

ENERGY FACTS

Below are a few facts on the **diversity of energy** production, transformation, transportation, use, and trade across Canada.

YUKON

- Oil products make up **79% of total demand**
- **Generates the majority** of its electricity from hydro sources
- **No refinery**, so all oil products are imported

BRITISH COLUMBIA

- **Produces 35%** of Canada's natural gas
- **Many large-scale** facilities to export liquefied natural gas (LNG) on ships have been proposed
- **89% of electricity** from hydroelectric sources

ALBERTA

- **Largest producer** of crude oil and natural gas
- **Electric generation** dominated by coal and natural gas, but coal to be phased out by 2030
- Alberta is the highest emitter in Canada at **38% of total emissions**

NORTHWEST TERRITORIES

- **Crude oil and** natural gas production have been decreasing over the past decade
- **Approximately 63% of** electricity comes from hydro sources
- **Diesel is used** for power generation in remote communities

SASKATCHEWAN

- **Produces 9%** of total Canadian crude oil (second behind Alberta)
- **Electric generation** currently dominated by coal and natural gas
- **The Boundary Dam** coal plant includes carbon capture and storage technology

MANITOBA

- **15 hydroelectric** generating stations
- **96% of electricity** generation from hydro
- Manitoba phased out **coal for electricity generation in 2018**

NUNAVUT

- **Electricity generated** mainly by diesel in communities not connected by roads or power lines
- **Transportation accounts** for about half of the total final energy demand
- **No natural gas** is used

QUEBEC

- **Crude oil arrives** via pipeline, rail, and tankers to two refineries
- **Hydroelectric stations** generate around 95% of Quebec's electricity
- **Quebec is the largest** producer of electricity in Canada

NEWFOUNDLAND & LABRADOR

- **Crude oil production** occurs offshore
- **3rd largest oil** producer, behind Alberta and Saskatchewan
- **Generates 97% of** electricity from hydro sources

NOVA SCOTIA

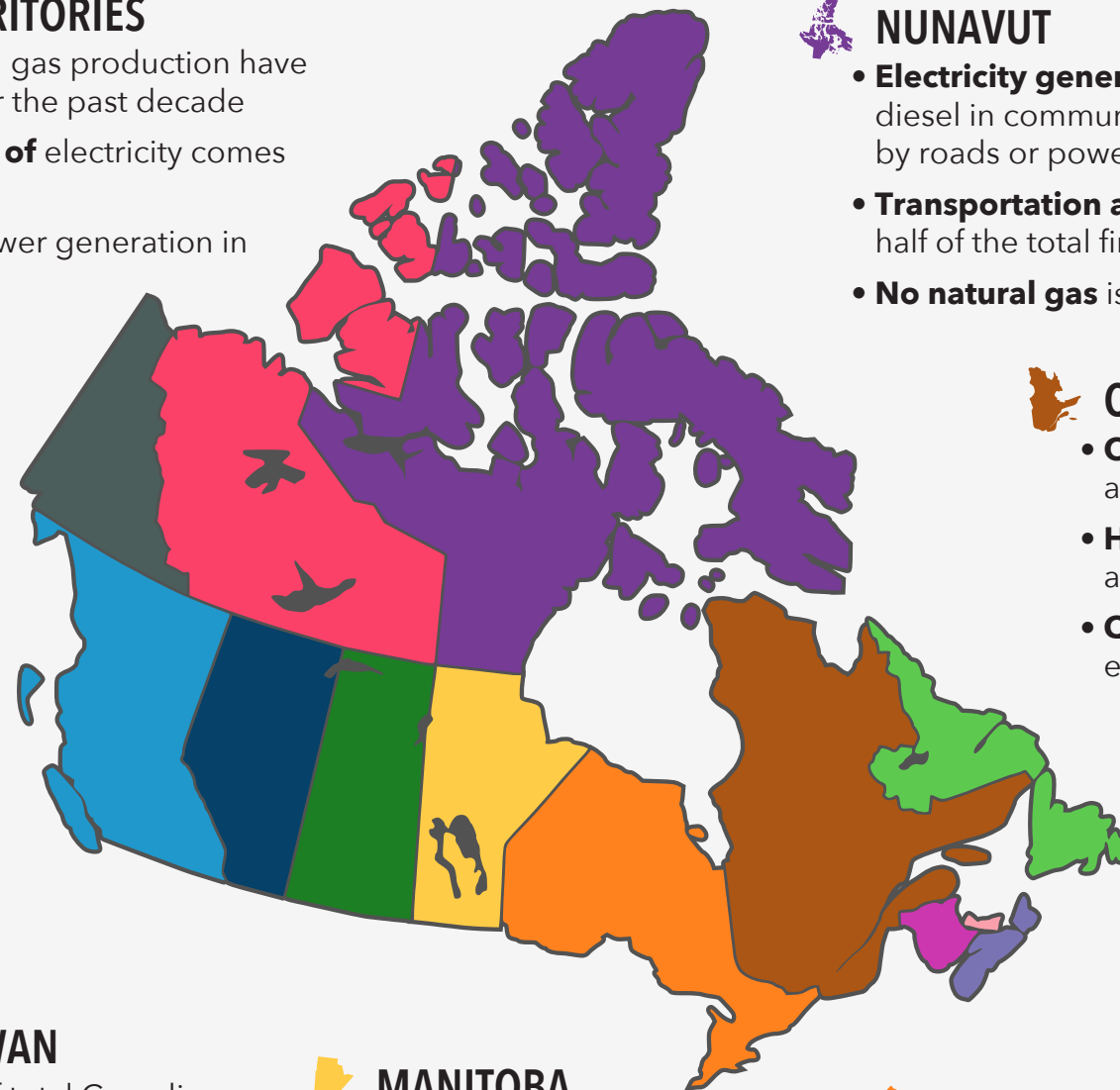
- **Offshore natural gas production** ended in 2018
- **Primary source of** electricity generation is coal
- **Home to the** only tidal power generating station in North America

