

Section Two

Project Background



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2. Project Background

2.1 Proposal Overview

Cameco is proposing to develop the Kintyre Uranium Project (the Project) in the Shire of East Pilbara, Western Australia (WA), located approximately 270 km northeast of Newman (Figure 2-1).

The Kintyre deposits were discovered by CRA Exploration Pty Ltd in 1985 and a comprehensive drilling and metallurgical test programme was completed during the following four years. This work identified five main deposits (Kintyre, East Kintyre, Whale, East Whale, and Pioneer) which are collectively known as the Kintyre Uranium Project. The Project was put on care and maintenance in 1988 due to low uranium prices. In 1994 the WA State Government excised part of the Project area from the Rudall River National Park (now called Karlamilyi National Park) and the Kintyre Advancement Programme (KAP) was initiated by CRA in September 1995. A positive uranium outlook in 1996 led to metallurgical testing of bulk samples and the Project advanced to a full feasibility study.

The environmental approval process was triggered in June 1996, with the application to the Australian and WA State governments for Project designation. The Project assessment level was set at the State level as an Environmental Review and Management Programme (ERMP) and at the Federal level as an Environmental Impact Statement (EIS). However, a drop in uranium prices and a change in government policy which led to a State-wide ban on uranium mining resulted in the Project being put on hold.

In July 2008, the Canadian and Japanese mining companies Cameco Corporation and MDP Uranium Pty Ltd purchased the Kintyre Project from Rio Tinto. In November of that year, the WA government formally lifted the State's ban on uranium mining.

Cameco commenced the current environmental assessment in 2009 and submitted a Referral to the State and Federal assessment agencies in September 2010 and released the Environmental Scoping Document (ESD) for public review in March 2011. The ESD was revised based on submissions received from the regulators, key stakeholders and general public, and resubmitted to the Environmental Protection Authority (EPA) in June 2011 to finalise the scope of works for the Kintyre Uranium Project ERMP.



