APRIL 2025

The IESO's Local Generation Program

Introductory Stakeholder Engagement Session

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Territory Acknowledgement

The IESO acknowledges the land we are delivering today's webinar from is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples. We also acknowledge that Toronto is covered by Treaty 13 with the Mississaugas of the Credit First Nation.

As we have attendees from across Ontario, the IESO would also like to acknowledge all of the traditional territories across the province, which includes those of the Algonquin, Anishnawbe, Cree, Oji-Cree, Huron-Wendat, Haudenosaunee and Métis peoples.

Today's Discussion

On November 28, 2024, the IESO was directed by the Minister of Energy and Electrification to *"…explore a new program to secure existing and new distribution-connected generation facilities to help meet regional and system-wide supply needs. Additionally, the IESO should explore considerations for upgrades and/or expansions at existing distribution-connected facilities to help cost-effectively support our growing energy needs."*

The IESO was asked to report-back with considerations on this program by the end of April. Given the pause on engagement sessions from January - March, the IESO will be reporting back later this summer to allow for time to engage with the sector.

In response to this direction, this presentation introduces the IESO's Local Generation Program (LGP), a program to cost effectively re-contract existing, and encourage new-build, sources of generation within Ontario's distribution systems.

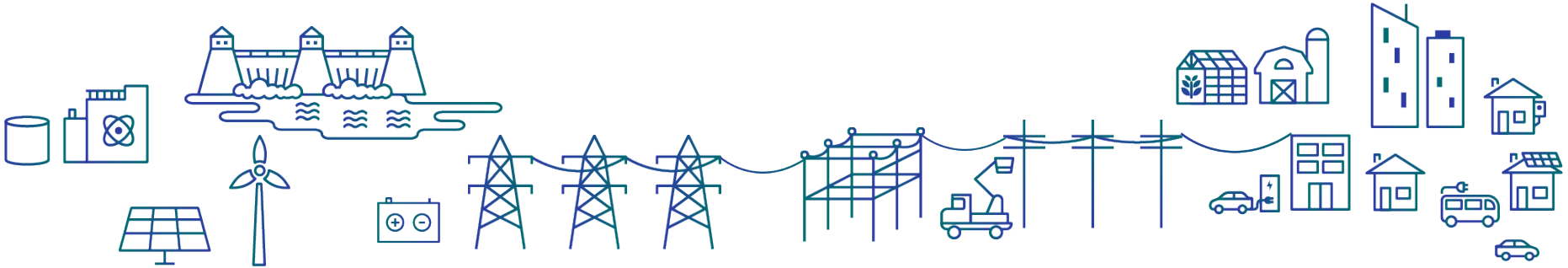
Agenda

- Background and context of electricity procurements in Ontario
- Drivers for the program
- High level design outline for the proposed streams of the LGP:
  - Stream 1: Re-contracting
  - Stream 2: New Build
- Consideration: Upgrades/Expansions/Refurbishments
- Timelines and Next Steps

Background: The IESO's Role in the Sector

The IESO:

- Manages Ontario' bulk power system through the operation of the wholesale energy market
- Plans for the province's future energy needs
- Procures energy and capacity resources through long-term contracts and wholesale energy markets



Everyday, the IESO interacts with:

Generators (Suppliers) → **Transmitters** → **Local Distribution Companies (LDC)** → **Energy Consumers**

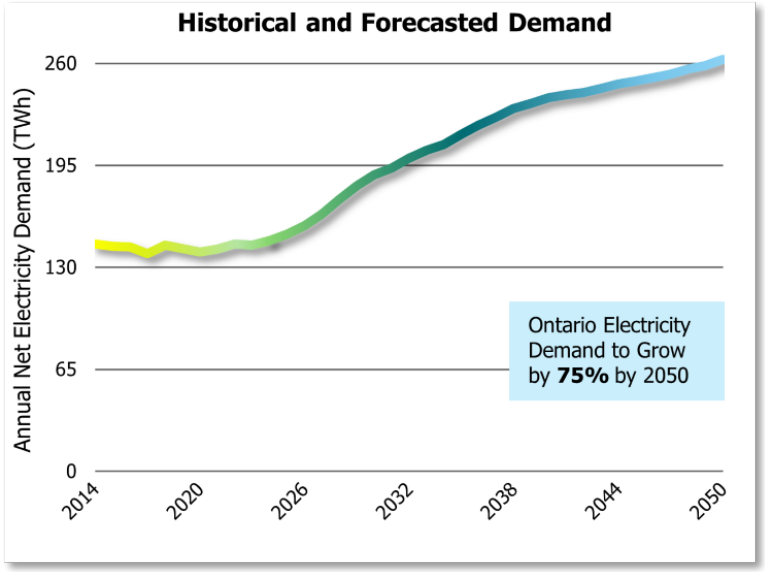
Ontario's Changing Electricity Landscape

This is a **pivotal point** for the electricity system. Ontario is entering a period of growing needs – by 2050, **electricity demand is expected to grow by 75%.**

These needs are being driven by **continued electrification** as well as **recent developments in industrial and data centre growth**.

