

EMPOWERED

Sustainable Development at Cameco



2012 Sustainable Development Report – Executive Summary

Cameco is one of the world's largest uranium producers, with assets on three continents. Our head office is in Saskatoon, Saskatchewan, and we employ nearly 3,500 people across our operations.

Nuclear power plants around the world use our uranium products to generate one of the cleanest sources of electricity available today.

Our operations and investments span the nuclear fuel cycle, from exploration to electricity generation.

Nuclear fuel cycle

MINING AND MILLING

Mining

There are three common ways to mine uranium, depending on the depth of the orebody and the deposit's geological characteristics:

Open pit mining is used if the ore is near the surface. The ore is usually mined using drilling and blasting.

Underground mining is used if the ore is too deep to make open pit mining economical. Tunnels and shafts provide access to the ore.

In situ recovery (ISR) does not require large scale excavation. Instead, holes are drilled into the ore and a solution is used to dissolve the uranium. The solution is pumped to the surface where the uranium is recovered.

Milling

Ore from open pit and underground mines is processed to extract the uranium and package it as a powder typically referred to as *uranium concentrates* (U_3O_8) or *yellowcake*.

The leftover processed rock and other solid waste (*tailings*) is placed in an engineered tailings facility.

Operations and investments

SASKATCHEWAN

- McArthur River (69.805%)/Key Lake (83.33%)
- Rabbit Lake (100%)
- Cigar Lake (50.025%) (development project)
- Millennium (42%) (under evaluation)

US

- Smith Ranch-Highland (100%)
- Crow Butte (100%)

KAZAKHSTAN

- Inkai (60%)

AUSTRALIA

- Kintyre (70%) (under evaluation)

REFINING

Refining removes the impurities from the uranium concentrate and changes its chemical form to uranium trioxide (UO_3).

ONTARIO

- Blind River refinery (100%)

CONVERSION

For light water reactors, the UO_3 is converted to *uranium hexafluoride* (UF_6) gas to prepare it for the next stage of processing.

For heavy water reactors like the Candu reactor, the UO_3 is converted into powdered *uranium dioxide* (UO_2).

ONTARIO

- Port Hope conversion facility (100%)

UK

- Springfields Fuels Ltd. (toll-processing agreement)

ENRICHMENT

Uranium is made up of two main isotopes: U-238 and U-235. Only U-235 atoms, which make up 0.7% of natural uranium, are involved in the nuclear reaction (fission).

Most of the world's commercial nuclear reactors require uranium that has an enriched level of U-235 atoms.

The enrichment process increases the concentration of U-235 to between 3% and 5% by separating U-235 atoms from the U-238. Enriched UF_6 gas is then converted to powdered UO_2 .

US

- Global Laser Enrichment (24%)

FUEL MANUFACTURING

Natural or enriched UO_2 is pressed into pellets, which are baked at a high temperature.

These are packed into zircaloy or stainless steel tubes, sealed and then assembled into fuel bundles.

ONTARIO

- Cameco Fuel Manufacturing Inc. (100%)

GENERATION

Nuclear reactors are used to generate electricity. U-235 atoms in the reactor fuel fission, creating heat that generates steam to drive turbines. The fuel bundles in the reactor need to be replaced as the U-235 atoms are depleted, typically after one or two years depending upon the reactor type. The used – or *spent* – fuel is stored or reprocessed.

Spent fuel management

The majority of spent fuel is safely stored at the reactor site. A small amount of spent fuel is reprocessed. The reprocessed fuel is used in some European and Japanese reactors.

ONTARIO

- Bruce Power Limited Partnership (31.6%)

CEO Message

Cameco can attribute much of its success to a steady and committed focus on four measures that form the foundation for all that we do: a safe, healthy and rewarding workplace, a clean environment, supportive communities and outstanding financial performance. We believe that each is essential to our success, and that together they ensure our long-term sustainability.

Tracking and reporting about our performance in each of these areas provides important information that allows us to improve. In 2011, we began to once again align our measures with the internationally recognized Global Reporting Initiative (GRI) reporting framework. After a thorough stakeholder and materiality assessment, we identified 31 GRI 3.1 indicators that are right for Cameco. These are complemented by four corporate indicators that capture other information we believe is important to track.

 You can read more about these indicators and our process in our online sustainable development report.

Industry and outlook

The 2011 earthquake and tsunami in Japan were extreme events with devastating consequences. The nuclear industry is applying what it learned from their impact on the Fukushima Daiichi power plant to prepare for and prevent future incidents. While short-term demand for uranium has softened in the wake of Fukushima, we believe nuclear energy will remain an important part of the energy mix for the long term. Nuclear power can generate baseload electricity with minimal air pollutants, carbon dioxide (CO₂) or other greenhouse gas emissions, and it is an affordable and sustainable source of safe, clean and reliable energy.

We are aware that our plans to increase our annual uranium production to 40 million pounds by 2018 (our Double U strategy) will increase the environmental and social impact of our operations as we expand existing facilities and develop new ones. Our energy use and GHG emissions, in particular, will continue to increase as we grow – an impact offset by the downstream benefits of using uranium to efficiently generate clean electricity.

To mitigate both present and future impacts, we have established a culture in which responsibility, accountability and sustainability guide our corporate business strategy and our day to day activities. We meet or exceed regulatory requirements everywhere we operate, and we work with people in local communities to make sure their concerns are addressed and that they also share the economic benefits of our operations.

