Cameco



Cameco Fuel Services

A world leader in uranium processing



Cameco is a major supplier of uranium processing services required to produce uranium fuel. Through our Canadian refining and conversion operations, and a toll-processing agreement with Springfields Fuels Ltd. in the United Kingdom, Cameco is a leading conversion supplier, managing approximately 40% of western world UF_6 capacity. We are the only commercial supplier of conversion for natural UO_2 customers in the western world and one of two fuel manufacturers serving Canada's reactor fleet. The products of Cameco's refining, conversion and fuel manufacturing operations are used exclusively for the generation of clean electricity by nuclear power plants.

Growth Strategy

Cameco is pursuing a strategy to build upon our competitive advantages in nuclear fuel services. We are working to maintain our position as a low-cost producer, expand our market position, and maintain supply flexibility. We are now a leading conversion supplier to the western world and participate in all stages of the fuel cycle for Canada's reactor fleet. Cameco estimates world demand for UF_6 and UO_2 was 69 million kgU in 2010. Cameco supplied 15.4 million kgU in 2010 – up 25% from 2009. As prospects for nuclear energy improve globally, Cameco is well positioned for continued growth.



Cameco is one of the world's largest uranium producers.

Cameco



Fuel Services Operations

Fuelling clean electricity generation

Refining

Blind River, Ontario

Cameco's Blind River operation is the world's largest uranium refinery. The plant processes uranium concentrate from mines around the world including Canada, the US and Australia to produce a high-purity uranium trioxide (UO_3) powder. This product is shipped to Cameco's Port Hope conversion facility as well as other conversion facilities in the US and Europe for further processing.

Cameco has applied to the Canadian Nuclear Safety Commission to increase the licensed capacity of the refinery to 24 million KgU as UO_3 to position Cameco to adjust to market conditions.



Blind River is the world's largest capacity uranium refinery.

Location Blind River, Ontario
Ownership 100% owned and operated by Cameco
Capacity 18 million kilograms uranium as UO_3
Employment About 160 people

2010 production
12.4 million kilograms uranium as UO_3

Conversion

Port Hope, Ontario

Cameco's Port Hope facility converts refined uranium trioxide (UO_3) to other chemical forms needed to produce fuel for electricity generation. The plant uses separate processes to produce natural uranium dioxide (UO_2) to fuel Canadian-designed Candu reactors and uranium hexafluoride (UF_6) to feed enrichment plants in the US and Europe that produce the fuel for light water reactors. Port Hope is also the base for Cameco's innovation and technology development research centre, which is engaged in research to maintain Cameco's position as a leading supplier of uranium concentrates, refining and conversion services.



Uranium processed at Port Hope fuels Canada's entire reactor fleet.

Location Port Hope, Ontario
Ownership 100% owned and operated by Cameco
Capacity UF_6: 12.5 million kilograms uranium
UO_2: 2.8 million kilograms uranium
Employment About 390 people

2010 production conversion and fuel manufacturing
15.4 million kilograms*

Fuel Manufacturing

Preston, Lancashire, UK

Cameco has secured most of the production capacity of the Springfields conversion facility in the United Kingdom through a 10-year toll-processing agreement. Constructed in 1993, the Springfields plant is the world's newest conversion facility. The agreement allows Cameco to increase uranium hexafluoride (UF_6) sales and utilize excess capacity at its Blind River refinery in Ontario. Springfields Fuels Ltd. can process up to 5 million KgU of uranium trioxide (UO_3) from Blind River to produce UF_6. Cameco markets UF_6 from Springfields to its customers around the world.



Springfields is the world's most modern conversion facility.

Location Preston, Lancashire, UK

Ownership Cameco controls the production capacity of the plant through a 10-year toll-processing agreement (2006-2016)

Capacity 6.0 million kgU as UF_6

Employment About 175 people

Port Hope/Cobourg, Ontario

Cameco manufactures fuel bundles for Candu reactors at a plant in Port Hope, Ontario. Uranium from the Port Hope conversion facility is pressed into pellets, sintered, ground and fitted into zirconium tubes. The tubes are then sealed and assembled into fuel bundles ready for insertion in Candu reactors. The zirconium tubes are supplied by a Cameco plant in nearby Cobourg, Ontario that also constructs components for nuclear reactors and specialty alloy products for a variety of applications.



Cameco is one of two Canadian reactor fuel manufacturers.

