

Proposed East Windsor Generation Facility Expansion

A reliable backstop to help meet Windsor’s future power needs

Spring 2024



Responding to the need for more power generation capacity in Ontario, Capital Power is proposing the East Windsor Generation Facility Expansion. The facility would help address the projected generation shortfall in the Windsor-Essex area that could occur as early as 2025 and support economic growth objectives in the region.

The project would consist of a simple-cycle gas turbine generator capable of generating approximately 100 megawatts (MW). The project would be located adjacent to the existing East Windsor Cogeneration Centre (EWCC) on a parcel of land owned by Capital Power.

Designed to operate as a peaking facility, the project would provide dependable capacity at times when other generation sources (wind, solar, base-load generation) are not capable of meeting demand. The facility would operate under contract to Ontario’s Independent Electricity System Operator (IESO), which would determine when the facility would run based on the need for electricity.

The gas turbine generator would be capable of responding to system needs quickly, with the generator unit able to ramp up to full output within 10 to 20 minutes. This allows the IESO to dispatch the facility quickly in response to sudden changes in the system or when more electricity is needed to meet unanticipated demand.

Since the project was originally announced in 2023, Capital Power has worked to design and develop the project in a way that balances the need for additional power generation capacity with the needs of the community. Feedback received from the engagement program has significantly guided the proposed design in a way that strives to avoid or mitigate the potential effects of the project.

About Us

Capital Power is a growth-oriented North American power producer, publicly traded (TSX: CPX) and headquartered in Edmonton, Alberta. We create innovative electricity solutions to electrify the world reliably and affordably while protecting the planet for future generations.

Powering Change
by Changing Power™



Join us! Public Open House

You’re invited to learn more about our proposed project.

Giovanni Caboto Club - 2175 Parent Avenue
Wednesday, May 1 | 5:00pm to 8:00pm

5pm

Project team members will be available to share information, answer questions and hear comments from community members.





East Windsor Cogeneration Centre (EWCC)

The existing 84 MW EWCC began operations in 2009 and was acquired by Capital Power in 2017. EWCC is a peaking facility and is dispatched by the IESO to meet overall system needs.

Public Engagement

We value and consider local community interests and priorities. We engage government, local communities, investors, shareholders, and Indigenous communities. Please contact us if you have any questions, comments and/or want to be added to the project mailing list.

Location, Layout and Project Key Components

The project would be located at 224 Cadillac Street, immediately adjacent to the existing EWCC on a section of land currently used for site access, parking, and storage.

The project includes these and other components:

- Simple cycle gas turbine generator and auxiliary equipment (gas compressor, exhaust stack, power distribution, air-cooled heat exchanger, etc.)
- A building for the power generation equipment and to mitigate noise
- A transformer to connect to the power grid
- A stormwater management system, including an underground stormwater tank
- A storage building
- Landscaping improvements

The buildings have been designed to be consistent with the architectural character of the surrounding neighbourhood, and to ensure the facility is compliant with provincial noise regulations.

The project would make use of some existing infrastructure, including tying into the existing EWCC high-voltage interconnection line to avoid the need for a new connection to the provincial electricity grid.

Schedule

Construction would not start until all provincial and municipal approvals and permits have been received. Pending regulatory approval, the anticipated project timelines include:

Milestone	Anticipated timing
Environmental studies and regulatory approvals	2023–2024
<i>Activities below are pending regulatory approval</i>	
Construction start	Early 2025
Delivery and installation of project components	2025–2026
Commercial operation target	Mid 2026

In May 2023, Capital Power executed a Long-Term Reliability Services Contract with the IESO through 2040 (approximately 15 years) as part of IESO's Expedited Long-Term RFP process.

A Clear Need for New Electricity Generation

A broad-based economic resurgence, population growth, electrification (electric vehicles, electronic devices, etc.), and refurbishment of nuclear generating facilities has led to an immediate need for electricity supply in Ontario. The IESO has identified several regions of the province with particularly pressing needs for new power supply. The Windsor-Essex area, representing the region west of London (Ontario) and the City of Windsor is one of these regions. The IESO forecast suggests local demand will outstrip current capacity in this region as early as 2025.

Ontario's power needs are projected to double by 2050, from 42,000 MW to 88,000 MW.

(Source: Powering Ontario's Growth, Government of Ontario, 2023)



Architectural rendering of the proposed equipment and storage buildings, looking northeast from Cadillac St. (March 2024).

Environmental Review

Capital Power is currently completing the Environmental Screening Process for Electricity Projects (ESP) in accordance with Ontario Regulation 50/24 under the Environmental Assessment Act and as outlined in the Guide to Environmental Assessment Requirements for Electricity Projects (2024).

The ESP has two tiers of assessment: the Screening Stage, which can be based primarily on existing or readily available information, and the Environmental Review Stage, where additional work programs, studies and consultation are undertaken to assess environmental effects and/or address unresolved concerns and issues. Capital Power has voluntarily undertaken the Environmental Review Stage of the ESP for this Project.

Project engineering and design, technical studies and engagement with provincial ministries, the City of Windsor, Indigenous communities, and local residents have been ongoing throughout 2023 and early 2024. The assessments we are undertaking for the Environmental Review consider the potential effects

of the project, and identifies any required mitigation or monitoring, on the following:

- Stormwater Management
- Groundwater
- Land Use
- Air Quality
- Greenhouse Gas Emissions
- Noise & Vibration
- Natural Environment (Ecology)
- Socio-Economic Environment
- Heritage Buildings and Landscapes
- Archaeological Resources
- Visual Aesthetics
- Human Health Risk
- Climate Change Resilience

Preliminary results of these assessments will be shared at our Open House on May 1, 2024. The project team will then incorporate feedback and finalize the Environmental Review Report, which will be issued for public review and available on Capital Power's website.



