



ProsperUnity



Sustainable Transformation, Securing Canada's Future

ISSUES AHEAD FOR ALL CANADIANS

- ✦ Truth and Reconciliation
- ✦ Energy Security (Availability & Cost)
- ✦ National Transportation Infrastructure
- ✦ National Power Infrastructure
- ✦ Climate Change



Canada ProsperUnity Corridor

- ✦ Moving forward on the National Infrastructure Assessment;
- ✦ Aligning with Principles and Calls for Action from Truth and Reconciliation Commission;
- ✦ Leading the move to Net Zero Economy while supporting the Three Pillars of Indigenous Economic Reconciliation;
 - ✦ Quest for Economic Independence,
 - ✦ Self-determination and,
 - ✦ Sustainable Community Infrastructure;
- ✦ Will build a utility corridor, which will transport clean energy (hydrogen/ammonia/natural gas) and open access to domestic/export markets for Canada's mineral resources (i.e.. rare earths metals),
- ✦ Will enable Energy Transition ensuring energy security to reduce reliance on foreign sources.
- ✦ Will strengthen resilience to climate change-induced extreme weather incidents.
- ✦ Will transform the quality and efficiency of our main east-west interprovincial trade corridors.

Mid-Canada, Coast to Coast



Benefits to Canada

- ✿ Enhance access/opportunity for Indigenous People in Canada's mid-north that will help achieve the Canada plan for Indigenous Communities.
- ✿ Bring substantial infrastructure north of the 54th parallel, asserting Canada's sovereignty over northern and arctic regions.
- ✿ Contribute significantly to the Canadian economy, in the range of a 7.5% net increase based on 2021 GDP as reported by Statistics Canada.

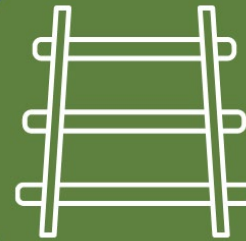
Infrastructure Elements



Clean Energy



Power



Rail



Telecoms



Road

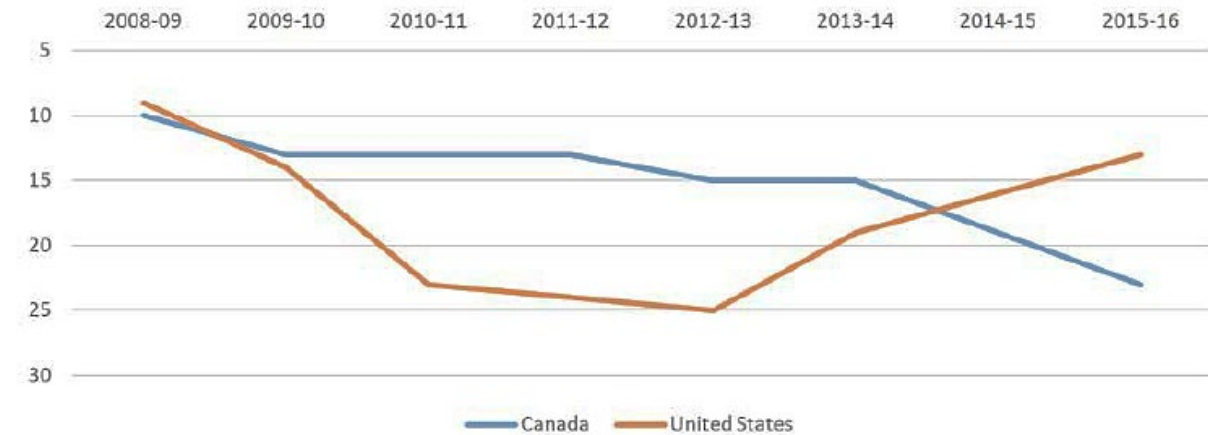
- ✳ Building the national pathway for Energy Transition to achieve Net Zero carbon emissions.
- ✳ Powering Canada with renewable, low carbon electricity.
- ✳ Connecting people and resources within mid-Canada to trade and import and export for people and resources.

