



*Energizing a clean-air world*

2022  
ESG Report



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# Message From Our CEO

**I am pleased to share our 2022 Environmental, Social and Governance (ESG) Report. We take this opportunity to reflect on our performance from the previous year and communicate our targets for the year ahead. I hope these pages demonstrate how serious and committed we are to advancing our ESG performance at Cameco.**

In 2022, geopolitical events deepened concerns about energy security, and coupled with the ongoing focus on the climate crisis, created the conditions for what we believe is transformative change in the nuclear power industry and our business. Unrest in Kazakhstan at the beginning of 2022 raised concerns about the more than 40% of global uranium supply that originates from that country. However, it is the tragic ongoing Russia-Ukraine war that has not only brought about human suffering and societal upheaval but has resulted in economic impacts felt around the globe and a realignment in energy markets. This realignment is highlighting the increasingly important role for nuclear power not just in providing clean energy, but also providing secure and affordable energy. And, with the global nuclear industry reliant on Russian supplies for a significant portion of its uranium concentrates as well as conversion and enrichment services, it is highlighting the security of supply risk associated with the growing primary supply gap and shrinking secondary supplies with an increasing focus on origin of supply.

The uncertainty about where nuclear fuel supplies will come from to satisfy growing demand led to increased long-term contracting activity in 2022 and price increases across the nuclear fuel cycle. Notably, utilities' annual contracting activity is getting closer to the rate required to replace what is being consumed annually, which has not occurred in over a decade. Therefore, we expect there will be continued competition to secure uranium, conversion, and enrichment services under long-term contracts with proven producers and assets in geopolitically attractive jurisdictions, with strong ESG performance and on terms that will ensure the availability of reliable supply to satisfy demand.

In 2022, we began the restart of production at our McArthur River/Key Lake operations, which had been on care and maintenance since 2018. With the improvements in the market and in alignment with the significant long-term contracting success we had during the year, we updated our 2024 production plans, adding 3 million pounds (100% basis) at the McArthur River/Key Lake operations and 4.5 million pounds (100% basis) at the Cigar Lake mine. In addition, we increased our interest in our Cigar Lake mine from 50 to 54%. We also entered into a strategic partnership with Brookfield Renewable Partners to acquire Westinghouse Electric Company, a global provider of specialized technologies, products, and services across most phases of the nuclear power sector. I am excited about what all these opportunities will mean for our people, our local communities, and our shareholders.

Although global and company efforts are geared towards avoiding the most devastating consequences of climate change, extreme weather events continue to increase in frequency and to impact Western Canada. In 2022, Cameco deepened its understanding of potential climate-related risks to our business. We worked with third-party experts to conduct a detailed analysis of our exposure to climate hazards and to model the impacts of climate on our northern Saskatchewan operations. We plan to extend this analysis to our other sites in the next few years, validate our current mitigation plans, and develop mitigation plans across our operations.





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As decarbonization efforts are ramping up, the world continues to look for sources of clean energy. If countries and companies are serious about decarbonizing and realistic about the scale of their ambitions, I am convinced that nuclear energy must be part of the solution. While nuclear energy is already a reliable and zero-emissions energy source, Cameco wants to do more to help reduce emissions in the uranium value chain by working to reduce our own operational GHG emissions. As a milestone towards our long-term net-zero ambition, we have set a target to reduce our absolute Scope 1 and Scope 2 GHG emissions by 30% by 2030, from a 2015 base year. We are already investing in efficiency initiatives and will continue to look at new technologies that align with our decarbonization pathways.

Cameco continues to invest in our people by providing training to build skills and competencies. For example, to help employees develop their technology skills, we provide access to Cameco’s Digital Learning Centre, an online portal with a wide array of digital-themed courses, presentations, and podcasts from upskilling basic digital skills to software development. Cameco also continues to build capacity in northern Saskatchewan communities by providing training and work placements to local residents that enhance industry and digital knowledge.

I believe a company is nothing more than its people, and I continue to be proud of everything we have collectively achieved this past year. At the same time, I am disappointed that we did not meet all our safety targets. Although our safety performance has improved significantly over the last decade, we must focus on continuing to improve. We move forward with a renewed focus on safety. I am personally committed to reminding everyone at Cameco that “no job is so important that we cannot take the time to do it safely.”

Looking forward, I am excited about the growing momentum for nuclear energy and eager to see what we can accomplish together. I would like to thank our board of directors for their strong oversight and the trust and confidence shown as we take on new opportunities. I also want to welcome back so many of our rehired employees at McArthur River/Key Lake and thank all our employees who have chosen to join or stay with us over the last several years – your dedication continues to contribute to our vision of energizing a clean-air world.

**Tim Gitzel**  
President and Chief Executive Officer



LEFT

Tim Gitzel, with guest Scott Moe, Premier of Saskatchewan, visited McArthur River/Key Lake in 2022 as Cameco began restarting the world’s largest uranium operation.



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# 2022 ESG Highlights



30 by 30

We set a new target to reduce our Scope 1 and Scope 2 GHG emissions by 30% by 2030, from our 2015 base year.



Climate focus

We completed a physical risk assessment of our northern Saskatchewan operations.



Marked 10+ years of supporting the Eastern Athabasca sampling and testing program in collaboration with industry, government and communities.

10 years



Indigenous individuals comprised 50% of the workforce at our operations in northern Saskatchewan at the end of 2022.

50%



Effective and engaged board

An independent consultant undertook a board effectiveness assessment focused on board succession, renewal and refreshment.



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# Our ESG Targets



**To demonstrate our commitment to continual advancement, we set ESG targets and report on our progress each year.**



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# Looking Back: 2022 Scorecard

● Met    ● Made progress    ○ Did not meet

(→) Short-term incentive program (STIP) target. 50% of our STIP targets for employees, including executives, are tied to ESG performance measures.

All targets refer to year-end of the stated year.

## How We Performed Against Our ESG Targets

We set ESG targets to demonstrate our commitment to continual advancement. To provide transparency around our ESG performance and activities, we have developed the below scorecard (see the next two pages).

