



ONTARIO'S ELECTRICITY FUTURE

High-Cost Nuclear or Lower Electricity Bills?

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ABOUT OCAA

Ontario Clean Air Alliance was established in 1997 to promote the phase-out of Ontario's five dirty coal-fired power plants

We're now working on next steps to clean-up our electricity grid by:

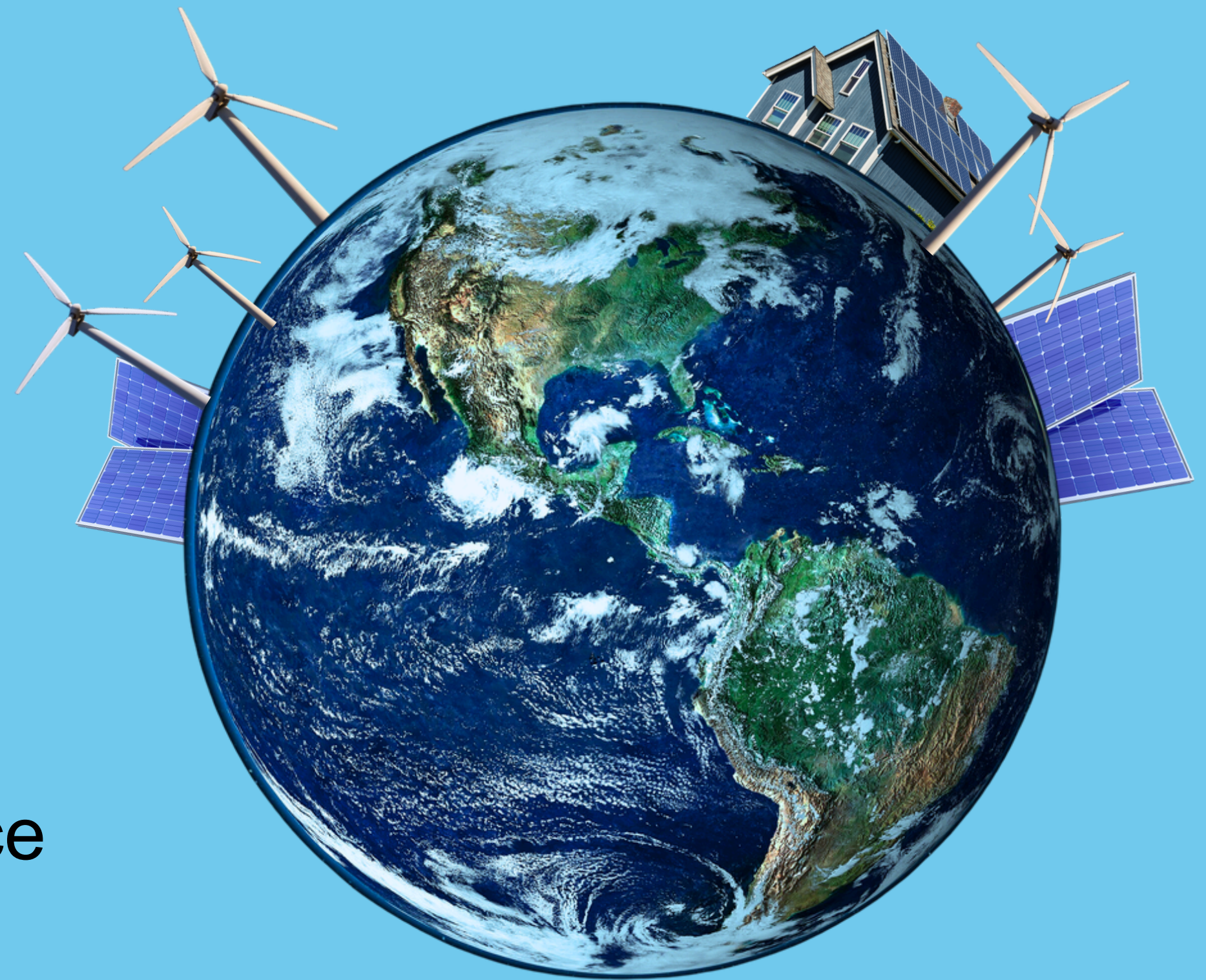
- Phasing-out gas power
- Moving to a renewable electricity future
- Lower electricity bills



