

# Nuclear in Canada

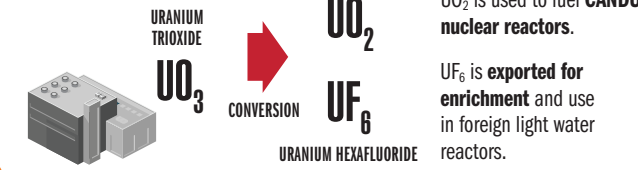
**NUCLEAR ENERGY** A KEY PART OF CANADA'S CLEAN AND LOW-CARBON ENERGY MIX

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

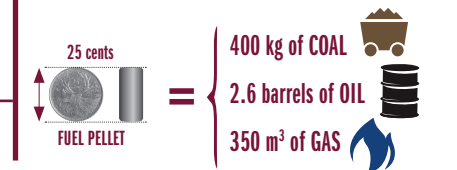
Yellowcake is refined at Blind River, Ontario, to produce uranium trioxide.



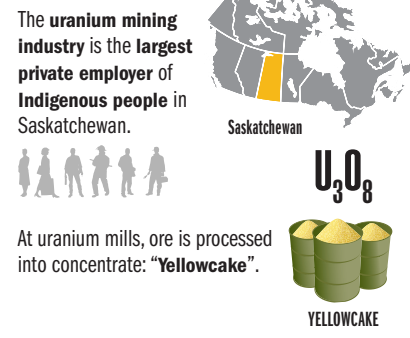
At Port Hope, Ontario, uranium trioxide is converted.



At plants in southern Ontario, fuel pellets are loaded into tubes and assembled into fuel bundles for CANDU reactors.



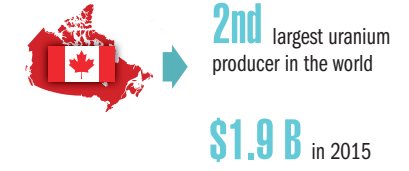
20% of the world's production of uranium is mined and milled in northern Saskatchewan.



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

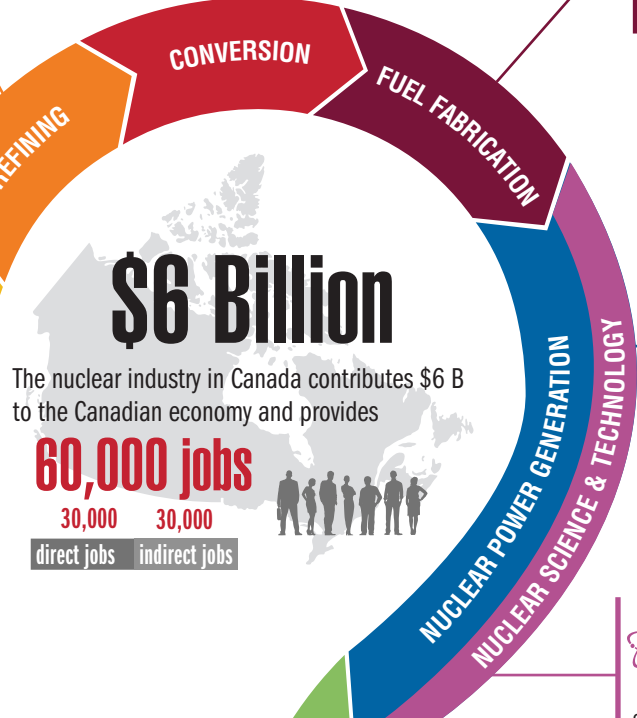


Uranium fuels the world's nuclear power plants. Canada is the 2nd largest uranium producer in the world.



87% exported for use in foreign nuclear power reactors.

13% used to fuel Canadian nuclear power reactors.



**\$6 Billion** The nuclear industry in Canada contributes \$6 B to the Canadian economy and provides **60,000 jobs** (30,000 direct jobs, 30,000 indirect jobs).

19 CANDU reactors at 4 nuclear power generating stations, 7th globally in nuclear power capacity.



supported by a stable domestic supply chain in southern Ontario and across Canada. \$25 B planned investment over 15 years to extend the life of 10 reactors in Ontario.

