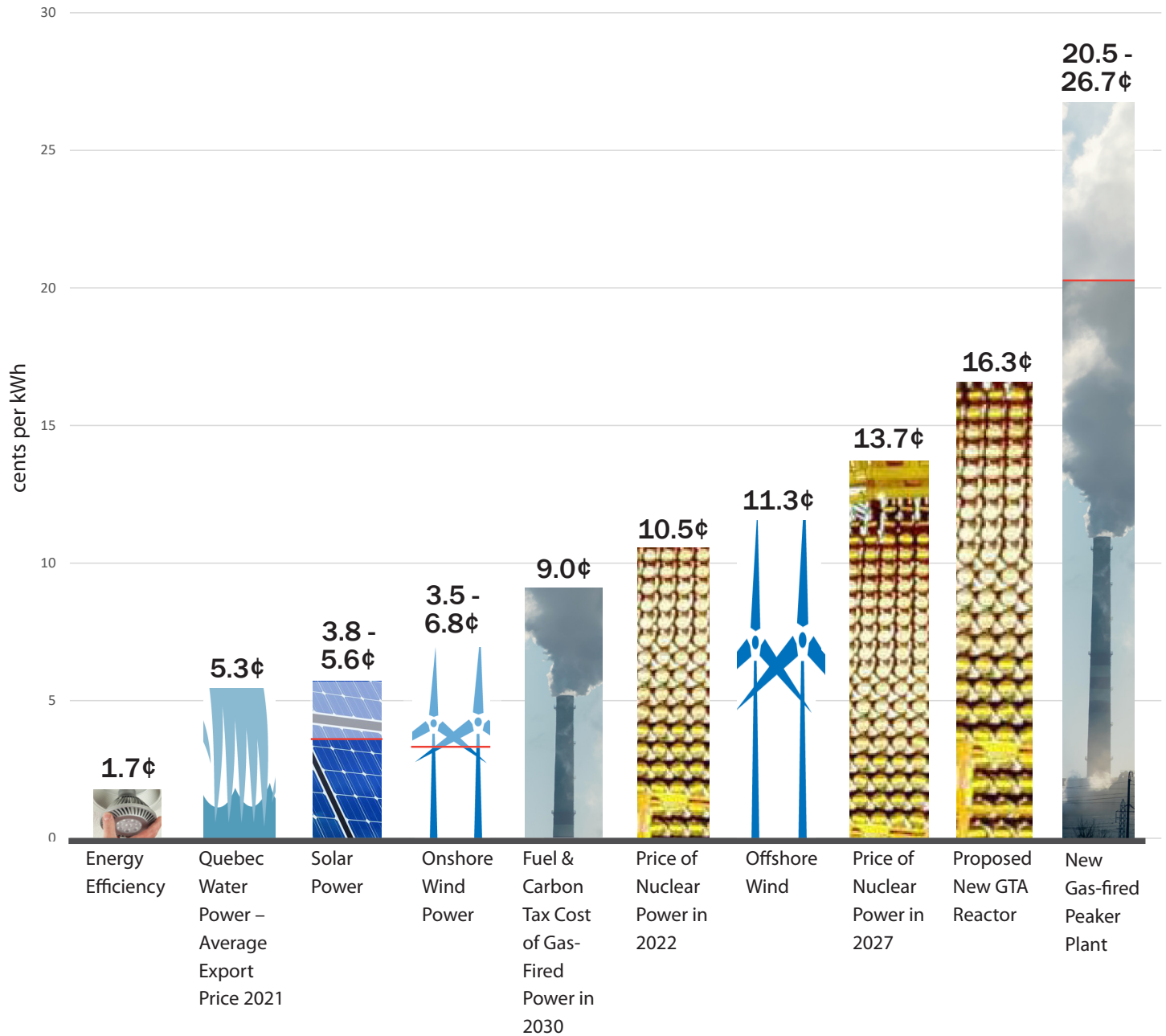


# Ontario's Electricity Options: A Cost Comparison

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

**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 1.36. 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 1.36. 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 1.36. 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.

**Gas-Fired Peaker Plant:** According to Lazard, the cost of a new gas-fired peaker plant is 15.1 to 19.6 cents per kWh (US \$). We have converted these costs to Canadian dollars by multiplying them by 1.36. These cost estimates do not include the carbon tax costs of operating a gas-fired peaker plant. Lazard, *Lazard's Levelized Cost of Energy Analysis – Version 15.0*, (October 2021) pages 2 and 5.

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