WEF Quality of Overall Infrastructure Report

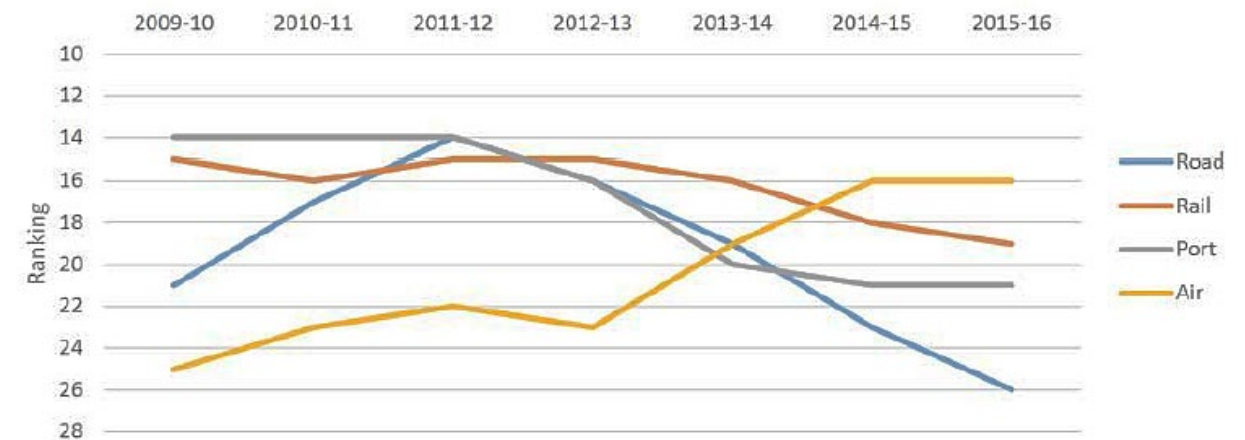
World Economic Forum - Quality of Overall Infrastructure

2008-2009	Rank	2015-2016
Switzerland	1	Switzerland
Singapore	2	United Arab Emirates
Germany	3	Hong Kong SAR
France	4	Singapore
Finland	5	Netherlands
Austria	6	Finland
Denmark	7	Japan
Hong Kong SAR	8	Austria
United States	9	Iceland
Canada	10	France
United Arab Emirates	11	Germany
Sweden	12	Denmark
Iceland	13	United States
Luxembourg	14	Spain
Belgium	15	Portugal
Japan	16	Malaysia
Netherlands	17	Luxembourg
Korea, Rep	18	Qatar
Malaysia	19	Sweden
Barbados	20	Korea, Rep
Cyprus	21	Chinese Taipei
Taiwan, China	22	Belgium
Portugal	23	Canada
United Kingdom	24	United Kingdom

Canada Versus United States Overall Infrastructure Quality



Quality of Canada's Infrastructure Competitiveness Rankings



Infrastructure Demand is Forecast to Increase

Pacific Gateway Throughput Comparison 2013-2024

Sector	2013 Actual (million tons)	2024 (million tons)	Increase (tons)	Increase (%)
Coal	48.6	82.0	33.4	69
Agriculture Products	21.2	29.6	8.4	40
Potash	6.6	15.2	8.6	130
Forest Products	3.4	4.5	1.1	32
Metals and Minerals	3.4	4.5	1.1	32
Sulphur	2.8	3.2	0.4	14
Other Fertilizers	1.9	2.3	0.4	21
Petrochemicals	0.6	3.0	2.4	400
Sub-Total	88.5	144.3	55.8	63
Crude Oil	3.1	25.7	22.6	729
LNG	-	27.6	27.6	-
Total	91.6	197.6	106.0	116

Source: 2014 Transportation Network Needs Assessment

Figure 6: International/Trans-Border Trade by Air

CANADIAN AIRPORTS: IMPORT/EXPORT GROWTH (\$ MILLIONS)							
AIRPORT	AIR CARGO VALUE	% GROWTH		AIRPORT	AIR CARGO VALUE	% GROWTH	% CHANGE
Exports from 2001 to 2011	2001	2011	% CHANGE	Imports from 2001 to 2011	2001	2011	% CHANGE
Toronto Intl Airport	\$14,242	\$30,414	114%	Toronto Intl Airport	\$21,690	\$35,949	66%
Montreal-Mirabel	\$8,640	\$5,275	-39%	Montreal-Dorval/PET	\$10,601	\$7,727	-27%
Montreal-Dorval/PET	\$5,314	\$5,430	2%	Hamilton Intl Airport	\$1,723	\$3,934	128%
Vancouver Intl Airport	\$1,708	\$1,949	14%	Vancouver Intl Airport	\$3,301	\$3,732	13%
Calgary Intl Airport	\$1,144	\$1,227	7%	Calgary Intl Airport	\$2,518	\$2,735	9%
Ottawa Intl Airport	\$1,068	\$339	-68%	Montreal-Mirabel	\$2,185	\$2,698	24%
Edmonton Intl Airport	\$242	\$157	-35%	Ottawa Intl Airport	\$2,704	\$1,363	-50%
Halifax Intl Airport	\$202	\$315	55%	Winnipeg Intl Airport	\$1,291	\$1,035	-20%
Winnipeg Intl Airport	\$113	\$419	270%	Edmonton Intl Airport	\$765	\$800	5%
Hamilton Intl Airport	\$106	\$162	%52	Halifax Intl Airport	\$364	\$230	-37%

