



# Canada and Japan Natural Partners

**Frank Des Rosiers**  
Assistant Deputy Minister  
Strategic Policy and Innovation  
July 2023



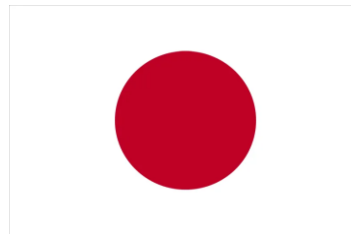
Natural Resources  
Canada

Ressources naturelles  
Canada

Canada

# Natural Partners

- Canada and Japan have a long history of close bilateral relations and shared values.
- Largest source of bilateral foreign direct investment from Asia
- Bilateral Relationship is a comprehensive and strategic partnership focused on:
  - Enhancing Economic Prosperity,
  - Addressing Climate Change and the Environment, and
  - Supporting Energy Security
- Natural Resources and Energy are key to achieving these objectives. Canada's Indo-Pacific Strategy is rooted in this reality.



# Abundant Resources

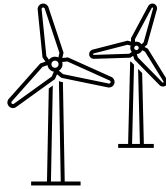
## HYDROPOWER

- 3<sup>rd</sup> largest hydro producer
- 9% of world generation



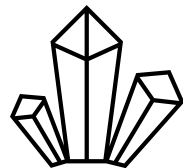
## RENEWABLES

- 9<sup>th</sup> in wind power capacity
- 8<sup>th</sup> in liquid biofuels



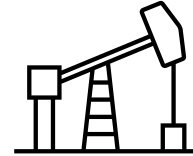
## CRITICAL MINERALS

- Leading producer of minerals and metals; has all the minerals needed for EVs/batteries (e.g. nickel, cobalt, copper, lithium)



## NATURAL GAS

- 4<sup>th</sup> largest producer
- 6% of world exports
- 45% of production exported



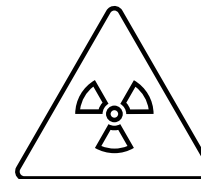
## CRUDE OIL

- 4<sup>th</sup> largest producer
- 3<sup>rd</sup> largest proved reserves
- 8% of world exports



## NUCLEAR

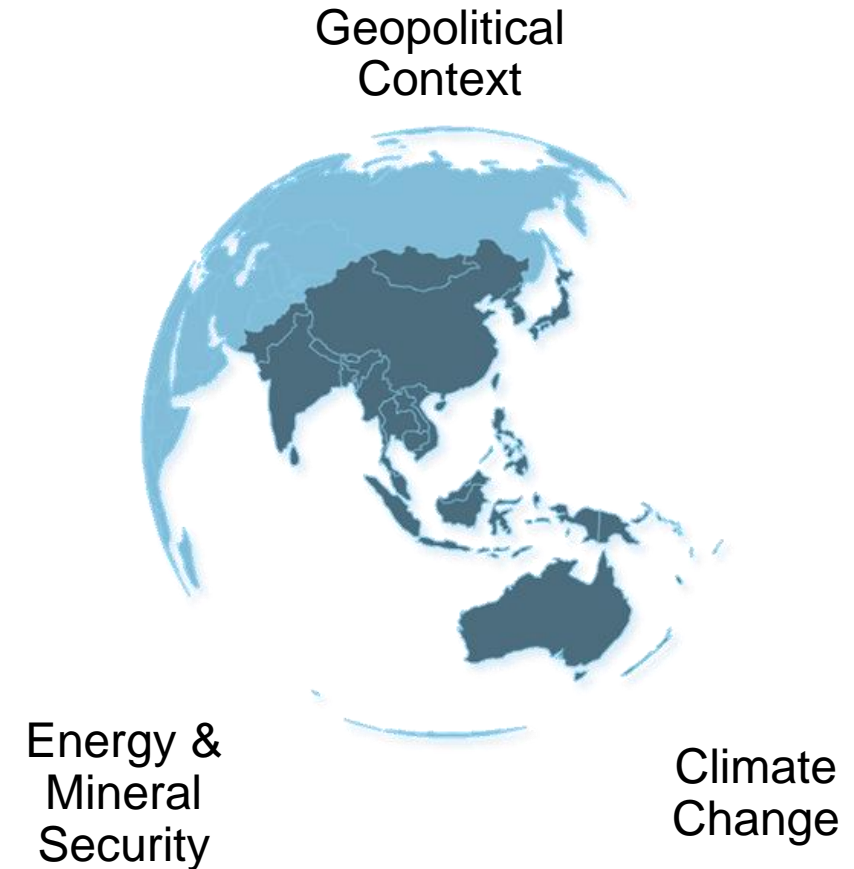
- 2<sup>nd</sup> largest uranium producer
- 6<sup>th</sup> in nuclear power
- Tier 1 Nuclear Nation