This demand growth is happening in the midst of expiring generator contracts and nuclear refurbishments.

To meet the emerging needs, **Ontario will require new electricity infrastructure**, including new supply, transmission and distribution assets.



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Resource Adequacy Framework

The IESO's Resource Adequacy Framework includes the following suite of tools intended to secure resources over the short, medium and long-term:

Capacity Auction	Medium-Term Procurements	Long-Term Procurements	Programs	Bilateral Negotiations
Balances fluctuations in system capacity needs from one year to the next. Executed on an annual basis.	Provides existing resources with greater certainty through shorter forward periods and flexible 5- year contracts. Every 2-3 years as needed.	Incentivizes investment in new resources through longer forward periods and long-term contracts. Annually from 2025-2028 (possibly beyond).	Meets electricity policy objectives in a more targeted manner as directed. Local Generation Program aims for regular application windows.	Secures resources where a need exists that can't be addressed in a practical & timely way through competitive processes. Undertaken as-needed.

Engagement Context: DER-Related Initiatives

Market Participant (MP) Requirement
Non- Market Participant
Combination (MP/Non-MP)

Initiative	Resource Type(s)	Timeframe
Local Generation Program	Smaller scale, existing and new distribution-connected resources with an installed capacity of 100 kW to 10MW	Engagements ongoing through 2025
Enabling Resources Program	Storage and hybrid generation storage (Stream 1); DER integration (Stream 2)	Continued engagements through 2025
Regional and Bulk Transmission Planning	Dispatchable and distribution-connected DERs considered as part of transmission planning	Ongoing engagements related to ongoing regional plans
Demand Side Management	DER installation support programs available as part of the framework	New framework and programs effective January 2025; engagements through 2025
	Larger Scale	
Capacity Auction	All Market Participant resources – 6-month commitment from May to Oct and November to April	Engagements on enhancements expected to continue through 2025
Long-Term 2 Procurement	Capacity and energy resources – Market Participants > 1 MW	Ongoing engagements; proposal submissions due October 16, 2025 (energy) and December 18, 2025 (capacity)
Medium-Term 2 Procurement	Existing energy and capacity resources uncontracted or near ending of contract term	Engagements concluded; program launched

Background – Distributed Energy Generation in Ontario

Ontario has a strong history of procuring generation assets within local distribution systems. Province-wide, the IESO has contracts with roughly 2,500 facilities (installed capacities between 100 kW – 10 MW); totalling roughly 3,300 MW.

Over the next 10 years, roughly 1,600 of these contracts, representing 2,000 MW, will come to the end of their original contract term, including contract types such as:

- **FIT** (Feed in Tariff Program)
- **RES** (Renewable Energy Supply)
- **RESOP** (Renewable Energy Standard Offer Program)
- **CHP** (Combined Heat and Power)
- **CHPSOP** (CHP Standard Offer Program)
- **NUG** (Non-Utility Generators)

Opportunity – Distribution-Connected Generators

The IESO recognises that smaller, distribution-connected electricity generators play an important role within Ontario's electricity system. In general, Local generating facilities are able to:

- be built more quickly than larger scale energy infrastructure
- help meet local demand, freeing-up transmission capacity
- support both province-wide and regional energy needs

Investing in generation facilities at the local level can help ensure Ontario's electricity system is reliable and cost effective.

Update – IESO Request for Information (RFI)

The IESO would like to thank everyone who participated in the Fall 2024 Resource Adequacy RFI.

- The RFI received responses representing approximately 1,500 facilities and developers of yet-to-be-built facilities, demonstrating significant stakeholder engagement.
- We received responses from existing facilities of all sizes, offering valuable insights to help with the LGP design.
- The responses showed mixed priorities and unique challenges faced by various parties, which the IESO is continuing to analyse.

