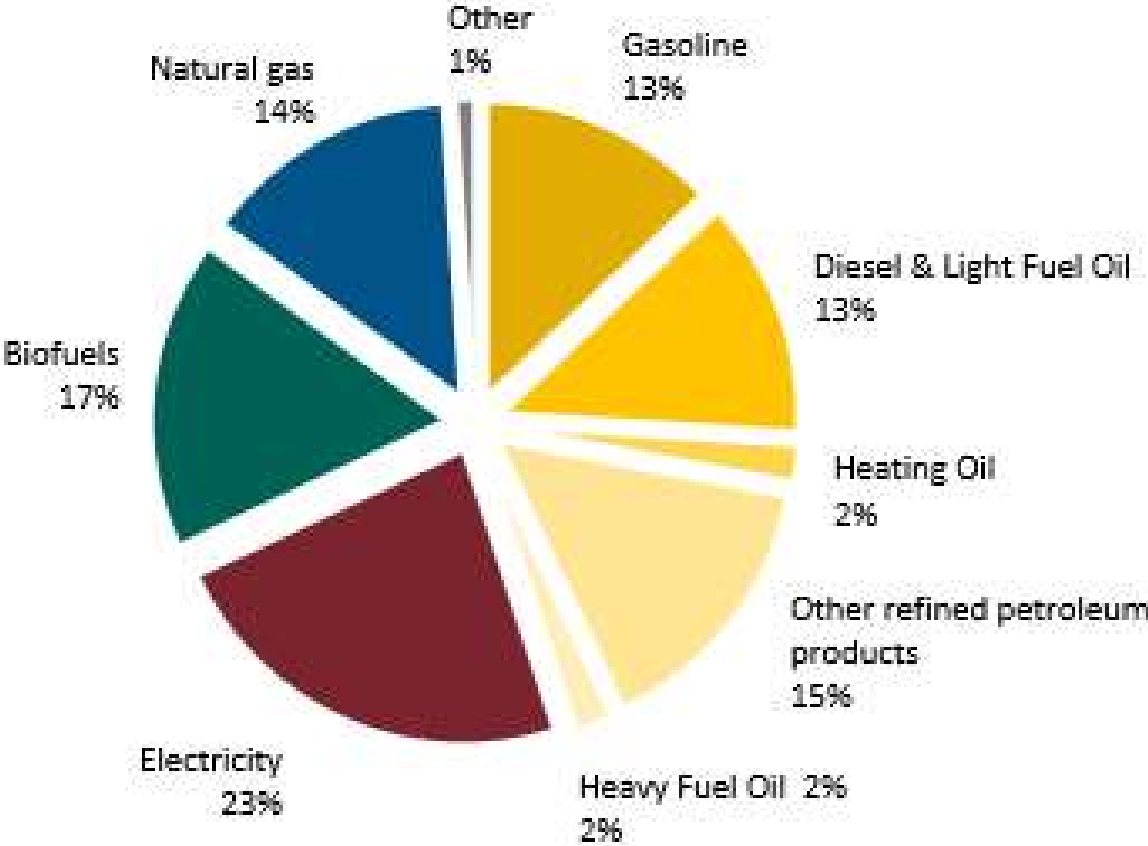


Powering our Economy and the World with Clean Energy

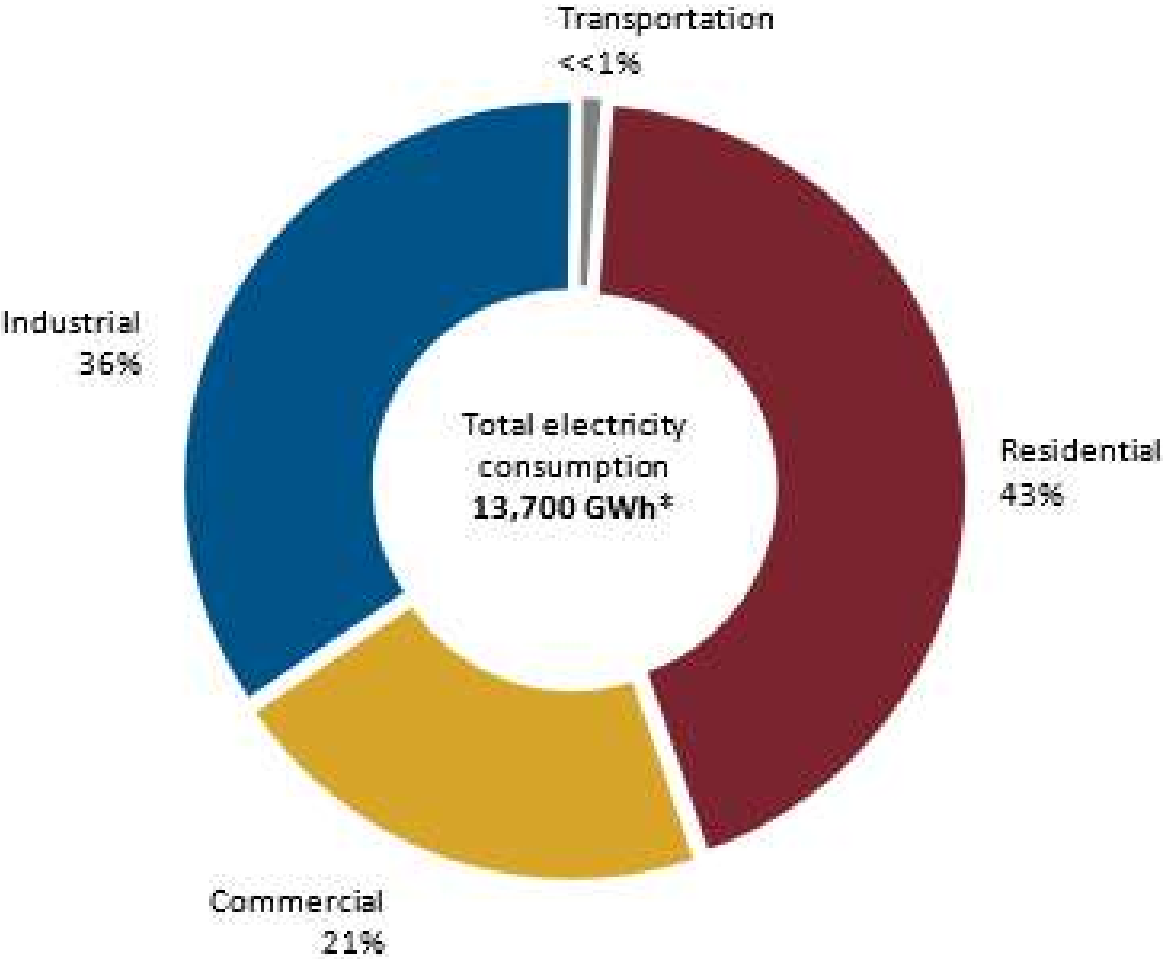