PRINCE EDWARD ISLAND

- **The majority of** the electricity consumed in PEI comes from New Brunswick
- **Electricity generated** in PEI is 99% wind
- **Does not produce** crude oil, natural gas, or have a refinery

NEW BRUNSWICK

- **Home to the** largest refinery in Canada
- **The only province** outside of Ontario with nuclear power
- **Diverse power mix** also includes hydro, wind, biomass, oil, coal, and natural gas



Use the **interactive online tool** to visualize provincial and territorial energy trends based on **total demand, economic sector, and electricity type**. Visit www.cer-rec.gc.ca/energyfuturesdata

ENERGY LIFECYCLES

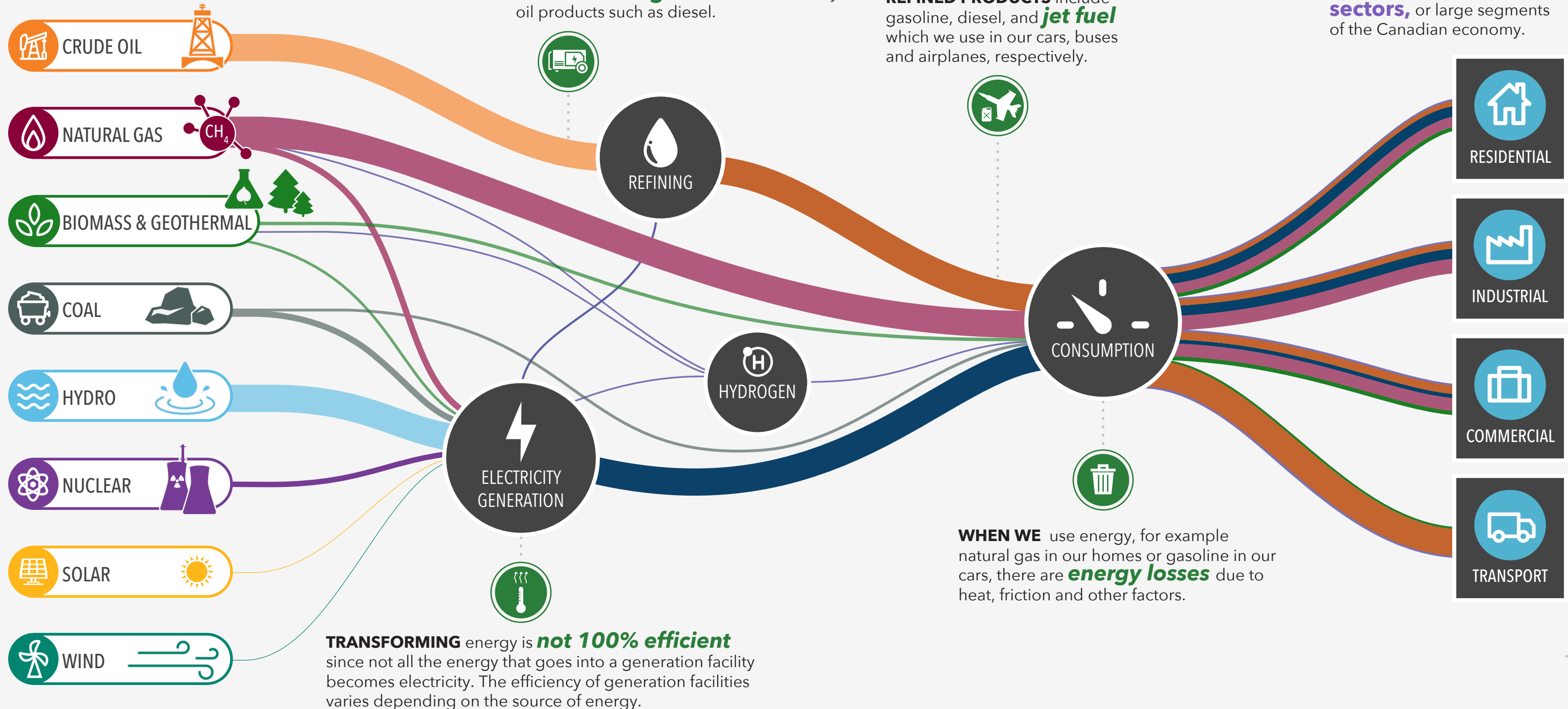
A **SANKEY DIAGRAM** shows the flow of a set of items from one state to the other. The width of the lines shows the **relative proportions** of these items.

ENERGY SOURCES come from our **environment**. They can be found buried underground, on land, or in the Earth's natural wind and water cycles.

ELECTRICITY GENERATION in Canada's **north** and in remote communities is often reliant on **small generators** fueled by oil products such as diesel.

REFINED PRODUCTS include gasoline, diesel, and **jet fuel** which we use in our cars, buses and airplanes, respectively.

ALL FORMS OF energy are consumed within the **four sectors**, or large segments of the Canadian economy.



Use the **interactive online tool** to project the future of energy trends in Canada and explore various energy scenarios which involve various cases of **technology development, climate policy, energy prices, exports and pipelines**. Visit www.cer-rec.gc.ca/energyfuturesdata

POWERING CANADA'S REMOTE COMMUNITIES

Remote communities are a unique part of Canada's diverse energy system.