2022 TARGETS	STATUS	PROGRESS	READ MORE
<b>ENVIRONMENT</b>			
<b>Net-Zero Ambition</b>	→	Complete a low-carbon transition plan in 2022 that maps out our net-zero alignment and pathways.	● ● We completed our Low Carbon Transition Plan in Q4 2022. <a href="#">Page 47</a>
<b>Climate-Related</b>	●	<ul style="list-style-type: none"> <li>Conduct a third-party assessment of fire hazard and preparedness at our northern Saskatchewan operations.</li> <li>Engage a third-party expert to conduct physical risk assessments of our northern Saskatchewan operations.</li> <li>Complete a TCFD gap analysis.</li> </ul>	<ul style="list-style-type: none"> <li>The Saskatchewan Public Safety Agency (SPSA) assessed fire hazard and preparedness at each of our northern Saskatchewan operations.</li> <li>We completed a physical risk assessment for each of our four northern Saskatchewan operations. <a href="#">Page 32</a></li> </ul>
	●	<ul style="list-style-type: none"> <li>Develop an action plan to quantify Scope 3 emissions.</li> </ul>	<ul style="list-style-type: none"> <li>We engaged a third-party to assess alignment of our public disclosures with TCFD recommendations and developed an action plan to close gaps in the next few years.</li> <li>We completed a preliminary Scope 3 emissions estimate following GHG Protocol guidelines and expect to refine the calculation in 2023.</li> </ul>
<b>Northern Saskatchewan operations</b>	●	<ul style="list-style-type: none"> <li>Achieve at least a 5% reduction in GHG intensity by 2030.</li> </ul>	<ul style="list-style-type: none"> <li>GHG intensity of the mines operating in 2022 was approximately 8% lower than baseline.  <small>Note: This was a multi-year target, but it has been replaced with our new corporate target.</small></li> </ul> <a href="#">Page 48</a>
<b>Ontario Fuel Services Facilities</b>	●	<ul style="list-style-type: none"> <li>Develop a GHG reduction plan for our Ontario facilities that aligns with Ontario's new Emissions Performance Standard program and our Low Carbon Transition Plan (currently in development).</li> </ul>	<ul style="list-style-type: none"> <li>Our Low Carbon Transition Plan was finalized in 2022, which identifies reduction opportunities for the Ontario sites.  <small>Note: This target has been replaced with our new corporate target.</small></li> </ul> <a href="#">Page 47</a>
<b>Environmental Performance<sup>1</sup></b>	→	<ul style="list-style-type: none"> <li>Improve effluent discharge management at our Saskatchewan and Ontario operations by maintaining quality within regulatory limits, predicted environmental effects, and better than historically strong performance.</li> <li>Progress groundwater restoration in our US operations by advancing one mine unit into the stability monitoring stage, one mine unit begins reverse osmosis treatment, and 87 production wells are evaluated as clean.</li> </ul>	<ul style="list-style-type: none"> <li>Performance on our environmental targets was below the targeted range for some of our Saskatchewan and Ontario sites. <a href="#">Page 36</a></li> <li>Exceeded our annual targets, with one mine unit advancing to the stability stage, one mine unit beginning reverse osmosis treatment, and 109 production wells evaluated as clean.</li> </ul>
<b>Tailings Management</b>	●	<ul style="list-style-type: none"> <li>Adjust our tailings management system to achieve level A in all indicators<sup>2</sup> of the <a href="#">Mining Association of Canada's Towards Sustainable Mining Tailings Management Protocol</a> by 2022.</li> </ul>	<ul style="list-style-type: none"> <li>Audits of all active Cameco Tailings Management Facilities resulted in level A ratings in all indicators. <a href="#">Page 40</a></li> </ul>

<sup>1</sup> For STIP purposes, there is an overriding modifier: no payout on this measure if there is any incident that results in a moderate or significant environmental impact, current and future remediation costs of ≥ \$10 million, a significant environmental fine, or that has a reasonable potential to result in significant negative impact on the company's reputation with our major stakeholders.

<sup>2</sup> This target covers active tailings facilities.



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	2022 TARGETS	STATUS	PROGRESS	READ MORE
<b>SOCIAL</b>				
<b>Workplace Safety<sup>3</sup></b>	→ Achieve a total recordable injury rate (TRIR) of 0.99 or less.	○	<ul style="list-style-type: none"> <li>There were no incidents causing a fatality or permanent disability. Our 2022 TRIR was 1.96.</li> </ul>	<a href="#">Page 59</a>
	→ Achieve 100% completion rate of job task observations.	●	<ul style="list-style-type: none"> <li>We achieved 100% completion of job task observations.</li> </ul>	
	→ Complete implementation of a corporate ergonomic standard.	●	<ul style="list-style-type: none"> <li>We completed implementation of our corporate ergonomic standard and continue to progress work in this area.</li> </ul>	
<b>Indigenous and Community Relations</b>	<ul style="list-style-type: none"> <li>Maintain long-term downward trend in combined employee and contractor radiation doses.</li> </ul>	●	<ul style="list-style-type: none"> <li>Radiation doses to all workers are maintained well below regulatory limits. Over the last 10 years, average radiation doses have decreased.</li> </ul>	<a href="#">Page 62</a>
	→ Provide paid temporary work-placements for 12 RSNs, with a minimum of six positions provided to female RSNs, at our mining/milling operations.	●	<ul style="list-style-type: none"> <li>12 RSNs, six of whom were female, participated in our work placement program.</li> </ul>	<a href="#">Page 57</a>
	<ul style="list-style-type: none"> <li>Annually maintain, or increase, the procurement of services for our northern Saskatchewan operations from northern-owned local businesses (82% in 2021).</li> <li>Develop a rotational elder program for McArthur River / Key Lake from our three impact communities.</li> </ul>	○	<ul style="list-style-type: none"> <li>In 2022, 80% of services at northern Saskatchewan operations were procured from northern-owned local businesses, just slightly less when compared to 2021.</li> <li>We developed our Elder's Advisory Program, which will see Elders employed at each of our northern Saskatchewan operations starting in 2023.</li> </ul>	
<b>Inclusion and Diversity</b>	<ul style="list-style-type: none"> <li>Each year, strive for a complement of senior management who are women that, at a minimum, reflects the proportion of women in our workforce (25% of our workforce in 2021 were women).</li> </ul>	●	<ul style="list-style-type: none"> <li>Women represented 28% of our senior management in 2022.</li> </ul>	
	<ul style="list-style-type: none"> <li>For the restarts at McArthur River and Key Lake, strive for a 2022 year-end workforce that has representation of greater than 11% women and 48% Indigenous people, the 2017 pre-shutdown representation levels.</li> </ul>	●	<ul style="list-style-type: none"> <li>We achieved 15% women and 51% Indigenous representation at McArthur River and Key Lake (higher than the 2017 pre-shutdown levels).</li> </ul>	
<b>GOVERNANCE</b>				
<b>Board Diversity</b>	<ul style="list-style-type: none"> <li>At least 30% of board members are women (maintain annually).</li> <li>At least one director with Indigenous heritage (maintain annually).</li> </ul>	●	<ul style="list-style-type: none"> <li>Women held 33% of director positions on our Board in 2022.</li> <li>Of our current directors, one is Indigenous (11% of the total number of directors). Cameco has had Indigenous directors on our board since 1992.</li> </ul>	
		●		
<b>Conduct and Ethics</b>	<ul style="list-style-type: none"> <li>100% of all targeted and new employees to complete Code of Conduct and Ethics online training in 2022.</li> </ul>	●	<ul style="list-style-type: none"> <li>100% of new and existing employees completed Code of Conduct and Ethics training in 2022.</li> </ul>	
<b>Cybersecurity</b>	<ul style="list-style-type: none"> <li>100% of all employees complete the information security course (annually).</li> <li>Complete at least one internal audit on cybersecurity-related topics (annually).</li> </ul>	●	<ul style="list-style-type: none"> <li>100% of employees completed the information security course.</li> <li>Cameco completed three internal audits on cybersecurity-related topics.</li> </ul>	