Stay Connected for Future RFIs

Ensure your voice is heard in shaping future energy initiatives by participating in upcoming RFIs. Stay informed and involved to help shape the future of energy planning.

How to Stay Informed:

- The Request for Information - Resource Adequacy webpage will be the primary source for updates on current and future Resource Adequacy RFIs.

Local Generation Program

High Level Design Overview

What is the Local Generation Program (LGP)?

- The LGP is a **contracting program**, focused on locally sited, distribution-connected generation facilities.
- Recognizing that over 1,600 distribution connected energy generation contracts are expiring over the next 10+ years, the IESO is engaging on the design of **a re-contracting stream** to offer opportunities for continued investment and operations in those assets.
- Given the increasing demand for energy in Ontario, the IESO is also seeking to create **a new build stream** to support new distribution connected generation throughout the province.

Program Goals

The goal of the LGP is to offer opportunities for investment in existing and new-build distribution-connected generation facilities to help support Ontario's increasing energy needs. Its goals include:

- Cost-effectively re-contracting with existing facilities. The proposal is to use a pay-as-bid approach to re-contracting instead of the standard offer process used in the 2010's.
- An application process that is administratively simple for suppliers and LDCs and includes a regular cycle of application opportunities (windows)
- Close collaboration with LDCs on program design and delivery

Proposed Program Features

- Front of meter electricity generating resources – technology agnostic
- LDC-connected – no requirement to become an IESO Market Participant
- Installed capacity of 100 kW to 10 MW
  - The program is not targeted at smaller facilities such as rooftop solar (i.e. microFIT).
  - The IESO's electricity Demand-Side Management (eDSM) programs include incentives for new rooftop solar generation facilities sized between 1kW and 1 MW.
  - Final eligibility requirements for the LGP will be made in consideration of these eDSM opportunities.

Local Generation Program

Proposed streams:

1. Re-Contracting
2. New Build

Program Streams

The LGP intends to offer two distinct program streams:

- **Re-Contracting** supports existing facilities to continue operations
- **New Build** will support the development and construction of new energy generation facilities

Stream 1: Re-Contracting

Re-contracting: Proposed Eligibility

- Facilities with contracts expiring within 5 years of a given program round:
  - Example: In a 2026 application period, facilities with contracts expiring before 2031 would be eligible. In 2027, contracts expiring before 2032 would be eligible, etc.
- Leveraging the design of the IESO's medium-term procurements, the IESO is proposing 5-year re-contracting terms
- This means that a facility with a contract expiring in 2031 that bids in 2026 could be awarded a new contract that runs from 2032 to 2037
- Available for energy producing technology types such as biogas, wind, solar, and gas-fired generators (including CHPs)

Re-contracting: Proposed Mechanics (1 of 2)

In order to provide certainty of opportunity, the IESO is aiming to offer regular (e.g. annual) application windows for re-contracting. The process is contemplated as:

1. Eligible generation facilities (those with contracts expiring within 5 years) pre-register prior to an application window
2. During the application period - proponents submit a price ($/MWh), and contract capacity at which they would be willing to re-contract

Re-contracting: Proposed Mechanics (2 of 2)

After the prices have been submitted:

3. Similar to the medium-term 2 process, the IESO would award contracts to the most cost-effective facilities (e.g. the lowest cost 80%). The IESO would also have the ability to offer contracts to all competitively-priced facilities
4. Contracts would be traditional power purchase agreements (PPA) like those awarded in previous DER programs
5. Proponents that submit prices but are not re-contracted may re-apply in subsequent years

Re-contracting: High Level Issues to Explore

The IESO is seeking additional information and feedback around the following high-level re-contracting issues:

1. Feedback on the proposed recontracting design
2. Timing and logistical issues that may impact contract transition and or facility operations
3. Suppliers perspectives on facility remaining useful life and life extension options and risks
4. LDC and supplier perspective on opportunities for upgrades and expansions in some areas

Stream 2: New Build

New Build: Proposed Eligibility

In addition to the general program eligibility mentioned earlier (on slides 14-17), the following is proposed for the new build stream:

- A technology neutral approach for energy generation offering long-term contracts;
- Target quantities may be informed by both provincial-wide energy needs and locational / regional considerations; and,
- Similar to the Long-Term 2 procurement, other policy considerations may be applicable (e.g. economic participation in the project by an Indigenous Community, Municipal and LDC support, agricultural land use considerations).