MORE THAN **350** active communities in Canada are classified as **remote**

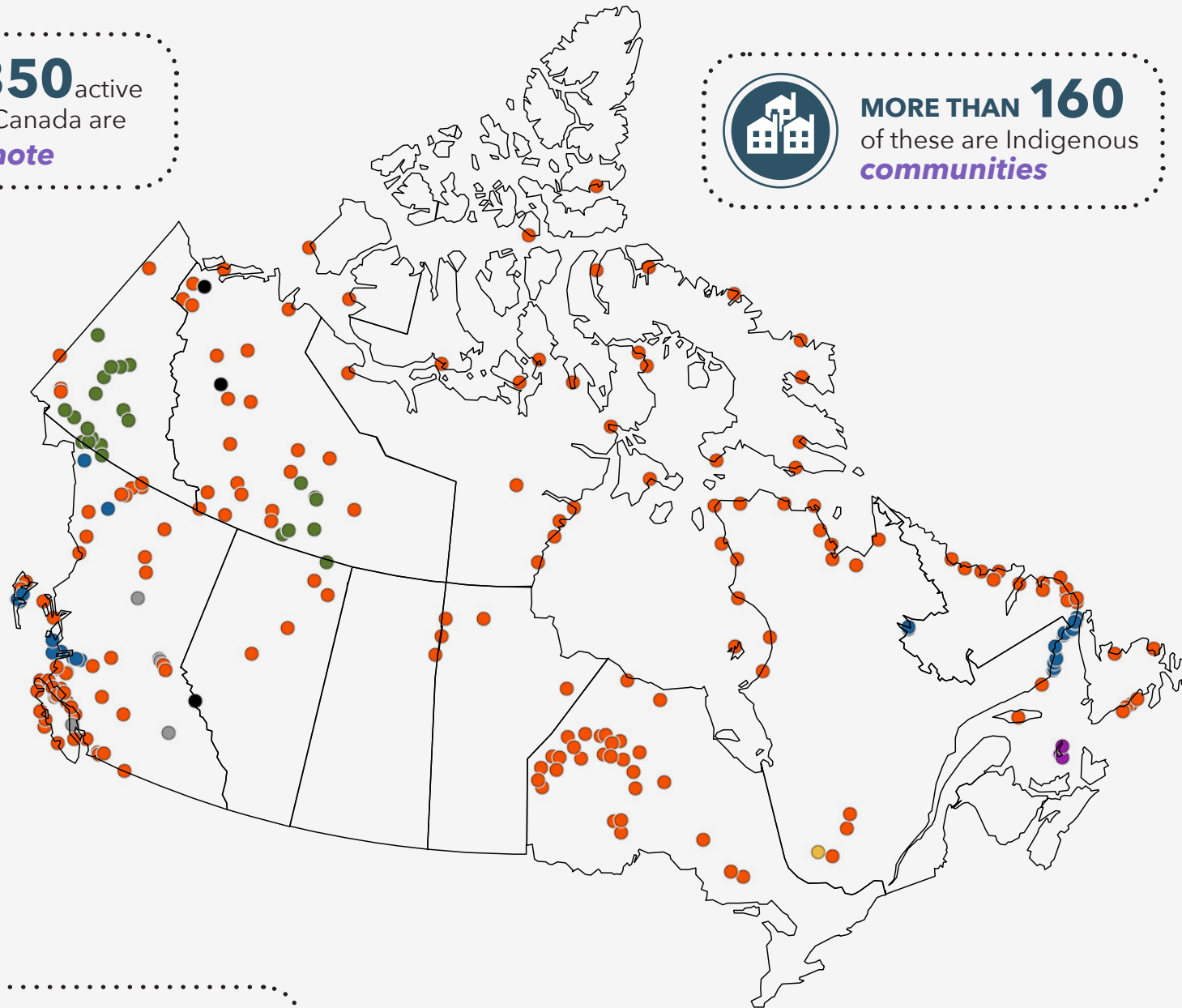


MORE THAN **160** of these are Indigenous **communities**

MAIN POWER SOURCE

- Diesel
- Regional electricity grid
- Hydro
- Heavy fuel oil
- Natural gas
- Other
- Unknown

*Map based on data from the Remote Communities Energy Database



Among remote Indigenous communities, **OVER 80%** use **diesel** as their main power source



Transitioning from diesel to **cleaner** power sources in remote communities is a key part of the Pan-Canadian Framework on Clean Growth and Climate Change



WHY THE RELIANCE ON DIESEL?

- **Many remote communities are not connected** to the North American electrical grid and natural gas distribution pipeline systems
- **Reliable**
- **Easily stored**
- **An energy-dense fuel**
- **Diesel-fired generators** are relatively affordable, easy to install, and can be scaled-up or down as required



WHY SHOULD WE REDUCE DIESEL DEPENDENCE?

- **High operating costs**
- **Prices can be volatile**
- **Negative environmental impacts** including high **greenhouse gas** emissions



HOW CAN WE REDUCE DIESEL DEPENDENCE?

- **Improve energy efficiency**
- **Switch to natural gas** by trucking in liquefied natural gas (LNG)
- **Increase use of renewable technologies** including biofuels, wind and solar
- **Use new technologies such as** battery storage, microgrids and small modular nuclear reactors
- **Access lower cost fuels** by connecting off-grid communities to provincial and territorial grids via **transmission lines**
- **The best option will differ** depending on the regional setting and the community

Learn more about the energy system in your province or territory using the interactive online visualization tool. Visit www.cer-rec.gc.ca/energyfuturesdata