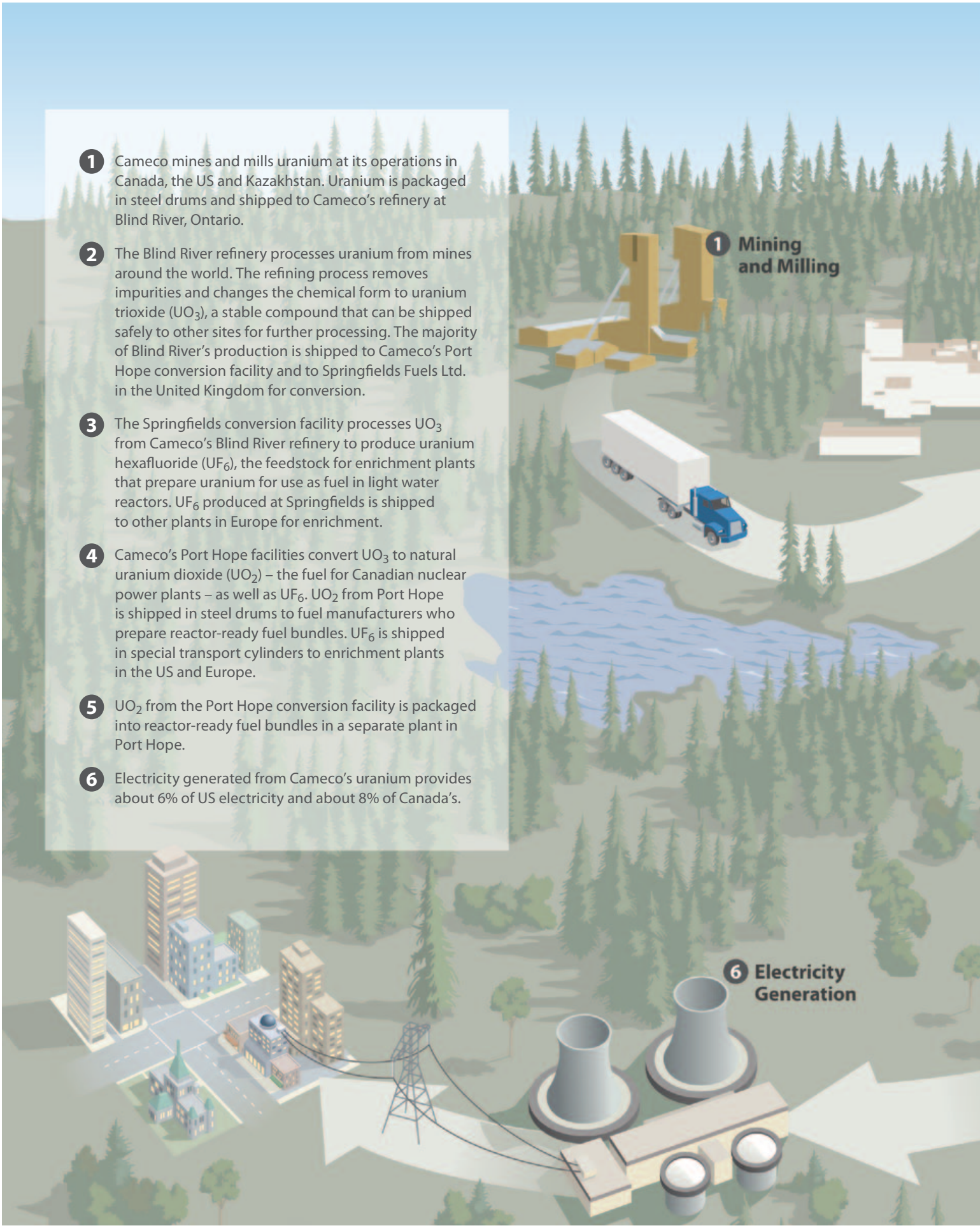
Location Port Hope/Cobourg, Ontario

Ownership 100% owned and operated by Cameco

Capacity 1.2 million kgU as finished fuel annually

Employment About 340 people

* Figure includes combined Port Hope UF_6 and UO_2, Springfields UF_6, Cameco Fuel Manufacturing fuel bundles



1. Cameco mines and mills uranium at its operations in Canada, the US and Kazakhstan. Uranium is packaged in steel drums and shipped to Cameco's refinery at Blind River, Ontario.