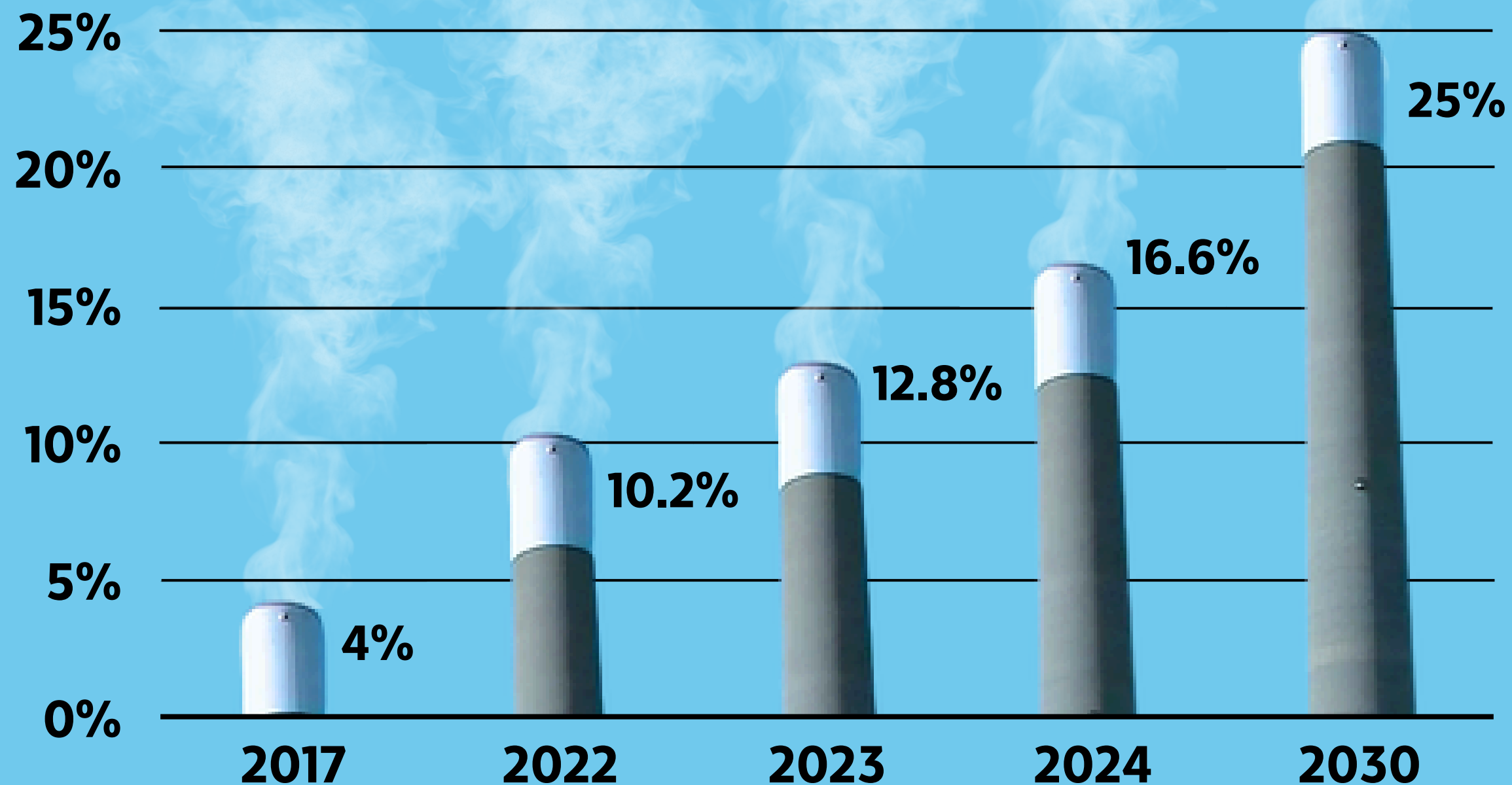
THE WORLD IS GOING RENEWABLE

In 2024, **92.5%** of the world's **new electricity** generating capacity was renewable...

...but **Premier Ford** hasn't **contracted for a single kWh** of **NEW** wind & solar electricity since he was elected in 2018.



PERCENTAGE OF ONTARIO'S ELECTRICITY PROVIDED BY POLLUTING GAS POWER



RISING ELECTRICITY RATES & PROVINCIAL DEFICIT

- **November 1, 2025** residential electricity generation rates rise **29%**
- Ontario Electricity Rebate simultaneously raised from 13.1% to 23.5%
- **Annual taxpayer subsidy** for electricity about **\$8.5 billion**
- OPG applying to OEB to **raise its price of nuclear energy by 72.6% in 2027** to pay for cost overruns & new nuclear

