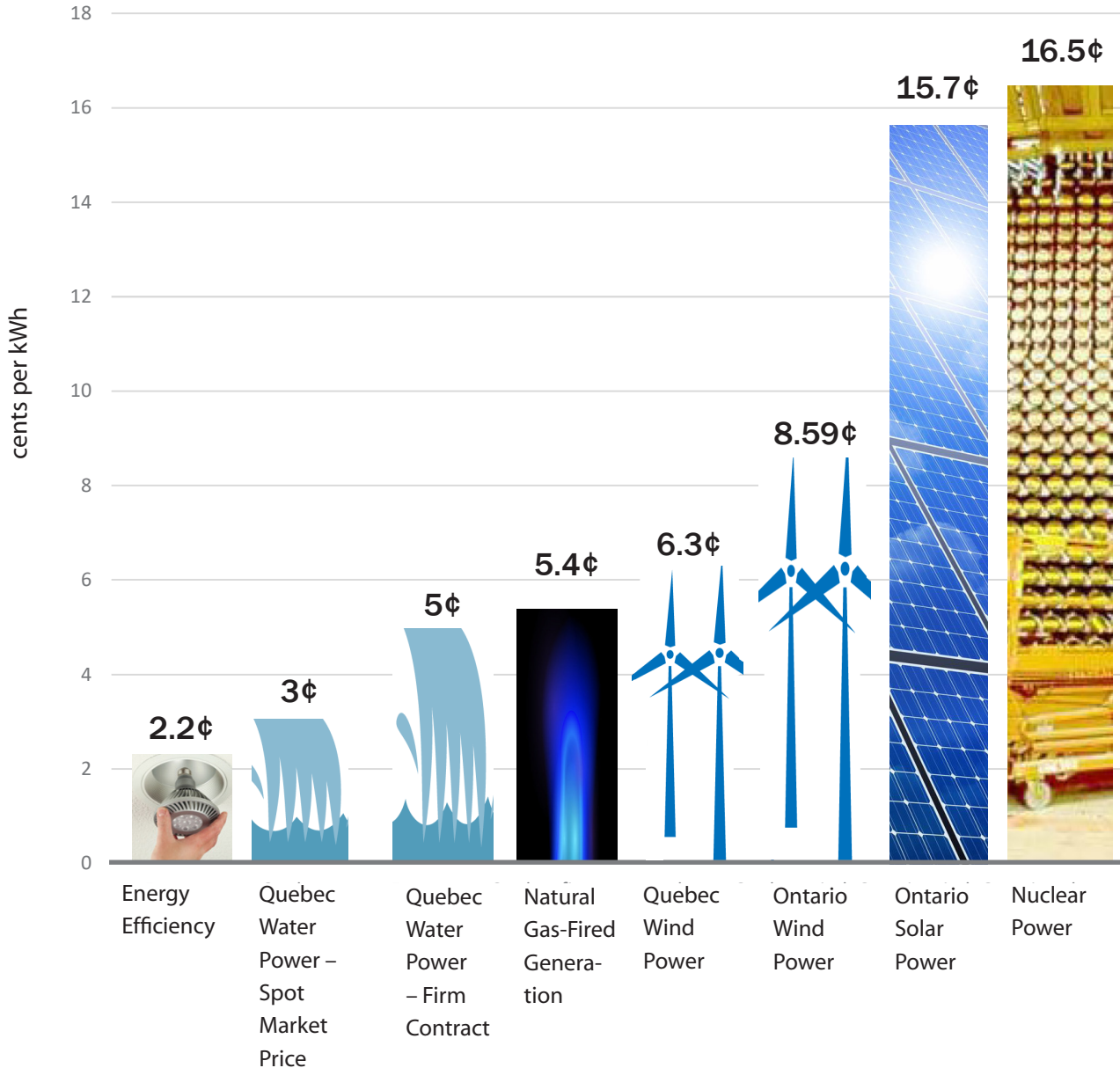


Ontario's Electricity Options: A Cost Comparison

ONTARIO CLEAN AIR ALLIANCE RESEARCH | www.cleanairalliance.org

Oct. 3, 2017



ONTARIO
CLEAN AIR
ALLIANCE
RESEARCH

CleanAirAlliance.org

Notes

Energy efficiency: In 2016 the Independent Electricity System Operator's (IESO) average levelized unit energy cost (LUEC) of procuring a kWh of electricity savings was 2.2 cents. Navigant Consulting Ltd., *Conservation Framework Mid-Term Review: Budgets, Targets, Cost Effectiveness – Phase 2*, Prepared for the IESO, (September 21, 2017), page 40.

Quebec water power – spot market price: According to the Quebec Energy Commission, Hydro-Quebec can only obtain high prices for its exports during the 300 peak demand hours of each year. And, as a result of transmission constraints, Quebec can only export 10 billion kWh per year during high price periods. As a consequence, approximately two-thirds of Hydro Quebec's electricity exports are sold at an average price of only 3 cents per kWh. According to the Quebec Energy Commission, Hydro-Quebec's low-price electricity exports will grow by 50% between 2014 and 2022 from 20.1 billion kWh to 31.1 billion kWh per year. Commission sur les enjeux energetiques du Quebec, *Maitriser Notre Avenir Energetique*, (2 fevrier 2014), pages 176 – 183.

Quebec water power – firm contract: In October 2016, Ontario concluded an agreement with Hydro Quebec to purchase 2 billion kWh of water power per year at a price of 5 cents per kWh for seven years. Denis Lessard, "Hydro-Quebec signe un contrat ferme avec l'Ontario", *La Presse*, (October 21, 2016).

Natural Gas-Fired Generation: This is the IESO's forecast of the cost of gas-fired generation in 2020 assuming the gas plants have a 95% annual capacity utilization rate and the commodity cost of gas is \$5.50/MMBtu (2014\$) at the Dawn Hub near Sarnia. Ontario Power Authority, *Conservation & Demand Management Energy Efficiency Cost Effectiveness Guide*, (October 2014), pages 57 & 58; and email from Terry Young, Vice President, IESO to Jack Gibbons, Ontario Clean Air Alliance, (October 20, 2015).

Quebec wind power: In 2014 Hydro Quebec used a competitive procurement process to contract for wind power at an average generation cost of 6.3 cents per kWh. Hydro Quebec, *Press Release*, "Calls for tenders for the purchase of 450 MW of wind power: Hydro-Quebec Distribution accepts 3 bids totalling 446.4 MW", (December 16, 2014).

Ontario wind power: IESO, *News Release*, "IESO Announces Results of Competitive Bids for Large Renewable Projects," (March 10, 2016).

Ontario solar power: IESO, *News Release*, "IESO Announces Results of Competitive Bids for Large Renewable Projects," (March 10, 2016).

Nuclear Power: Ontario Power Generation (OPG) is proposing to increase the price of its nuclear electricity from 5.9 to 16.5 cents per kWh. According to OPG, the price increase is necessary to pay for the continued operation of the Pickering Nuclear Station and the re-building of the Darlington Nuclear Station. Ontario Energy Board Docket No. EB-2016-0152, Exhibit N3, Tab 1, Schedule 1, Attachment 2, Table 14.

Thanks to the M.H. Brigham
Foundation and the Taylor Irwin
Family Fund at the Toronto
Foundation for their generous
financial support.



CleanAirAlliance.org