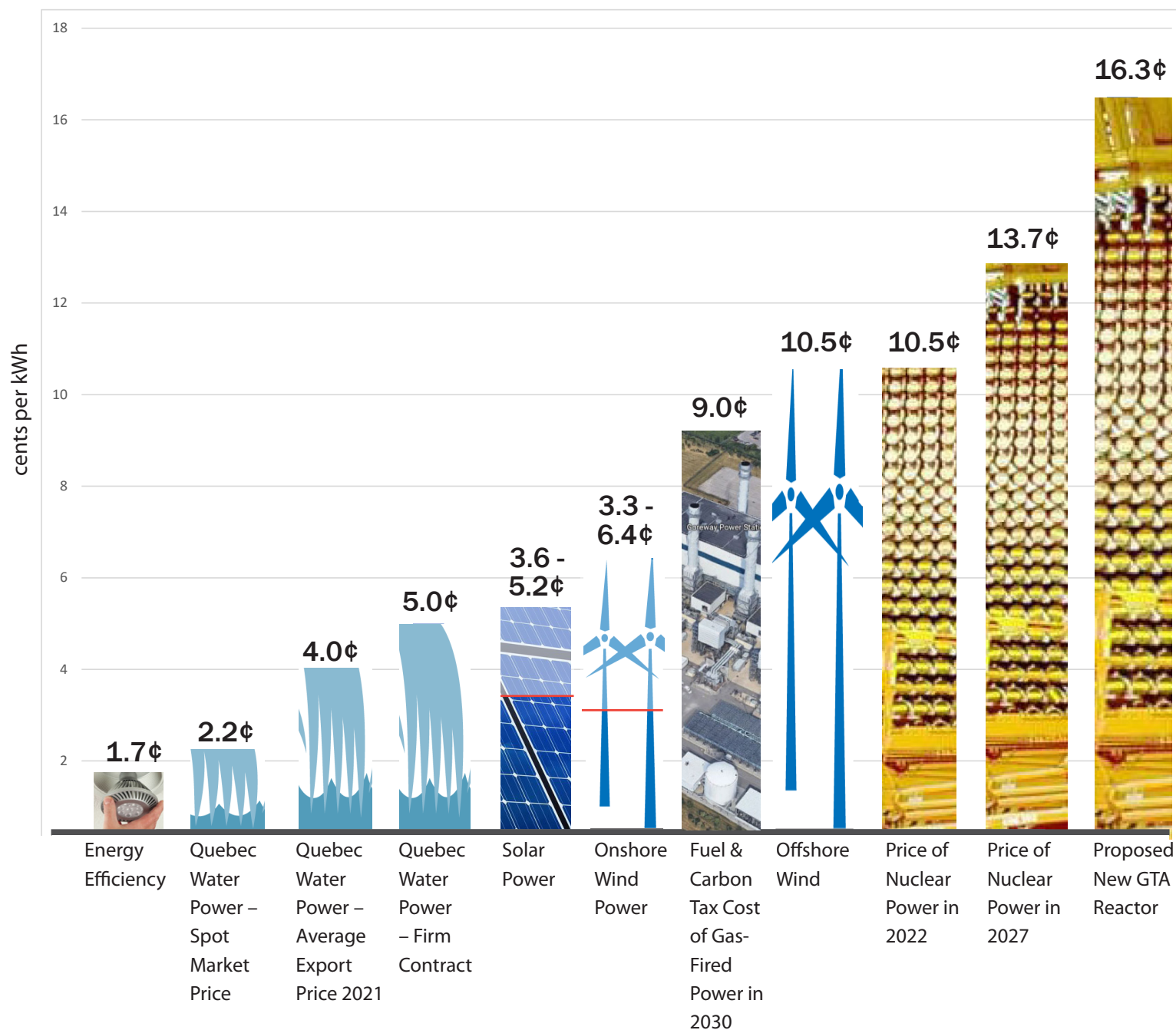


Ontario's Electricity Options: A Cost Comparison

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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 – spot market price: In 2017 the average price of Ontario's spot market electricity purchases from Quebec was 2.2 cents per kWh. Financial Accountability Office of Ontario, *Electricity Trade Agreement: An Assessment of the Ontario-Quebec Electricity Trade Agreement*, (Spring 2018), page 7.

Quebec water power – average export price in 2021: During the first three quarters of 2021 Hydro Quebec's average electricity export price (firm and spot) was 4.0 cents per kWh. <https://www.hydroquebec.com/about/financial-results/quarterly-bulletin.html>

Quebec water power – firm contract: On June 22, 2017 Hydro Quebec offered to sell Ontario 8 billion kWh per year, for 20 years, at a price of 6.12 cents per kWh. In August 2017 Hydro Quebec lowered its proposed price to 5 cents per kWh, but the Government of Ontario still refused to accept the offer. Letter from Steve Demers, Vice President, Hydro Quebec to Peter Gregg, CEO, Independent Electricity System Operator, (June 22, 2017); and Pierre Couture, "Hydro Quebec l'Ontario en ligne de mire", *Journal de Montreal*, (August 16, 2017).

In 2017 the average price of Hydro Quebec's short and long-term electricity exports was 4.7 cents per kWh. Hydro Quebec, *Annual Report 2017*, page 76.

Utility Scale Solar: According to Lazard, the cost of utility scale solar PV is 2.8 to 4.1 cents per kWh (US \$). We have converted these costs to Canadian dollars by multiplying them by 1.27. Lazard, *Lazard's Levelized Cost of Energy Analysis – Version 15.0* (October 2021) page 2.

Onshore Wind: According to Lazard, the cost of onshore wind is 2.6 to 5.0 cents per kWh (US \$). We have converted these costs to Canadian dollars by multiplying them by 1.27. Lazard, *Lazard's Levelized Cost of Energy Analysis – Version 15.0* (October 2021) page 2.

OPG's Price of Nuclear Power in 2022: 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 2021 Annual Planning Outlook is forecasting that the cost of gas at Dawn, Ontario will be \$3.38 per mmbtu (Real 2021\$ CDN) from 2023 onwards. This entails that the fuel cost of a combined-cycle gas power plant will be approximately 2.4 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 8.3 cents per kWh (US \$). We have converted this cost to Canadian dollars by multiplying it by 1.27. Lazard, *Lazard's Levelized Cost of Energy Analysis – Version 15.0* (October 2021) page 2.

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

Proposed New GTA Nuclear Reactor: Ontario Power Generation (OPG) is proposing to build a small modular reactor (SMR) near Oshawa. The Canadian nuclear industry is forecasting that the cost of electricity from a SMR will be 16.3 cents per kWh; however they note that if there is a 3% capital cost overrun the cost will rise to 21.5 cents per kWh. They are hoping that the first commercial SMR will be in-service by 2030. Canadian Small Modular Reactor Roadmap Steering Committee (2018), *A Call to Action: A Canadian Roadmap for Small Modular Reactors*, pages 35 and 54.

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