DOUG FORD'S NUCLEAR PROJECTS

Darlington New Nuclear

1,200 MW

\$28 B

Pickering B Re-Build

2,200 MW

\$27 B +++

Port Hope

10,000 MW

\$230 B

Bruce C

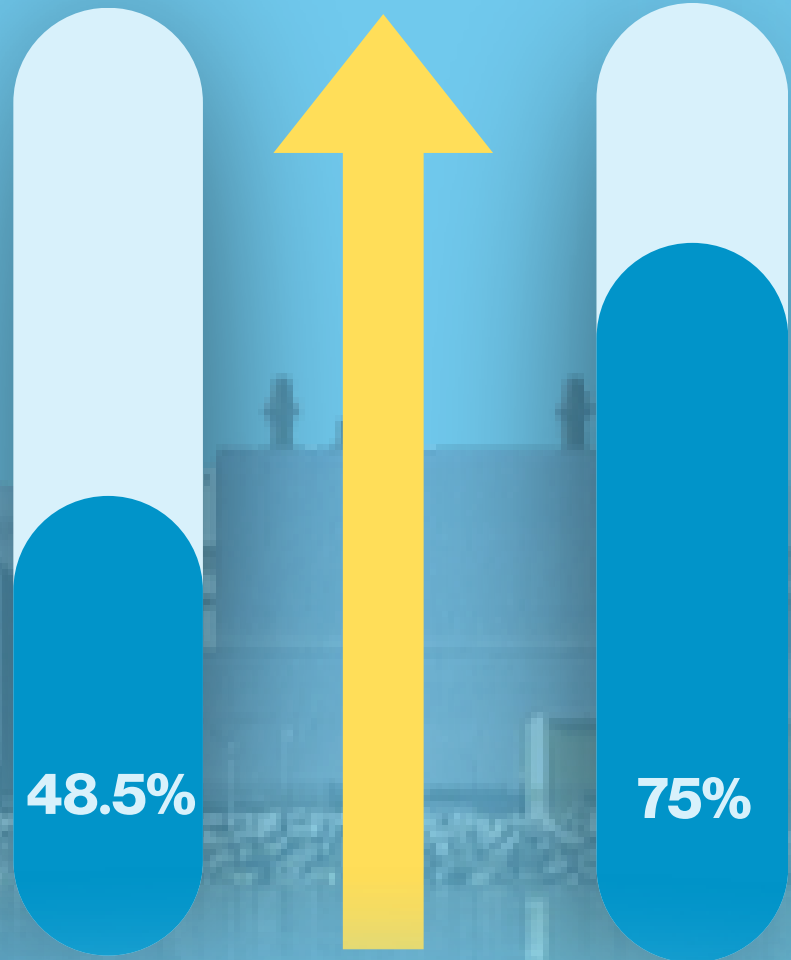
4,800 MW

\$110 B

TOTAL COST: Approx. \$400 B

ONTARIO'S ENERGY IS MOVING IN THE WRONG DIRECTION

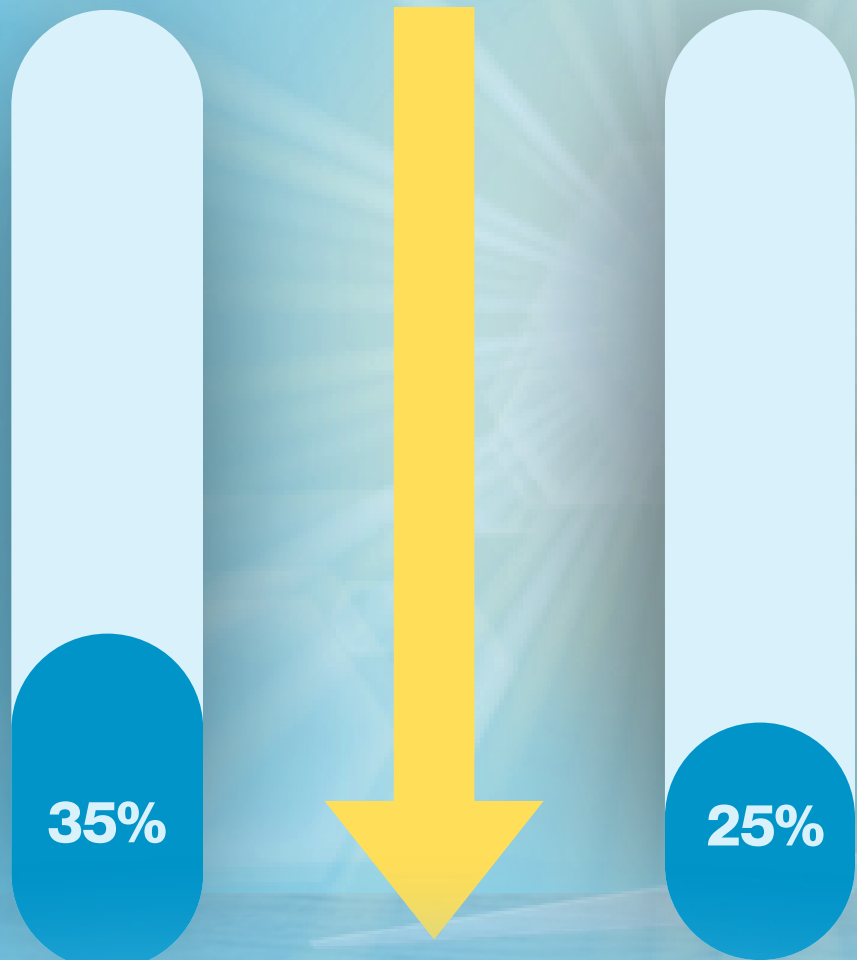
NUCLEAR RISING



Nuclear 2024*
(Actual)