Performance

Our performance since we last reported has been strong.

We achieved the best overall safety performance in our history in 2010 and exceeded our targets for lost-time injury frequency in 2011. This is due to a robust corrective action process, combined with daily job hazard analysis meetings at the start of each shift that deliver excellent safety performance across our operations. While there is still room for improvement, we believe we are on the right track.

There were no significant environmental or safety incidents at Cameco in the last two years. Cameco has had no serious incidents since a contamination problem was discovered at our Port Hope Conversion facility in 2007 and remediated in 2008. Although the Altona shipping incident in December 2010 attracted considerable media interest, the cargo of uranium concentrate was safely contained onboard the ship at all times and was safely and thoroughly cleaned up, with no impact to people or the environment at any time. Our Vision 2010 program is progressing in Port Hope, where we submitted the draft environmental impact statement for review by the regulators in December 2010 and have continued work on the environmental assessment, and all nine of our operating sites are now ISO 14001 certified.

We continue to proactively engage with communities near our operations and to contribute meaningfully to

their well-being, with a special emphasis on empowering northern and aboriginal communities. We draw on more than 20 years' experience acquired working with aboriginal communities in northern Saskatchewan to develop respectful working relationships with the Martu in Australia and First Nations near our US and Ontario operations. We were also gold level certified for progressive aboriginal relations for the third time in 2010.

We have updated our corporate social responsibility policy, our governance ratings continue to be very strong, and we continue to be recognized as one of the top companies to work for in Canada.

I'm proud of our results and continued efforts to improve sustainable development at Cameco. It is my personal goal to make sure we maintain our focus on safety, environment and communities – empowering employees, community members and others to maximize the benefits of Cameco's economic and social contributions, and the clean energy potential of nuclear.



Tim Gitzel
President and CEO

ABOUT THIS REPORT

Cameco prepared its first sustainable development report in 2005, and has produced a sustainability report every two years since 2008. This document is a summary of our 2012 report, and covers our activities in 2010 and 2011.

 You will find our complete report online, including a full discussion of our practices and an analysis of three years of performance for most operations (www.cameco.com).

Stakeholders

Cameco recognizes six core groups of stakeholders:

- communities
- customers
- employees
- government and regulators
- investors
- media

We have written this report to address their interests and concerns.

Scope

This report focuses on performance at all Cameco-owned global uranium mining and milling operations and our refining, conversion and fuel manufacturing operations. It does not include performance related to our ownership in nuclear fuel

enrichment development or electricity generation. It does not include any assessment of the performance of associated companies or non-operated joint ventures.

We collect quantitative data for all in-scope operations, except where the indicator is for a specific operation or geographic region (like public support polling) or where data is not yet available for an operation or region. Where data is not currently available, we are working toward including it in our next reporting cycle (our 2014 report). Most data is collected by calendar year.

Change in reporting

In 2011, we moved from reporting using Cameco indicators to reporting using the Global Reporting Initiative (GRI) framework. Based on a sustainable development materiality assessment completed with Deloitte, we have adopted 31 GRI 3.1 indicators and four corporate indicators. You'll find these listed in our 2011 Overview on pages 4 and 5.

Throughout this document, the terms *we*, *us*, *our* and *Cameco* mean Cameco Corporation and its subsidiaries. Unless we indicate otherwise, all dollar amounts are in Canadian dollars.

CAUTION ABOUT FORWARD-LOOKING INFORMATION

Statements contained in this report include statements and information about our expectations for the future. When we discuss our strategy, plans and future financial and operating performance, or other things that have not yet taken place, we are making statements considered to be forward-looking information or forward-looking statements under Canadian and US securities laws. These include our statements about the future of nuclear energy, uranium supply and demand, and about our plans to increase annual uranium production to 40 million pounds by 2018. They also include other statements using other words such as plan, expect, anticipate, goal, outlook, ensure, could and will. They represent our current views as of June 15, 2012 and can change significantly. Forward-looking information is designed to help you understand management's current views of our near and longer-term prospects, and it may not be appropriate for other purposes. We will not necessarily update this information unless we are required to by securities laws. Actual results and events may be significantly different from what we currently expect, because of the risks associated with our business. This information is based upon a number of material assumptions, which may prove to be incorrect, and is subject to a number of material risks, which are discussed in our current annual management discussion and analysis, including under the heading "Caution about Forward-Looking Information". In particular, we have made assumptions about demand for uranium, our expected production level and production costs, the reliability of our mineral reserve and resource estimates, the geological, hydrological, and other conditions at our mines and our ability to continue operations without any significant disruptions due to accidents or other development or operating risks. The material risks that could prevent us from reaching our production target for 2018 including risks that actual market prices are lower than we expect; production costs are higher than planned; our mineral reserve and resource estimates are not reliable; or we face unexpected or challenging conditions; or our operations are disrupted for any reason. We are also subject to the risk that we are affected by changes in the regulation or public perception of the safety of nuclear power, which adversely affect the demand for uranium and future prospects for nuclear energy.