Source: Statistics Canada

Estimated Rail Traffic to/from B.C. Ports (East-west Flows)

	Trains 2013	Trains 2024	Increase Trains/Year
Vancouver	17,100	25,200	8,100
Prince Rupert	4,000	8,900	4,900
Total Pacific Gateway	21,100	34,100	13,000

Source: 2014 Transportation Network Needs Assessment

Estimated Truck Traffic to/from B.C. Ports (East-west Flows)

Sector	Truck Trips 2013	Truck Trips 2024	Change	% Change
Forest Products	26,600	36,700	10,100	+37.9%
Metals & Minerals	31,500	58,900	27,400	+86.9%
Containers	1,456,100	2,066,500	610,400	+41.9%
Total	1,514,200	2,162,100	647,900	+42.8%
-Port Metro Vancouver	1,472,000	2,086,400	614,400	+41.7%
-Prince Rupert/Stewart	42,200	75,700	33,500	+79.5%

Source: 2014 Transportation Network Needs Assessment



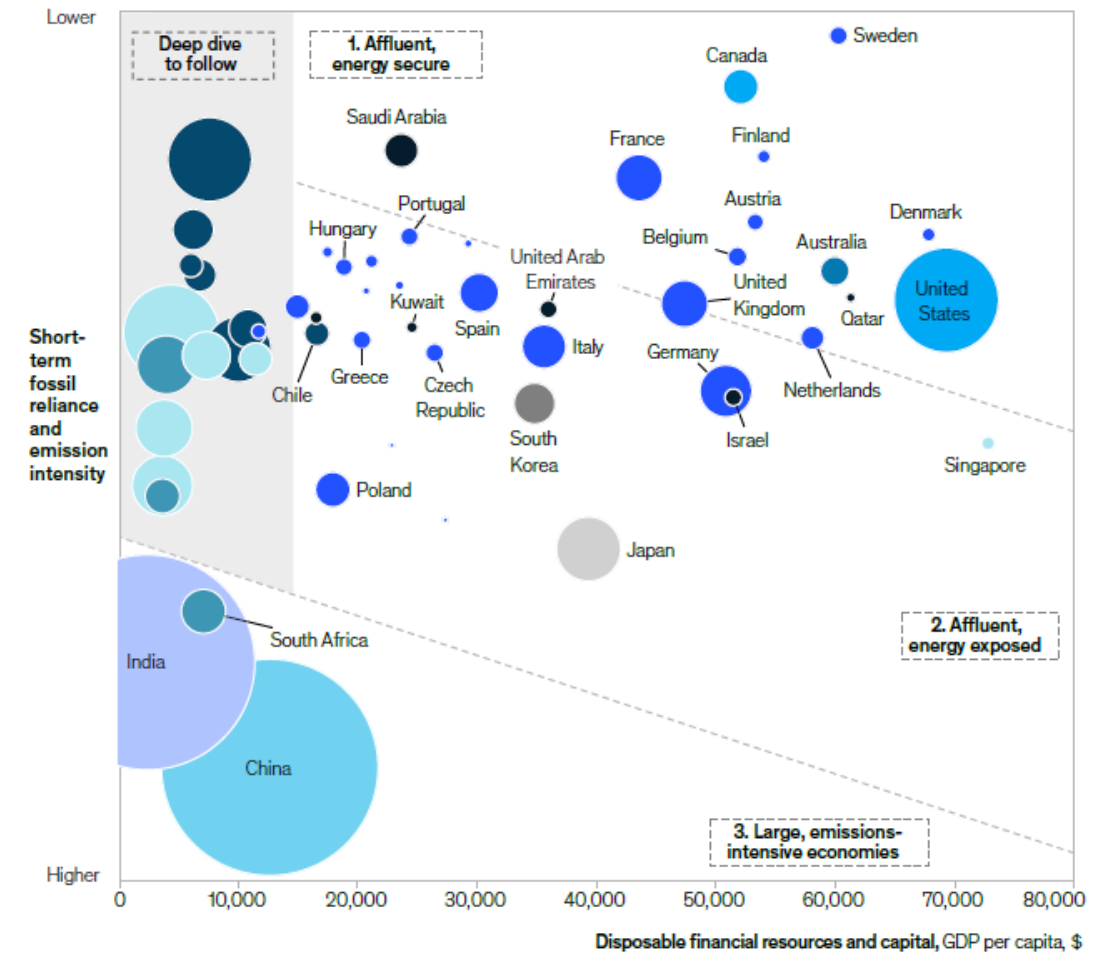
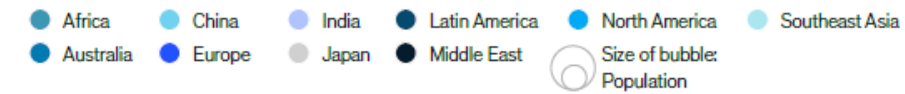
McKinsey & Company: The Energy Transition

- Canada is in Affluent energy secure region **AS LONG AS** it has access to its fossil fuels

Exhibit E1

Countries can be divided into five main archetypes based on key energy transition characteristics.

