Ontario’s Electricity Options: A Cost Comparison

Ontario Clean Air Alliance Research

April 19, 2024

Energy Efficiency
Quebec Water Power: Average Export Price 2023
New Solar Power + Storage: Mid-point cost
New Onshore Wind Power + Storage: Mid-point cost
OPG Price of Nuclear Power in 2024
OPG Price of Nuclear Power in 2027
New Offshore Wind: Mid-point cost
New Gas-fired Peaker Plant: Mid-point cost estimate
New Nuclear Reactor: Mid-point cost estimate

cents per kWh

24.4¢
22.7¢
14.3¢
13.7¢
10.5¢
10.5¢
10¢
5.2¢
1.6¢

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**Notes**

**Energy efficiency:** In 2022 the Independent Electricity System Operator’s (IESO) average levelized unit energy cost (LUEC) of procuring a kWh of electricity savings was 1.6 cents. Email to Ontario Clean Air Alliance from Customer Relations, IESO, (December 7, 2023).

**Quebec water power – average export price in 2023:** Hydro Quebec, Press Release, “Hydro-Quebec delivers a strong performance in challenging times”, (February 21, 2024).

**Onshore Wind + Storage:** According to Lazard, the cost of new onshore wind + storage is 4.2 to 11.4 cents per kWh (US $). We have converted these costs to Canadian dollars by multiplying them by 1.35. Lazard, Lazard’s Levelized Cost of Energy Analysis – Version 16.0, (April 2023) page 2. In 2024 Hydro Quebec procured 1,550 MW of new wind power at an average cost of 7.8 cents per kWh. Hydro Quebec, Press Release, “Hydro-Quebec retains 8 bids totalling 1550 MW of wind power,” (January 26, 2024).

**Solar + Storage:** According to Lazard, the cost of new utility-scale Solar PV + storage is 4.6 to 10.2 cents per kWh (US $). We have converted these costs to Canadian dollars by multiplying them by 1.35. Lazard, Lazard’s Levelized Cost of Energy Analysis – Version 16.0, (April 2023) page 2.


**Offshore Wind:** According to Lazard, the cost of new offshore wind is 7.2 to 14.0 cents per kWh (US $). We have converted these costs to Canadian dollars by multiplying them by 1.35. Lazard, Lazard’s Levelized Cost of Energy Analysis – Version 16.0, (April 2023) page 2.

**OPG’s Price of Nuclear Power in 2027:** Ontario Energy Board Docket No. EB-2020-0290, I1-01-Environmental Defence-028.

**Gas-Fired Peaker Plant:** According to Lazard, the cost of a new gas-fired peaker plant is 11.5 to 22.1 cents per kWh (US $). We have converted these costs to Canadian dollars by multiplying them by 1.35. Lazard, Lazard’s Levelized Cost of Energy Analysis – Version 16.0, (April 2023) page 2.

**New Nuclear Reactor:** According to Lazard, the cost of a new nuclear reactor is 14.1 to 22.1 cents per kWh (US $). We have converted these costs to Canadian dollars by multiplying them by 1.35. Lazard, Lazard’s Levelized Cost of Energy Analysis – Version 16.0, (April 2023) page 2.

Thanks to the Ivey Foundation, M.H. Brigham Foundation, the Echo Foundation, the Green Sanderson Family Foundation, Noor Cultural Centre, and the Taylor Irwin Family Fund at the Toronto Foundation for their generous financial support.