WHERE TO FIND IT

Our approach	page 3
2011 overview	page 4
Safe, healthy and rewarding workplace	page 6
Putting employees and safety first	
Clean environment	page 8
Innovative stewardship	
Supportive communities	page 10
Empowering people and building futures	
Outstanding financial performance and governance	page 12
Managing our responsibilities	

OUR APPROACH

Cameco is one of the world's largest uranium producers. We want to bring the multiple benefits of clean, safe, reliable nuclear energy to the world, and are committed to delivering our products responsibly.

Our goal is to be recognized globally as a leader in corporate social responsibility by proactively addressing the social, environmental and financial aspects of our business. We use four categories to define our objectives and assess our results:

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

These four measures of success, supported by effective governance, are also the organizing principles for our sustainable development report.

Policies

Our corporate social responsibility policy defines what CSR means to Cameco and how we implement it. It is supported by our code of conduct and ethics and six other policies that guide how we work and interact with our stakeholders:

- community investment
- international business conduct
- procurement of goods and services
- respectful workplace
- safety, health, environment and quality
- talent acquisition and selection

In 2012, we will formalize our approach to identifying community interests by introducing company standards for engaging aboriginal and local communities. These will complement the community engagement provisions in our corporate social responsibility policy. We updated our CSR policy in December 2011 and will be launching it across all of our managed operations and subsidiaries in 2012.

Governance

Our commitment to sustainability starts at the top. Sustainability reporting is overseen by Cameco's board of directors. The board and its committees set annual corporate targets, evaluate our performance and determine executive compensation awards – all based on performance against our four measures of success.

Management provides strategic and operational leadership under the guidance of the board, using a quality management system to guide every aspect of our work, and an enterprise risk management program to systematically identify and manage the risks associated with our business. Our sustainable development report is developed by a number of corporate teams including safety, health, environment and quality (SHEQ), environmental leadership (EL) and corporate social responsibility (CSR). These teams also support our corporate responsibility programs, initiatives and ongoing improvements day to day.



GRI 3.1 level B report

We are self-declaring to a GRI 3.1 level B this year.

Where to find more

The information in this report is a summary. Please see our online sustainable development report for a full discussion of our performance.



2011 OVERVIEW

2011 Highlights

SAFE, HEALTHY AND REWARDING WORKPLACE



HIRING AND LABOUR PRACTICES

- LA1 Workforce (by employment type, contract and gender)
- LA2 Hiring and turnover
- LA4 Collective bargaining
- HR11 Human rights complaints

- Top 100 employer for third consecutive year¹
- Top 10 company to work for in Canada¹
- Top employer for Canadians over 40¹

EMPLOYEE DEVELOPMENT

- LA12 Performance and career development reviews

- More than 70% of all employees receiving annual performance reviews

SAFETY AND WORKING CONDITIONS

- LA6 Health and safety committees
- LA7 Injury frequency, missed work
- CA2 Average radiation dose to workers

- All workers covered by formal joint management-worker health and safety committees
- Annual average radiation dose to workers consistently below 1 mSv, which is 5% of the level permitted by Cameco's regulators

CLEAN ENVIRONMENT



ENERGY

- EN3 Direct energy use
- EN4 Indirect energy use

- Direct and indirect energy use up due to expansion activities

WATER

- EN8 Water withdrawal
- EN21 Water discharge and quality

- Intake volumes up due to expansion activities
- Surface discharge volumes stable, with molybdenum and selenium loadings declining

EMISSIONS

- EN16 GHG emissions
- EN20 Air emissions

- GHG emissions up due to expansion activities

WASTE

- EN22 Waste
- MM3 Mine waste

- Mine and other waste volumes are up due to expansion and historic waste cleanup activities

INCIDENTS

- EN23 Significant incidents
- EN28 Significant environmental fines

- No significant spills for the second consecutive year²

SUPPORTIVE COMMUNITIES



ECONOMIC IMPACT

- EC6 Local spending
- EC7 Local hiring
- EC8 Infrastructure and service investments
- EC9 Indirect economic impact

- Between 2009 and 2011, over \$4.4 million invested in infrastructure-related community projects

ENGAGEMENT

- SO1 Community engagement

- Canadian Council for Aboriginal Business: Gold-level recognition for progressive aboriginal relations

COMMUNITY RELATIONS

- MM6 Disputes - land use and customary rights
- MM5 Proximity to Indigenous territories
- HR9 Violations of Indigenous rights

- No formal land disputes
- No operations on Indigenous lands
- No unresolved human rights complaints

PUBLIC OPINION, LOBBYING

- CA1 Polling (public support)
- SO5 Public policy, lobbying

- Cameco continues to enjoy strong public support for its operations
- Cameco continues to advocate nuclear power as a safe, clean, reliable energy source

OUTSTANDING FINANCIAL PERFORMANCE AND GOVERNANCE



ECONOMIC VALUE

- EC1 Direct economic value

- Revenue up 12%, operating costs up 19%
- Payments to shareholders up 14%
- Community investments up 10%

FINES, SANCTIONS, LITIGATION

- SO7 Legal action (anti-competitive behaviour)
- SO8 Significant fines (non-compliance)
- PR4 Labelling non-compliance
- PR9 Sanctions (product non-compliance)

- No actions against Cameco for anti-competition
- No fines or sanctions for non-compliance with laws
- No sanctions for product non-compliance
- Two non-material non-compliance incidents (product labelling)

GOVERNANCE

- CA3 Annual business scores and rankings
- CA4 Institutional Shareholder Services governance risk indicators

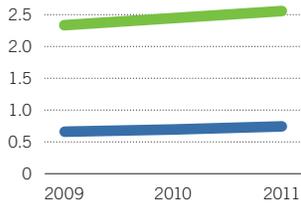
- Cameco ranked 12th among 253 Canadian companies, scored 91% on four measures of good governance (Globe and Mail, *Report on Business*)
- Governance risk score remains low (ISS)
- Updated corporate social responsibility (CSR) policy approved by Cameco board

¹ *The Globe and Mail* (October 7, 2011), *The Globe and Mail* (June 6, 2011), *The Financial Post* (February 1, 2012).