Nuclear 2050*
(Doug Ford's Plan)

RENEWABLES FALLING

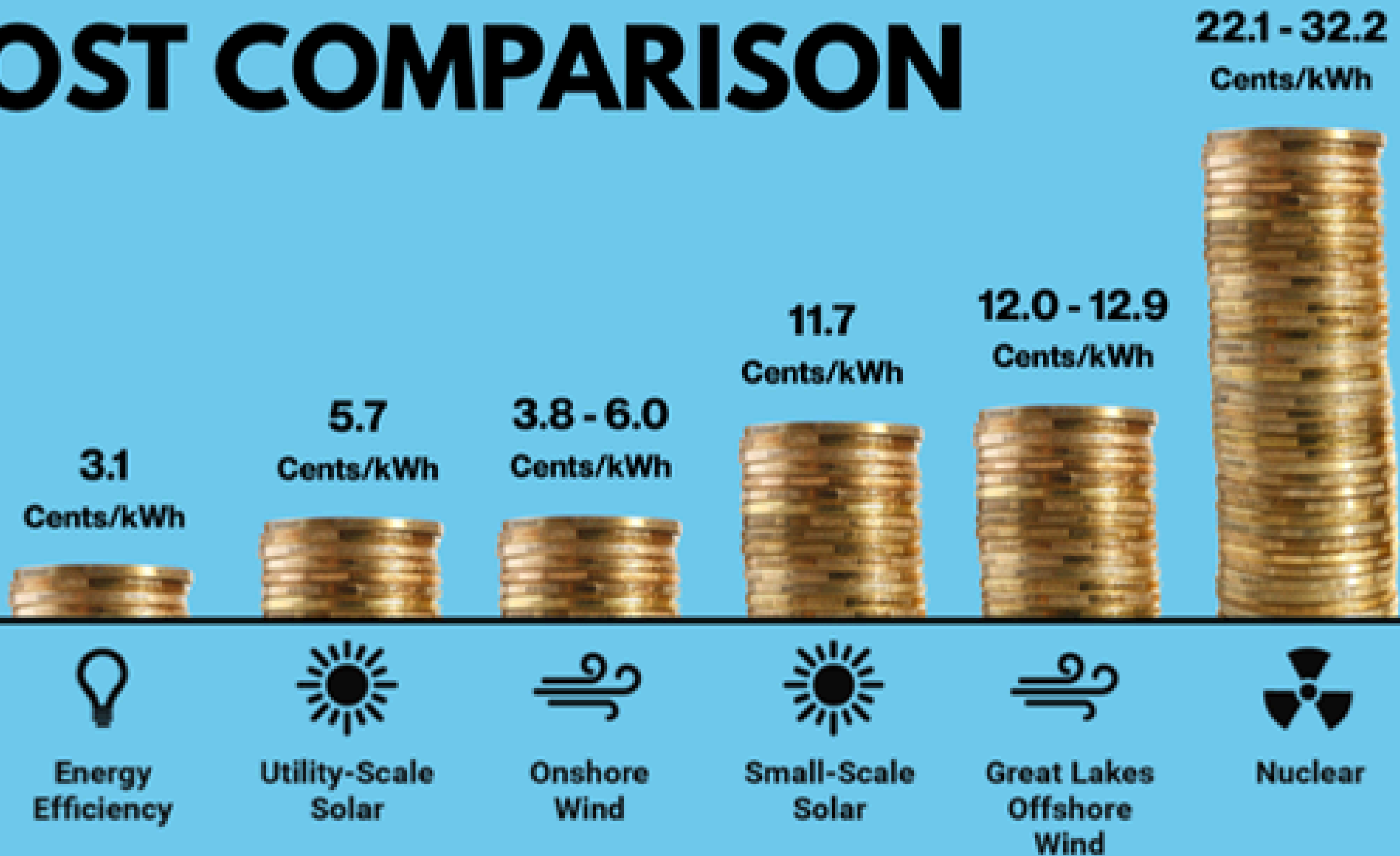


Renewables 2024*
(Actual)

Renewables 2050*
(Doug Ford's Plan)

Ontario, Energy for Generations, (June 2025), page 65, Figure 18;
& Ontario Energy Board, Ontario's Electricity Supply Mix: 2024 Data.