Leader in nuclear research and technology, exporting Canadian-developed CANDU reactor technology. Nuclear science has broad applications: materials testing, pharmacology, nuclear medicine, food and agriculture, wastewater treatment, and environment protection. Strong nuclear science and technology presence across Canada: 6 research reactors and a tokamak support R&D, and produce isotopes for medical and industrial applications.

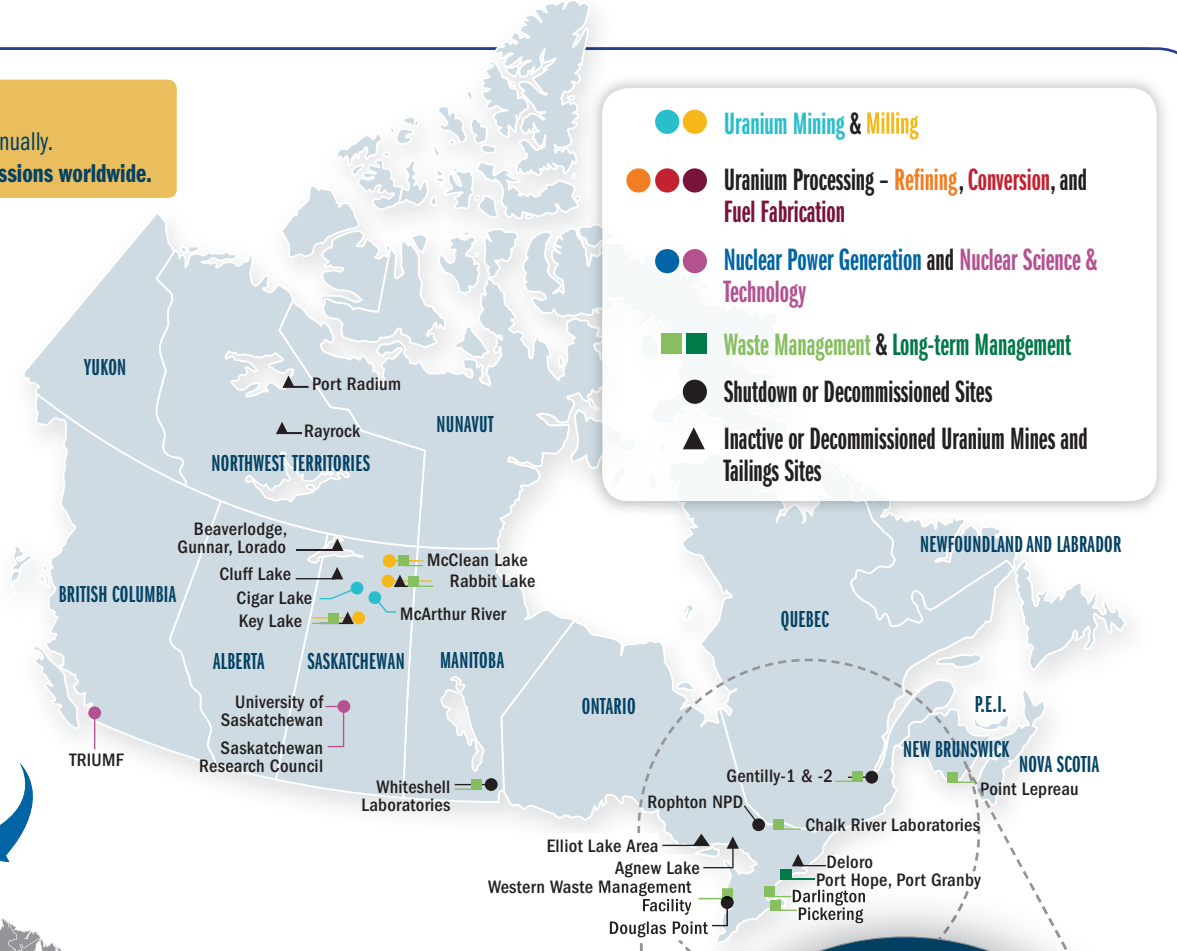
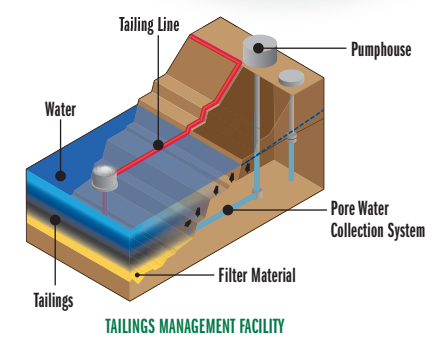
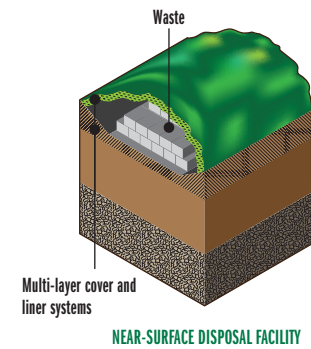
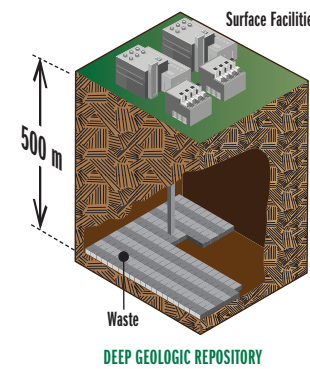
Radioactive waste is produced throughout the nuclear fuel cycle and safely managed in licensed storage facilities:

- High-level waste - Nuclear fuel waste (HLW)
- Low and intermediate-level waste (L&ILW)
- Uranium mine and mill tailings waste (UMMT)

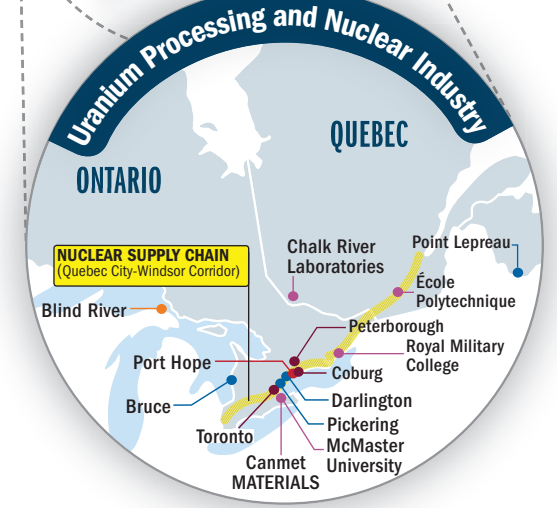
Initiatives underway for long-term management of radioactive waste include:

- Deep geologic repositories - suitable for all waste categories;
- Near-surface mounds - suitable for LLW and some ILW; and
- Tailings management facilities - specially designed for tailings.

