Energy Outlook Implications for Ontario

CCRE Energy Roundtable, June 2025

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STRATEGIC POLICY ECONOMICS

Outline

Demand

- Demand from Decarbonizing Canada's Economy
- Economy-driven Demand Trends and Demand Scenarios

Infrastructure Development

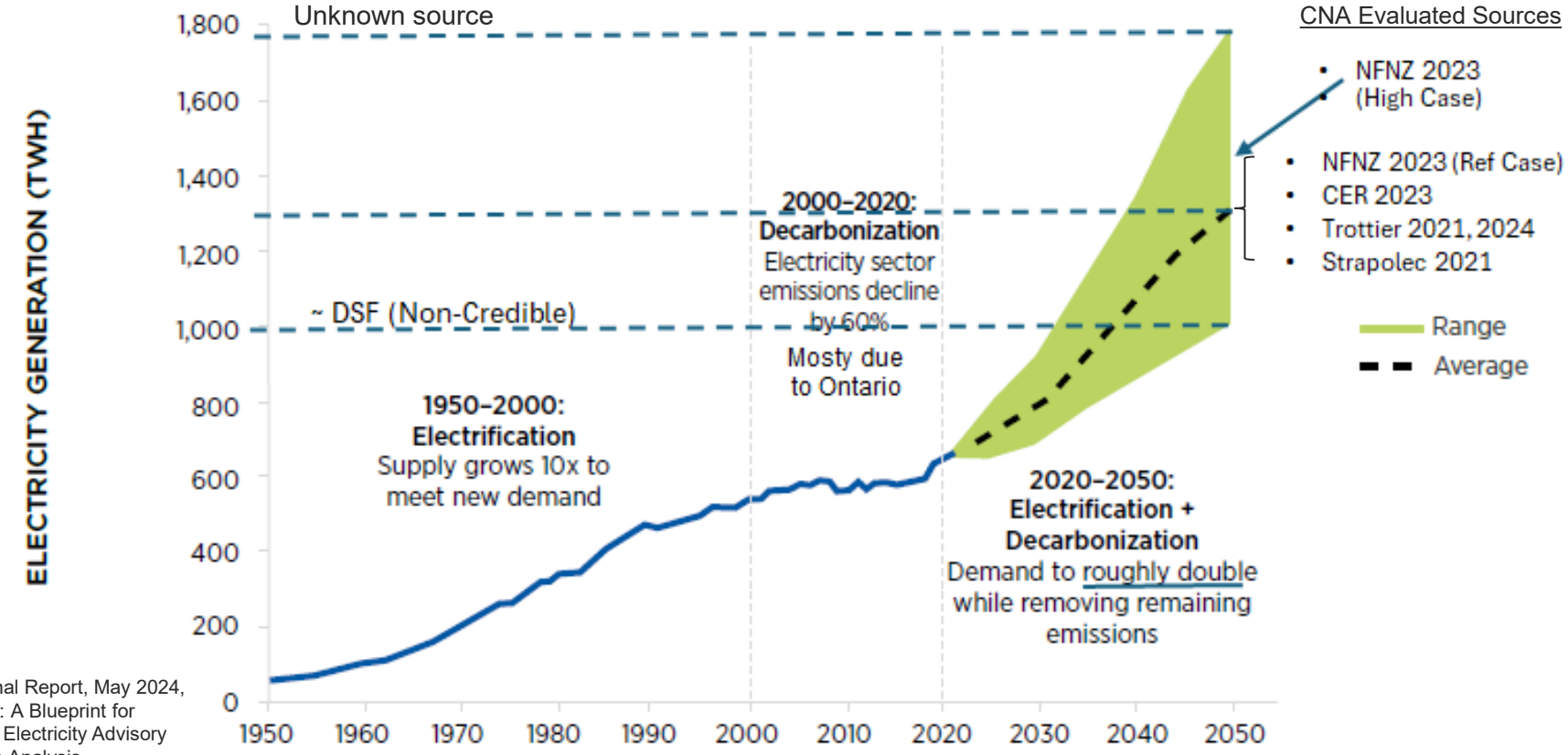
- Pace of Ontario's Demand Growth and Capacity Development Challenge