Figure 2-1: Project location

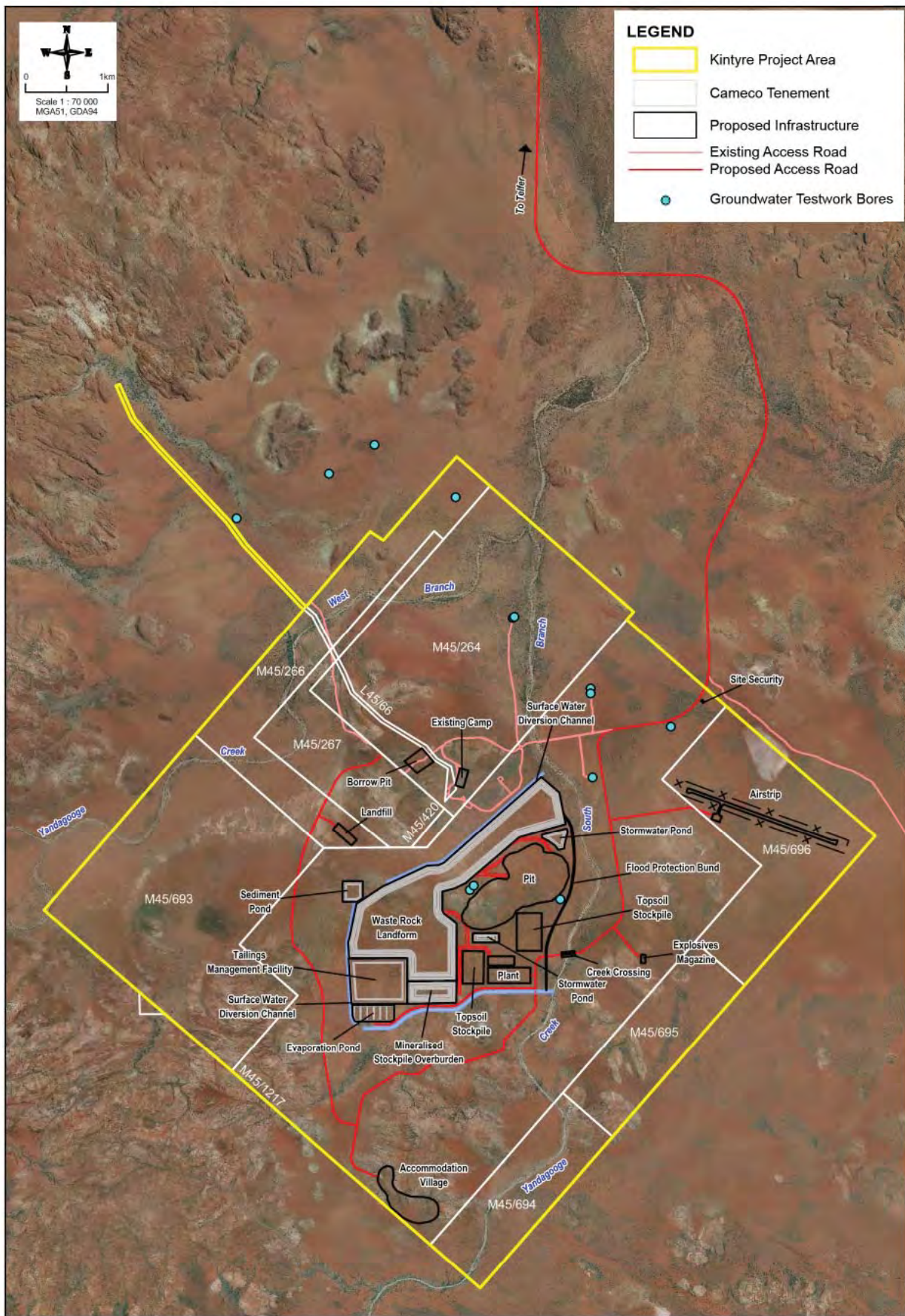


Figure 2-2: Conceptual project layout

Cameco proposes to develop the Project, which comprises of a uranium mine and associated treatment facilities (Figure 2-2). Ore would be mined by open cut techniques from a single pit and sorted to separate uranium-bearing ore from barren material. The ore would be processed at a leach and precipitation treatment plant to produce up to 4,400 tonnes (9.7 million pounds) of U₃O₈-based uranium oxide concentrate (UOC) per annum for export. The resource estimate (JORC Code and NI 43-101 compliant estimate²) is 5.26 Mt of ore at 1,500 ppm U₃O₈ cut-off grade. The anticipated life of the Project is 12 years with the potential to increase through continuing exploration.

The UOC would be transported by road from the mine site to the Port of Adelaide, South Australia, via the Great Northern Highway, Goldfields Highway, and the Eyre Highway.

This environmental assessment covers all transport within Western Australia. Transport within South Australia will be the subject of separate environmental assessment and approvals processes.

2.2 Project Objectives

Cameco Corporation has developed four measures of success. These are to achieve:

1. a safe, healthy and rewarding workplace;
2. a clean environment;
3. supportive communities; and
4. outstanding financial performance.

The objectives for the Project from approvals to closure and beyond are to:

- continuously improve the safety and environmental performance of the operation;
- maximise the value of the deposit for the stakeholders, community and nation;
- maintain an employment source in the East Pilbara of Western Australia;
- enhance the current opportunities, lifestyle and amenities for the local and regional communities;

² JORC Code: Joint Ore Reserves Committee Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves.

NI 43-101: National Instrument 43-101 is a Canadian mineral resource classification scheme used for the public disclosure of information relating to mineral properties.

- strengthen the relationship and communication with traditional claimant groups; and
- design, construct, operate and decommission an operation that minimises the impact on the environment, and maximises the benefits to the community.

2.3 Proponent

The Project is a joint venture between Cameco Corporation (70%) and MDP Uranium (30%). Cameco Australia Pty Ltd will be the operator and is the proponent for the Project. Details for Cameco Australia Pty Ltd are:

ABN: 65 001 513 088
Office address: 24 Hasler Road, Osborne Park, WA 6017, Australia
Postal address: PO Box 748, Osborne Park, BC, WA 6196, Australia
Telephone: +61 (0) 8 9318 6600
Facsimile: +61 (0) 8 9318 6606
Contact: Mr Simon Williamson
Environmental Manager

Cameco is one of the world's largest uranium producers with uranium assets on three continents, including Australia. Cameco's head office is located in Saskatoon, Saskatchewan, Canada.