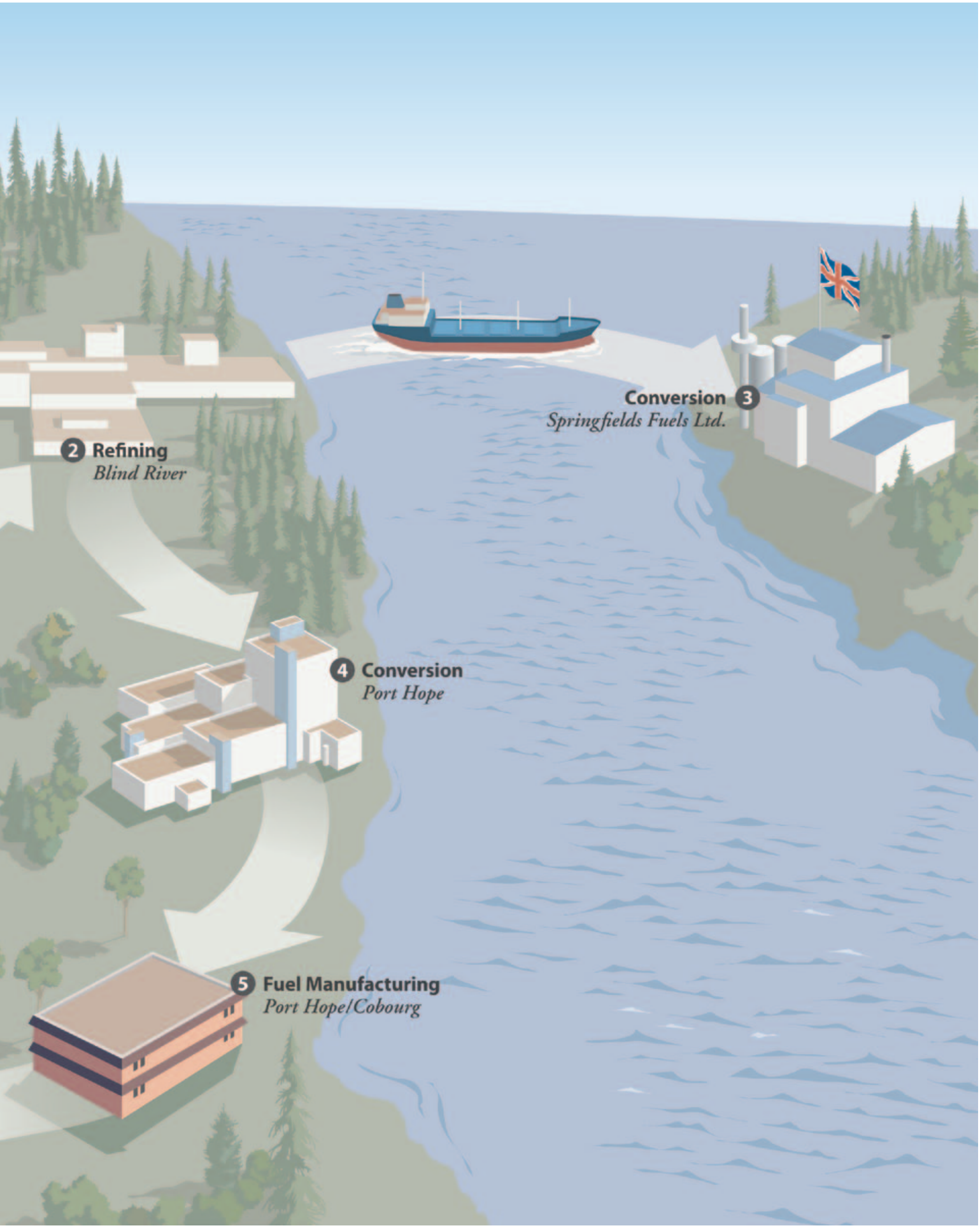
2. The Blind River refinery processes uranium from mines around the world. The refining process removes impurities and changes the chemical form to uranium trioxide (UO_3), a stable compound that can be shipped safely to other sites for further processing. The majority of Blind River's production is shipped to Cameco's Port Hope conversion facility and to Springfields Fuels Ltd. in the United Kingdom for conversion.