**Canada is a reliable supplier of energy and minerals**

# Geopolitical Context

- Current geopolitical context places energy and mineral security as a top priority for government and business leaders.
  - Need to secure reliable supplies of energy and minerals
  - Need to pursue action to meet net zero goals
- Canada is committed to strengthening ties with Japan and other allies





# Canada's Competitive Advantage

## Canada's resource sector starts from a position of strength:

- Abundance of natural resources
- Innovation
- Skilled labour
- Clean power
- Access to markets
- Trade agreements
- Competitive tax regime
- Transport corridors

### Targeted Programming

- Programming to support clean energy decarbonization projects, and to develop innovative clean technologies

### Strategic financing

- Innovative financing and investment tools to attract private capital and accelerate deployment of key technologies

### Investment tax credits

- Refundable tax credits for investments in:
  - Clean Hydrogen
  - CCUS
  - Clean Electricity
  - Clean tech and clean tech manufacturing

### Carbon Pricing and Regulatory Framework

- Ensures there is a price incentive to reduce GHG emissions and innovate. Requires reductions in carbon for certain activities and products

In response to US *Inflation Reduction Act*, Canada introduced several measures in Budget 2023.

# Canada's Investment Tax Credits

## Budget 2023

- a set of clear, predictable investment tax credits
- low-cost strategic financing
- targeted investments and programming



### Clean Hydrogen

- 15-40% refundable tax credit of eligible project costs, and a 15% credit for equipment



### CCUS

- 37.5-60% refundable invest tax credit



### Clean Electricity

- 15% refundable tax credit



### CleanTech Manufacturing

- 30% refundable tax credit



### CleanTech

- 30% refundable tax credit



### Reduced Tax Rates for Zero Emission Technology Manufacturers

- Reduced corporate income tax rates (7.5% and 4.5%)

Budget2023's investment tax credits  
are worth **\$60B over 10 years.**

### Other measures:

- Canada Infrastructure Bank
- Canada Growth Fund
- Strategic Innovation Fund
- Clean Fuels Fund
- National Supply Chain Strategy
- Business Innovation and Research through Canada Innovation Corporation
- Contract for Difference