<sup>3</sup> For STIP purposes, there is an overriding modifier: no payout on the safety measure if there is any fatality or permanent disability.





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# Looking Forward: ESG Targets



## Environment



### Net-Zero Ambition and 30 by 30 target

- As a milestone towards our long-term net-zero ambition, achieve a 30% absolute reduction in Cameco's combined Scope 1 and 2 emissions by 2030, from 2015 levels. This corporate target replaces our previous site-specific targets.



### Decarbonization pathways

- Develop tailored decarbonization pathways for operationally controlled sites.



### Scope 3

- Refine the calculations necessary to quantify our Scope 3 emissions profile.



### Climate-related physical risks

- Engage a third-party expert to conduct physical risk assessments of our Fuel Services Division's operations.

### Environmental Performance<sup>4</sup>

- Improve effluent discharge management at our Saskatchewan and Ontario operations by maintaining quality within regulatory limits and action levels, predicted environmental effects, and achieving historic benchmarks.
- Progress groundwater restoration at our US operations by:
  - Advancing two specified mine units into the stability monitoring stage
  - Developing and submitting to regulatory authorities Alternate Control Limits for one mine unit
  - Achieving clean evaluations for 87 production wells.

### Tailings Management

- Achieve Level A for all our tailings facilities<sup>5</sup> in all indicators of the Mining Association of Canada's Towards Sustainable Mining Tailings Management Protocol by 2023.



## Social

### Workplace Safety<sup>6</sup>

- Achieve a total recordable injury rate (TRIR) of 0.99 or less.
- Achieve a 100% completion rate of job task observations (2 per supervisor per month).
- Complete 100% of the target of 66 ergonomic assessments for workplaces that impact multiple individuals across the organization.
- Maintain radiation doses as low as reasonably achievable, social and economic factors taken into account (ALARA).

### Indigenous and Community Relations

- Provide 18 paid temporary work-placements for RSN, at least nine of which are female, at our mining/milling operations.
- Provide 10 apprentice positions, the majority of which are filled by residents from the Athabasca Basin and a minimum of five who are female RSN.
- Procure at least 80% of our services for our northern Saskatchewan operations from northern-owned local businesses.
- Implement a rotational elder program at our northern Saskatchewan operations.

### Inclusion and Diversity

- Each year, strive for a complement of senior management that reflects or surpasses the proportion of women in our workforce.



## Governance

### Board Diversity

- At least 30% of board members are women (maintain annually).
- At least one director with Indigenous heritage (maintain annually).

### Conduct and Ethics

- 100% of employees in certain functional areas and new employees to complete Code of Conduct and Ethics online training in 2023.

### Cybersecurity

- 100% of all employees complete the information security course (annually).
- Complete at least one internal audit on cybersecurity-related topics (annually).

All targets refer to year-end of 2023 with the exception of our 30 by 30 target that refers to year-end 2030.

(→) Indicates a short-term incentive program target. 50% of our short-term incentive targets for employees, including executives, are tied to ESG performance measures.



Targets marked with this symbol are climate-related.

<sup>4</sup> For STIP purposes, there is an overriding modifier: no payout on this measure if there is any incident that results in a moderate or significant environmental impact, current and future remediation costs of ≥ \$10 million, a significant environmental fine, or that has a reasonable potential to result in significant negative impact on the company's reputation with our major stakeholders.

<sup>5</sup> All facilities include active and inactive tailings facilities to reflect the changes in the TSM's Tailings Management Protocol.

<sup>6</sup> Overriding modifier: no payout on the safety measure if there is any fatality or permanent disability.



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# Overview

~32 million pounds/year  
our potential share of  
tier-one uranium supply

2,424  
employees

\$1.9 billion  
in revenue

**Cameco is one of the largest global providers of the uranium fuel needed to energize a clean-air world.**



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# About Cameco

Cameco is one of the largest global providers of the uranium fuel needed to **energize a clean-air world**. If we took advantage of all the tier-one expansion opportunities, our annual share<sup>7</sup> of tier-one supply could be about 32 million pounds of uranium concentrates, backed by 469 million pounds of proven and probable mineral reserves (our share<sup>8</sup>). See Cameco's [Proven and Probable Reserves webpage](#) for more information about reserves and resources. We are also a leading supplier of uranium refining, UO<sub>2</sub> and UF<sub>6</sub> conversion services, and CANDU fuel manufacturing for heavy water reactors.

Our competitive position is based on our controlling ownership of the world's largest high-grade uranium reserves and low-cost mining operations. Utilities around the world rely on our nuclear fuel products to generate safe, reliable, zero-emissions nuclear power. Together, we are meeting the ever-increasing demand for clean, baseload electricity while delivering safe, reliable solutions to today's clean-air crisis. Our shares trade on the Toronto Stock Exchange (TSX: CCO) and on the New York Stock Exchange (NYSE: CCJ). Our head office is located in Saskatoon, Saskatchewan.

## Vision

Energizing a clean-air world.