ONTARIO'S ENERGY: A COST COMPARISON



N.B. The nuclear cost estimates do not include the cost of decommissioning the reactors and the storage of their radioactive wastes for one million years.

IESO, *2025-2027 Demand Side Management Program Plan*, (January 2025), page 7; and IESO, *Annual Planning Outlook: Resource Costs and Trends*, (March 2024), page 5. Energy Futures Group, *Levelized Cost of Energy ("LCOE") Calculations*, (May 2025), Table 3, assuming Investment Tax Credit at 30%. U.S. \$ costs converted to CDN \$ by multiplying by 1.39.

COST OVERRUNS

Historically, every nuclear project in Ontario has gone massively over-budget. Globally, the average cost overrun for nuclear is 120%.

Darlington Refurbishment Project is more than \$3 BILLION over budget.

Average cost overruns for solar & wind projects are 1% & 13% respectively.



WHEN THE WIND DOESN'T BLOW

- According to Ontario's Independent Electricity System Operator (IESO), wind & solar **combined with batteries can meet at least 99.5%** of our electricity needs under all weather scenarios.
- Last 0.5% can be met by our existing gas plants or by shifting some demands to off-peak periods.



WIND & SOLAR & BATTERIES CAN PROVIDE RELIABLE 24/7 ELECTRICITY AT LOWER COST THAN NUCLEAR

Peak Power **80 - 84% lower cost than new nuclear**

Baseload Power **14 - 29% lower cost than new nuclear**



IESO COST ANALYSIS:

NON-FACT-BASED NUCLEAR ASSUMPTIONS

ASSUMPTION: New nuclear will have 90.9% annual capacity utilization

FACT: Darlington's historic average annual capacity utilization rate was 78.6% *

ASSUMPTION: New nuclear will operate for 60 years without major refurbishment

FACT: \$15.9 billion refurbishment of Darlington Nuclear Station started just 26 years after its first reactor went into service

ASSUMPTION: New nuclear will cost \$11,804 to \$16,711 per kW.

FACT: Most recent new U.S. reactors (Vogtle) cost \$22,628 per kW (CDN \$)

Note: Costs of decommissioning reactors & storing their radioactive wastes for one million years are not included in analysis

TIMING

OPG forecasts **Port Hope Nuclear Station** could be in service between **2040 & 2048**

