The Meaford Pumped Storage Project: Does it make sense for Ontario?

ONTARIO CLEAN AIR ALLIANCE

By Jack Gibbons
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About the Ontario Clean Air Alliance

- OCAA established in 1997 to promote the phase-out of Ontario's five dirty coal-fired power plants
- We worked on this campaign every day for 17 years until last coal plant was shut down in April 2014
- We're now working on the next steps to clean-up our electricity grid by:
  - Phasing-out gas power; and
  - Meeting our future electricity needs by investing in energy efficiency, wind, solar and storage

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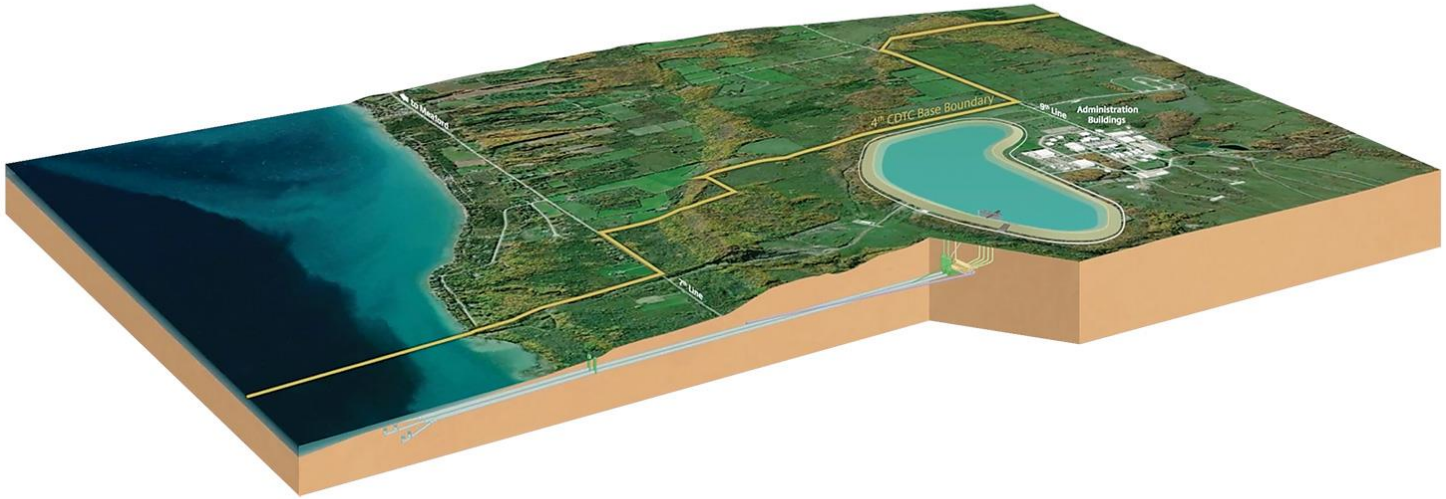
TC Energy's proposed Meaford Pumped Storage Project

- 1,000 megawatts (MW) for up to 8 hours
- Total Cost: $4.3 to $7 billion
- Cost per kilowatt (kW): $4,300 to $7,000