Implications of the Energy Transition

- Ontario's Energy Mix: Oil, Natural Gas, Electricity and Renewables

Decarbonizing the economy could double demand for electricity

Forecasting experts are aligned on net impact of electrification



Source: CEAC Final Report, May 2024, Powering Canada: A Blueprint for Success, Canada Electricity Advisory Council; Strapolec Analysis

Additional drivers suggest capacity growth needs of 2.4x–3x

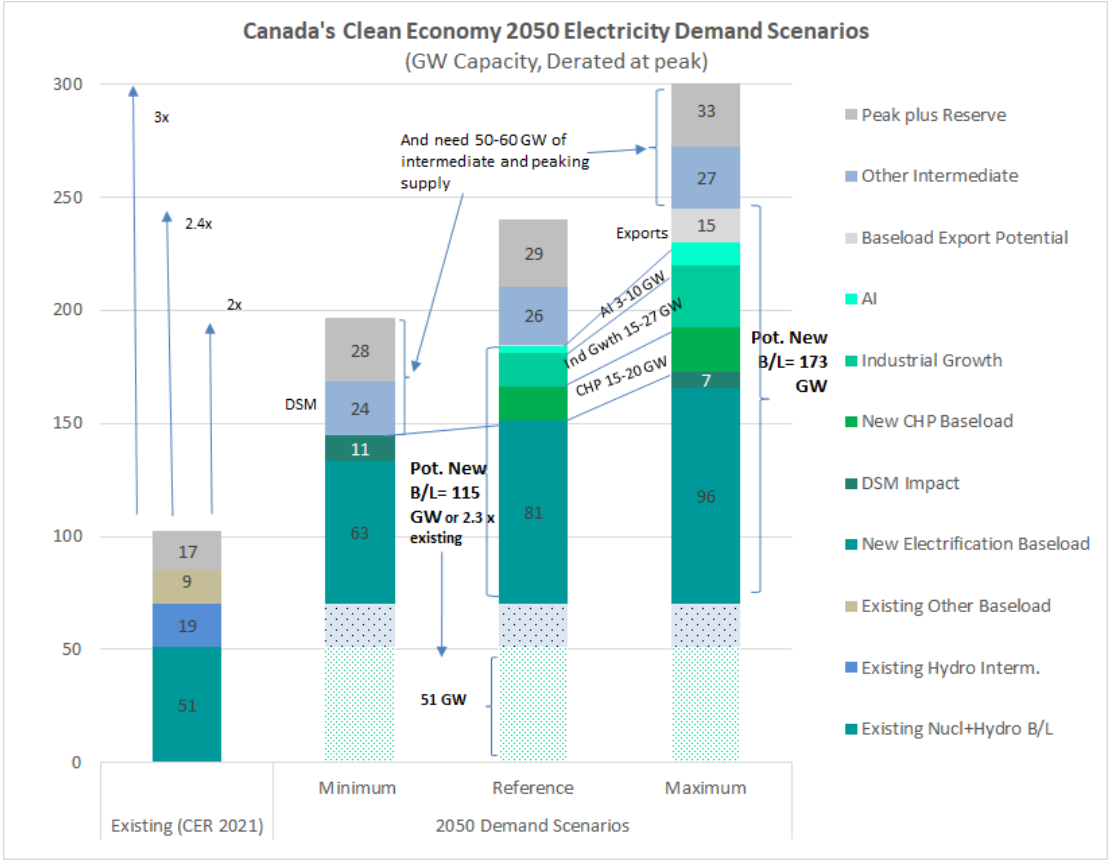
May need 115-173 GW more baseload than Canada's current non-emitting baseload supply

Economy-Driven Demand Drivers

- Industrial growth – Critical Minerals, EVs, Hydrogen
- Artificial Intelligence (AI) driven Data Centre growth
- Industrial behind the meter (BTM) combined heat & power (CHP)
- Population
- Demand Side Management (DSM)
- Exports

Nature of Demand requires three types of supply:

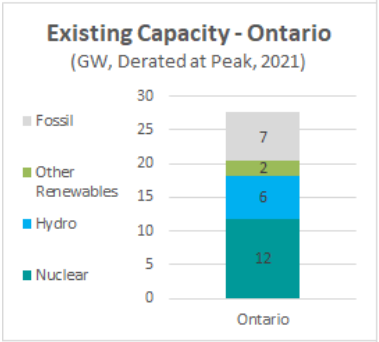
- Baseload
- Intermediate
- Peak + Reserve

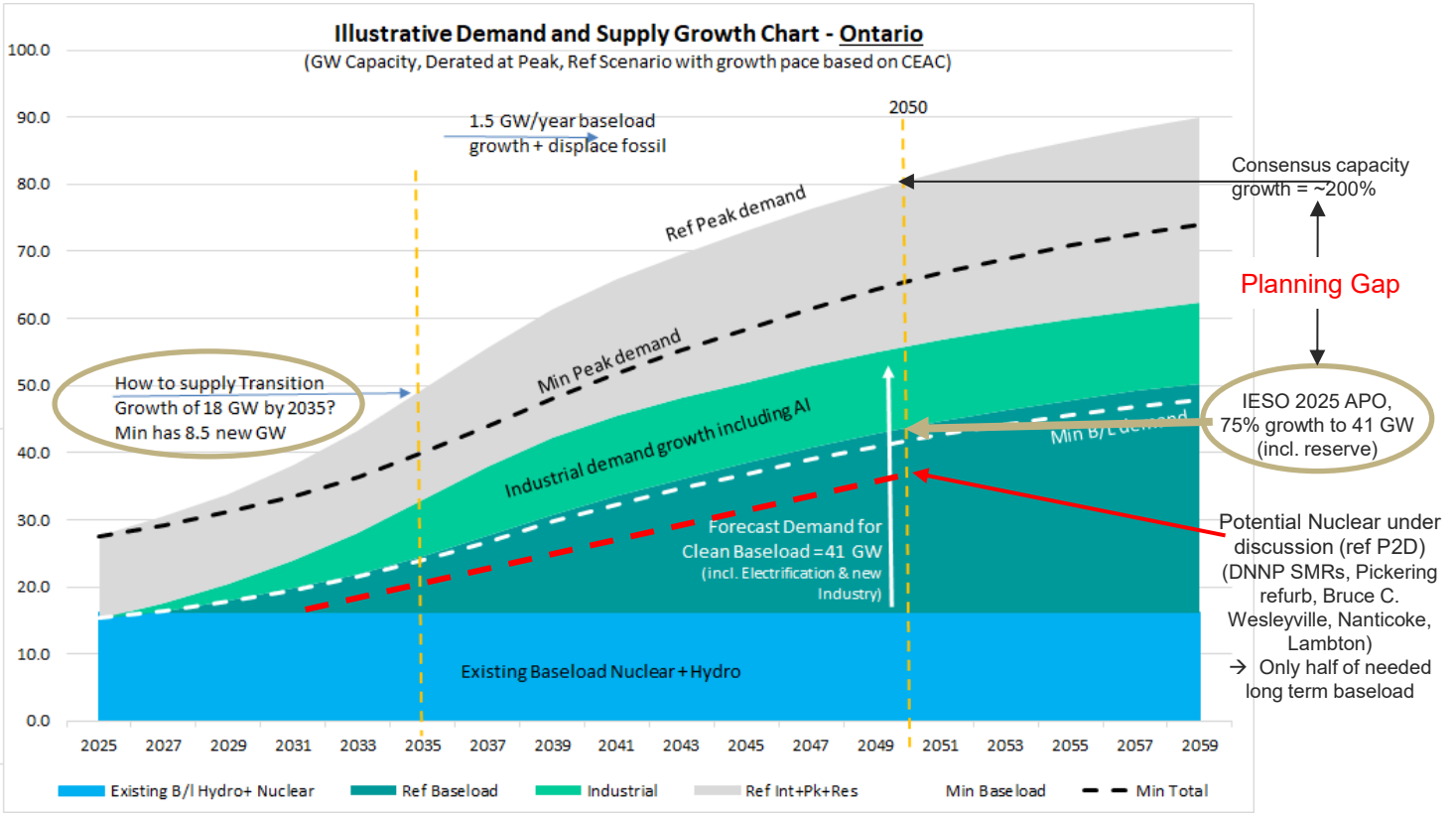


Source: CNA, Outlook for Nuclear in Canada, June 2025

Ontario demand could triple by 2050, with 41 GW of new baseload

Pace of demand growth could exceed ability to develop electricity system infrastructure





Source: Power Workers' Union, Ontario's Electricity System's Risks and Mitigation – A Recap and Taking Stock, Jan 2025; Strapolec analysis.