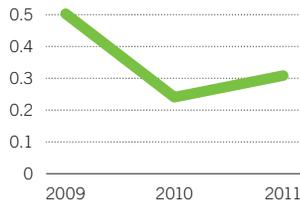
² We consider level IV and V spills significant, according to our incident recording and corrective action process.

Sustainability outlook

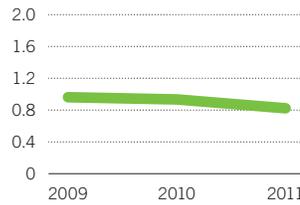
NUMBER OF EMPLOYEES
(thousands)
● male ● female



INJURY FREQUENCY
LTI rate



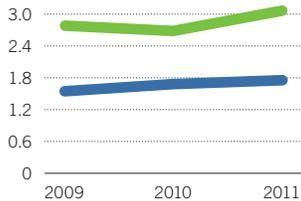
AVERAGE RADIATION DOSE
mSv (millisieverts)



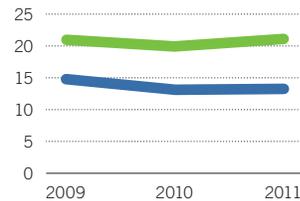
We will continue to strive for zero injuries and maintain a long-term downward trend in the lost-time injury rate and radiation doses.

We will also strive to attract, retain, engage and develop employees and establish succession pools for key positions.

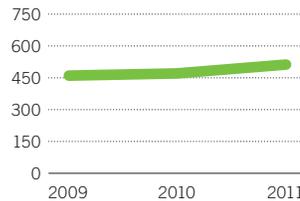
DIRECT AND INDIRECT ENERGY USE
GJ (millions)
● direct ● indirect



WATER USE
m³ (millions)
● withdrawn ● discharged



EMISSIONS
GHG emissions
tonnes CO₂e (thousands)



We will continue to look for opportunities to improve our environmental performance.

This includes reducing our footprint at all operations and looking for ways to minimize our impacts on land, air and water as we grow.

HIRING*
Northern Saskatchewan
● local 50% ● other 50%



PROCUREMENT*
Saskatchewan
● local 74% ● other 26%



Ontario
● local 64% ● other 36%



Kazakhstan
● local 92% ● other 8%

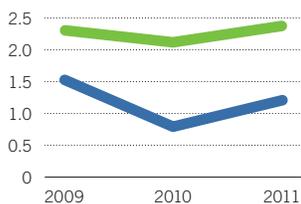


*As at year end 2011

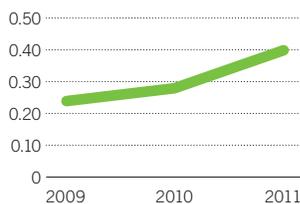
We will continue to develop long-term relationships by engaging with local stakeholders.

We will seek to secure continued support from Indigenous and local communities, employees, government, regulators and the general public through communications, community investment, and workforce and business development.

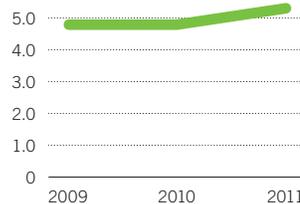
REVENUE AND OPERATING COSTS
\$ (billions)
● revenue ● operating costs



PAYMENTS TO SHAREHOLDERS
\$ (dividends per common share)



COMMUNITY INVESTMENTS
\$ (millions)



We will continue to achieve financial stability and profitability by managing financial risk and by implementing measures that ensure sound governance.

SAFE, HEALTHY AND REWARDING WORKPLACE

Putting employees and safety first

In the mining and nuclear industries, the safety of workers and members of the public is paramount at every stage of operations – from exploration, development and operation, to decommissioning and reclamation.



We track our progress by measuring key workplace indicators, like conventional and radiation safety statistics, hiring and labour practices and employee development.

 **Performance indicators**
You will find full indicator data and three-year trend information in our online sustainable development report.

Occupational health and safety

We achieved the best overall safety performance in our history in 2010 and exceeded our targets for lost-time injury frequency in 2011. This is due to Cameco's comprehensive safety programs and management attention to safety, including a robust corrective action process that, combined with daily job hazard meetings at the start of each shift, delivers strong safety performance across our operations.

In 2011, we invested \$30 million in conventional and radiation health and safety programs, which included upgrading our Canadian operations in accordance with national fire code standards and general program monitoring expenditures.

A focus on operational excellence and corrective action has contributed to a long-term downward trend in injury frequency at Cameco. Although our lost-time injury rate was up slightly in 2011, it was

consistent with the normal amount of variability we expect for this metric and does not suggest a setback. We will focus on continuing to improve our performance in 2012.

