified that Ontario's electricity planning does struggle with a bias that favours big generation and big transmission as an energy solution over increasing all cost effective energy efficiency, distributed energy resources and demand response opportunities. A growing body of research, both in Ontario and North America, suggests that local generation and storage, demand response, efficient electrification, and other local conservation and demand management (CDM) measures can and should play a major role in securing a reliable energy system for Toronto. The heavier focus on the supply side, over the demand reduction side of the electricity equation poses significant cost concerns. It is essential to address this tendency of bias and ensure that electricity planning incorporates a diverse mix of energy solutions and strategies to meet growing energy demands over the coming decades.</p>
<p>What information is important to provide to participants throughout this engagement?</p>	<p>Clarity on the assumptions that are being used. There is concern that the IESO places a heavier emphasis on increasing supply over reducing electricity demand. For example, if it is based on the 2019 Achievable Potential Study, then there is a concern that this analysis significantly underestimates the CDM potential since it places a cap of 3.9 cents per kWh for efficiency, which is far lower than the price Ontario pays for existing nuclear electricity generation. Ontario Power Generation pays 10.5 cents per kWh for existing nuclear, never mind the higher costs</p>

Topic	Feedback
	associated with new nuclear. There is a need to level the playing field so that the price Ontario is willing to pay to reduce demand should be closer to the price for additional supply. This underestimation has significant implications for the calculation of electricity supply needs for Toronto's Transform TO targets. How the IESO has considered this traditional bias will be critical for stakeholders to understand.
Does the proposed Engagement Plan provide sufficient scope and opportunities for input?	If it is an ongoing process over a one-off process then yes it does. But this effort requires an ongoing and transparent process for stakeholders to provide input and to better understand how the IESO incorporated/considered that input or what was unable to be incorporated and why. The latter piece is an opportunity for significant improvements in stakeholder input.

General Comments/Feedback

RE: Clean Air Partnership Input on Regional Electricity Planning in Toronto. Clean Air Partnership (CAP) is a charitable environmental organization whose mandate is to enable communities to improve air quality, advance active and sustainable transportation options, take bold climate action, increase community resilience to climate impacts and accelerate the transition to a low carbon economy. We convene networks, lead research and knowledge transfer, and catalyze transformative action. CAP serves as the facilitator for the Clean Air Council, which is a network of 44 municipalities from across Greater Toronto, Hamilton, Eastern and Southern Ontario that work collaboratively on the development and implementation of clean air and climate change mitigation and adaptation actions. The CAC network represents over 11 million Ontarians. CAP is very pleased that the IESO is advancing analysis to better understand the implications that Transform TO will place on the electricity system and how we can better prepare for Toronto's upcoming electrification needs to achieve decarbonization in a more comprehensive and strategic manner that results in lower costs over the long term. As the IESO is the entity tasked with managing Ontario's electricity system, it is imperative that the IESO engage with municipalities and the province on what the 2030 and 2050 climate targets mean for Ontario's bulks and distribution systems and the state of readiness of the electricity system for decarbonization readiness. At present, our present course of electricity planning investments is not on track for decarbonization. Hence, it is important to advance this Toronto electricity planning exercise. CAP and the CAC undertook a review of the Pathways to Decarbonization report released by the IESO, and the resulting document Assessment of IESO's Pathways to Decarbonization Study identified that Ontario's electricity planning does struggle with a bias that favours big generation and big transmission as an energy solution over increasing all cost effective energy efficiency, distributed energy resources and demand response opportunities. A growing body of research, both in Ontario and North America, suggests that local generation and storage, demand response, efficient electrification, and other local conservation and demand