Plate 2-1: Cameco's head office in Saskatoon, Saskatchewan, Canada

Cameco employs more than 3,300 people worldwide, engaged in uranium mining, refining and conversion. Cameco is also a major investor in nuclear power generation in Canada.

Cameco's vision is to be a dominant nuclear energy company producing uranium fuel and generating clean electricity. Its goal is to be the supplier, partner, investment and employer of choice in the nuclear industry.

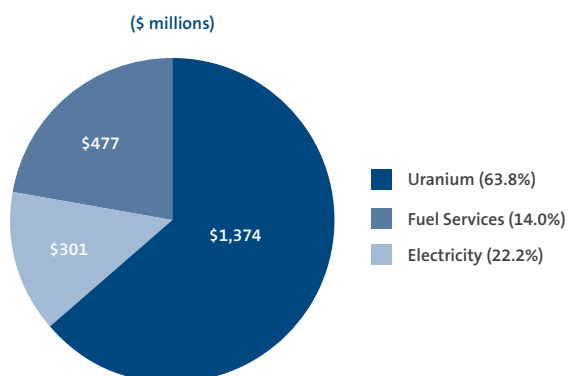


Figure 2-3: 2011 Cameco revenue by segment

Cameco's growth strategy is focused on its uranium segment, with plans to increase annual uranium production to 36 million pounds by 2018 to meet the predicted rising world demand for uranium by further developing the potential of existing mines and the development potential of known resources of properties within its holdings.

2.3.1 Company History

Cameco Corporation was created from two government corporations, one owned by the province of Saskatchewan and the other owned by the Canadian federal government. Cameco was incorporated in Canada in June of 1987 and began operating as the new combined entity a year later. Both of the predecessor companies, Saskatchewan Mining Development Corporation and Eldorado Nuclear Limited (the Canadian federal government company), had mining and milling assets in Saskatchewan. Eldorado Nuclear also owned uranium refining and conversion operations in the province of Ontario. Over time, the provincial government of Saskatchewan and the Canadian federal government divested all their common shares in Cameco. This makes Cameco the world's largest publicly traded uranium company.

Cameco's shares are traded on both the Toronto Stock Exchange (CCO) and the New York Stock Exchange (CCJ).

³ The international unit of measurement for the uranium industry is 'pounds'.

2.3.2 Company Profile

Cameco is one of the world's largest uranium producers. In 2012 the company accounted for about 14% of the world's production. Cameco has controlling ownership of the world's largest high-grade reserves, with ore grades up to 100 times the world average.

Cameco has approximately 465 million pounds³ U₃O₈ of proven and probable reserves, 244 million pounds measured and indicated resources and 287 million pounds of inferred resources.

The company has a 31.6% interest in the limited partnership that operates four units of the Bruce B nuclear powered generating station in Ontario which is equivalent to Cameco owning about 1,000 megawatts of generating capacity.

Cameco also has a limited liability partnership known as Joint Venture Inkai which has a 60% interest in the Inkai uranium mine in Kazakhstan.

2.3.2.1 Operating Properties

McArthur River-Key Lake



Plate 2-2: McArthur River mine

Cameco is the operator and 70% owner of the McArthur River mine which is the world's largest, high-grade uranium mine. It is located in the Athabasca Basin of northern Saskatchewan, Canada and has more than 378.9 million pounds of high-grade uranium ore which averages 16.36%.

Since 2000, the mine has produced 230.5 million pounds of uranium for world markets. The uranium produced by McArthur River each year is sufficient to fuel 34 1,000-MW nuclear reactors. This would meet about 7% of total electricity demand in the United States. The mine's proven and probable

processing facilities in central Kazakhstan. Inkai has proven and probable reserves of 93.8 million pounds U_3O_8 and extensive resources. In 2012, Cameco entered into a binding memorandum of agreement with its joint venture partner Kazatomprom setting out a framework to increase Inkai's annual production to 10.4 million pounds (Cameco's share 5.2 million pounds) and sustain it at that level, and to extend the term of Inkai's resource use contract through 2045.