Commercial & Institutional Solar **6 months**

Utility-Scale Solar **15 months**

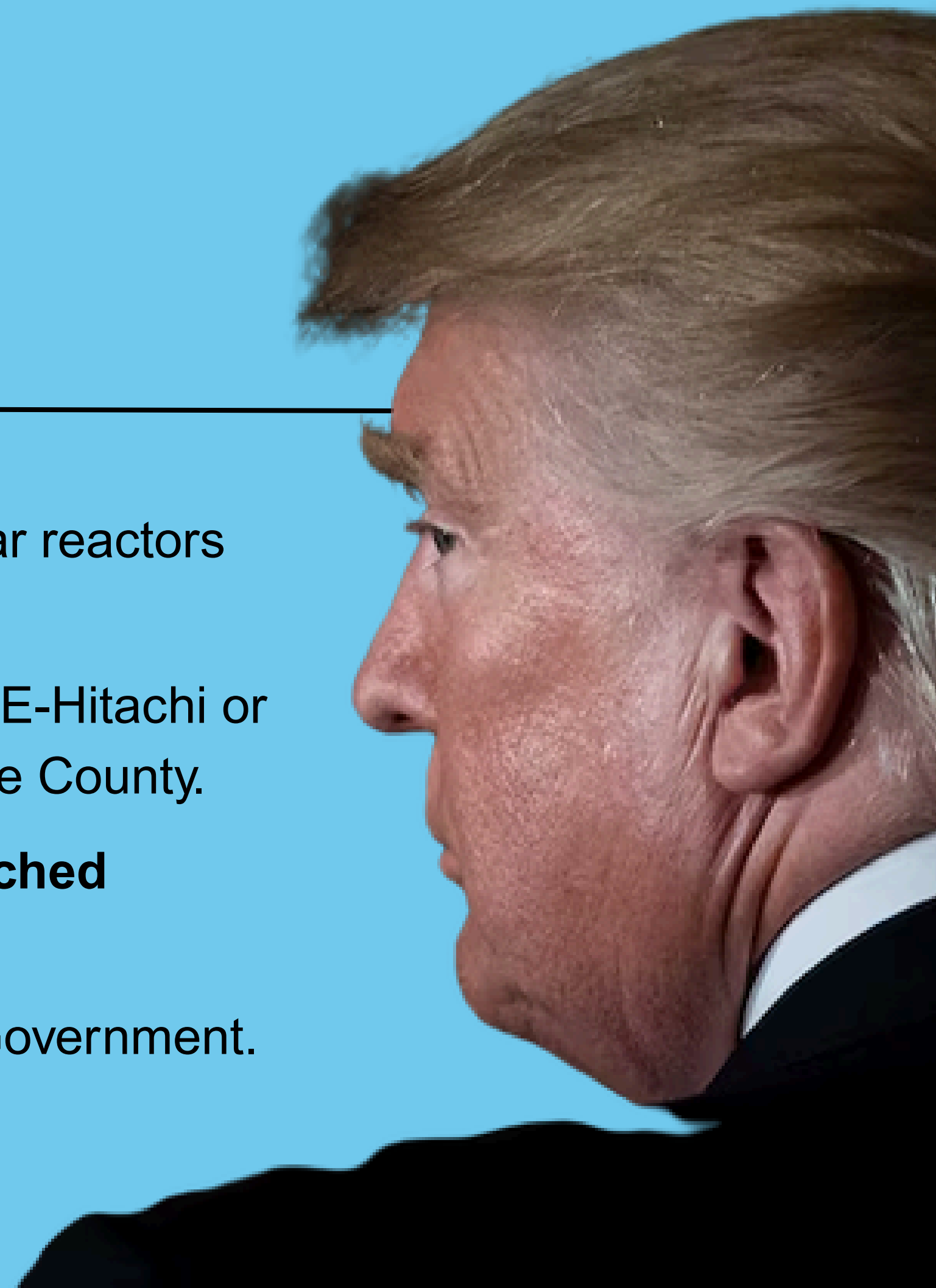
Onshore Wind **18 months**

Offshore Wind **24 months**



NATIONAL SECURITY

- OPG is building American-designed GE-Hitachi nuclear reactors at Darlington.
- Ontario is considering building **American-designed** GE-Hitachi or Westinghouse nuclear reactors in Port Hope and Bruce County.
- These reactors would **require Ontario to import enriched uranium from U.S.** to fuel them.
- Enriched uranium imports could be curtailed by U.S. Government.



WIND POWER POTENTIAL

- Great Lakes offshore wind power could meet **more than 100%** of Ontario's electricity needs.
- 3,146 five-megawatt wind turbines could produce as much electricity as the proposed Port Hope Nuclear Station.
- The total lakebed footprint of these wind turbines would be 0.3146 square km.
- They would be almost invisible 10 – 15 km from shore.



SOLAR POWER POTENTIAL

- **Solar farms** with a footprint equal to approximately 4/10ths of 1% of Ontario's area, could meet **100%** of Ontario's electricity needs.
- **Rooftop and large parking lot solar** has a large potential (e.g., Toronto rooftop and large parking lot solar could meet more than 50% of its electricity needs).