Creating a New Energy Vision for New Brunswick

Context – Current Energy Mix

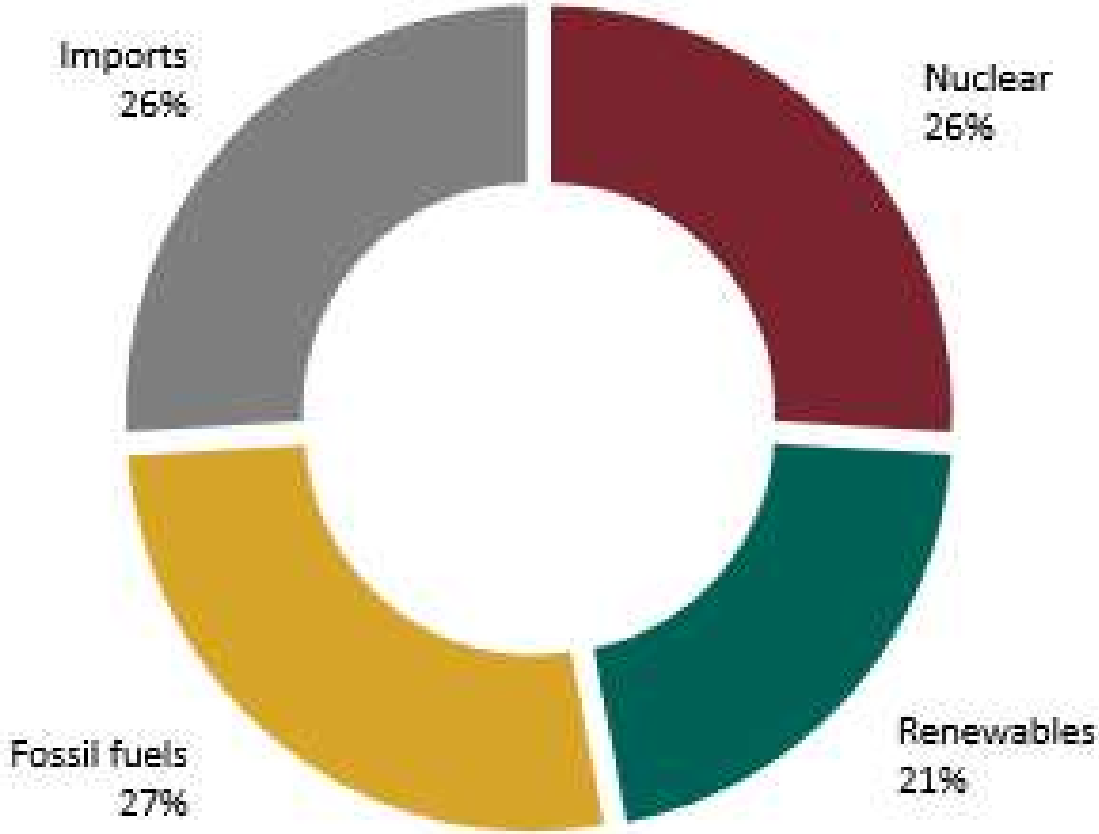
Overall Energy End Use Consumption from All Sources



