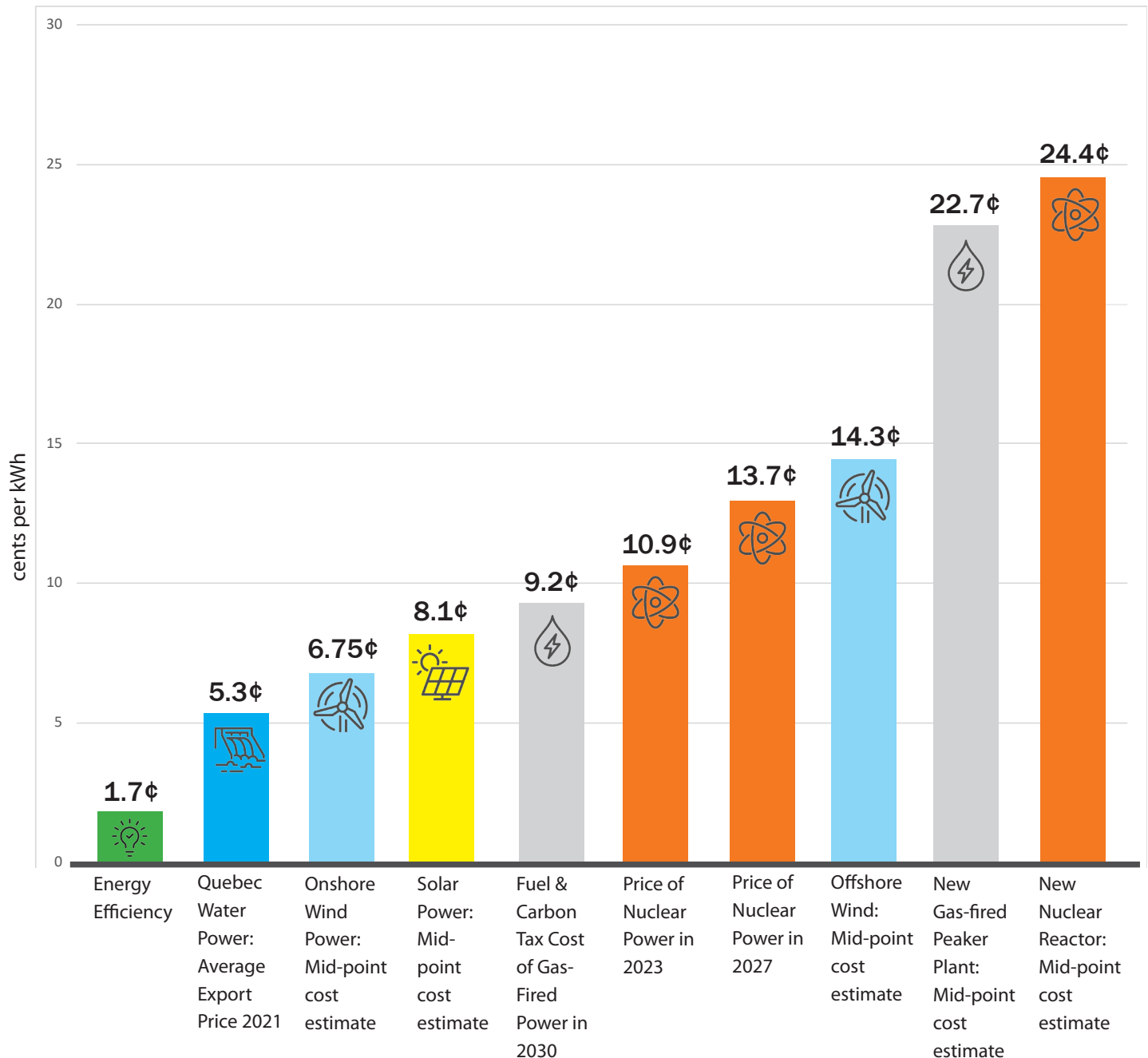


Ontario's Electricity Options: A Cost Comparison

ONTARIO CLEAN AIR ALLIANCE RESEARCH | www.cleanairalliance.org

MAY 1, 2023



ONTARIO
CLEAN AIR
ALLIANCE
RESEARCH

CleanAirAlliance.org

Notes

Energy efficiency: In 2017 the Independent Electricity System Operator's (IESO) average levelized unit energy cost (LUEC) of procuring a kWh of electricity savings was 1.69 cents. Independent Electricity System Operator, *2017 Report on Energy-Efficiency Activities*, page 8.

Quebec water power – average export price in 2021: Hydro Quebec, *Annual Report 2021*, page 100.

Onshore Wind: According to Lazard, the cost of onshore wind is 2.4 to 7.5 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 March 2023 Hydro Quebec accepted seven bids for wind power at an average price of 6.1 cents per kWh (2022 CDN \$). Hydro Quebec, [Press Release](#), "Hydro-Quebec accepts seven projects totalling nearly 1,150 MW of wind power," (March 15, 2023).

Utility Scale Solar: According to Lazard, the cost of utility-scale solar PV is 2.4 to 9.6 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 2023: Ontario Energy Board Docket No. EB-2020-0290, Ontario Energy Board, *Payment Amounts Order Ontario Power Generation Inc.*, (January 27, 2022), pages 5 & 8.

Fuel & Carbon Tax Cost of Gas-Fired Power in 2030: The IESO's 2022 Annual Planning Outlook is forecasting that the cost of gas at Dawn, Ontario will be \$3.76 per mmbtu (2022 CDN \$). This entails that the fuel cost of a combined-cycle gas power plant will be approximately 2.6 cents per kWh. In 2030 the federal carbon tax will be \$170 per tonne. If 100% of the gas plants' carbon pollution is subject to the carbon tax, their carbon tax will be 6.6 cents per kWh. <https://www.ieso.ca/Sector-Participants/Planning-and-Forecasting/Annual-Planning-Outlook>

Offshore Wind: According to Lazard, the cost of 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.



CleanAirAlliance.org