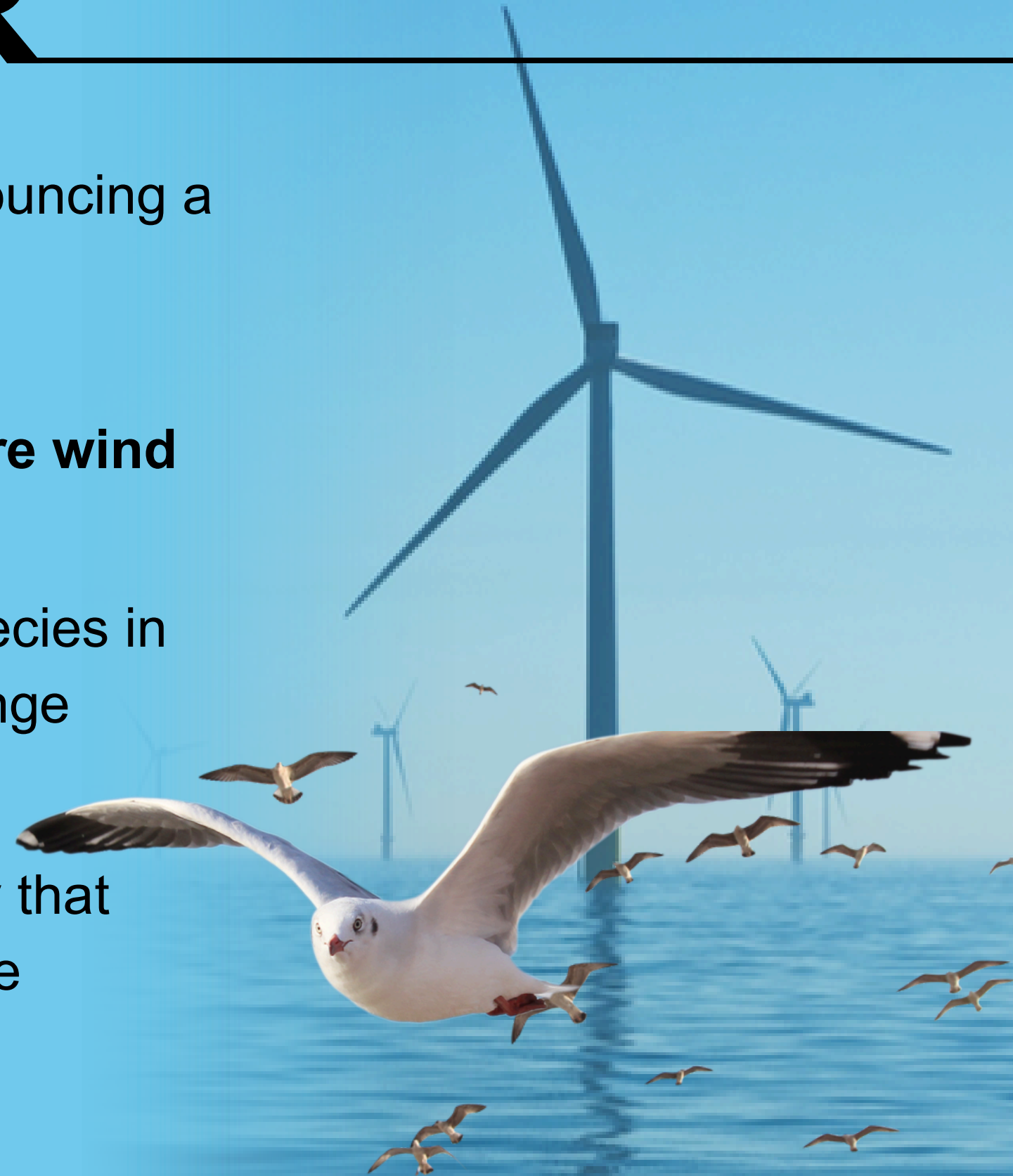
A MORATORIUM ON GREAT LAKES WIND POWER

In 2011, the McGuinty Government issued a news release announcing a moratorium on offshore wind power to permit “further scientific research”.

Ontario Ministry of Natural Resource studies found that **offshore wind can be implemented with minimal aquatic impacts**

According to the **National Audubon Society**: 2/3rds of bird species in North America will face extinction unless we tackle climate change

Audubon supports the responsible siting and operation of offshore wind and emphasizes that this must be done in a way that both minimizes harm to birds and provides a path toward a more climate-stable future.



A MORATORIUM ON GREAT LAKES WIND POWER (CONT'D)

According to Christina Davy, Associate Professor of Biology, Carleton University:

Wind turbines should be turned off from dusk to dawn during migratory bat seasons when wind speeds are less than seven metres per second.

There is no legally-binding Government of Ontario regulation prohibiting Great Lakes offshore wind power.



STORAGE

- Stationary lithium-ion batteries
- Compressed air (Hydrostor)
- Hydro Quebec's reservoirs
- EV batteries combined with bi-directional charging
- ~~TC Energy's proposed Meaford Pumped Storage~~



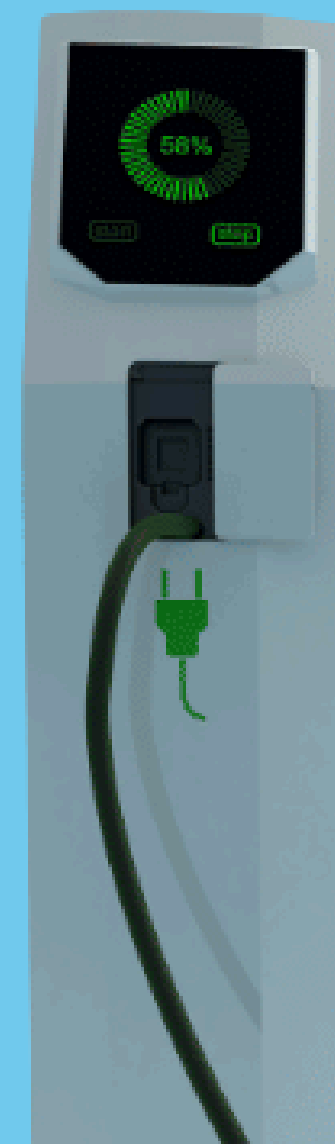
EV BATTERIES & BI-DIRECTIONAL CHARGING

Total capacity of Ontario EV batteries in 2040: 64,000 to 81,000 MW.

2.7 to 3.4 times greater than Ontario's peak demand in 2024.

Cars are parked 95% of the time.

Batteries already paid for.





