

Feedback Form

Regional Electricity Planning in Toronto – April 16, 2024

Feedback Provided by:

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Date: May 7, 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.

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?

- include equipment performance degradation over time for all equipment modelled, as this will increase demand over time, for example of HVAC equipment, and use actual equipment data rather than manufacturer’s specifications
- include the effect of loss of tree canopy due to adverse weather, on HVAC demand
- consider the effect on electricity demand of new technology:
 - sophisticated bottom-up demand management / smart buildings
https://www.thestar.com/business/mars/inside-job-how-ai-can-help-reduce-emissions-in-buildings/article_e7afecca-00ce-11ef-b101-1bc46118f325.html
 “highly scalable”
 - Form Energy claims that new grid-scale battery technology can store power at much lower cost than Li+ batteries, based on widely available iron.
 - <https://formenergy.com/technology/battery-technology/> - low-cost storage will lower peaks.
- consider adoption of recovery of waste heat (Subway stations / NY, & London UK) for building HVAC and water heating, thermal storage and thermal networks may reduce winter peak demand due to cold-climate ASHP’s on very cold days.
 - <https://www.stevens.edu/news/from-subways-to-city-buildings-decarbonizing-new-york-city-through-its-first>
 - [By using waste heat from the London Underground network, 1,350 homes, a school and two leisure centers in Islington, are now heated and supplied with hot water.](#)
 - Project to recover waste heat from steel mill in Hamilton under development.
 - From sewers, as at Toronto Western Hospital
 - [Sand batteries can be used to store intermittent renewable energy for thermal grids.](#)
 - Distributed thermal storage using home water heaters <https://theconversation.com/using-electric-water-heaters-to-store-renewable-energy-could-do-the-work-of-2-million-home-batteries-and-save-us-billions-204281>

- consider that increased mandated building density around transit nodes creates opportunity for low-carbon thermal networks, which may then be expanded to adjacent areas.

What local issues and concerns should be considered in the electricity planning?

We are in the east end of Toronto, just north of the Portlands Energy Centre. The following are related to production.

Public health is a concern.

<https://www.economist.com/science-and-technology/2022/11/29/air-pollution-can-drive-people-to-kill-themselves>

Rocky Mountain Institute: The projected costs of the negative health impacts caused by planned gas-powered electrical energy plants estimated at \$23-74 billion dollars in the US. Consider the cost in Canada <https://rmi.org/hidden-health-costs-of-gas-fired-power-plants/>

Food Security will be challenged by adverse weather and transportation challenges¹

Environment Issues from pollution (lower crop yield article)

AGU Advancing Earth and Space Science, July 19, 2121 "Significant Reductions in Crop Yields from Air Pollution and Heat Stress in the United States"

"Air quality and regional climate change from fossil fuel use should both be considered in any assessment of food security."

<https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2021EF002000> US National Science Foundation. June 29, 2022

High amounts of nitrous oxide result in lower crop <https://new.nsf.gov/news/less-air-pollution-leads-higher-crop-yields-study>

What information is important to provide to participants throughout this engagement?

-We'd like to know how accurate have demand forecasts been in the past and what measures have been taken to improve accuracy?

Does the proposed Engagement Plan provide sufficient scope and opportunities for input?

It's not clear how inclusive the plan is in terms of reaching an appropriate variety of stakeholders. (Perhaps we missed this information.)

Suggest referring to Public Participation and Engagement Professionals.

<https://iap2canada.wildapricot.org/>

The scope needs to be widened to priorities: the stated priorities have been reliability, affordability, and sustainability. During the pandemic, non-essential parts of the economy were put on hold in the interest of public health. Many municipalities in Ontario have declared climate emergencies, and we similarly need to do centre demand management and decarbonization to mitigate GHG emissions from electricity generation to meet [Canada's obligations in the COP28 Global Renewables and Energy Efficiency Pledge](#), federal mandates on emission caps, to mitigate catastrophic risk.

¹ <https://www.reuters.com/business/energy/market-be-short-oil-2025-onwards-occidental-ceo-davos-2024-01-16/>

General Comments/Feedback

It was challenging to enter input into the Word document.

We appreciate the opportunity to comment.