The average radiation dose to workers at our operations remains consistently well below the maximum dosage limits of 50 mSv per person per year and 100 mSv over five years mandated by federal regulations in Canada.

Hiring and labour practices

In 2011, we hired 648 new employees, 7% more than 2010 and 40% more than 2009. This included 178 local employees in northern Saskatchewan, a target region for local hiring for Cameco.

About a quarter of our workforce (26% in 2011) is covered by collective bargaining agreements, and we actively promote diversity and fair hiring practices throughout the company. Like many industrial employers, the ratio of female to male employees in our workforce (1:3) is lower than we would like it to be. Women also account for a higher proportion of our turnover than men. However, at 24% the size of our female workforce exceeds the industry average of 14%, and we are confident we can further improve in the future.

We attract and retain employees through a combination of competitive compensation and benefit packages (including flexible work arrangements), professional development and learning opportunities, and corporate initiatives and approaches to work that encourage engagement and a sense of community, contribution and belonging. Employees recognize Cameco's commitment to environmental leadership, and the positive impact we have on local communities in particular.

Research and development apprenticeships and programs aimed at recruiting and developing candidates from both universities and local communities help ensure we continually refresh our workforce and provide employment opportunities to the communities where we operate.

We consistently rank as one of Canada's top employers overall, for diversity and for employees over 40.



CASE STUDY

EMPLOYEE AND PUBLIC RADIATION SAFETY

 [Read more case studies online](#)



In addition to the safety, health and environmental risks all mining and chemical processing companies manage, our operations also manage risks related to radiation.

Radiation protection at a uranium mine is accomplished by:

- reducing the time spent around radiation sources
- increasing the distance between workers and radiation sources
- placing a shield between employees and radiation sources
- ventilating the workplace to provide clean air and remove potentially harmful radon and dust.

The goal of these measures is to reduce exposures to as low as reasonably achievable. Some of our mining methods (for example, raiseboring in combination with groundfreezing) maximize the distance between workers and potential sources of radiation. Where those methods are not used, we find other ways to reduce and limit exposures.

We measure and monitor levels of radiation at all of our industrial workplaces (except Cobourg, where there is no uranium present) and we record and monitor the personal exposures of employees and contractors. Monitoring methods include dosimeters (devices designed to measure certain types of radiation), air monitoring, and internal dosimetry techniques like urinalysis and lung counting (direct measurement of any radioactive material that may be present in the lungs).

Our sites also have joint employee-management health and safety committees that are responsible for implementing our corporate health and safety management system.

Industry regulation and oversight

We comply with all international declarations, conventions and treaties that relate to our businesses. In Canada, the Canadian Nuclear Safety Commission (CNSC) provides oversight of our operations, along with provincial regulators. In the United States, we are regulated by the Nuclear Regulatory Commission (NRC) and state regulatory bodies.

Following the events in Japan in 2011, the CNSC asked us to review the risk management and emergency preparedness processes at all our Canadian sites. Third-party experts carried out these reviews and concluded that the system in place at our operations – our *five layers of defence* – provides an effective barrier against the potential effects of a natural disaster. Similar assessments were also conducted at our US operations.

We are continuously looking to further improve our designs, practices, policies and plans to keep workers and the public safe, including during transportation of our materials.



A top employer

- **Top 100 Employers for 2012**¹
Named in a national competition organized by Mediacorp Canada Inc. and published in *The Globe and Mail*, for the third consecutive year.
- **Canada's Best Diversity Employers**²
Selected by the *Globe and Mail* for the third consecutive year.
- **Top Employers for Canadians over 40**³
Selected for this award for the first time in 2011.
- **Top 10 Companies to Work For in Canada**⁴
Named by the *Financial Post* for the third consecutive year.
- **Saskatchewan's Top 10 Employers**⁵
Named in this annual competition organized by the editors of *Canada's Top 100 Employers*. This is the third consecutive year we were named a Top 10 Employer.

Looking ahead

Cameco is committed to maintaining safe and healthy workplaces. We will continue to strive for zero injuries and maintain a long-term downward trend in the lost-time injury rate and radiation doses.

We will also strive to attract, retain, engage and develop employees and establish succession pools for key positions.

¹ Canada's top 100 employers for 2012, *The Globe and Mail*, October 7, 2011.

² Canada's best diversity employers for 2012, *The Globe and Mail*, February 22, 2012.

³ Top employers for Canadians over 40, *The Globe and Mail*, June 6, 2011.

⁴ The *Financial Post's* 10 best companies to work for 2012, *The Financial Post*, a joint venture publication of *Postmedia Network Inc.* and *Mediacorp Canada Inc.*, February 1, 2012.

⁵ Saskatchewan's top employers 2012, *Leader-Post* and *The StarPhoenix*, a joint venture with *Mediacorp Canada Inc.* February 1, 2012.

CLEAN ENVIRONMENT

Innovative stewardship

Cameco operates its business with respect and care for the local and global environment. We strive to be a leader in environmental best practices and performance by complying with regulatory requirements, and moving beyond them where possible.

We integrate environmental leadership into everything we do. We track our progress by monitoring our impacts on air, water and land near our operations, and by measuring the amount of energy we use and the amount of waste we generate. We use this information to help identify and prioritize opportunities to improve.



Performance indicators

You will find full indicator data and three-year trend information in our online sustainable development report.