Short-term risk: Relative energy security; CO₂ intensity

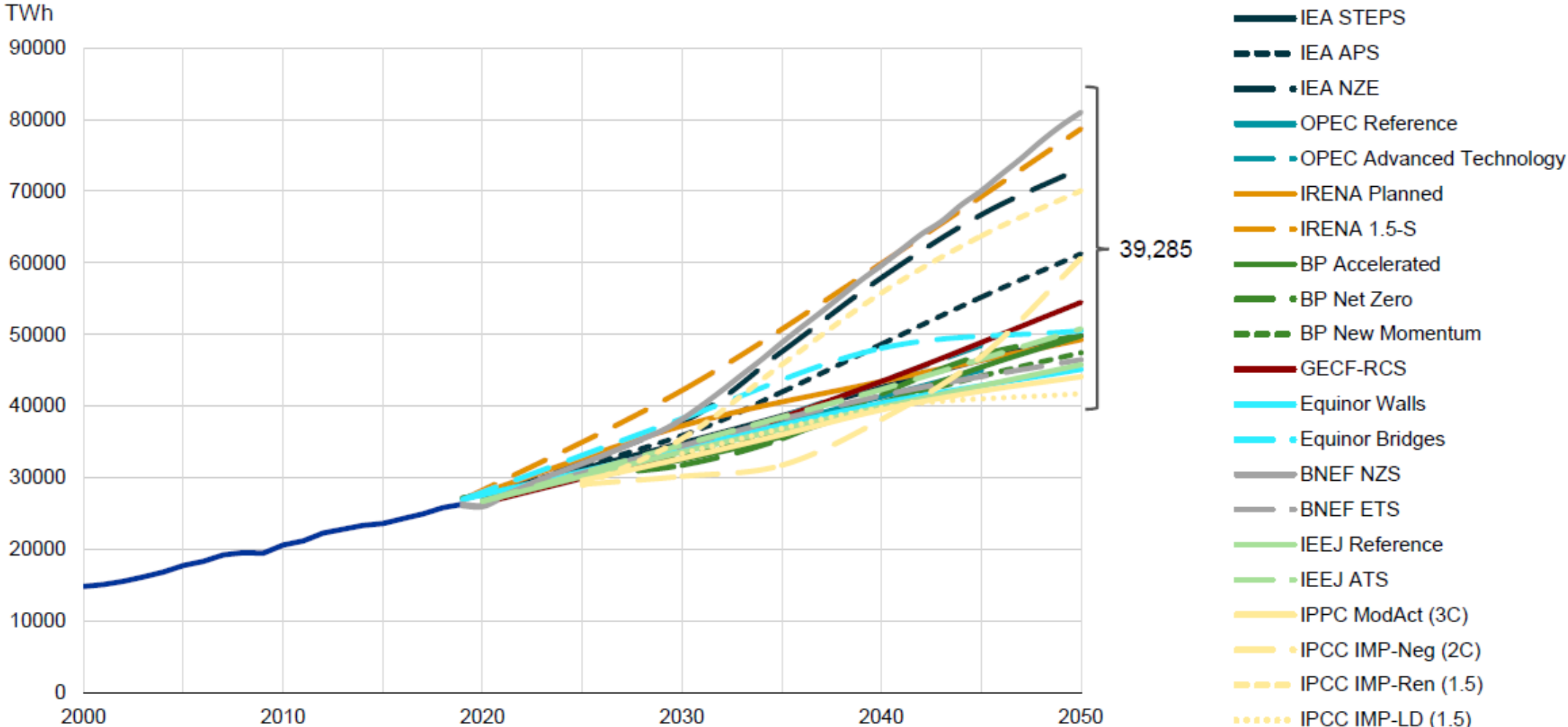


Source: McKinsey analysis

WEF Forecast for World Electric Power Generation

Electricity Generation: Most Scenarios Show Electricity Demand Growing By ~80% By 2050, With More Ambitious Net Zero Scenarios Showing Up to ~200% Growth vs. 2021

