



Implications of the Global Solar Power Revolution for Canada's Energy Future

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Context

- Canada has been described by Mark Carney as an “energy superpower”
- The description is true in the context of oil and gas production
- Canada ranks in the top five globally in terms of fossil fuels and uranium
- But renewable energy production is rapidly growing worldwide
- Oil demand nearing its peak and then forecast to decline
- Electricity from clean renewables will increasing drive economic growth
- Leading the global renewable revolution is rapid growth in solar energy
- Wind and especially solar are the cheapest sources of *new* electricity

Considerations

- Energy drives economic progress. It is the lifeblood of economies
- Nations/regions with secure access to cheap and most abundant future energy will have the best economic prospects
- The cost of solar generation will continue to decline due to:
 - technological innovation in conversion of sunlight to electricity
 - industrial scale economies together with learning curve effects
 - innovation in all other elements of the supply chain
- China runaway leader in solar/wind and clean renewables supply chains
- West cannot afford to cede cheap renewable energy leadership to China
- Canada badly lags globally in production of solar energy
- In 2024 solar contributed less than 1 percent of Canada's electricity
- Canada near back of the pack among peer group countries in solar energy

Questions

- What are global projections for fossil fuel demand?
- Should Canada's oil exports pivot away from the U.S. market?
- How does Canada replace declining export revenue from oil?
- Should Canada's energy policy strategy change?
- If so, what needs to be the key policy considerations?
- How to design a national energy strategy when provinces have jurisdiction over energy production and supply?