In 2011, we invested \$99 million in environmental protection, monitoring and assessment programs. This included several new projects that involved significant environmental expenditures, including a site-wide progressive reclamation plan at Rabbit Lake and decommissioning efforts at our Port Hope conversion facility. No significant environmental incidents occurred in 2010 or 2011, and our water withdrawal volumes have been stable since 2009. Our direct and indirect energy use, GHG emission and waste generation numbers all increased in 2011. This is due to the expansion of our activities – a trend we expect to continue until at least 2018, as we grow our operations to meet our Double U target.

Energy

Both our direct and indirect energy volumes have been increasing slowly since 2005, reflecting our growth and expanding operations. To explore how best to address this challenge, we have completed energy assessments at each of our North American operations. Large-scale, multi-year projects, like our revitalization projects at Key Lake and Rabbit Lake and our operational reliability project at Port Hope, are expected to bring the biggest energy savings.

Our operations are also exploring other opportunities to reduce, through improvements like energy efficient lighting, repairing leaks in pressurized air systems, upgrading insulation, and lowering temperatures in process units and underground work areas.

Water

We track the amount of water we withdraw by source, and we monitor the volume and quality of water we discharge to the environment. Our goals are to minimize the amount of water we consume, keep clean water away from impacted areas, and ensure the water we do impact is treated and released to the environment in a way that will not harm aquatic ecosystems,

plants, fish and animals, and humans. Only 10% of the water we withdraw is used in our processes – the rest is returned to the environment.

We continually look for ways to improve process water management, in part through developing and testing newer water treatment technologies and looking for ways to optimize our treatment circuits. In recent years, these efforts have helped us reduce concentrations of molybdenum and selenium in water released to the environment from our mining and milling operations in Saskatchewan.

Emissions

We have several programs to control airborne environmental pollutants at our operations.

At Blind River, new processes have reduced uranium emissions from ventilation systems. The operation has also eliminated emissions of nitrous oxide (N₂O, a greenhouse gas) by adjusting its process to eliminate the need for ammonia – a change that will also save nearly \$1 million per year in electricity and chemical costs and remove a significant safety hazard.

New equipment and changes to processes at Port Hope have progressively lowered emissions of uranium and fluorides over the last decade. This facility is using HEPA filtration technology to further reduce emissions from the heating, ventilation and air conditioning system.

At Rabbit Lake, new equipment reduced sulphur dioxide emissions from 300 kg/day to 85 kg/day in 2011 – a nearly 70% decrease – while increasing efficiency in the acid-generation process and reducing our costs. A new acid plant at Key Lake is expected to significantly reduce our sulphur dioxide emissions starting in 2012.

Waste

Most mine waste is generated at our uranium mining operations in northern Saskatchewan, where it is safely stored in tailings management facilities. We treat our mill tailings to stabilize contaminants before placing them in the tailings facilities, and divert both surface and groundwater around them to reduce any impact. Runoff and seepage water from the tailings facilities and rock piles is collected and treated before it is released to the environment.

The amount of landfill waste we generate varies each year based on our activities. Our operations are looking for ways to reduce and divert waste, including industrial-scale composting, increased recycling and decontamination and incineration/gasification technologies.

CASE STUDY

ENVIRONMENTAL RESPONSIBILITY FOR THE LONG RUN

 [Read more case studies online](#)

Sound environmental stewardship means managing our facilities responsibly, maximizing the life of each operation, and returning our sites to a healthy, natural state when we are done.

Rabbit Lake, for example, is the longest-operating uranium mining and milling facility in Canada. We are upgrading this operation to support production growth, while improving its efficiency, reducing air emissions and protecting the environment. We are also actively engaged in reclamation activities at Rabbit Lake, including grading, seeding, grooming, re-vegetation and covering the above-ground tailings facility, so that by the time we are ready to fully decommission this site, much of the area will already be rehabilitated.

At the same time, we are expanding production at our existing operations by developing new mining zones. These activities make good business sense because they take advantage of existing infrastructure while minimizing our environmental footprint. We are proud of how little land we disturb, relative to the amount of energy that is generated from the ore we mine and process.



Pioneering new reclamation approaches

The reclamation process takes time, patience and creativity. Some restoration work, like establishing vegetation on our waste rock piles at Key Lake or restoring the wellfields at our ISR operations in the US, is very challenging.

Our team at Key Lake is developing a new way to help reclaim areas more quickly, especially in areas where re-vegetation is a challenge. Their innovative approach focuses on creating the right conditions for key pioneer species to grow, and using native plant species that are more likely to succeed.

For ISR mining in the US, we use only water that is not suitable for drinking or other purposes, and we are careful to ensure the bicarbonate mixture we use in our process is confined to our operating wellfields. Work is ongoing to find the most effective ways to restore water quality when mining ends. To date, the groundwater at one Crow Butte wellfield has been restored to pre-mining quality standards and two wellfields have been fully restored at Smith-Ranch Highland – key achievements for our US operations.

Ammonia eliminated at Blind River

Ammonia used to be the number one risk to people and the environment at our Blind River refinery. In 2010, we completely eliminated it from our process at that site.

All operating sites ISO 14001 certified

With certification of Rabbit Lake in 2010 and Cameco Fuel Manufacturing in 2011, all Cameco operating sites are now ISO 14001 certified, and all sites are using an ISO 14001-based environmental management system.