2.3.2.2 Projects Under Development

Cigar Lake Project

The Cigar Lake project is located in northern Saskatchewan. Mine development has resumed after several setbacks due to groundwater inflows. Cameco is 50% owner and operator of the project (which has reserves of 216.7 million pounds) at an average grade of 18.3%. The mine plan for Cigar Lake, similar to McArthur River, calls for extensive freezing of the ground around the orebody which is located within water-bearing sandstone about 460 m below the surface. This freezing is one of the tools used to prevent water penetration into the underground workings. The high-grade ore will be safely mined using remote mining methods, similar to McArthur River. Cigar Lake will employ a jet boring system that uses pressurised water to remove the ore. Initial production at Cigar Lake is expected in 2013.

2.3.2.3 Projects Under Evaluation

Cameco also has a number of projects under evaluation including the Millennium Project in northern Saskatchewan, and Kintyre and Yeelirrie in Western Australia.

2.3.2.4 Exploration in Australia

In Australia, Cameco has active exploration projects in Western Australia and the Northern Territory.

2.3.2.5 Fuel Services

Cameco is an integrated uranium fuel supplier, offering refining, conversion and fuel manufacturing services from operations located in Ontario, Canada.

The refining of uranium oxide (U_3O_8 to UO_3) takes place at Blind River which provides uranium refining for producers from other parts of the world.

The Port Hope conversion facility in Ontario converts UO_3 to UF_6 which is the gas form of uranium required by companies which enrich uranium for light water reactors. The Port Hope conversion facility also has a plant producing natural UO_2 , the form of uranium used in Canadian heavy water reactors.

Cameco Fuel Manufacturing, located in Port Hope, turns the natural UO_2 powder into fuel bundles. A satellite plant in nearby Cobourg produces zirconium-based metal components for reactors and fuel bundles.

2.3.2.6 Nuclear Power Generation

Cameco holds a 31.6% interest in the Bruce Power Limited Partnership that operates four nuclear reactors at the Bruce B generating station in southern Ontario. This is equivalent to Cameco owning about 1,000 MW of generating capacity.

2.3.3 Cameco's Safety, Health, Environment and Quality (SHEQ) Performance

Cameco measures its safety, environmental, social and financial performance using key performance indicators based around the following four measures of success:

- a safe, healthy and rewarding workplace;
- a clean environment;
- supportive communities; and
- outstanding financial performance.

The overall governance of safety, health, environment and quality at Cameco begins with the Safety Health Environment and Quality (SHEQ) policy, which states the commitment of the senior management of Cameco to the following principles:

- keeping risks at levels as low as reasonably achievable⁴;
- prevention of pollution;

⁴'As low as reasonably achievable' or the ALARA Principle refers to the principle of optimisation of radiation protection, and is the key driver for ensuring that radiation doses are maintained at the lowest feasible level throughout the life cycle of a practice involving radioactive materials (DMP, 2010). The ALARA Principle originally defined by the International Commission on Radiological Protection in 1977 (ICRP, 1977) takes into account economic and social factors and recognises that infinite resources could be spent on reducing radiation risks to zero, but may result in minimal additional benefit.

- complying with, and moving beyond legal and other requirements;
- ensuring quality of processes, products and services; and
- continually improving our overall performance.

Cameco's values, principles and results against its key performance indicators are available in Cameco's Sustainable Development Report 2012 on Cameco's website (www.cameco.com/sustainable_development/2012/).

Cameco has invested tens of millions of dollars in recent years to reduce the environmental footprint of its mining and milling operations. The acid and steam plants at both the Key Lake and Rabbit Lake mills are being replaced. This will not only improve operational performance, but greatly reduce sulphur dioxide emissions to the atmosphere.

Federal water quality standards for Canadian mines include regulatory limits on metals such as nickel, copper, lead and arsenic. Cameco's operations comply with these water quality standards on a consistent basis.

In the past licence period, Cameco upgraded its mill circuits and water treatment at Key Lake and Rabbit Lake to reduce the annual discharge of molybdenum and selenium, two trace elements that the Canadian nuclear regulator determined were contaminants of concern in uranium ore. Cameco has effectively reduced these two elements to meet stringent requirements at both of these mills. Cameco posts the monitoring results of its treated mill and mine water as well as any reportable incidents, including spills, on its website. Some of Cameco's recent achievements include:

- An award in May 2010 from the Canadian Institute of Mining, Metallurgy and Petroleum for its McArthur River and Cigar Lake operations in recognition of outstanding safety performance.
- The Port Hope Chamber of Commerce 2009 Excellence in Environmental Business Award.
- 2009 Peak Performance Award from the Nebraska Safety Council in recognition of safety performance for the Crow Butte operation.