## Values

At Cameco, we are guided by four values that establish a framework for everything we do:

- Safety and Environment
- People
- Integrity
- Excellence

As the foundation of our culture, these values, and their aligning [value statements](#), define who we are as a company and are at the core of everything we do, helping to embed ESG principles and practices as we execute on our strategy in pursuit of our vision. We strive to create an environment where our employees live our values every day.



## Significant changes to our company or operations

- In 2022, we transitioned our McArthur River mine and Key Lake mill into production after being in care and maintenance since 2018.
- In October 2022, Cameco formed a strategic partnership with Brookfield Renewable Partners to acquire Westinghouse Electric Company. Westinghouse is a global provider of specialized technologies, products and services across most phases of the nuclear power sector. The proposed acquisition would support our customers' growing demand for reliable and secure nuclear fuel supplies and services that span the nuclear fuel cycle.

ABOVE

Cameco's corporate headquarters in Saskatoon, Saskatchewan.

<sup>7</sup> More than 55 million pounds on 100% basis

<sup>8</sup> 821 million pounds on 100% basis



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## Operations within the Nuclear Fuel Cycle

Our operations range from exploration and uranium mining to the manufacture of nuclear fuel. Utilities around the world rely on our nuclear fuel products to generate power in reliable and carbon-free nuclear reactors.



### 1 Uranium Mining and Milling

Uranium ore is mined and milled into yellowcake.

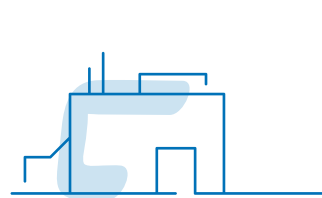
#### Underground Mines and Milling Operations

- Cigar Lake
- McArthur River
- Key Lake
- Rabbit Lake\*

#### In Situ Recovery Mine Operations

- Inkai (non-operated)
- Smith Ranch-Highland\*
- Crow Butte\*

**~32 million pounds/year**  
our potential share of tier-one uranium supply



### 2 Refining

Yellowcake is turned into high purity  $UO_3$ .

**18 million kg**  
of uranium capacity as  $UO_3$  per year



### 3 Uranium Conversion

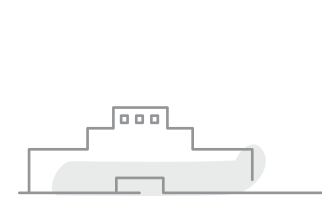
For heavy water reactors,  $UO_3$  is converted into  $UO_2$  powder.

$UO_2$  goes to our fuel manufacturing facilities (4b).

For light water reactors,  $UO_3$  is converted into  $UF_6$ .

$UF_6$  is shipped as a solid to an enrichment facility (4a).

**~21%**  
of the world's  $UF_6$  primary conversion capacity



### 4a For Light Water Reactors

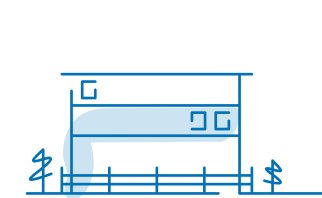
#### Enrichment

For light water reactors,  $UF_6$  is enriched to increase the amount of U-235. While Cameco does not commercially enrich uranium, it has a 49% interest in GLE, the exclusive licensee of a proprietary enrichment technology that is currently under development.

#### Fuel Manufacturing

Enriched  $UO_2$  powder is compressed into pellets, packed into fuel rods and assembled into fuel bundles.

Fuel bundles for light water reactors



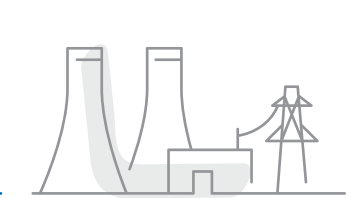
### 4b For Heavy Water Reactors

#### Fuel Manufacturing

$UO_2$  powder is compressed into pellets, which are packed into metal tubes called fuel rods. Fuel bundles are assembled using several fuel rods.

Fuel bundles for heavy water reactors

**1.65 million kg**  
as  $UO_2$  fuel pellets (licensed capacity)



### 5 Power Generator

Fuel bundles are used to make zero-emissions electricity.

Used fuel is stored safely or can be sent to be reprocessed.

\* Care and maintenance status

This process occurs at our Blind River refinery.

Both  $UO_2$  conversion and  $UF_6$  conversion occurs at our Port Hope conversion facility.

This process occurs at facilities not owned or operated by Cameco.

This process takes place at Cameco Fuel Manufacturing Inc. facilities located in Port Hope and Cobourg.

This process occurs at facilities not owned or operated by Cameco.