Looking ahead

We will continue to look for opportunities to improve our environmental performance. This includes reducing our footprint at all operations and looking for ways to minimize our impacts on land, air and water as we grow.



SUPPORTIVE COMMUNITIES

Empowering people and building futures

Cameco needs the trust and support of communities, indigenous people, governments and regulators. It is essential to our operations and we earn it by being a good corporate citizen. We build and sustain the trust of our local communities through a focused corporate social responsibility strategy that includes five key elements: workforce and business development, community engagement and investment, and environmental stewardship.



Performance indicators

You will find full indicator data and three-year trend information in our online sustainable development report.

Working co-operatively to make a difference

Our five-pillar corporate social responsibility strategy is the foundation for building and sustaining relationships everywhere we operate, but particularly with Indigenous communities near our operations. For example, our refinery in Blind River signed a memorandum of understanding (MOU) with the local Mississauga First Nation in 2010, formalizing their intention to continue to work together co-operatively to benefit the community and Cameco.

We also work closely with the Athabasca Working Group and Northern Saskatchewan Environmental Quality Committee, two groups tasked with helping to bridge the gap between industry and the people affected by it. Both of these groups help ensure uranium development in the region – home to one quarter of the world's uranium resources – is sensitive and responsive to the concerns, needs, and aspirations of northerners, while protecting the environment.

Providing jobs and opportunity

Because many of our operations are located in remote regions, the need to find and develop the skills we need and to source materials locally, where possible, benefits many communities where business and employment opportunities are limited. In 2011, over 50% of the employees at our northern Saskatchewan

mines were local residents, and we have successfully increased the number of northerners we've hired by 65% over the last seven years.

Through our Northern Preferred Supplier Program, we have purchased over \$1 billion in goods and services from local vendors and suppliers in northern Saskatchewan since 2004. In 2011, we had a record setting year, paying over \$390 million to northern businesses, who provided 74% of all services to our northern mines. Local sourcing is also prevalent at our operations in Ontario and Kazakhstan.

Investing in communities

We target community donations and investments in four areas that are key to community health and well-being: initiatives that support youth, health and wellness, education and literacy, and culture and recreation.

We donated over \$5 million to community initiatives in 2011. This included nearly \$1 million to the Japanese Red Cross following the earthquake and tsunami, \$35,000 to support community baseball for women and youth in Chadron, Nebraska, and \$100,000 to a community centre in Cobourg, Ontario (part of a multi-year commitment of \$250,000). We also contributed over \$1.3 million to northern and aboriginal initiatives in Saskatchewan and provided \$100,000 in scholarships to post-secondary students.

Employee giving

Cameco employees are actively engaged in giving back to their communities everywhere we operate. Through annual United Way giving campaigns in Canada and the US, employees have been able to raise \$4.2 million since 2004. Other volunteer efforts include fundraising for libraries and hospitals, Future Farmers of America (FFA) community improvement challenges, organizing backpacks and school supplies for children in need, and building homes through Habitat for Humanity.

Maintaining strong support

Polling data indicates strong earned public support for our operations in Canada and the US (about 78% on average). Port Hope ranked highest in our 2011 results, at 87% support. First-time polling in Australia indicated support at about 58%.

CASE STUDY

BUILDING INDIGENOUS SUPPORT IN AUSTRALIA

 [Read more case studies online](#)

Kintyre, an advanced exploration property in a remote area of Western Australia, is a uranium deposit that has potential to increase Cameco's future production. Kintyre is situated on the traditional lands of the Martu people. The Martu are the recognized native titleholders to the land and their consent is essential to developing the project.

Over the past three years, during the advanced exploration phases of the project, Cameco has been training and employing many local people and actively engaging the Martu to understand their community needs and their social and

environmental concerns. As a foreign owner of a potentially large-scale operation in a region where there has been opposition to uranium exploration and mining, Cameco has to earn the Indigenous community's support.

To help garner this support, Cameco's corporate social responsibility team invited a group of Martu to visit our operations in northern Saskatchewan. This visit demonstrated firsthand how we operate and gave Martu representatives a chance to speak with members of aboriginal communities that have been working with Cameco for over 20 years. Seeing a

well-established operation in person and speaking directly with aboriginal community members gave the Martu confidence in our responsible approach to mining and community development, including our commitments to safety, local hiring and procurement, and sound environmental stewardship.

Although a final development agreement has yet to be completed, we signed a preliminary, non-binding memorandum of understanding in 2011. This agreement acknowledges the Martu's support in principle for the proposed development.



Inkai reaches out to local university

In August 2011, Cameco and Nazarbayev University signed a memorandum of co-operation to help stock the university's library. Under the agreement, Cameco provided \$214,000 US for 1,000 books that have been delivered to the university.

Gold-level PAR



Cameco holds gold level certification for progressive aboriginal relations from the Canadian Council for Aboriginal Business (CCAB) and is the number one industrial employer of aboriginal people in Canada. We've also been recognized by the Purchasing Management Association of Canada (PMAC) for excellence in integrating aboriginal-owned and northern-based contractors into our supply chain.

Cameco holds gold level certification for progressive aboriginal relations from the

Looking ahead

We will continue to develop long-term relationships by engaging local stakeholders. We will seek to secure continued support from Indigenous and local communities, employees, government, regulators and the general public through communications, community investment, and workforce and business development.