Electricity Generation Scenarios Through 2050

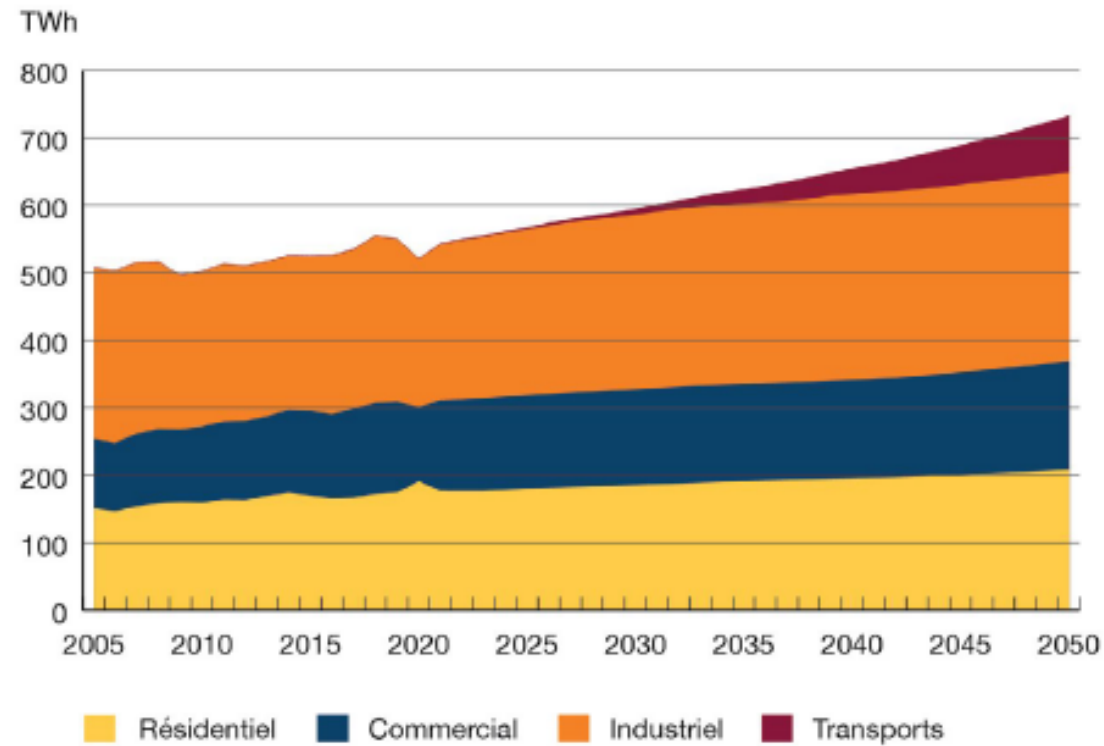


Source: IEF, IEA WEO 2022, OPEC WOO 2022, IRENA World Energy Transitions Outlook 2022, BP Energy Outlook 2022, GECF 2021 Global Gas Outlook to 2050, Equinor Energy Perspectives 2022, BNEF New Energy Outlook 2022, IEEJ Outlook 2023, IPCC Climate Change 2022: Mitigation of Climate Change