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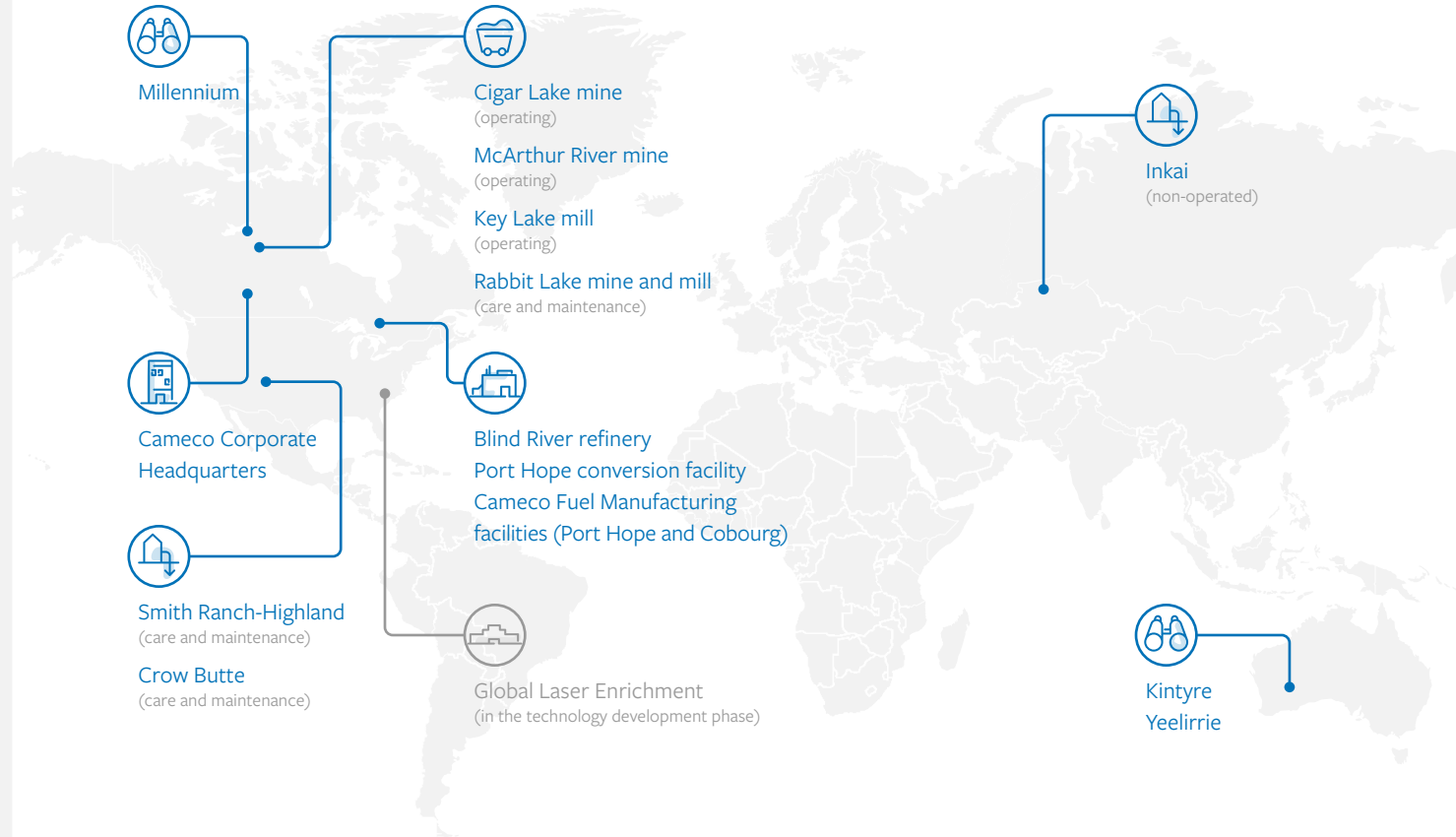
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## Our Locations

Our uranium assets are located on three continents – North America, Asia and Australia – and include a large portfolio of low-cost mining operations, extensive mineral reserves and resources, as well as exploration and development projects.



**Office**

**Exploration**

**Underground Mines**

**In Situ Recovery Mines**

**Fuel Services Division Facilities**

**Enrichment**

We mine high-grade deep in the ground using a variety of methods such as jet boring, blasthole stoping and raisebore mining.

We mine uranium deposits from the surface by pumping a mining solution underground to dissolve the uranium and collect it using a system of wells.

### LAND ACKNOWLEDGMENTS

We respectfully acknowledge the lands where Cameco operates. This includes:

#### Saskatchewan, Canada

Saskatoon corporate office is in Treaty 6 territory, the traditional territory of Cree Peoples, and the homeland of the Métis. Cigar Lake, Key Lake, Rabbit Lake, and McArthur River operations are in Treaty 10 territory, the traditional territory of the Dene and Cree Peoples, and the homeland of the Métis.

#### Ontario, Canada

Cobourg and Port Hope fuel services facilities are in the traditional territory of the Michi Saagiig and Chippewa Nations, collectively known as the Williams Treaties First Nations, which include: Curve Lake, Hiawatha, Alderville, Scugog Island, Rama, Beausoleil, and Georgina Island First Nations. Blind River operation is in the traditional lands of the Mississaugas and we recognize the Robinson-Huron Treaty of 1850.

#### South Dakota, US

Crow Butte operation is located in Nebraska about 48 kilometres from the southern boundary of the Oglala Sioux Tribe Pine Ridge reservation in South Dakota, the closest Indigenous community to the mine.

#### Wyoming, US

Smith Ranch-Highland operation is located about 242 kilometres from the Wind River reservation, home to Eastern Shoshone and Northern Arapaho Tribes, the closest Indigenous community to the mine.

#### Western Australia

Kintyre exploration project is in the East Pilbara region in a registered native title claim of the Martu People. Yeelirrie exploration project is in the native title claim of the Tjiwarl People.

We offer these acknowledgments to reaffirm our commitment and responsibility in building meaningful relationships and to improving our own understanding of local Indigenous Peoples and their cultures.



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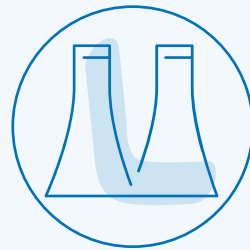
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## SPOTLIGHT

## Nuclear Power – A Central Part of the Clean Energy Transition

Cameco has been in the business of providing uranium fuel for over 30 years and is therefore poised to be an important part of the energy transition. Backed by years of safe performance, we continue to operate under stringent regulatory standards. At Cameco, we believe our tier-one reserves and fuel services business can safely provide the uranium fuel the world needs. We enable emissions reductions that can be achieved through nuclear power and are committed to reducing our own low GHG emissions footprint in our ambition to reach net-zero.

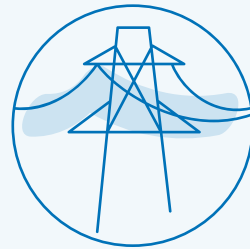
Nuclear power provides about 10% of global electricity generation<sup>9</sup>. We believe nuclear energy must continue to be a central part of the solution to the world's shift to a low-carbon, climate resilient economy. It is an option that can provide the necessary power in a reliable and affordable manner, and in a way that will help avoid some of the worst consequences of climate change. A few of the benefits that make nuclear energy an important element of the energy transition are:



Nuclear reactors emit no GHGs or other air pollutants during operation.



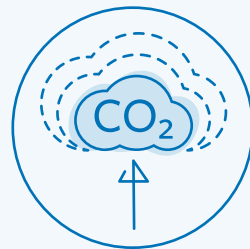
Uranium can be exported from supplying countries to countries with lower access to energy resources. Not all forms of energy can be moved, and some are dependent on nature.



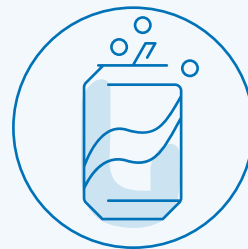
Nuclear power has the added advantage of providing stable baseload power and not being intermittent.