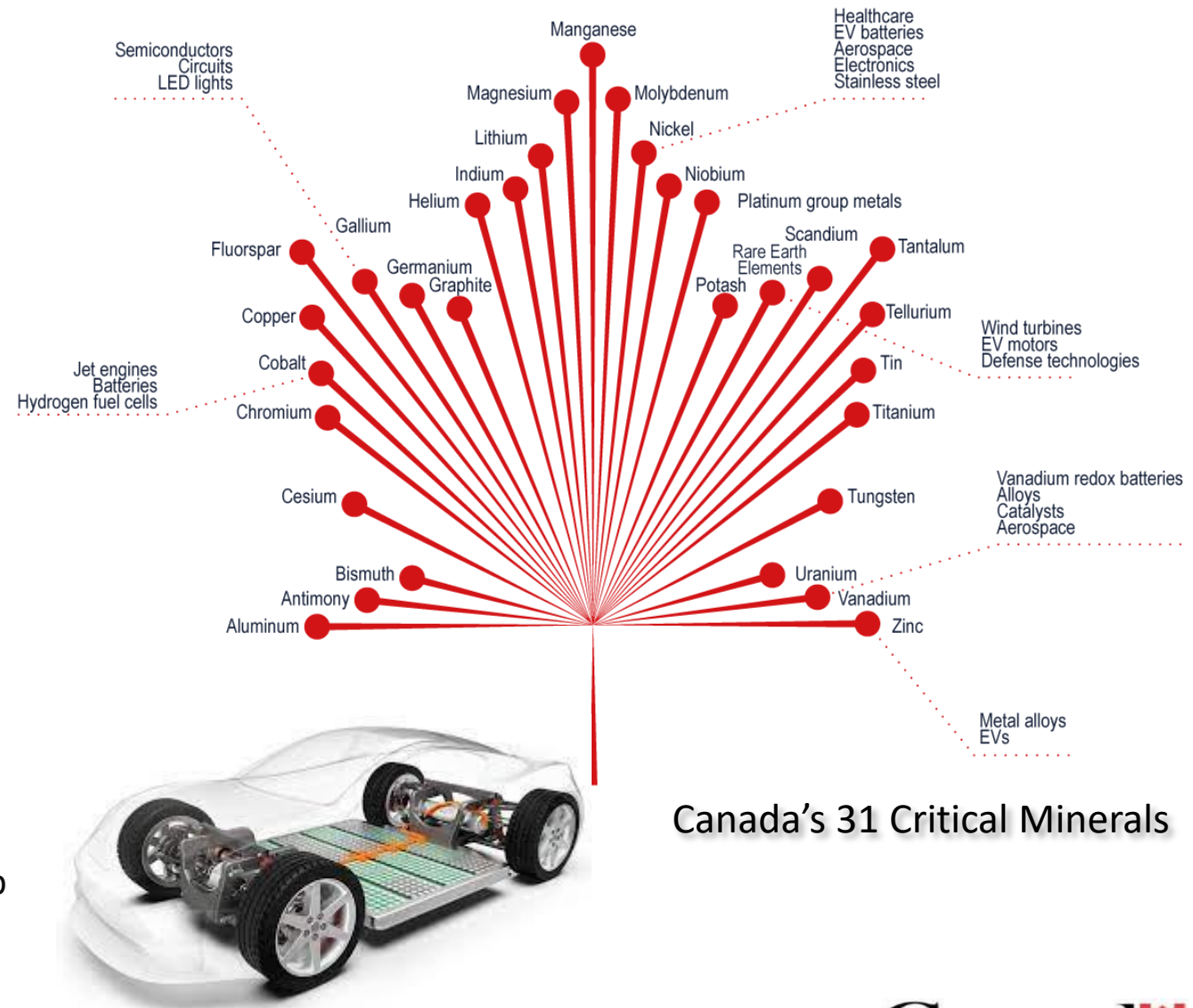
# CRITICAL MINERALS / BATTERIES

## STRATEGY

- Critical Mineral Strategy released in Dec 2022
  - Prioritizes lithium, graphite, nickel, cobalt, copper and rare earth elements
- Canada seeking leadership across all segments of battery supply chain

## KEY BATTERY PROJECTS

- PowerCo (VW): Batteries for EVs (\$7B)
- Stellantis/LGES: Batteries for EVs (\$5B)
- Ford Canada: EVs (\$1.8B)
- Umicore: Cathode active materials and precursors (\$1.5B)
- GM Canada: EVs (\$1.0B)
- BASF: Cathode active materials
- POSCO/GM: Cathode active materials (\$500M)
- Vale: First North American nickel sulphate project
- Lion Electric: Battery packs for e-buses (\$185M)
- Nouveau Monde Graphite signed an offtake and partnership agreement with Panasonic Energy and Mitsui (2022)



# HYDROGEN / AMMONIA

## STRATEGY

- Hydrogen is a key pillar in decarbonizing global energy system
  - Canada is 4th largest hydrogen producer
  - Leader in innovative hydrogen and fuel cell technologies (R&D).
- National Hydrogen Strategy launched in 2020
- Advantages for exports to Asian markets:
  - Abundant and cheap natural gas feedstock
  - Suitable geology for CCUS
  - Shorter shipping times from West Coast to Asia
  - Clean electricity
  - Innovation
  - Skilled workforce
- Multiple partners involved to seize opportunities (production / use)

## PROJECTS

- Several multibillion projects actively pursued in both West and East Coast (\$29B)
- FIDs expected by late 2023 (export markets to Asia / Europe).
- **Itochu, Gentari, Inter Pipeline** plans to manufacture and sell ammonia to Japan by 2027 (\$1.6B)
- **Shell, Mitsubishi** produce low-carbon hydrogen (\$1B)
- **ATCO, Kansai Electric Power** hydrogen supply chain between Canada and Japan (2027)
- **Hydrogen Canada** export hydrogen to Japan (\$1B)
- **Northern Petrochemical** export hydrogen to Japan by 2026 (\$2.5B)





# OIL & GAS



*LNG Canada – Phase 1, Kitimat, BC (80% complete)*

## STRATEGY

- Canada is on track to export LNG to Asia by 2025

## PROJECTS

- **LNG Canada**
  - Phase 1 (80% complete, start-up in 2025 (14 MT) -
    - Mitsubishi – 15% stake
  - Phase 2 under consideration (additional 14 MT)
- **Woodfibre LNG** : start-up in 2027 (2.1 MT)
- **Cedar LNG** : pre-construction phase (3 MT)

### Trans Mountain Expansion (TMX)

- Will expand Canada's pipeline infrastructure, increasing oil export (890k b/d).
- Once completed, will provide market diversification in Asia.

# NUCLEAR



*Ontario Power Generation SMR project  
(Darlington, Ontario) - Operational by 2028*

## STRATEGY

- Canada is a tier-1 nuclear nation
- Canada is the world's second largest producer of Uranium and the world's largest exporter
- NRCan and METI collaborate closely under the **Canada-Japan Energy Policy Dialogue**, incl. on Atomic energy

## PROJECTS

- **Ontario Power Generation's** SMR Project (Darlington, Ontario)
  - North America's first SMR, operational by 2028
  - 300 MW – GE Hitachi technology
- Successful large-scale **refurbishment** of nuclear reactors (Ontario)

## Working as natural partners: together, lots can be achieved!



ありがとうございます

Frank Des Rosiers

Assistant Deputy Minister  
Strategic Policy and Innovation  
Natural Resources Canada



Natural Resources  
Canada

Ressources naturelles  
Canada

Canada