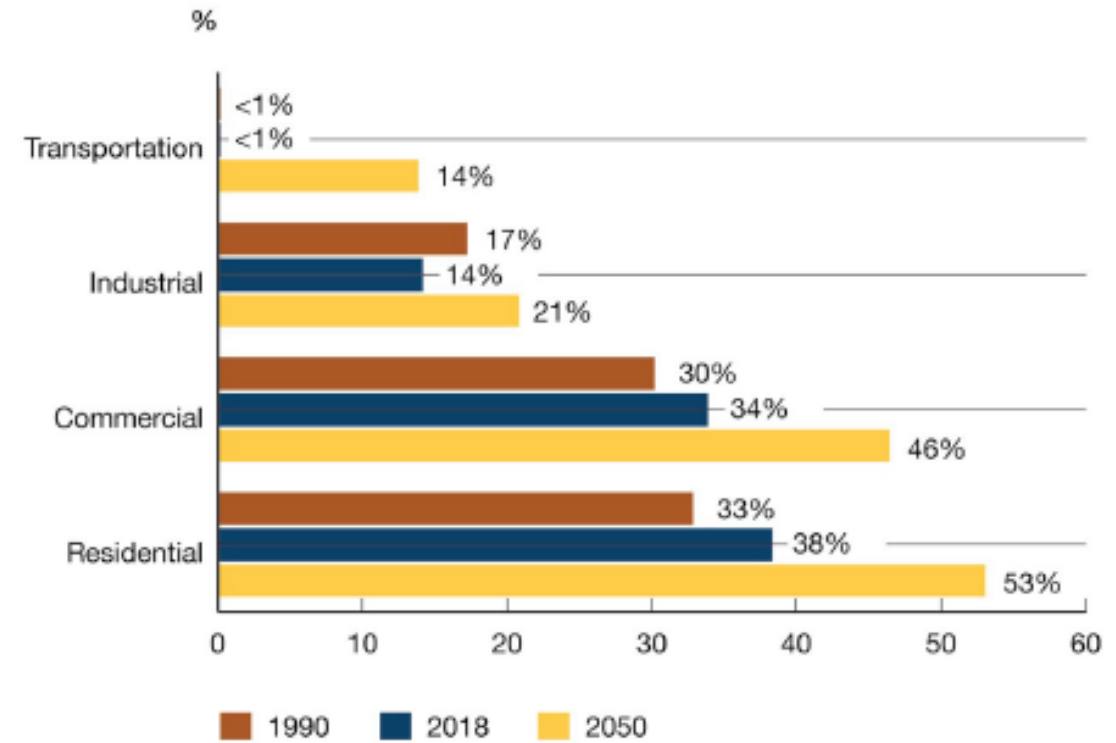
CER's View of Canada's Electric Future

Electricity Demand by Sector, Evolving Scenario

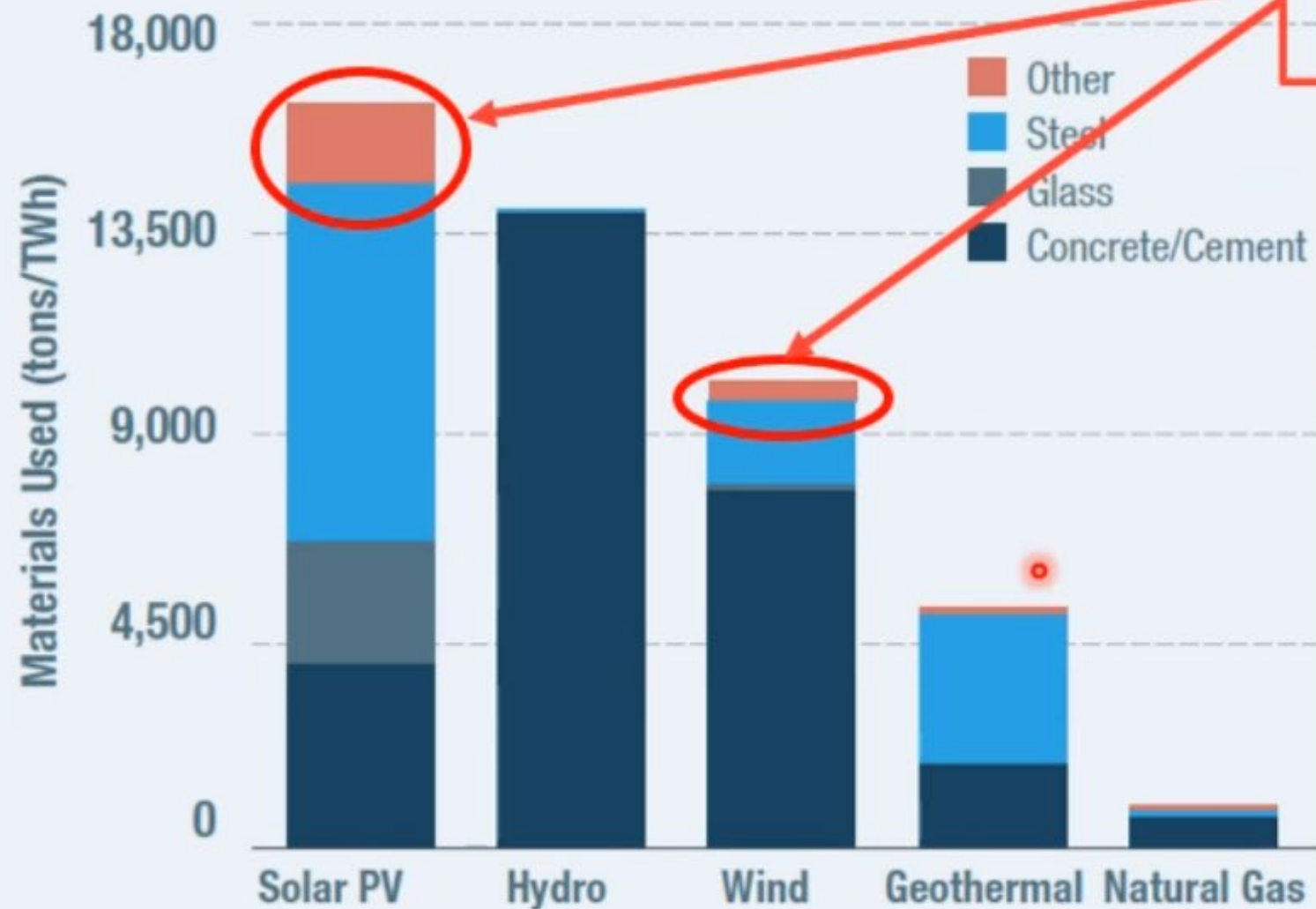
a) Total Electricity Demand by Sector



b) Share of Electricity In the Total Demand For Each Sector



Materials Requirements to Build Different Energy Machines



Critical Metals
Rare Earths

“Exponential growth in global renewable energy production capacity is not possible with present-day technologies and annual metal production”
(van Exter et al, 2018)