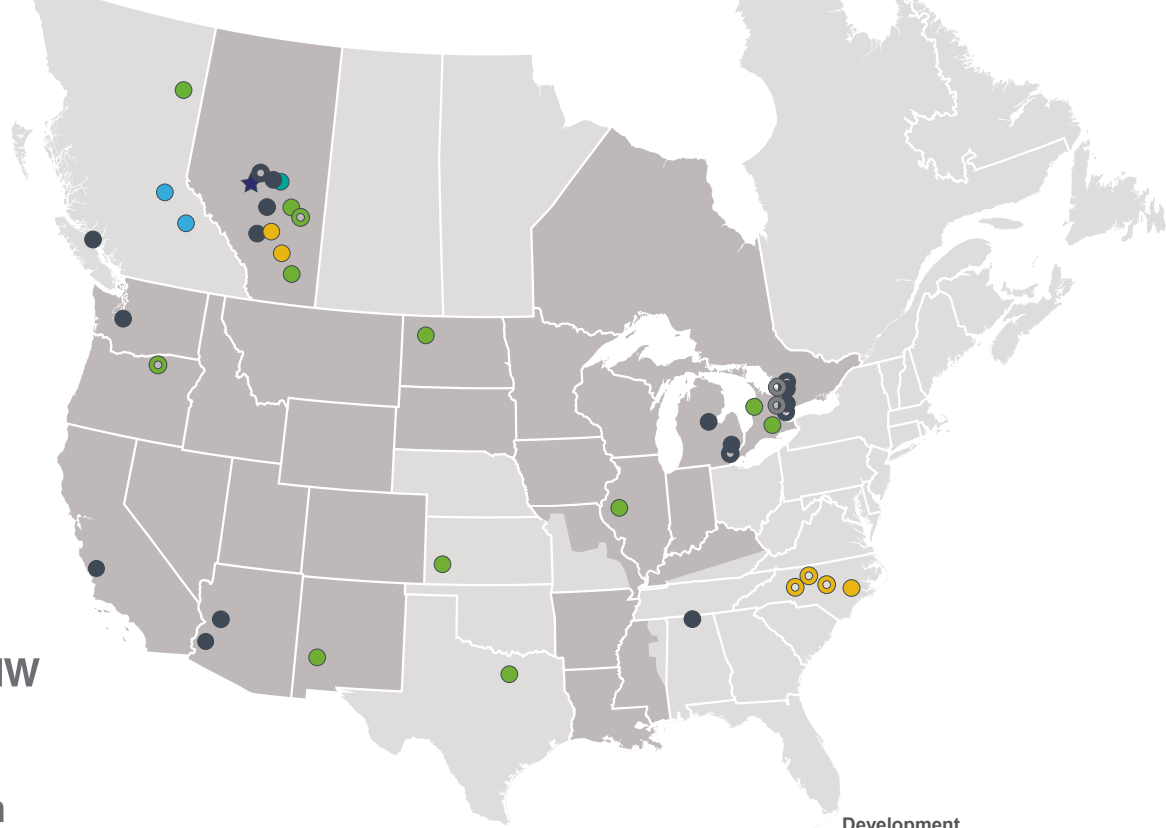
The Role of Natural Gas Generation – a Critical Energy Transition Backstop

Natural gas power generation has a key role in helping Ontario transition to a decarbonized future, ensuring the electricity system stays reliable and affordable while Ontario bolsters its renewable energy potential and develops other alternatives.

The attributes of natural gas in power generation include:

- Operates under all weather conditions.
- Can be ramped up or down within minutes in response to sudden or unexpected changes in demand or the availability of other generation sources.
- Generates electricity for longer than four hours (the normal operating span of batteries).
- Provides overall reliability to the grid by stabilizing voltage and frequency, which is critical for a power system that has intermittent generation sources, such as wind and solar.

Capital Power's North American Footprint



~9,300 MW
generation capacity



\$28 million
innovation spend

In Operation

- Wind
- Waste Heat
- Solar
- Landfill Gas
- Gas
- Battery Storage

Development and Construction

- ★ Gas / Coal*
-
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*Genesee 1, 2, 3 shown as one facility

Committed to Being a Good Neighbour

Capital Power has been operating the EWCC since 2017. We are proud to have supported community organizations and initiatives during this time, including:

- Ford City Business Improvement Association
- Noah's House Mental Health Foundation
- Family Services Windsor-Essex
- Windsor & Essex County Crime Stoppers, Inc.
- The Windsor Parade Corporation
- The Windsor Residence for Young Men (WRYM)
- The United Church Downtown Mission of Windsor
- Windsor Lifeline Outreach
- Hiatus House
- East Windsor Community Service Centre

Check out our 2023 Integrated Annual Report: capitalpower.com/IAR



Contact Us

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capitalpower.com/EWG-Expansion



Territorial Acknowledgement

We acknowledge that the land on which this project is proposed is the traditional territory of the Three Fires Confederacy of First Nations, which includes the Ojibwa, the Odawa, and the Potawatomie.

