

# Ontario's Clean Energy Future | Fact Sheet

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## Environmental Impact

- Renewables can be leveraged to address climate change but at this time, cannot reliably or cost effectively provide the necessary capacity and energy on their own.
- Nuclear is a very dense form of energy, requiring a much smaller land-use footprint compared to renewables. To generate the same amount of energy as nuclear, solar would require about 100 times more land area and wind about 500 times more.
- Importing electricity would require large and complex transmission infrastructure projects (i.e. leading to higher emissions and likely higher electricity cost for Ontarians.)
- All forms of energy produce by-products, however when it comes to nuclear power, the 'footprint' of waste is small due to the high energy content of uranium, and all by-products are accounted for and/or safely stored in licensed facilities.

## Cost Comparison

- Contrary to the misleading cost comparison charts being circulated, we don't yet have the final numbers for the cost of SMRs. We do know they will be competitive once factoring in the *full costs* of wind and solar providing the same amount of energy and capacity at the time of highest system need.
- Ontario has large variations in its weather-sensitive demand but the technology for seasonal or even multi-day storage is not mature.
- Wind and solar do not provide power 24/7/365; any true comparison must include the cost of backup power and the full lifecycle costs, including waste.
- As a publicly owned generator and a good steward of the electricity sector, OPG ensures the ratepayer is always top of mind.

## Safety and Performance

- While the technology for a potential SMR at the Darlington site has not yet been selected, the operating premise is alike that of our operating units which have earned a long and reliable track record for safety and performance.