All in keeping with internationally accepted approaches and best practices

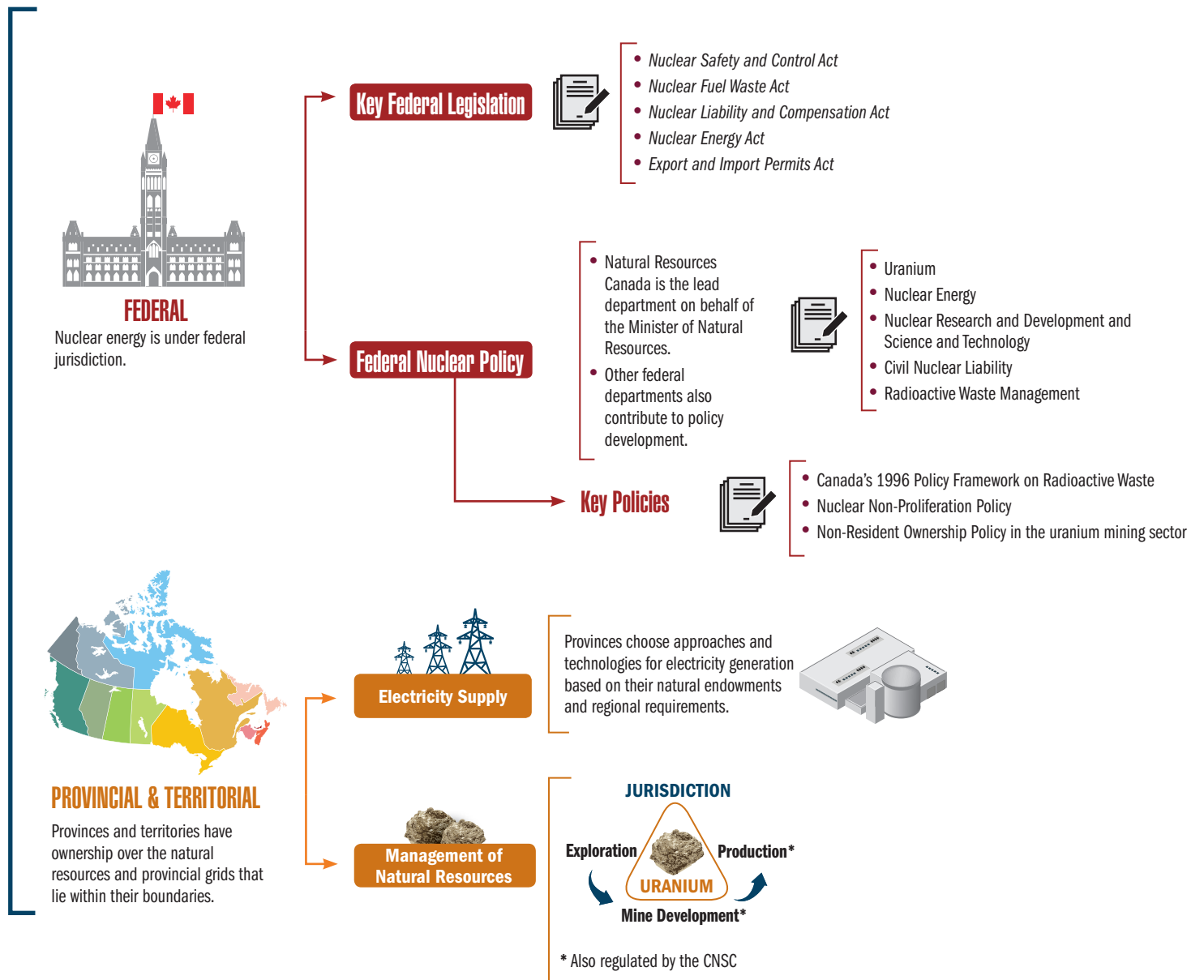


- Uranium Mining & Milling
- Uranium Processing - Refining, Conversion, and Fuel Fabrication
- Nuclear Power Generation and Nuclear Science & Technology
- Waste Management & Long-term Management
- Shutdown or Decommissioned Sites
- Inactive or Decommissioned Uranium Mines and Tailings Sites

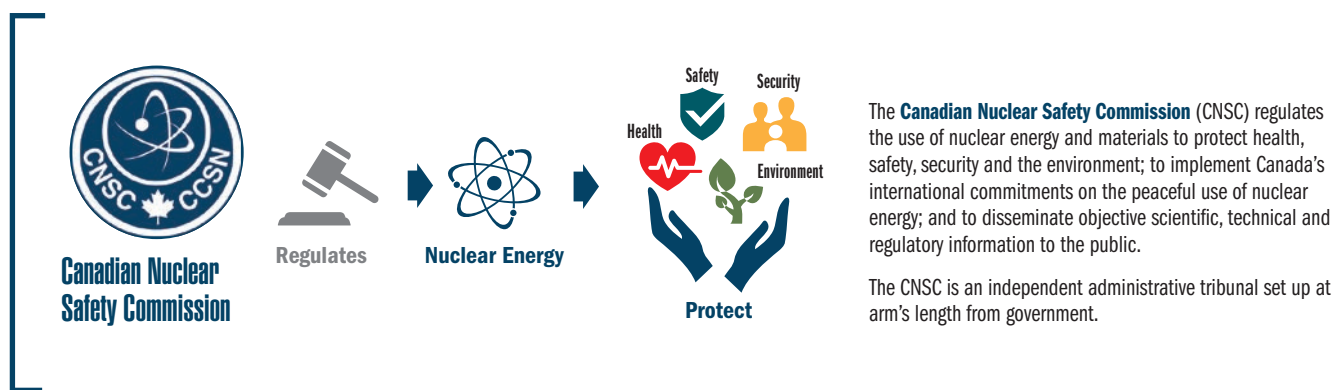


# Governance Framework

## Policy Makers



## National Regulator



## Nuclear Sector