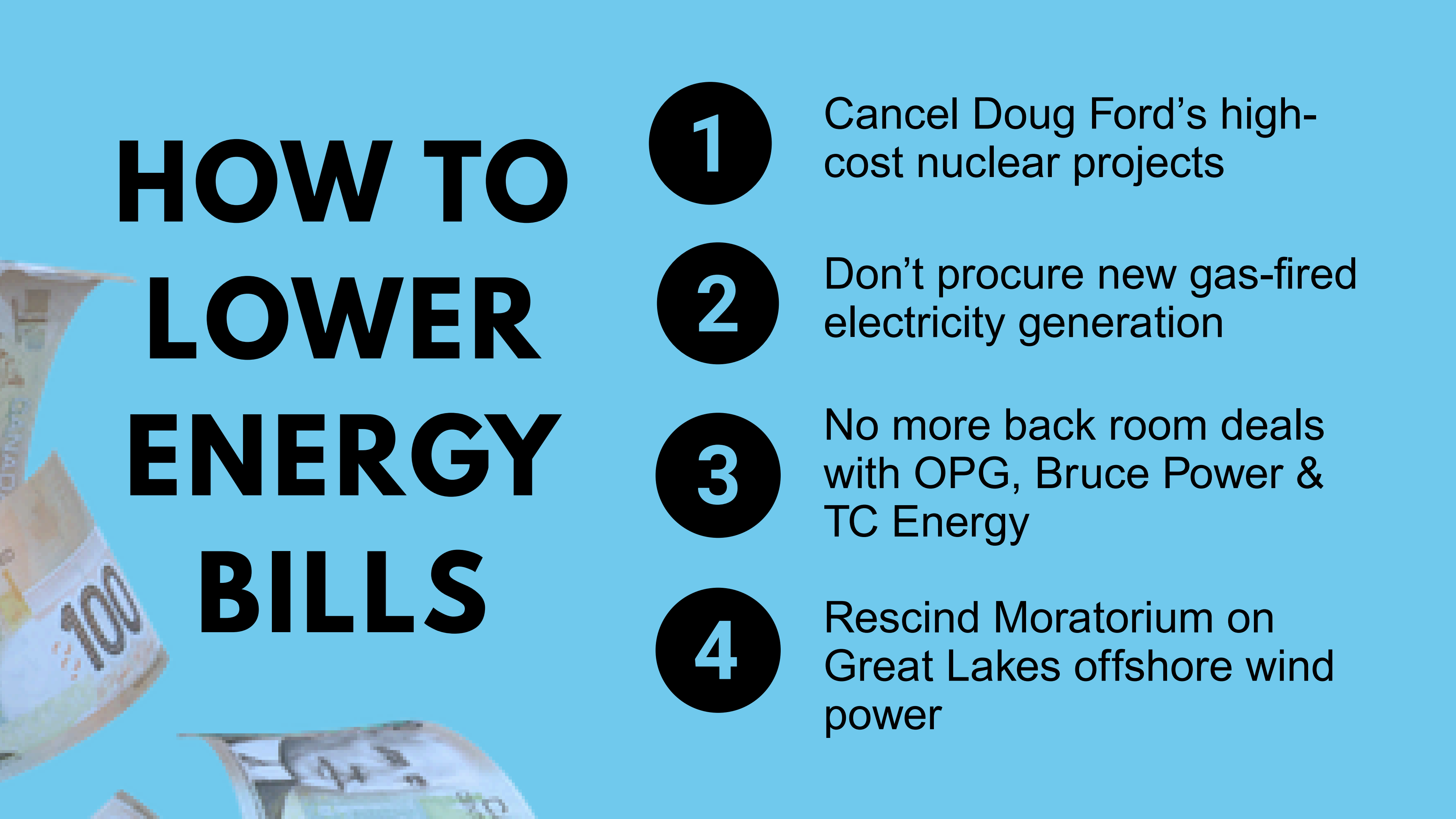
octopusenergy

In U.K., Octopus Energy provides free EV charging to EV owners who agree to provide power back to the grid during peak demand periods.



RENAULT

Similarly, in France, Renault provides free EV charging to EV owners who allow their EVs to provide power back to the grid when it is needed.



HOW TO LOWER ENERGY BILLS

1

Cancel Doug Ford's high-cost nuclear projects

2

Don't procure new gas-fired electricity generation

3

No more back room deals with OPG, Bruce Power & TC Energy

4

Rescind Moratorium on Great Lakes offshore wind power

5

Expand transmission links with Manitoba and Quebec to enable more wind, water and solar imports from Manitoba, Quebec, Labrador and Nova Scotia (Wind West)

6

Procure wind, water and solar power plus energy storage via competitive procurements open to all Canadian renewable energy and storage companies

7

Establish standard offer price for purchase of roof top and parking lot solar

8

Pay EVs to provide power back to the grid when needed



WHO BENEFITS FROM DOUG FORD'S ELECTRICITY PLAN?



**DON'T FORGET
TO FOLLOW**



@ONCleanAir