OUTSTANDING FINANCIAL PERFORMANCE AND GOVERNANCE

Managing our responsibilities

Long-term financial stability and profitability are essential to our sustainability as a company, and to the support we can bring to the communities we operate in. We also firmly believe that sound governance is the foundation for strong corporate performance.



We report on seven measures of direct economic value and measure our financial performance against four indicators related to fines, sanctions and litigation. We also assess the effectiveness of our corporate governance using two third-party metrics.

Performance indicators

You will find full indicator data and three-year trend information in our [online sustainable development report](#).

Cameco's vision is to be a dominant nuclear energy company producing uranium fuel and generating clean electricity. Our strategy is to increase annual uranium production to 40 million pounds by 2018, and to invest in opportunities across the nuclear fuel cycle that complement and enhance our business.

Our continuing profitability depends on production growth and operating efficiency, as well as support from all of our stakeholders. We encourage our employees to help us achieve these goals by managing our operations effectively and by using innovative approaches to meet the challenges of the work we do.

Recognizing innovation

We make it a formal practice to recognize and reward innovation throughout our organization, because our business depends on it. The challenges of the work we do are considerable, and it is only through the combined efforts and creativity of employees across teams and the organization as a whole that we can continue to manage risk and profit responsibly.

Over the past two years, we have recognized two operations whose creative solutions to technical challenges have made it possible to protect the value of two of our biggest assets.

The McArthur River team, recipients of the 2011 Cameco Innovation Award, developed a ground freezing technique that maximizes production while minimizing the risk of costly inflows. The technique, which also reduces the amount of waste rock we generate and the amount of water we consume and treat, represents a significant cost savings and can be applied to other challenging deposits in the Athabasca Basin.

The Cigar Lake engineering team, recipients of our 2010 Innovation Award and the 2011 Exceptional Engineering/Geoscience Award from the Association of Professional Engineers and Geoscientists of Saskatchewan, were recognized for their innovative work to recover the Cigar Lake mine. Their creativity and dedication restored access to the world's largest undeveloped high-grade uranium deposit.

While neither of these teams worked alone, their contributions, combined with those of other specialists, exemplify the approach to work that underpins the way we do business at Cameco.

Minding the triple bottom line

Evaluating projects in a way that considers their environmental, social and financial impacts strengthens our business and our reputation. This approach is standard practice for all of our major projects at Cameco.

The Pembina Institute's Life Cycle Value Assessment (LCVA) process is a rigorous, systematic approach to analysis and decision making that takes a holistic look at financial, social and environmental risks and benefits. Because it considers more than economics alone, it helps us more effectively assess environmental and social impacts and risks and objectively considers concerns our stakeholders may have, leading to better business decisions and a more transparent decision-making process.

Our environmental leadership team facilitated the development and integration of the LCVA tool in 2008 and it has gradually gained wider acceptance and use in the organization, particularly in our major projects division. With LCVA, we are able to demonstrate that we've considered our investments carefully, with equal care and attention to all three aspects of the triple bottom line – something that is good for our relationships, our reputation and the long-term success of our business.

CASE STUDY

AWARDS OF EXCELLENCE

One of the ways we recognize outstanding performance and encourage continuous improvement is through our internal awards.

MARY-JEAN MITCHELL GREEN AWARD

Named for one of our original board members, this award (also known as the Chairman's Award) is Cameco's highest safety honour. It's given each year to the operating site with the best safety performance, recognizing the diligent effort required to operate safely every day while still meeting production targets.

CAMECO ENVIRONMENTAL LEADERSHIP AWARD (CELA)



Our CELA awards recognize people and projects that have helped raise the bar for environmental

performance and stewardship at Cameco. Recognition is given to both proven solutions and to early-stage projects or ideas that have promising potential. The CELA awards reinforce our commitment to manage and mitigate our environmental impacts and to continually improve.



CAMECO INNOVATION AWARD

The annual Cameco Innovation Award honours employees and teams that have implemented new solutions to existing opportunities that contribute directly to safety, environmental protection, sustainability or cost reduction. This important award acknowledges our employees' ongoing efforts to ensure long-term sustainability for Cameco through always seeking the best way to do our work.

 [Read more case studies online](#)

Cameco's Technology and Innovation teams

Innovation doesn't happen by accident. The dedicated scientists, engineers and technologists in our technology and innovation teams actively support projects and ongoing work across Cameco by finding practical solutions to challenging technical problems, like reducing contaminants from effluent and controlling air emissions and constituents of concern.

Their expertise, combined with the knowledge and experience of team members in the field, keeps us on track and ahead of the curve. They also support ongoing development of Cameco's workforce by partnering with universities, speaking at conferences and offering co-op and apprenticeship opportunities.

New supply from Finland

Cameco will soon be helping build, design and operate a uranium extraction circuit at the Sotkamo nickel-zinc mine in Finland. It is a cost-effective source of supply for Cameco, a home-grown source of fuel for Finland's reactors, and productive use of what would usually be a waste product for another industrial operator.

Top quartile governance

This year we ranked 12th out of more than 200 companies in the Globe and Mail's Board Games, an annual assessment of corporate governance practices, including board composition, shareholding and compensation practices, shareholder rights and disclosure. We have remained in the top quartile since 2007.

Looking ahead

We will continue to achieve financial stability and profitability by managing financial risk and by implementing measures that ensure sound governance.



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