New Build: Proposed Mechanics

Similar to the re-contracting stream, the new-build stream intends regularly planned application windows for new builds:

1. Province-wide MW targets will be established for each window. Regional targets could be utilized where needs have been identified;
2. Proponents submit a price to build new energy generating facilities; rated criteria points could be used as to encourage development in specific regions or promote provincial policies
3. Contracts would be traditional power purchase agreements (PPA) like those awarded in previous DER programs

New Build: High Level Issues to Explore

The IESO is seeking feedback around the following issues related to new build facilities:

1. Facility size and locational concerns
2. LDCs role in developing and delivering the program
3. Municipal support policies and practices

Consideration: Upgrades/Expansions/Refurbishments

Upgrades and Expansions: Summary

- The IESO understands that some owners of existing facilities may be interested in upgrading or expanding existing facilities.
- How to enable such opportunities will depend on several factors, including:
  - Timing of upgrade / expansions / refurbishment (i.e. pre or post existing contract expiry)
  - The extent of work being undertaken – what might trigger the need for additional permitting or municipal approvals

Upgrades and Expansions: High Level Issues to Explore

IESO is seeking feedback around the following issues:

1. Supplier and LDC perspectives on opportunities around upgrading or expanding existing facilities
2. Timing considerations around upgrades and expansions
3. Contractual issues and approvals processes around changes to existing facilities

Summary

Summary (1 of 2)

- Ontario has a growing energy need
- The IESO is seeking options to meet those energy needs
- Distribution system connected generators can:
  - be built quickly in areas where energy is most needed
  - help meet local demand, freeing-up transmission capacity
  - provide cost effective energy for the provincial grid
- Existing DERs coming off contract may be suitable for reinvestment to extend the lifespan of the facilities in a cost effective manner

Summary (2 of 2)

- The IESO proposes the Local Generation Program as part of the solution to growing energy needs
- A re-contracting stream will support life extensions of existing facilities
- A new-build stream will support energy development in areas where there is local needs and support
- LGP is intended to offer a simplified approach to procurement for smaller energy generating assets
- An annual program cycle will provide certainty of opportunity

Next Steps

Next steps

- The IESO invites written feedback on the materials presented by **May 9, 2025**. All written feedback should be submitted to **engagement@ieso.ca** utilizing the IESO Feedback Forms posted on the engagement webpage.
- We anticipate hosting monthly LGP engagement sessions. Subscribe to the IESO Bulletin for updates.
- Information about engagement sessions and stakeholder feedback will be posted on the webpage.
- Our plan above supports the IESO intention to launch the LGP in 2026. We appreciate your time, feedback, and support in designing the program.

Thank You

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Appendix

Directive to the IESO
November 28, 2024
From the Minister of Energy and Electrification
Regarding The Local Generation Program

Directive to IESO Re: The Local Generation Program

From the Minister of Energy and Electrification, November 28, 2024:

"The government of Ontario recognizes that distributed energy resources (DERs), such as smaller-scale, distribution-connected generation, can offer value to our electricity system at a time of unprecedented demand growth. Ontario has nearly 2,000 MW from roughly 1,600 existing biogas, wind, solar, and combined heat and power facilities with contracts sunsetting over the next ten years. The IESO should explore a new program to secure existing and new distribution-connected generation facilities to help meet regional and system-wide supply needs. Additionally, the IESO should explore considerations for upgrades and/or expansions at existing distribution-connected facilities to help cost-effectively support our growing energy needs. Locally sited resources can help support municipal clean energy commitments, address local energy supply concerns, and empower more Ontario customers and business to participate in the electricity system.

As such, I request that the IESO report back by April 30, 2025 on a proposal to establish a local small generation procurement program in Ontario. After receiving and reviewing this report, government will work with the IESO to launch a competitive program for local generation resources by early 2026."

Appendix

Definitions

Acronym definitions

Dx: Distribution system - The power lines, poles, transformers, and other equipment that carry electricity at lower voltages (up to 50,000 volts) from the transmission system to homes and businesses.

IESO: The Independent Electricity System Operator.

LDC: Local Distribution Company – owner / operator of electrical distribution systems (i.e. Toronto Hydro, Alectra, Hydro Ottawa etc). Most of these are owned by Municipal Governments.

LGP: Local Generation Program, the focus of this presentation deck

MW: Megawatt – a measure of the amount of electricity (capacity output from a generator)

OPA: Ontario Power Authority was an agency responsible for Ontario electricity system procurements and programs from 2004 to 2015 when it merged with the IESO. Most eligible contract types in LGP were issued by the OPA