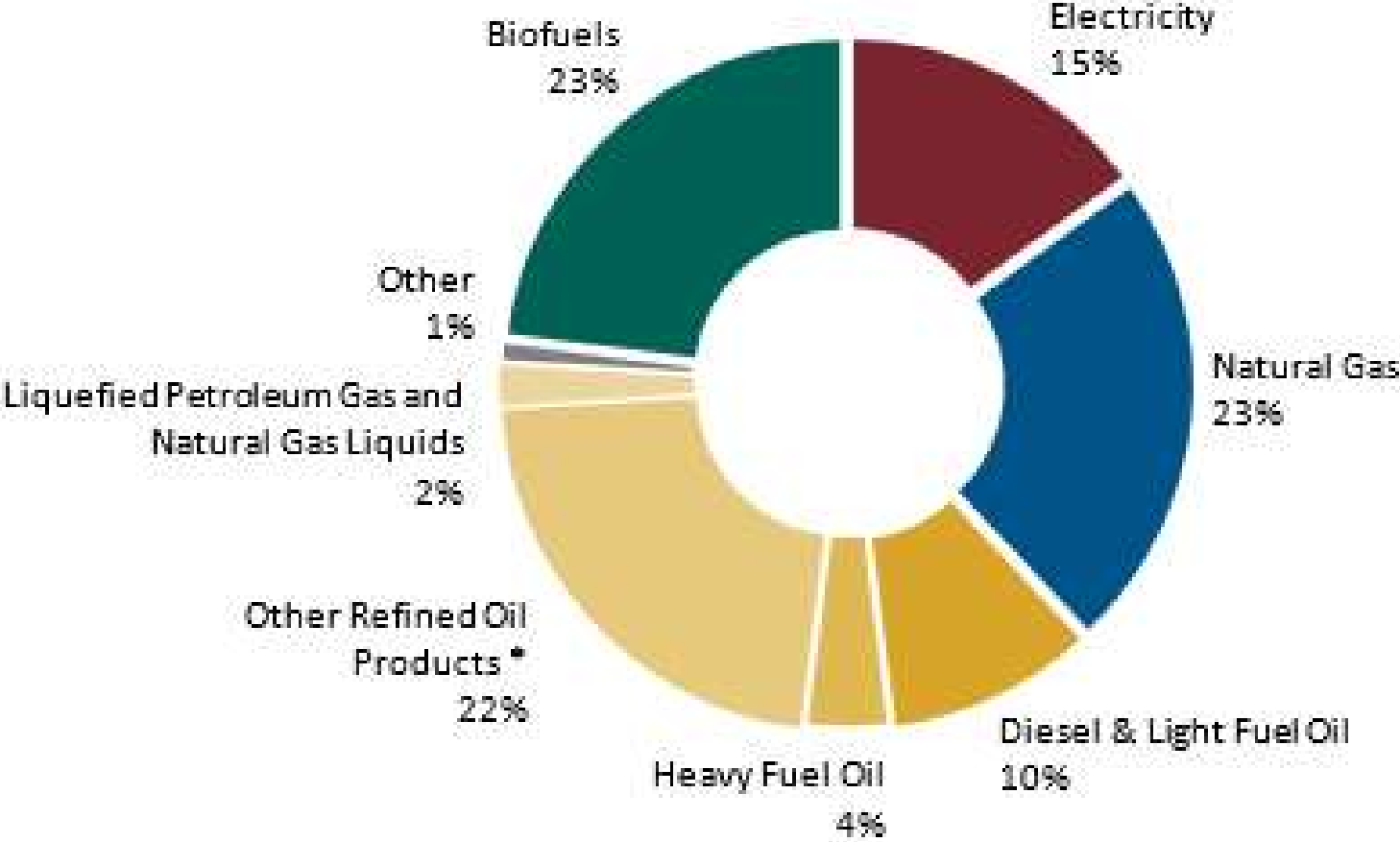
Electricity Consumption Across Sectors



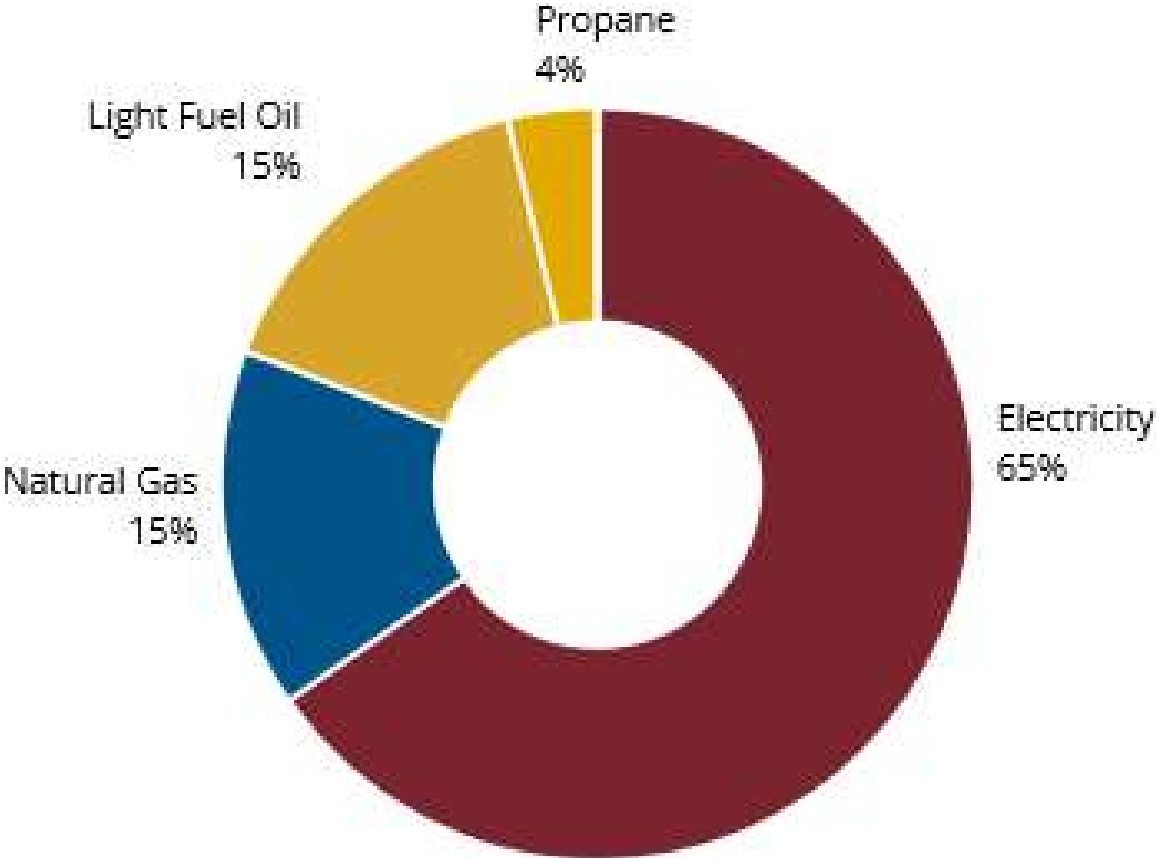
Electricity Generation by Source



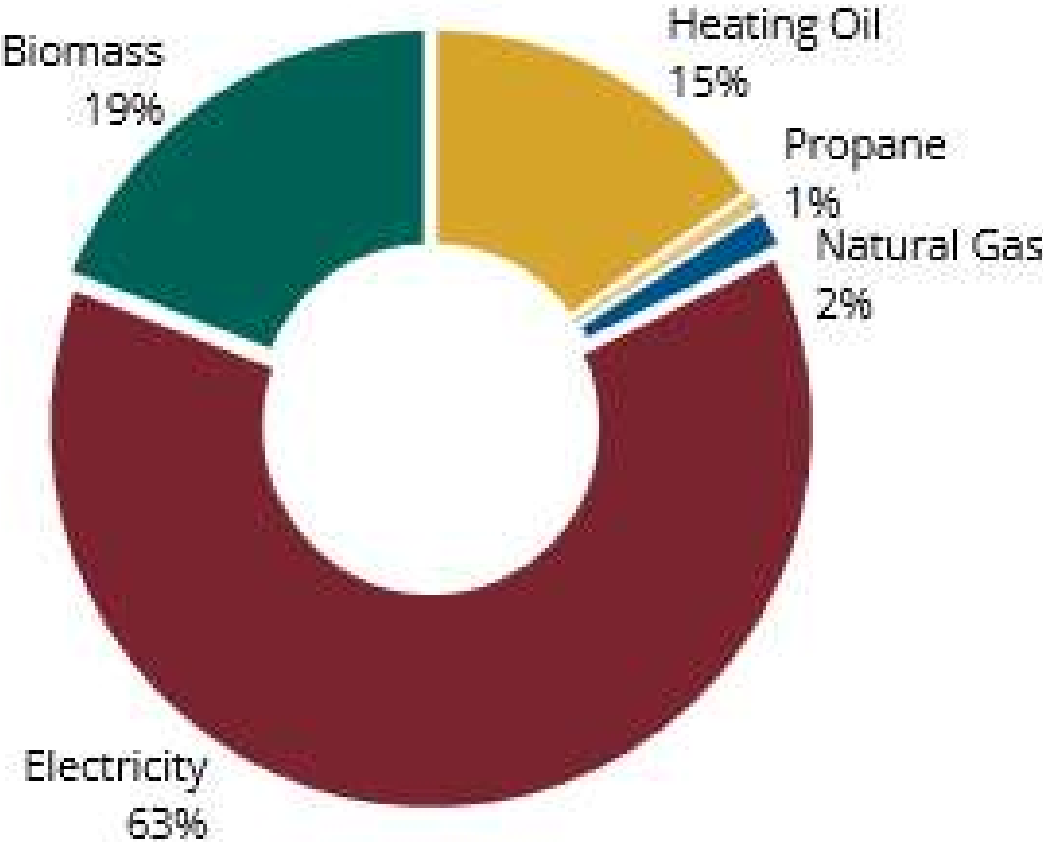
Industrial Energy Consumption



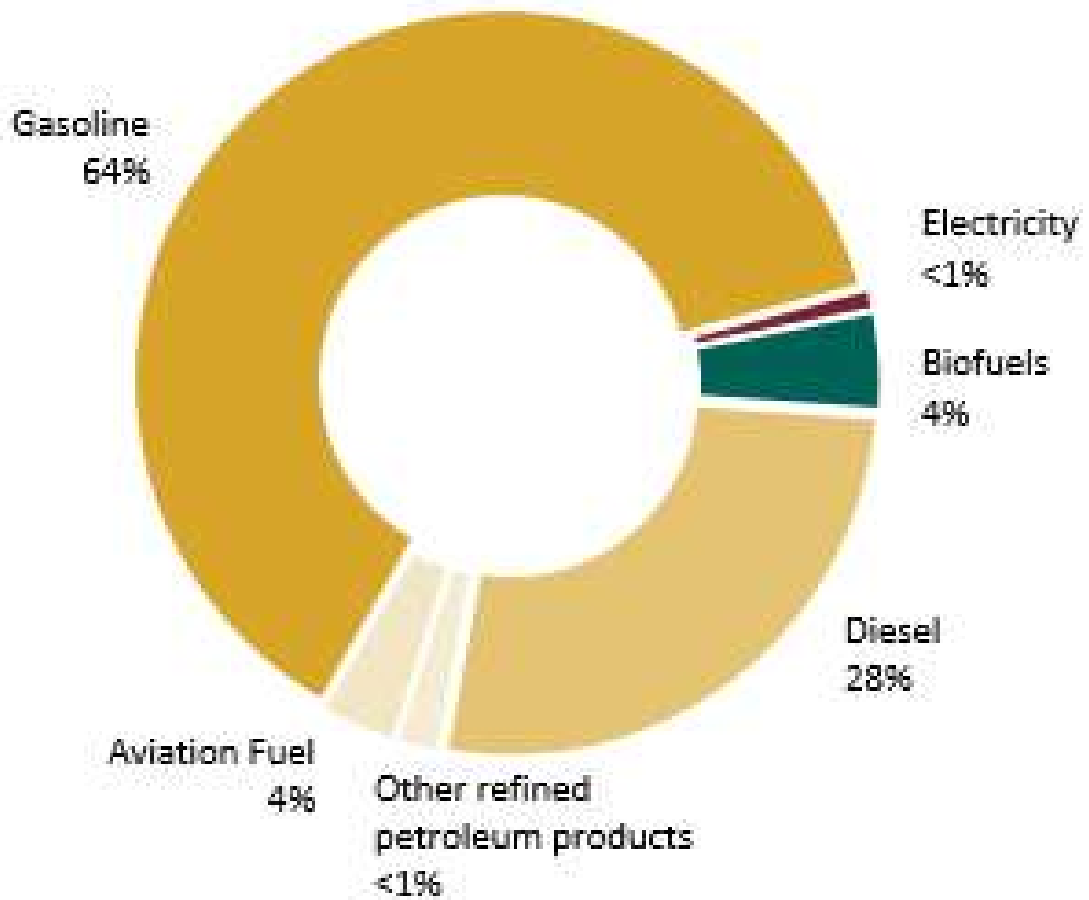
Commercial Energy Consumption



Residential Energy Consumption



Transportation Energy Consumption



Drivers of Increased Energy Demand & Drivers of Change

Drivers of Increased Energy Demand

- Population Growth
- Industrial Demand Growth and Economic Development
- Decarbonization of industry
- Decarbonization of transportation

Drivers of Change

- Climate change
- Customer and citizen preferences
- Sustainability, affordability and reliability