For more information on Cameco's achievements refer to www.cameco.com/about/awards/.

2.3.4 Cameco's Radiation Management Performance

The corporate Radiation Protection Programme (RPP), operating within the governance of the Safety, Health, Environment and Quality Policy, defines the minimum requirements for a radiation protection programme at Cameco's sites and explains corporate management and oversight of the RPP. Because radiation protection is essentially a specialised occupational safety and health issue, Cameco has elected to base the corporate RPP on the general principals of the British standards, BSI OHSAS 18001:1999 and BSI OHSAS 18002:2002 and subsequent BSI updates to these standards.

The RPP outlines requirements for site programmes, including the areas of risk assessment, regulatory compliance, training, operational controls, emergency response, monitoring and measurement, non-conformance and corrective/preventive actions, audits and management review among others. This programme also operates within the broader context of the Quality Management Programme and in conjunction with the other corporate level programmes; specifically, the Safety and Health Management, Environment Management, Emergency Preparedness and Response, Contractor Safety and Environment and Management Systems Audit Programmes. Some of the specific requirements of the corporate RPP are discussed below.

Cameco is committed to complying with legal and other requirements relating to managing radiation protection issues. In some jurisdictions the regulations are not prescriptive in all technical aspects. For example, internal dosimetry⁵ requires the use of a number of models. In such cases, internationally accepted methods or standards are used. As most national regulations are based upon the scientific recommendations of the International Commission on Radiological Protection (ICRP) and standards of the International Atomic Energy Agency (IAEA), the publications of these two organisations are used as the primary source of guidance for technical issues.

As stated in the corporate RPP, each site is required to provide training in radiation protection. This training must include, at a minimum, orientation and supervisor training and is expected to address, among other aspects, the specific radiation

⁵ Dosimetry is the measurement of doses received by individuals, in this case doses of ionising radiation.

risks found at a site, the protection measures to be followed, discussion of dose limits and health effects. Additional or specific training programmes may be developed, as required by sites, for groups such as engineers and technical staff. Cameco has adopted the systematic approach to training process, and as this is rolled out to the individual sites, radiation training is expected to be developed and documented in line with this process.

Monitoring and measurement of individual doses and radiological conditions is a key aspect of a radiation protection programme. The corporate RPP provides both guidance and specific instruction in the monitoring and measurement of dose. The programme addresses expectations for measurement of gamma radiation, long lived radioactive dust and radon progeny doses. In addition the programme requires sites to develop engineering monitoring schedules for the appropriate types of radiation of concern. Engineering monitoring is a term used to describe types of monitoring not used for official dosimetry purposes. Most types of engineering monitoring are focussed on the workplace environment to control specific radiation parameters.

The corporate programme also requires several operational controls be in place at each site. Specifically, sites must have a programme or process for ensuring doses are as low as reasonably achievable (ALARA) and consider social and economic factors. ALARA demonstrates a recognition that the health and safety of employees is of foremost importance. A site ALARA programme includes a commitment by senior management to the ALARA programme, responsibilities, control over work practices, qualifications and training, consideration of emergency or upset conditions, a review of monitoring results, and a communications plan. The corporate RPP also requires sites to have a process, typically referred to as a radiation work permit, for setting of job-specific controls to help manage radiation doses in known high radiation conditions or high risk tasks. Finally, the corporate RPP states that each site must have a “code of practice” (or equivalent) which is a series of standard required actions in response to predetermined radiation levels. The actions are progressive in nature with an increasing management response as radiation levels increase.

A code of practice helps to ensure a consistent response to unexpected radiation conditions.

Conformance of sites to the requirements to the corporate RPP is assessed in many ways, from informal assessments to formal audits, in which significant findings may be reported to the Cameco Board of Directors. Corporate assistance is available to all sites to help overcome obstacles and achieve conformance to corporate requirements and regulations.

In addition to assisting with compliance and conformance issues, Cameco uses new science and technologies to aid sites in improving the accuracy of dosimetry results and dose reduction. Some specific examples include:

- Dust particulate studies and the use of simulated lung fluid experiments, performed by Cameco at its in-house laboratory, to determine site specific solubility parameters for all of its uranium products to better assess doses from internal exposure;
- Operational techniques to reduce dust in underground operations; and
- Techniques to locate sources of radon gas entering mine workings and mill workplaces.