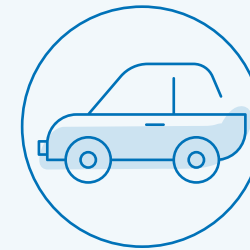
Nuclear power is the only energy technology for which there is international oversight at the United Nations (by the International Atomic Energy Agency). The stringent monitoring and regulation at the national level along with international oversight contribute to making nuclear power generation a safe energy technology.



On a lifecycle basis, nuclear power emits just a few grams<sup>10</sup> of CO<sub>2</sub> equivalents per kWh of electricity produced, similar to solar and wind power.



If nuclear energy supplied the electricity needs during a person's full lifetime, the used fuel waste would fit inside a pop can<sup>11</sup>.



### Enabled Emission Reductions

estimate between  
~78 and 131  
million cars off the road

The uranium Cameco sold in 2022 has the potential to fuel the generation of about 523,000 GWh. Generating that amount of electricity from zero-emissions nuclear power instead of natural gas or coal-fired power is equivalent to taking 78-131 million cars off the road<sup>12</sup> for one year (256-428 million tonnes of CO<sub>2</sub>e).

1 kg  
natural uranium

Following enrichment and used for power generation in light water reactors can generate<sup>12</sup>:

45,000 kWh of electricity

This corresponds to:

~10,000 kg of oil

~14,000 kg of coal

<sup>9</sup> <https://www.iea.org/reports/nuclear-electricity>

<sup>10</sup> United Nations Economic Commission for Europe (2021). Lifecycle Assessment of Electricity Generating Options. Document

<sup>11</sup> <https://cna.ca/2019/06/25/your-lifetime-used-fuel-would-fit-in-a-soda-can-want-proof/>

<sup>12</sup> Fuel equivalencies from <https://www.euronuclear.org/glossary/fuel-comparison/>  
Car equivalencies calculated using Natural Resources Canada calculator  
<https://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/calculator/ghg-calculator.cfm#results>



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# About this Report

## Our Approach to ESG Reporting

At Cameco, we are committed to transparency and hold ourselves accountable for quality reporting on ESG matters to our providers of capital, customers, employees, regulators, local Indigenous Peoples, communities around our operations, and other stakeholders. For over 15 years, we have disclosed our ESG performance through an extensive range of environment, safety, social, economic and governance indicators.

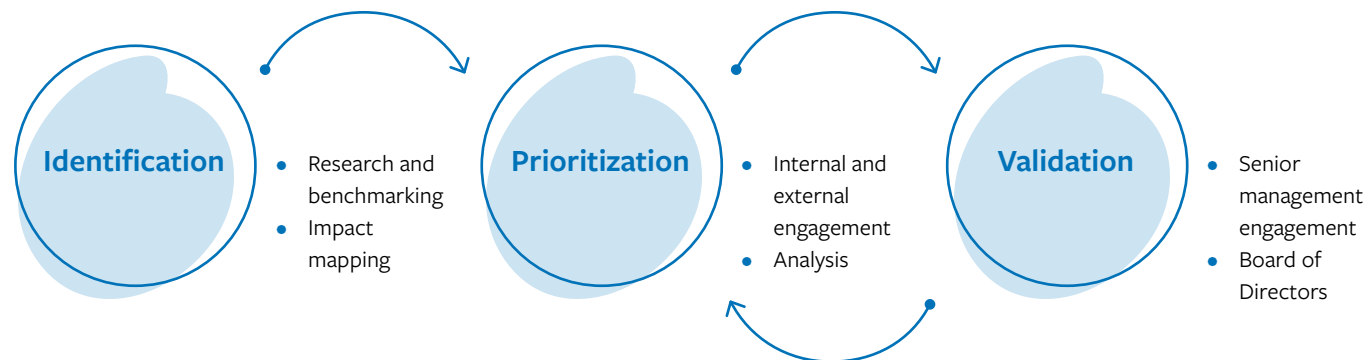
As part of our effort to continually evolve the robustness of our sustainability commitments and communications, generally we align our ESG performance indicators with those recommended by the Sustainability Accounting Standards Board (SASB). We have also included a section in this report that addresses our response to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

## ESG Materiality Assessment

Materiality for the purposes of this report is different than how we address materiality for disclosure requirements under securities laws. The three steps of our materiality assessment are illustrated in the graphic below.

The first step in our materiality assessment process consists of reviewing stakeholder requests, examining our previous sustainability materiality assessments as well as the ESG topics of our peer companies, considering SASB and TCFD recommendations, cross checking with our identified company risks, and excluding non-relevant topics based on location, sector, or specific business model. The second step is a workshop where the list of ESG-related topics relevant to Cameco were prioritized according to their importance to our stakeholders and to Cameco's business and strategy. The final step is a review and validation exercise by our executive team and board of directors. We conducted the first step in 2020 and we conduct the second and third step annually. The latest review by executives, in early 2023, resulted in elevating biodiversity into our list of priority ESG topics. Although biodiversity is not expected to have a material impact on Cameco's performance, we recognize the importance of addressing these concerns for our stakeholders.

Cameco's priority ESG topics are listed at right (in alphabetical order). The list continues to evolve every year. In addition to our priority topics below, we have included throughout this report other ESG topics of interest to our investors and stakeholders.



## Priority ESG Topics

### Environment

- Air quality
- Biodiversity/land
- Decommissioning /closure
- GHG emissions and energy use
- Physical impacts of climate
- Tailings management
- Transition to a low-carbon economy
- Waste
- Water

### Social

- Inclusion and diversity
- Occupational safety and health
- Product and transportation safety
- Public safety
- Relationships with Indigenous Peoples and local communities

### Governance

- Business ethics and integrity
- Corporate governance
- Cybersecurity
- Tax transparency

This report includes other ESG topics of interest to us, our investors and stakeholders.



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## Scope of this Report

This report communicates the ESG initiatives and key metrics that demonstrate Cameco's progress to date and our commitment to continual advancement.

- The terms Cameco, our, we, us, the company, and the organization, refer to Cameco Corporation and its wholly-owned subsidiaries.
- The term executives refers to Cameco's CEO and officers of the company.
- The term senior management refers to Cameco's executives and vice-presidents.
- The term management includes select professional and supervisory positions, and all manager positions and above.
- Unless otherwise indicated, this report covers data and qualitative information for the year-ended December 31, 2022. When available, historical data is provided for 2020 and 2021.
- For all of our targets, the date stated indicates by year-end of the stated year. For example, completing an activity "by 2023", means completion "by the end of 2023".