- Regulatory Environment

Energy Vision



“Powering our Economy and the World with Clean Energy”

Six Principles

- Leverage our unique assets, location and natural resources to develop lower carbon energy solutions for Provincial, Regional and Global use
- Develop Hydrogen and other sources of clean energy to build and attract new businesses
- Implement SMR’s as safe and reliable non intermittent low carbon generation
- Build new Clean Energy Supply Chains to drive growth
- Grow Economic Relationships with First Nation Communities
- Achieve both Energy Security and Net Zero

Leverage our unique assets, location and natural resources to develop lower carbon energy solutions for Provincial, Regional and Global use

- Unique Assets: largest refinery, Canada's first LNG terminal, one of two province in Canada with nuclear generation, direct access to Europe and eastern seaboard
- Rich in natural resources: wind, minerals, water, forestry and natural gas
- Opportunity to develop new clean energy sources



Develop Hydrogen and other sources of clean energy to build and attract new business

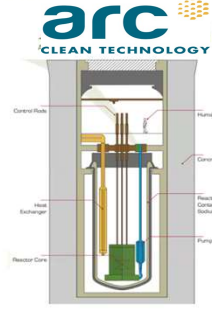
- Alternative fuels will be a significant focus of New Brunswick's energy transition
- Hydrogen, renewable natural gas and biofuels
- Incorporate SMRs with hydrogen production
- Create an environment to develop new energy sources – climate change and economic growth
- Export and domestic markets
- Provincial Hydrogen Roadmap aligned with the Climate Change Plan and Canada's Hydrogen Plan



Implement SMR's as safe and reliable non intermittent low carbon generation

- New Brunswick has been one of the Canadian Leaders in nuclear energy for over 4 decades.
- Expansion of non-emitting baseload nuclear generation is a fundamental part of our energy mix and path to net zero.
- Leveraging our nuclear expertise, New Brunswick will lead Gen IV SMR development as part of the Pan Canadian Plan
- First unit is expected to be deployed in 2030.
- Incorporate with wind and solar, energy source for industrial decarbonization and hydrogen production.