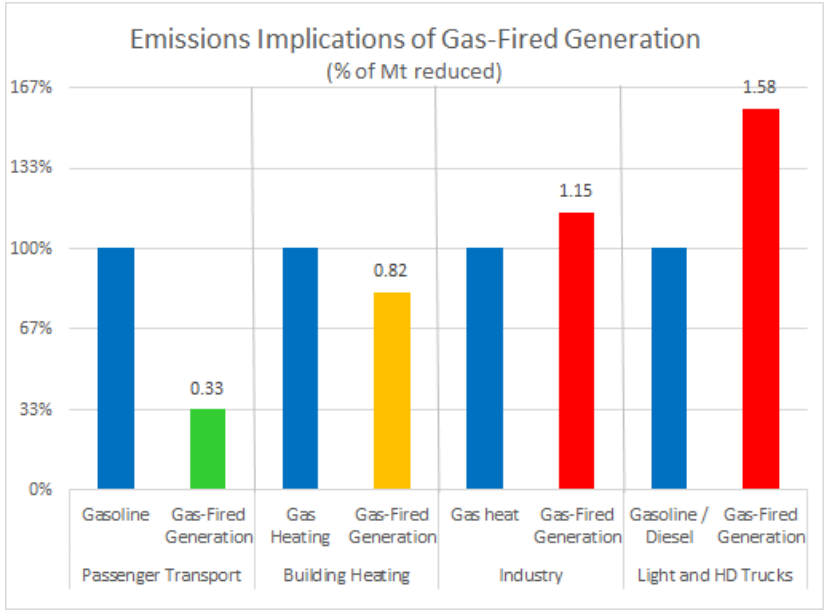
Future Supply Mix: A cost-effective energy transition policy question

Deferring emission reduction tactics while building non-emitting infrastructure

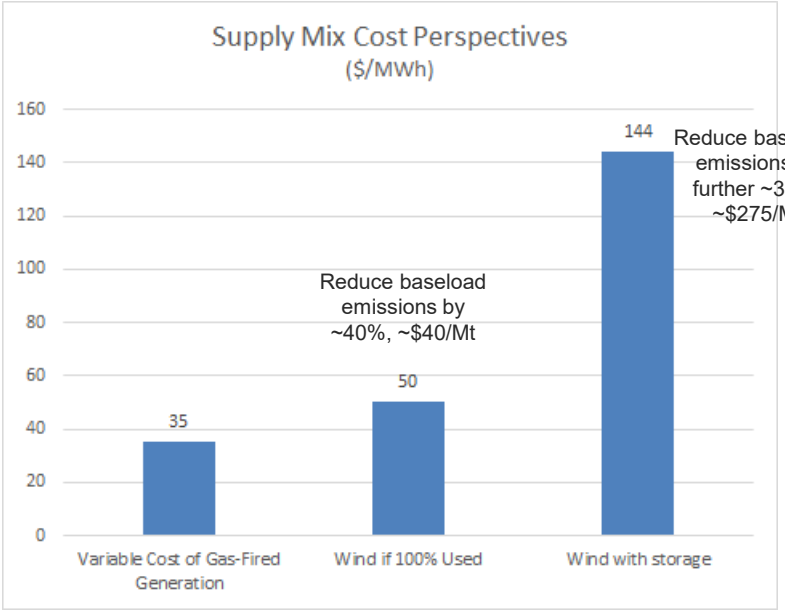
Natural gas system is required for several decades, likely well past 2060; Non-electrified diesel options for HD trucking

With natural gas-fired generation, emissions benefits of electrification are negated

Illustrative



Prudent use of renewables may offer cost effective bleeding down of emissions



Source: Strategic Policy Economics, Electrification Pathways for Ontario, 2021