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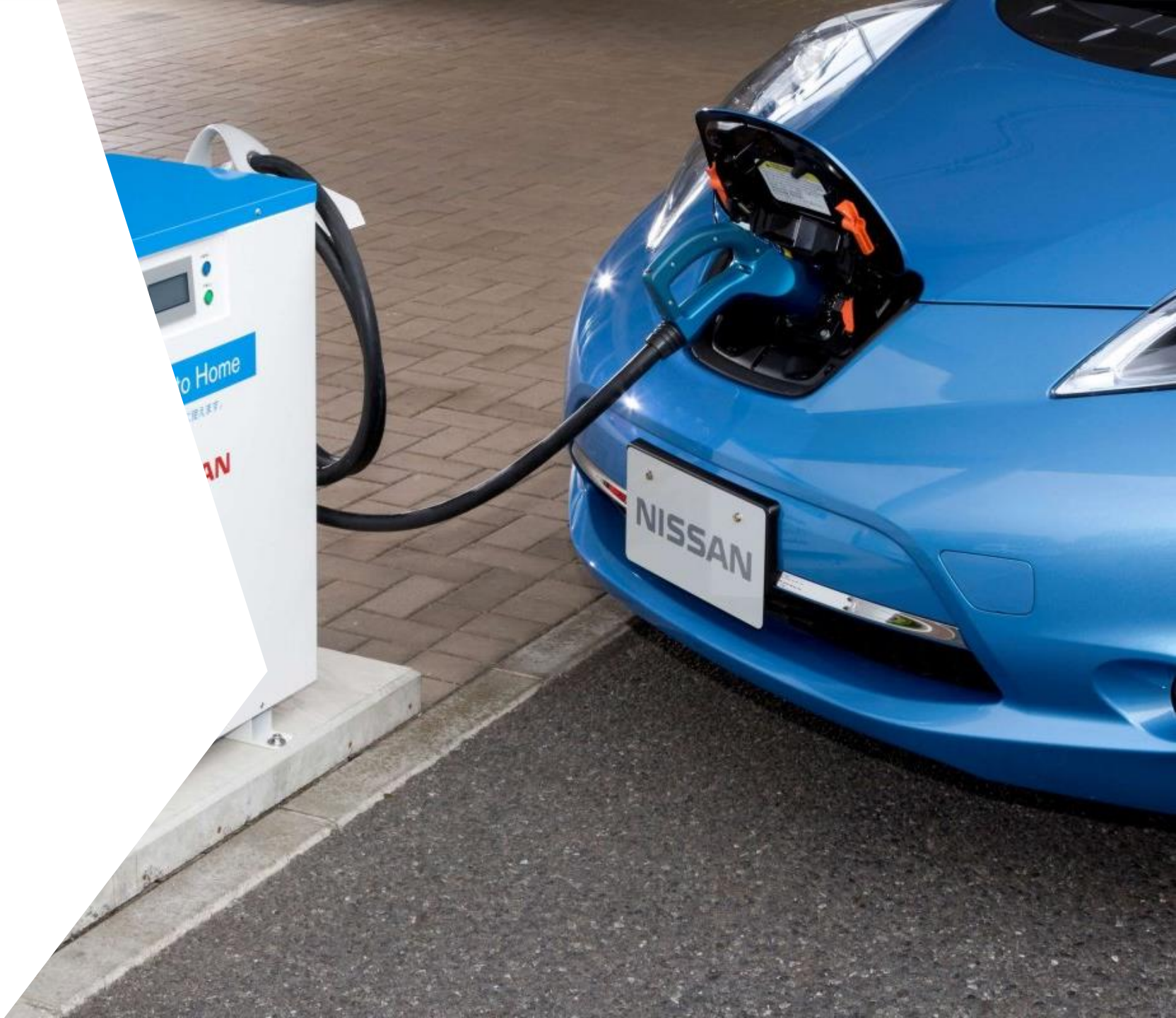
The Alternatives

- Stationary batteries
- Hydro Quebec's reservoirs
- EV batteries and bi-directional chargers



Stationary batteries

- In 2023 and 2024 Ontario has procured 2,916 MW of stationary battery storage capacity from 26 facilities
- Stationary batteries can provide power from 4 to 10 hours
- According to Independent Electricity System Operator (IESO):
  - Stationary batteries can provide storage at a lower cost than Meaford; and
  - Meaford does NOT provide a net benefit to Ontario's electricity system or ratepayers

Hydro Quebec's Reservoirs

- Hydro Quebec's storage capacity is 1.6x greater than Ontario's total annual electricity consumption
- To increase our access to Quebec's reservoirs we must expand east-west electricity transmission grid
- IESO has identified how we can increase east-west grid by 7,500 MW
- According to IESO, cost of expanding east-west grid is up to $1,400 per kW
- That is, 67-80% lower cost than Meaford

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EV Batteries with Bi-directional Chargers

- By 2030 the total storage capacity of our EVs will be more than double the capacity of all of our gas-fired power plants
- Ford F-150 bi-directional charger costs $9,950
- Cost per kW: $1,036
- That is, 75-85% lower cost than Meaford

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Why does the Ford Government want to choose the most expensive storage option?

- According to Ontario's former Energy Minister, because it has "broader societal and economic benefits"
- But don't the lower cost alternatives also have "broader societal and economic benefits"?

