

Nuclear in Canada

NUCLEAR ENERGY

A KEY PART OF CANADA'S CLIMATE STRATEGY AND A DRIVER FOR CLEAN GROWTH

- Nuclear electricity in Canada displaces about 50 million tonnes of GHG emissions annually.
- Electricity from Canadian uranium offsets more than 300 million tonnes of GHG emissions worldwide.



15% of the world's uranium is mined and refined in northern Saskatchewan (2019).



The uranium mining industry is the largest private employer of indigenous people in Saskatchewan.



At uranium mills, ore is processed into concentrate: "yellowcake".

2019 largest uranium producer in the world

\$800 M in 2019

75% was exported for use in foreign nuclear power reactors (2019)

25% used to fuel Canadian nuclear power reactors (2019)

33,000 direct jobs 43,000 indirect jobs

\$17 Billion

The nuclear industry in Canada contributes \$17B to the Canadian economy and provides 76,000 jobs

NUCLEAR POWER GENERATION

19 CANDU reactors at 77% globally in nuclear power capacity

Supported by a robust supply chain of over 240 companies, including 300 SMEs, and an R&D network of laboratories and universities.

World-leading innovators are pursuing the on-grid and mini-grid markets in Canada for deployment in the late 2020s to early 2030s.

12 vendors are participating in CNSC's Vendor Design Review

Four vendors are participating in CNSC's process to site an SMR at a federal lab site

Several vendors are working directly with utilities

Canada's SMR Roadmap (2018)

Financial Multi-Billion, ON, NB and SK on SMRs (2019)

Canada's SMR Action Plan (2020)

Leader in nuclear research and technology: Canadian-developed CANDU reactor technology operating on 4 continents, representing 5% of the world nuclear capacity.

Strong nuclear science and technology presence across Canada: 5 research reactors and fusion technologies support R&D and produce isotopes for medical and industrial applications, including more than 50% of the world's supply of Ca-40, used to sterilize medical equipment around the world.

Small Modular Reactors (SMRs)

The next wave of Canadian nuclear innovation: smaller, simpler and cheaper.

Canada is well-positioned to lead and capture a share of the emerging global market, estimated to exceed \$150-200B annually by 2040, due to its competitive advantages.

Key SMR initiatives to ensure policy readiness and chart a path forward for SMR technology in Canada include:

- Canada's SMR Roadmap (2018)
- Financial Multi-Billion, ON, NB and SK on SMRs (2019)
- Canada's SMR Action Plan (2020)

SMR Project Opportunities in late 2020s or early 2030s

Potential SMR Sites / Under Review

Hot Currents Under Review

SMR Sites

ON: Power Advanced SMR & Waste Management

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At Port Hope, Ontario, uranium trioxide is converted.

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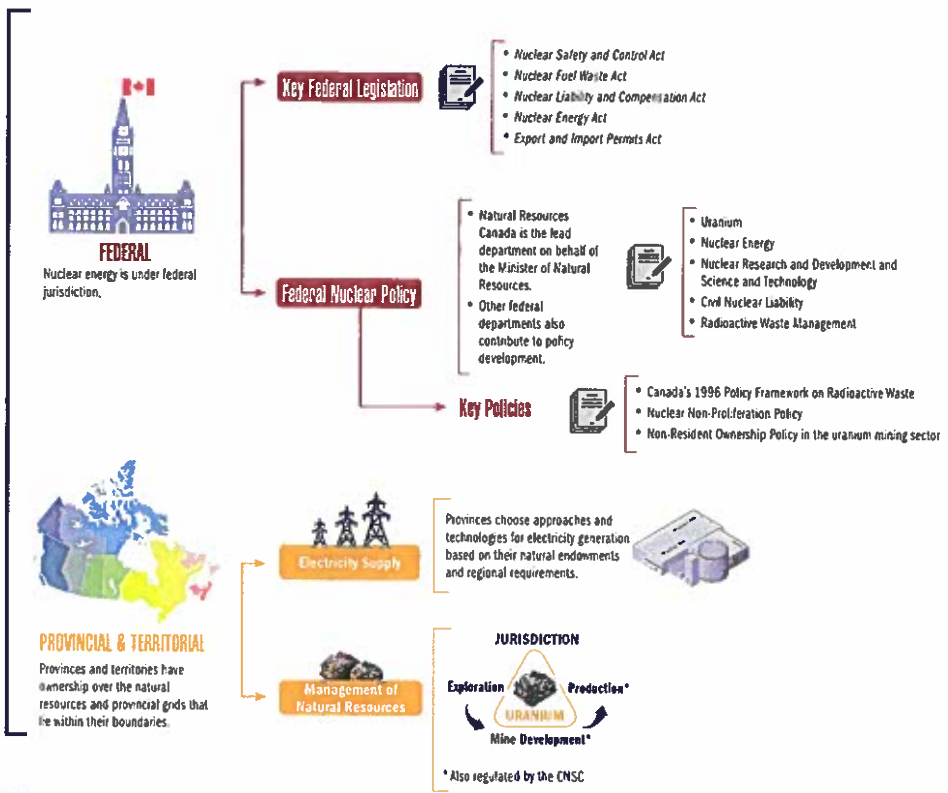
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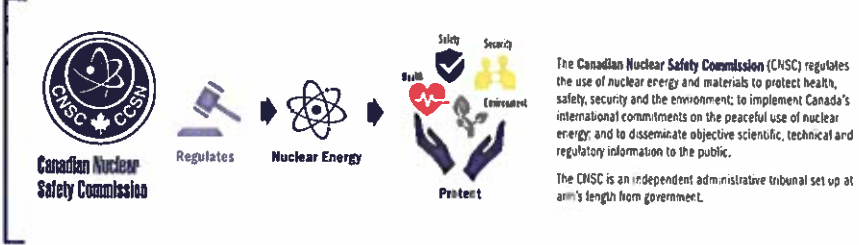
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Governance Framework

Policy Makers



National Regulator



Nuclear Sector