- Our reported environmental and social performance covers all Cameco operated facilities and is reported on an operational control basis (100% of operated facilities) with the following exceptions:
  - Indicators that report the percentage of proven and probable reserves with a specific attribute are based on Cameco's share of proven and probable reserves.
  - Production of U<sub>3</sub>O<sub>8</sub> is reported as Cameco's share of production with the exclusion of our joint venture (JV) in Kazakhstan (Inkai mine), unless otherwise indicated.
  - Direct economic value is reported based on revenue generated by Cameco.
  - Air emissions are reported for operated facilities in Canada only.
  - GHG emissions are reported using two methods: operational control and equity share approach. Under the equity share approach, we have adjusted the GHG emissions reported to align with our financial ownership: specifically, 69.805% of McArthur River mine, 83.333% of Key Lake mill, 54.547% of Cigar Lake mine, and we have included 40% of GHG emissions from JV Inkai.
- Unless noted, financial data is in Canadian dollars, and environmental and production data are in metric units.
- The accuracy and transparency of this report is important to our company. Report content and performance indicators have been reviewed by executives and relevant technical authorities within Cameco. PricewaterhouseCoopers LLP (PwC) has performed a limited assurance engagement for a select number of Cameco Corporation's performance indicators disclosed within this report. You can read more about the scope of PwC's work, including the select performance indicators and data in scope of the assurance, on [page 95](#).

## Aligning with ESG Reporting Standards

We cross-reference our disclosures in this report to the following recognized standards:

[SASB](#) \_\_\_\_\_ 93

[TCFD](#) \_\_\_\_\_ 17-33

Read our caution regarding forward-looking statements on the inside back cover of this report.

In addition to this ESG report, Cameco publishes operation-specific environmental and social performance on local websites. Please visit these websites for more information on specific operations:

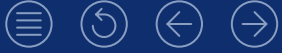
[Cameco Northern Saskatchewan](#)  
[cameconorth.com](http://cameconorth.com)

[Cameco Fuel Services](#)  
[camecofuel.com](http://camecofuel.com)

[Cameco Resources](#)  
[camecoresources.com](http://camecoresources.com)

[Cameco Australia](#)  
[camecoaustralia.com](http://camecoaustralia.com)





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# TCFD

## Task Force on Climate-Related Financial Disclosures



**This section is intended to help investors and other stakeholders understand how we integrate climate-related risks and opportunities into our governance, strategy, risk management, and metric and target-setting processes.**



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# Our Responses to the TCFD Recommendations

We have prepared this section of the report to outline our responses to recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD). This content is intended to help investors and other stakeholders understand how we integrate climate-related risks and opportunities (including physical and transition-related ones) into our governance, strategy, risk management, and metric and target-setting processes. At Cameco, we recognize the critical nature of the fight against climate change, and want our workers, customers, investors and community partners near our operations to know we are fully committed to being an active and constructive partner in addressing this challenge.

This is the third time we have reported in alignment with the TCFD recommendations. Climate-related disclosures have been integrated throughout this report and other disclosure documents such as our [management's discussion and analysis \(MD&A\)](#) and [annual information form](#). We identify material risks to our business operations, revenue, or expenditures in our [annual report](#) and [annual information form](#).



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Nuclear power provides [about 10%](#) of global electricity generation.



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# I. Governance

## Board Oversight of Climate-related Risks and Opportunities

We believe that sound governance is the foundation for strong corporate performance in all areas of our business (see [page 73](#) for information on corporate governance). Within Cameco, our board of directors holds the highest level of oversight for our business strategy and strategic risks and opportunities. Our board of directors is responsible for overseeing the management of our strategy and business affairs. Specific committees of the board oversee different risks and opportunities.

Cameco's board recognizes that climate-related risks and opportunities must be characterized and addressed appropriately. Cameco's board has deep experience in risk management and is continuing to advance their understanding of climate-related risks. The Safety Health and Environment (SHE) committee of the board assists the board in fulfilling its ESG oversight responsibilities. The SHE committee is responsible for overseeing risks related to its mandate, including those posed by changing climate conditions and economic transition, operational and value chain energy and greenhouse gas (GHG) emissions management, and climate change-related policy and regulation. Read more on Governance for ESG matters on [page 74](#) of this report.

Today, individual climate-related risks and opportunities are considered by the board, or within the various board committees, such as the SHE committee, on a quarterly basis as part of our Risk Management Program and annual reporting processes.

Examples of climate-related topics that have been discussed and reviewed are listed below:

- Potential impacts to assets, operations, and workers resulting from shifts in temperature, precipitation, and more frequent and extreme weather events.
- Regulatory risks related to GHG pricing and mandatory changes to electricity, fuels, and transportation systems.
- Sustainable financing taxonomies and tools in Canada and worldwide.
- Cameco's role as a supplier of choice and in advocating for nuclear energy as a central part of achieving a net-zero economy in a world with increasing electricity demand.

- Our approach to maintaining integrity and transparency throughout our climate action, target setting, and disclosure actions in order to manage climate-related legal risks.

### Enhancing Climate Competencies

In 2022, members of the board and Cameco's executives participated in climate-focused education sessions presented by a third-party expert. The sessions discussed global climate action trends across decarbonization, climate risk management and regulation. Session attendees also participated in a pre-work survey. Findings from the survey informed Cameco's climate ambition and our approach to climate action target setting.



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Our executives regularly report to the board and its committees on risks, which include any identified climate-related risks and opportunities.



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## Management's Role in Assessing and Managing Climate-related Risks and Opportunities

Our executives work with leaders and experts across the company to better understand and manage climate-related risks and opportunities. The chart to the right illustrates how climate-related information flows between groups with climate-related responsibilities across Cameco. Our climate governance includes:

**Executives** – Our executives provide strategic and operational leadership and take a proactive approach to managing risk across the company. As part of our Risk Management Program, our executives regularly report to the board and its committees on risks, which include any identified climate-related risks and opportunities. Our executives:

- Are responsible for preparing the company's disclosures of the major risks faced by the company.
- Receive regular updates from Cameco's climate change team on topics including climate governance, performance reporting, policy and regulation, energy and emissions management, climate risk management and adaptation.
- Approved Cameco's Low Carbon Transition Plan, establishing new climate action targets for our organization (see [page 33](#) for Metrics and Targets details)

One of our executives, the Senior Vice-President and Chief Corporate Officer, is ultimately responsible for development and delivery of our overarching climate change strategy.