Source: U.S. Department of Energy (DOE), “Quadrennial Technology Review: An Assessment of Energy Technologies and Research Opportunities,” September 2015, p. 390

Chart: Manhattan Institute

Mills, 2020. *Mines, Minerals and “Green” Energy: A Reality Check*



Corridor: Delivering Green Energy



- 🍁 A National East–West delivery system for Ammonia/Hydrogen/Natural Gas
- 🍁 Taking the step towards transition with a national pipeline delivering ammonia / hydrogen to areas that need it within Canada and exporting it to foreign markets.



Corridor: National Electric Grid



🍁 Delivering transition from East–West

🍁 Connecting Canada through hydro and/or SMRs.




Corridor: Another National Railway

- ✦ Providing access to resources in mid-Canada,
- ✦ Rail transport for import and export of goods and resources,
- ✦ Providing opportunity to grow and develop and increase prosperity.



Corridor: Telecommunications and Broadband

- 
- ✦ Delivering access to communication for more Canadians
 - ✦ Bringing a greater certainty in access to security, health services and food,
 - ✦ Broadening ability for mid Canada to participate in the digital economy,
 - ✦ Bringing Canadians closer together with communication services.



Corridor: A New National Highway

- 🍁 Providing people access to resources in mid- Canada,
- 🍁 Providing better access to health, security, and opportunity,
- 🍁 Potentially with charging stations,
- 🍁 Another national route for trade for import and export,
- 🍁 Reduction of traffic stress on southern national routes,
- 🍁 Better access for fire and safety services to northern communities



Net Zero and National Infrastructure

CANADA PROSPERITY CORPORATION

- ✿ We launched in 2018 to address National Infrastructure, Energy Security, Indigenous Empowerment, Prosperity and Access and Opportunity for ALL Canadians,
- ✿ To provide an Ammonia/Hydrogen delivery system to address Net Zero and Transition,
- ✿ To give leadership and prompt the building of a National electric power grid system,
- ✿ To enhance trade and access to export and import of goods and services by providing a national rail and road system through mid-Canada,
- ✿ To connect people and trade with an enhanced telecommunications and broadband network through mid-Canada,
- ✿ To show that a successful Net Zero Plan MUST be National with a long-term vision,
- ✿ Delivering a national multi-modal corridor IS the FIRST step to achieving a National Net Zero goal with Transition!



Vaclav Smil (Distinguished Emeritus Professor, University of Manitoba) researches energy, environmental and population change, food production and nutrition, technical innovation, risk assessment and public policy.

“History shows that **neither the dominant sources of primary energy, nor the common energy converters can be displaced rapidly** and completely in a short period of time”

“The unfolding **energy transition towards decarbonization** will inevitably follow the progress of all previous large-scale primary energy shifts – it **will be a gradual, prolonged affair.**”

<https://www.schoolofpublicpolicy.sk.ca/research/publications/policy-brief/what-we-need-to-know-about-the-pace-of-decarbonization.php>