SMR technologies under consideration in Canada Stream 2



Ownership	Canada
Design name	ARC-100
Reactor technology	Sodium - Cooled Fast Reactor
Power output	286 MW _{therm} / 100 MW _{elec}
Temperature output	510 °C
Plant lifetime	60 Years
Fuel type	Metal fuel based on enriched uranium
Fuel lifecycle (refueling)	20 Years
Applications	On-grid electricity, High-grade heat
Potential demonstration site	Point LePreau, NB

SMR technologies under consideration in Canada Stream 2



Ownership	Canada
Design name	Stable Salt Reactor-Wasteburner (SSR-W)
Reactor technology	Molten Salt Fast Reactor
Power output	750 MW _{therm} / 300 MW _{elec}
Temperature output	590 °C
Plant lifetime	60 years
Fuel type	Molten Salt Fuel
Fuel lifecycle (refueling)	On power refueling
Applications	On-grid electricity, High-grade heat, Fuel recycling
Potential demonstration site	Point LePreau, NB



Build Clean Energy Supply Chains to Drive Growth

- Energy Cluster – Launch a formal interconnected Energy Cluster comprised of operators, manufacturers, suppliers, R&D, SME's, investors and innovators to drive collaboration and growth
- Develop the Supply Chain for SMR's, Hydrogen, Natural Gas and Bio Fuels
- Work collaboratively to create jobs here at home and grow GDP

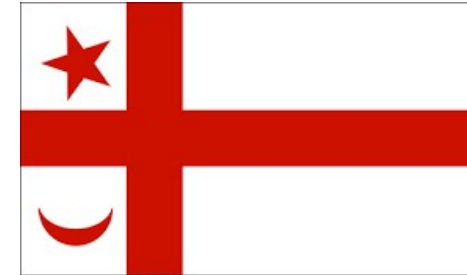


Énergie NB Power



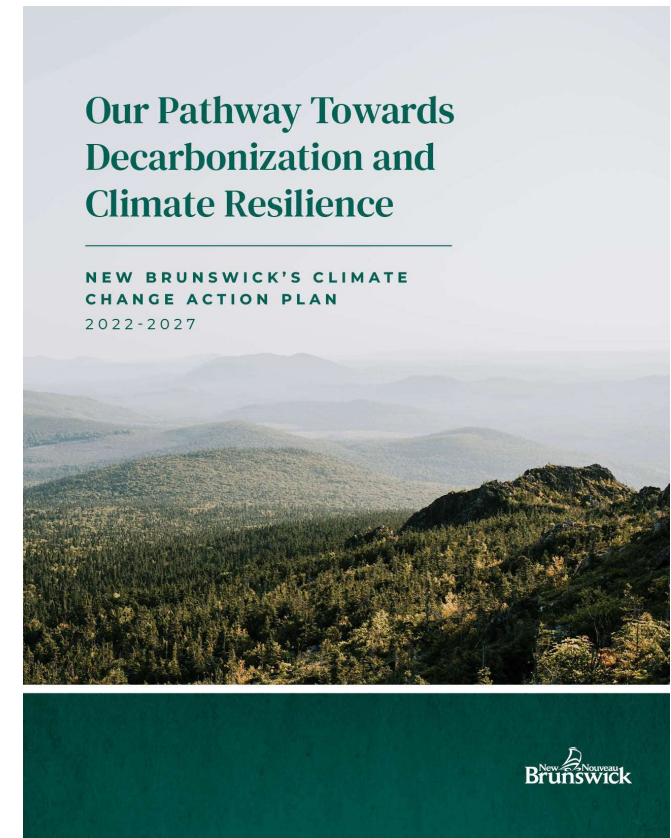
Grow Economic Relationships with First Nation Communities

- Investment partners in new energy ventures
- Supply Chain participants
- Vision advocates
- Duty to Consult



Achieve both Energy Security and Net Zero

- Commitment to reach net-zero GHG emissions by 2050
- Align with Climate Change Action Plan
- Essential to focus on both a secure energy supply and affordability



The Opportunity