In addition, significant effort has been put into development of a company-wide database tool for collection of radiation information, calculation of doses, management of sampling compliance, management of equipment calibration and efficiency checks, and reporting of dosimetry and workplace radiological monitoring. This tool has been adapted for use in Canada, the US and Kazakhstan to date and would be used at Kintyre. In addition, the corporate office has several technical experts to provide support to the sites.

Cameco has a strong commitment to radiation protection. As a minimum, the status of the RPP across the company is reported to senior management annually, and company-wide dose statistics are provided to senior management and the Board of Directors quarterly. Internal audit findings related to non-conformance or noncompliance with corporate programmes, standards and applicable regulations are also presented to the Board of Directors, ensuring these matters receive prompt attention of senior management.

2.3.5 Cameco's Transport Management Performance

Cameco has significant experience with the transport of radioactive materials. The Cameco Canadian mills alone ship approximately 600 loads of UOC by road annually at a total distance travelled at just under 2 million km. Using experience gained from many years of operation, Cameco has put into place a number of controls and initiatives to improve both the safety of transport as well as emergency preparedness and response to transport incidents. These include:

- Cameco Transport Standard;
- Emergency Preparedness and Response Program; and
- Emergency Response Assistance Plan.

The Cameco Transport Standard is a mandatory corporate standard put in place to ensure Cameco operations worldwide comply with relevant regulations and additional Cameco specific requirements with respect to transport of radioactive materials. The primary emphasis of this standard is packaging. The standard dictates the minimum requirements for each operation to adhere to with respect to packaging and transport of radioactive materials.

The Emergency Preparedness and Response Programme (EPRP), is a corporate programme aimed at ensuring Cameco operations are ready and able to respond to the variety of incidents that may occur at Cameco operations. The EPRP is a broad programme that encompasses all emergencies including transport. The effectiveness of the site programmes is measured by a series of metrics reported annually by the sites and assessed by Cameco's corporate office.

The Cameco Emergency Response Assistance Plan (ERAP) has been in place for a number of years. The overall purpose of the ERAP is to ensure preparedness and response to incidents that may occur during transport of products. While the establishment and ongoing maintenance of the ERAP is a Canadian regulatory requirement, Cameco has extended the principles and methods of the ERAP to its worldwide operations. The ERAP includes a broad list of initiatives:

- Cameco emergency response teams;
- Contracted emergency response networks;
- Mutual aid agreements;

- First responder outreach program;
- Annual emergency response exercises;
- Controls placed on Cameco carriers and freight-forwarders; and
- Cameco Safety, Health, Environment and Quality (SHEQ) audit program.

Cameco maintains response teams at each operation. These teams train and practice on a regular basis and are equipped to respond to a variety of site specific surface and underground emergencies. Additionally, a corporate team attends all activations of the transport emergency plan. These teams are typically composed of a hazardous materials/safety specialist, a radiation specialist and an environmental specialist. Cameco radiation specialists being present during actual transport emergencies have proven to be most valuable over the years by providing a high level of technical oversight and effective communication to first responders.

Contracted emergency response networks have been established in North America in order to support the Cameco teams. The transport of Cameco products typically involves very long distances and a variety of transport modes. As a result, trained teams fully equipped and prepared to respond to Cameco events, have been retained across the continent. These teams are trained by Cameco on a recurring schedule. Many of these contracted teams also participate in full-scale and table-top exercises conducted by Cameco.

In addition to the contracted commercial firms used by Cameco to support internal teams during a response, there are also mutual aid agreements set up with others in the nuclear fuel cycle. Cameco currently has an agreement with AREVA Resources whereby Cameco will respond with or on behalf of each other for transport incidents. Mutual aid partners are also included in applicable full-scale and table-top exercises.

Cameco has established a successful outreach programme for first responders whereby representatives from Cameco conduct awareness sessions at strategic locations. The first response agencies targeted in Canada typically consist of full-time and volunteer fire departments because they are normally in charge of a transport incident occurring on Canadian public roads. These sessions, which include radiation safety and hazardous

materials response advice specific to Cameco products, have been well received over the ten years of the programme. These awareness sessions are conducted on a three year recurring schedule. In addition to first responders, Cameco also conducts outreach training for port representatives, emergency management agencies and routinely speaks at hazardous materials conferences in Canada.