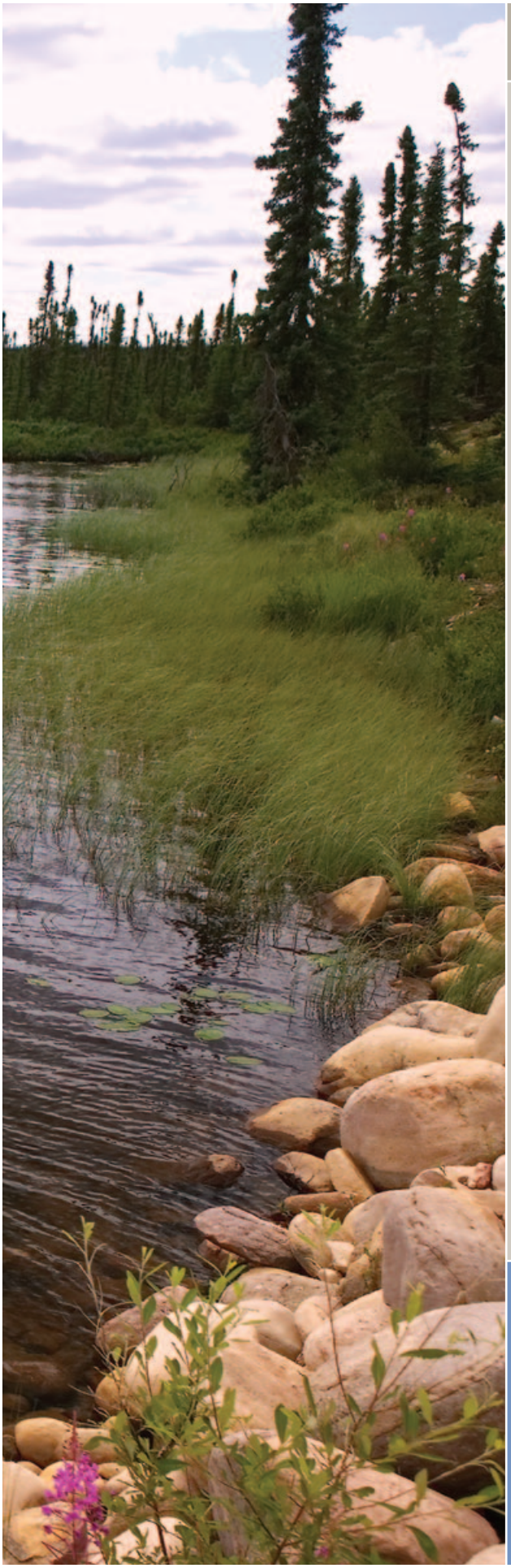
3. The Springfields conversion facility processes UO_3 from Cameco's Blind River refinery to produce uranium hexafluoride (UF_6), the feedstock for enrichment plants that prepare uranium for use as fuel in light water reactors. UF_6 produced at Springfields is shipped to other plants in Europe for enrichment.

4. Cameco's Port Hope facilities convert UO_3 to natural uranium dioxide (UO_2) – the fuel for Canadian nuclear power plants – as well as UF_6. UO_2 from Port Hope is shipped in steel drums to fuel manufacturers who prepare reactor-ready fuel bundles. UF_6 is shipped in special transport cylinders to enrichment plants in the US and Europe.

5. UO_2 from the Port Hope conversion facility is packaged into reactor-ready fuel bundles in a separate plant in Port Hope.

6. Electricity generated from Cameco's uranium provides about 6% of US electricity and about 8% of Canada's.


2 Refining
Blind River
Conversion 3
Springfields Fuels Ltd.
4 Conversion
Port Hope
5 Fuel Manufacturing
Port Hope/Cobourg



Sustainable Development

Safe

The safety of workers and the public is the top priority at all Cameco operations. We employ comprehensive health and safety management systems that monitor, assess and continually improve the safety of our operations. These programs identify and eliminate risks, maintain emergency response capabilities, and ensure employees have the awareness and training to keep our sites safe. Lost-time injury frequency at Cameco-operated sites in 2010 was 0.24 per 200,000 hours worked.

Healthy

Exposure to radiation is carefully managed at all of Cameco's processing operations. Our facilities and operating practices are designed to limit exposure wherever possible. Radiation levels in the workplace and the personal doses of employees and contractors are monitored as part of comprehensive radiation protection programs at all sites. Worker dose levels at all Cameco sites are consistently far below the thresholds considered safe by our regulators.

Clean

All of Cameco's operations have adopted formal environmental management systems that address immediate and long-term impacts. These systems are audited on a regular basis to ensure effectiveness and continual improvement. Cameco's environmental performance is thoroughly monitored by government agencies and reported to the public through a variety of channels.

Responsible

Cameco is committed to earn the support of communities wherever we operate. To achieve this, we maintain high standards for environmental and safety performance and ensure communities share in the benefits and opportunity generated by our operations. Our hiring and purchasing policies prefer local workers and suppliers and we support many initiatives that enhance quality of life. We also consult extensively with communities. At Port Hope, for example, we have developed many channels to promote ongoing dialogue with the community and to respond to public questions.

Cameco

***NUCLEAR.** The Clean Air Energy.*

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