management (CDM) measures can and should play a major role in securing a reliable energy system for Toronto. The heavier focus on the supply side, over the demand reduction side of the electricity equation poses significant cost concerns. It is essential to address this tendency of bias and ensure that electricity planning incorporates a diverse mix of energy solutions and strategies to meet growing energy demands over the coming decades. Demand Forecast. CAP recommends the need for a full and transparent consideration of non-wires solutions such as those described below to advance the resilience and reliability of the electricity system and to protect ratepayers from rising electricity costs. With the distribution and transmission grid limitations that Toronto experiences, there is a strong business case to ensure that Toronto advances all cost effective CDM, distributed energy resources and demand response opportunities prior to investing in the transmission system. For example, in the demand forecasts presented in Tables 8-11, it appears that these forecasts are based on gross demand minus the CDM contributions to the system. CAP would like to better understand how the CDM contributions were calculated. Did it rely on existing CDM programs? Or is CDM potential based on the 2019 Achievable Potential Study? For example, if it is based on the 2019 Achievable Potential Study, then there is a concern that this analysis significantly underestimates the CDM potential since it places a cap of 3.9 cents per kWh for efficiency, which is far lower than the price Ontario pays for existing nuclear electricity generation. Ontario Power Generation pays 10.5 cents per kWh for existing nuclear, never mind the higher costs associated with new nuclear. There is a need to level the playing field so that the price Ontario is willing to pay to reduce demand should be closer to the price for additional supply. This underestimation has significant implications for the calculation of electricity supply needs for Toronto's Transform TO targets. This concern also relates to distributed generation calculations which seem to be based simply on currently contracted resources. There is the need for the Toronto Region Electricity Planning to consider all potential distributed energy resources, especially modelling the value a virtual net metering policy for Ontario may play in opening the distributed energy opportunity in the market. The recent Ottawa solar incentive program can serve as an indicator of the market's desire to increase distributed energy resources within the distribution system to reduce the need for transmission and bulk generation investments. Considering the programs and policies that can unlock Toronto's distributed energy opportunities will be critical for reducing electricity investments at the bulk and transmission levels. It is also recommended that the Toronto Region Electricity Plan provide more clarity and transparency in the assumptions that are being used. For example:

- What are the individual scenarios that are being used for the aggregated assumptions (high, medium, low and BAU)? For example, what are the EV uptake, heating electrification and data center assumptions, respectively? Providing more clarity on each of the assumptions that add up to the aggregated demand assumptions is key to providing stakeholders with the information they need to provide their input on the overall assumptions.

Peak Demand Considerations There is a significant value in considering not only peak electricity, but overall load profile to better understand the potential to load shift from peak towards nonpeak. By focusing solely on peak demand, there is a risk of overlooking opportunities to optimize existing resources and implement cost-effective solutions to meet capacity needs. Programs incentivizing energy conservation during peak hours will help to avoid strain on the grid and reduce the need to build expensive power plants only used at peak demand times. For instance, the IESO compensates industrial, commercial, and institutional customers \$65,000 per megawatt to move their energy use from peak to off-peak times. In contrast, during the summer of 2023, IESO agreed to pay Capital Power & Eastern Power \$273,000 per megawatt annually to develop new gas-fired peaker plants¹. The cost of reducing peak demand is 76% less than the costs associated with creating new gas-fired

power generation capacity. Creating new programs to incentivize peak demand reduction and expanding programs like the Peak Perks program to turn down the thermostats of residential air-conditioners and heat pumps by up to two degrees Celsius on hot summer days have the potential to reduce over 90 MW of peak demand (equivalent to taking a city the size of Kingston off the grid at summer peak) for a relatively low cost. Opportunity for Innovation. The IESO and the city must view this planning process as an opportunity to embrace innovative solutions. Exploring renewable energy sources within and near Toronto, developing local energy storage systems, and promoting distributed energy generation, where power is created near the point of use, are all vital strategies that must be considered for meeting Toronto's growing electricity needs in a sustainable and cost-effective way. CAP thanks IESO for beginning this decarbonization analysis at the distribution system level. This effort is critical to ensuring all levels of government are doing their part to prepare Ontario for the energy transition. We need to work across siloes to ensure we manage our electricity system in a manner that advances our cost-effective energy opportunities and recognizes and addresses the bias within our energy planning to place a heavier emphasis and value on the increasing energy supply and transmission side of the equation than on the reducing and reallocating demand and advancing distributed energy opportunities side of the equation. Toronto's electricity future depends heavily on proactive planning and investment in modernizing its power infrastructure. The decisions made now will determine whether the city can support economic growth, address climate goals, and ensure that lights stay on for all Torontonians as the city continues to grow and decarbonize.