Cameco Australia will use the experience gained from years of operation in Canada to establish similar support arrangements with commercial emergency response organisations, other uranium companies and professional and volunteer first responder organisations.

While not specifically required as part of the ERAP, Cameco places conditions and controls within contractual agreements with all carriers and freight-forwarders that transport its products. Specific conditions can include parking and route restrictions, reporting of any incidents, driver qualification and emergency instructions in the event of an accident. All carriers and freight-forwarders transporting radioactive materials for Cameco undergo a regular Safety, Health, Environment and Quality (SHEQ) audit every two years. These audits, conducted by trained Cameco and third-party auditors, are a valuable tool to evaluate and keep in direct contact with transport vendors.

The controls that Cameco has placed on transport of its products have resulted in a dependable, safe and effective transport system. The core values of the Company are reflected in the transport of its products worldwide.

2.3.6 Cameco's Corporate Social Responsibility Performance

Cameco is committed to earn the trust and support of local communities and stakeholders wherever it operates. In addition to maintaining safe, clean operations, Cameco pursues initiatives to ensure that local communities benefit from its activities. These initiatives, led by Cameco's corporate social responsibility group, are developed around five pillars:

- Business development;
- Community engagement and government relations;
- Community investment;

- Environmental Stewardship; and
- Workforce development.

In Canada, these initiatives have established Cameco as the nation's largest industrial employer of Aboriginal peoples. Due to preferential hiring policies, about half of the employees and contractors at its mining operations in northern Saskatchewan are residents of the remote, primarily aboriginal region where mining operations are located. Cameco also favours local Aboriginal-owned business in contracting for services at its operations. During 2012, 73% of the services required to support Cameco's Saskatchewan operations were provided by aboriginal-owned businesses. These policies build capacity and create opportunity for the Indigenous peoples of northern Saskatchewan. Cameco also conducts extensive stakeholder engagement activities to ensure that people are aware of and understand its activities. These efforts are complemented by community investment, workforce development, and direct support for education to ensure people can benefit from opportunities related to mining in their region. Cameco's efforts to build and sustain the trust and support of local communities have been rewarded with consistently high levels of public support confirmed through annual polling in Canada.

In 2010 Cameco achieved certification for Maintaining Gold Level standards in the Progressive Aboriginal Relations Programme with the Canadian Council for Aboriginal Business for "innovative programmes and engagement of Aboriginal Peoples that have made an enduring impact on the business and Aboriginal communities, and demonstrate best practice for those companies beginning their journey".

Moving into new global regions such as Australia, Cameco will adapt this successful model and implement location-specific programmes and initiatives based on ongoing engagement with local communities.

Cameco recently signed a milestone agreement with the Western Desert Lands Aboriginal Corporation (WDLAC) which secures the support of the Martu for the development of the Project.



Plate 2-3: Cameco supports indigenous communities

2.4 The Nuclear Energy Industry

The following section has been presented to provide some background information on the global nuclear energy industry and uranium demand.

The nuclear energy industry addressed significant challenges in 2011 related to events at the Fukushima-Daiichi nuclear power plant in Japan. As a result, the outlook for the industry remains uncertain for the near to medium term. In the long term, however, Cameco continues to see a very strong and promising growth profile for the nuclear industry.

The industry is beginning to see some clarity on issues that have been overhanging the market since 2011. The most significant of these was the establishment in Japan of the Nuclear Regulatory Authority (NRA), which is currently drafting new safety standards for the nuclear industry in that country, against which reactor restarts will be evaluated. The NRA indicated that this process would likely take until mid-2013. While this means that reactor restarts will take longer than we had previously thought, Cameco believes that the NRA brings important stability to the nuclear regulatory environment in Japan, and welcome the clarity it has already brought to the issue of reactor restarts.

The election of the Liberal Democratic Party (LDP) in Japan will be similarly positive for the nuclear industry. Though it remains to be seen what kind of energy policy will emerge from the newly elected government, the LDP has been positively disposed towards nuclear in the past, and has been clear that rebuilding Japan's economy is its main priority, in which the nuclear industry plays a large role.