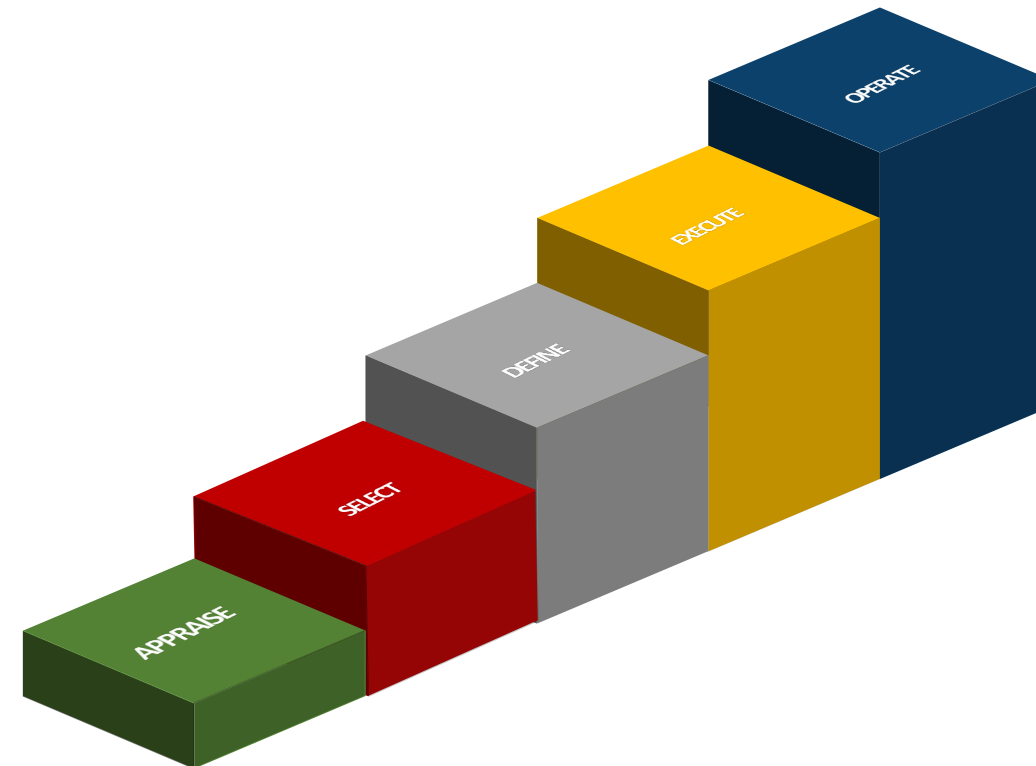


Stage Gate Process

The Plan as Proposed by ProsperUnity

We are Clean Energy Transmission, Power, Rail, Telecoms & Road.

- 01 APPRAISE**
Set-up, define, engage and scope the 5-Phase \$100B Stage Gate Project. Engage with communities, First Nations, governments, landowners and eNGO's. We will listen and respond to Stakeholders' needs.
- 02 SELECT**
Analyze options, approve design, prepare concept and update risk register.
- 03 DEFINE**
Detail design, peer review and update risk register.
FEED to FID
- 04 EXECUTE**
Execute construction, and complete project and financing EPC
- 05 OPERATE**
Bring project in operational mode and continue engagements with public and stakeholders.



Comments on Canada's Challenge

From Canada's Strategy Paper, "Seizing Opportunities"

"This is the moment to make moves. Not just Canada's moment: a global moment. But in how we respond, we can define our share of what the future will bring."

"Are we going to own our destiny or be part of someone else's master plan?"

Canada ProsperUnity Statement

"Like the Canadian Pacific Railway in the 19th century, the Trans-Canada Highway in the 20th century, Canada ProsperUnity Corporation will bring an East-West multi-modal Corridor to the 21st century. A legacy project for Canada, and First Nations providing long-term sustainability, community, and economic diversification and the FIRST STEP towards Transition and National Net Zero."



What Next?

Upon funding of \$50 - \$100 million, CPUC will:

- 🍁 Initiate Engagement of First Nations
- 🍁 Engage with Provincial and Federal Government
- 🍁 Engage Municipalities
- 🍁 Engage landowners
- 🍁 Engage eNGO's
- 🍁 Through listening develop full scope
- 🍁 Targeting Project completion for 2037



Cost Estimate (West Coast to East) Coast) (\$B)

CPUC CORRIDOR	CPUC CORRIDOR
<u>Major Infrastructure Components:</u>	
Pipeline, Pump Stations, Terminals, Ports/Jetty & ROW	72.6
FEED/Detailed Engineering/Procurement	7.3
Environmental Consulting	1.0
Permitting	1.5
Land	6.0
Legal & Contracts	2.0
Cost of Capital	14.5
Power Line	11.9
Telecommunications	3.6
Roads (2 Lane Paved = 2*Tridyne # (2 Lane Gravel))	19.0
<u>Rail (\$1.5 MM/mile (US\$) @ 1.37 CDN\$/US\$, 3400 km & 1.3 factor for terminals & sidings)</u>	<u>13.3</u>
Sub-Total (Does NOT Include Cost of Land, Federal, Provincial Governmental Costs):	83.5
CPUC Corridor Management Costs: (5% of Included Infrastructure)	7.4
Total:	161.5



CPUC – What We Do

Building Solutions for All of Society

Objective:

- 🍁 Create first mega project to assist in meeting calls of action from T and R
- 🍁 Innovation and Practical Action Create a Transformative Pathway to Net Zero for 2050,
- 🍁 Lead the building of an East-to-West multimodal OPPORTUNITY CORRIDOR,
- 🍁 Be a catalyst for Canada's Energy Transition to Net Zero, enabling other important infrastructure initiatives to bring opportunity to Northern Canada,
- 🍁 Using Clean Energy, Connecting Clean Power, and Spurring Innovative Transportation
- 🍁 Imaginative Thinking – Evidence Based Analysis – Practical Action,
- 🍁 Raise up to ~C\$100 million as initial seed capital; and

We are: ROAD, RAIL, POWER, TELECOMS & CLEAN ENERGY TRANSMISSION

Highly Skilled Leadership and Diversity

Sustainable Transformation, Securing Canada's Future





ProsperUnity

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