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The cost of choosing high-cost options to keep our lights on

- Ontario taxpayers subsidize provincial electricity rates to the tune of $7.3 billion per year
- Are there better uses for our tax dollars?

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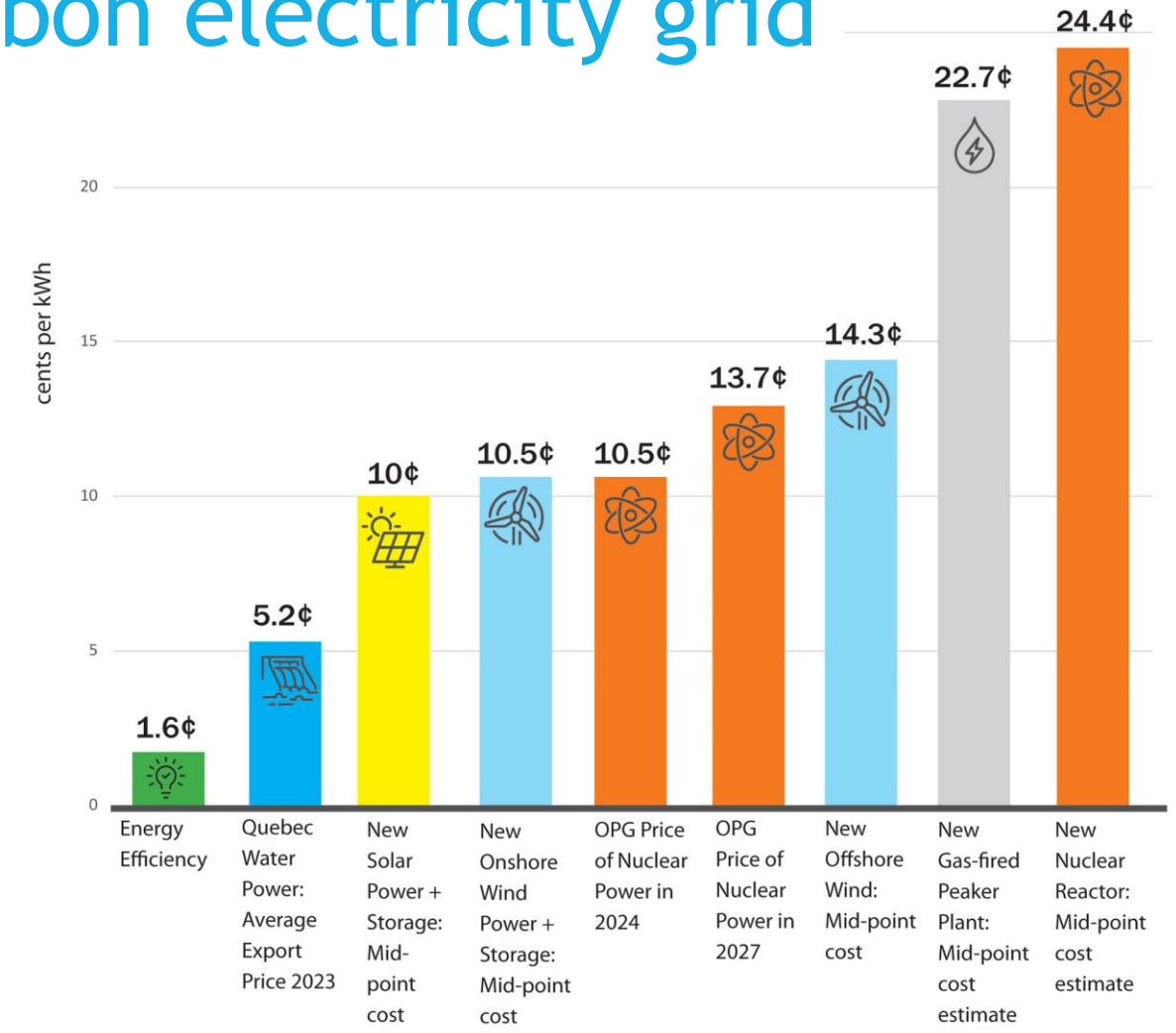
The Better Alternative:

Choosing the least-cost options to achieve a zero-carbon electricity grid



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Who benefits from high-cost choices?

- TC Energy
- OPG
- Bruce Power
- Enbridge Gas

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