In 2012, China lifted a temporary moratorium on new reactor construction and has since started construction on four reactors. The resumption of reactor construction in China is clearly a positive signal for the market.

Beyond Japan and China, some other countries made changes to their nuclear programmes, including announcements of older reactor retirements from Canada, France and Belgium. India also revised its 2020 nuclear target down from 20 to 14.6 gigawatts. These changes, combined with slower than expected restarts in Japan, the temporary pause in China new-build approvals, and slower economic growth worldwide, caused Cameco to re-examine its reactor forecast at the end of 2012. While the market continues to evolve, our current estimates project nuclear generating capacity to reach about 510 gigawatts by 2022 from today's 392 gigawatts, which represents average annual growth of 3%. Of this expected growth, approximately 64 new reactors with 64 gigawatts of generating capacity are under construction today.

Reactor retirements and delays in both restarts and new construction have had an effect on demand and the uranium price in 2012. There has been concern that excess inventories resulting from reduced requirements, deferrals and/or cancellations of deliveries under sales contracts could be introduced to the market. In 2012, any excess inventories were responsibly managed between suppliers and customers, but the situation has caused market participants to be discretionary in their purchases and the uranium price to remain depressed.

This remains the case at the beginning of 2013, but we believe the clearing of excess inventories, resumption of restarts in Japan and new-build around the world, in addition to promising supply-demand fundamentals, will lead to improved market conditions. We also anticipate utilities will be ramping up contracting activities well in advance of their requirements becoming uncovered around 2016.

The other side of the equation is supply, which saw a great deal of deferral in 2012 as the uranium spot price remained at a level well below where new projects are economic. A number of uranium producers, including Cameco, decreased their production growth plans. These challenges to primary supply occur while secondary supply is

decreasing as a result of the end of the Russian Highly Enriched Uranium (HEU) commercial agreement in 2013, and while steady demand growth continues – with an expectation that it will reach about 3% per year. So, although the supply-demand outlook continues to evolve, nuclear remains an important part of the global energy mix and it is clear that new uranium supply will be needed. Though some of the future supply gap could be filled by additions to secondary supplies, the majority will need to come from new mines and expansions to existing mines, which we expect will bring the economics of new production to bear on the market.

2.4.1 Long-term outlook

Electricity is essential to maintaining and improving the standard of living for people around the world. Demand for safe, clean, reliable, affordable energy continues to grow and the need for nuclear as part of the world’s energy mix remains compelling.

The 2012 World Energy Outlook predicts that by 2035 electricity consumption will have grown by about 70% from current levels, driven mainly by growth in the developing world as it seeks to diversify sources of energy and provide security of supply (OECD/IEA, 2012). At the start of 2013, there were 433 operable commercial nuclear power reactors in 31 countries, and by 2022, we expect that to grow to 524 reactors. At the start of 2013 there were 64 reactors under construction in 14 countries, and more planned to begin operation by 2022. Most of this new build is being driven by rapidly developing countries like China and India, which have severe energy deficits and want clean sources of electricity to improve their environment and sustain economic growth.

Given Cameco’s extensive base of mineral reserves and resources, diversified sources of supply and global exploration programme, the Company is well positioned to meet the growing demand for uranium. In anticipation of increased demand for nuclear energy, Cameco plans to double its annual uranium production to 36 million pounds) by 2018. The Project is an important part of Cameco’s plan to achieve this target.

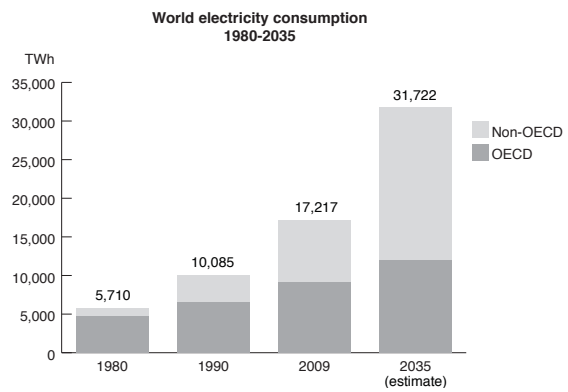


Figure 2-5: World electricity consumption 1980-2035