**ESG steering committee** – The focus of this committee is on disclosure of all environmental, social and governance topics, including climate. The ESG steering committee reports directly to our executives.

**Climate transition working group** – The climate transition working group is an interdisciplinary group with representatives from safety, environment, finance, corporate strategy, marketing, risk management, technical services, operations, and asset management. The climate transition working group is chaired by the Manager, Climate Change, and engaged in target setting, developing decarbonization strategies for our operations and value chain, preparing Cameco for the transition to a low-carbon economy, and proactively managing climate-related risks.

**Climate change team** – In 2022, we established an internal climate change team responsible for climate-related trend research, climate strategy and deliverable development, and performance reporting. The climate change team is led by the Director, Climate Change, Environmental Affairs and Geo-environmental Engineering, as part of the larger Safety Health Environment Quality and Regulatory Relations (SHEQ&RR) business unit under the Vice-President, SHEQ&RR.





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## II. Risk Management

Cameco is aware of the increasing risk changing climate conditions can create for our operations and value chain. We have, currently and historically, identified and managed risks posed by acute physical climate events (e.g., wildfire and flooding) and chronic changes in climate patterns (e.g., temperature and precipitation), as well as risks posed by changes in regulations or policy. Some of the elements of our risk management processes that focus on climate-related risks are:

### Climate Risk Identification

Each year, as part of our Risk Management Program (RMP), we identify a variety of risks to our business and our assets, including risks related to changes in applicable laws and regulations, and changes to the environment that affect our activities. To complement our mature and long-standing RMP, in 2022, we developed a formal process to identify physical climate risks. The process was informed by Cameco's RMP, and two external resources: the Mining Association of Canada (MAC) *Guide on Climate Change Adaptation for the Mining Sector* and the International Council on Mining and Metals (ICMM) *Adapting to a Changing Climate: Building Resilience in the Mining and Metals Industry*. During the year, we applied the process to all our northern Saskatchewan operations (see [page 32](#) for details). To continue this work, Cameco set a target to invest annually in projects that continue to enhance our understanding of climate-related physical risks and plan to complete a climate scenario-based risk assessment at all our majority owned and operated facilities over the next five years<sup>13</sup>.



### Risk Assessment

We use a common risk matrix throughout the company to assess all risks to our business. Using the risk matrix, risk owners determine the likelihood and consequences of the identified risk by examining the effect that the risk may have on our four corporate measures of success: safe, healthy and rewarding workplace; clean environment; supportive communities; and outstanding financial performance. Once assessed, risks are then prioritized based on their likelihood, anticipated severity, anticipated time horizon of the risk, and the level of strategic impact.

Risks at the enterprise level are categorized as:

**Functional risks** – Risks that are considered preventable, and are identifiable and quantifiable, with little to no direct strategic benefit.

**Tactical risks** – Risks that could threaten Cameco's medium-term objectives. They may be external, and outcomes are identifiable, but uncertainty makes them difficult to assess. Climate-related risks are considered a tactical enterprise risk at Cameco.

**Strategic risks** – Risks that threaten the key assumptions of our strategy. They are almost always external, and outcomes can vary and are difficult to quantify.

<sup>13</sup> Within this target statement "over the next five years" refers to the period inclusive of January 1, 2022 to December 31, 2026. Majority owned and operated facilities include Cigar Lake mine, McArthur River mine, Key Lake mill, Rabbit Lake mine and mill, Blind River refinery, Port Hope conversion facility, Cameco Fuel Manufacturing facilities (Port Hope and Coburg), Smith Ranch-Highland, and Crow Butte sites.



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## Monitoring and Reporting

We continually update our risk profile by performing regular monitoring of risks across the organization. Regular monitoring helps us to properly manage risks and identify any new risks. Detailed risk reporting is provided on a quarterly basis to executives and the board on the status of the mitigating and/or monitoring plans for all enterprise risks. Management also reviews monthly updates on the company's progress in managing these risks. In 2023, we are focused on defining a process for appropriate long-term monitoring and management of climate-related physical risks.

## Risk Management

On an annual basis, we complete an organization-wide risk review, which includes an evaluation of the effectiveness of mitigating controls and action plans, and the identification of new or emerging risks. Any risk that has the potential to significantly affect our ability to achieve our corporate objectives or strategic plan is considered an enterprise risk and is brought to the attention of executives and the board. We describe our risk management activities, specific to each transition-related or physical risks on [pages 28 to 31](#).

## Climate Risk Integration

Our formal RMP applies to all risks facing the company, including climate-related risks. The RMP is designed to identify and monitor significant risks that may impact our business, strategic goals, and objectives. Our RMP is based on the ISO 31000 Risk Management guidelines. ISO 31000 provides guidance on risk management activities with internationally recognized practices and provides sound principles for effective management and governance of risks. In 2021, climate change – physical and transitional risks impacting our financial performance or our reputation – was added as an enterprise risk owned by the Senior Vice-President and Chief Corporate Officer.

In 2022, we expanded our understanding of climate change risk and identified how climate change could impact all of our measures of success. Findings from the 2022 climate physical risk assessment are used within the risk assessment and reporting processes of our overarching RMP as outlined above and also inform decision making regarding additional risk management practice implementation and climate adaptation actions where necessary.

In 2022, to further integrate a climate change lens into existing business practices:

- We integrated a climate action factor into the prioritization criteria and review method used by Cameco's internal Capital Allocation Committee to evaluate improvement projects. The climate action factor is a scaled score for projects that demonstrate GHG emission reduction potential. This enhancement helps ensure potential projects put forward to support the achievement of Cameco's climate targets receive appropriate funding consideration.
- We updated our Life of Asset (LOA) plans to include projected carbon compliance costs for operations subject to an output-based performance system. Carbon pricing liabilities within LOA plans will be reviewed and revised during the regular LOA update cycle to help ensure accurate projections are included as part of long-term strategic and financial performance planning.
- Our climate change team established a process to support replies to customer and/or investor related climate action and general ESG performance surveys. This process identifies a lead for all responses and uses a dedicated online collaboration site to enable effective and efficient input directly from all impacted business units.

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Identifying the potential impact of climate-related risks, such as wildfires, is an important part of our overall risk management practices. Pictured wildfires near our Cigar Lake operations in 2021.





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## III. Strategy

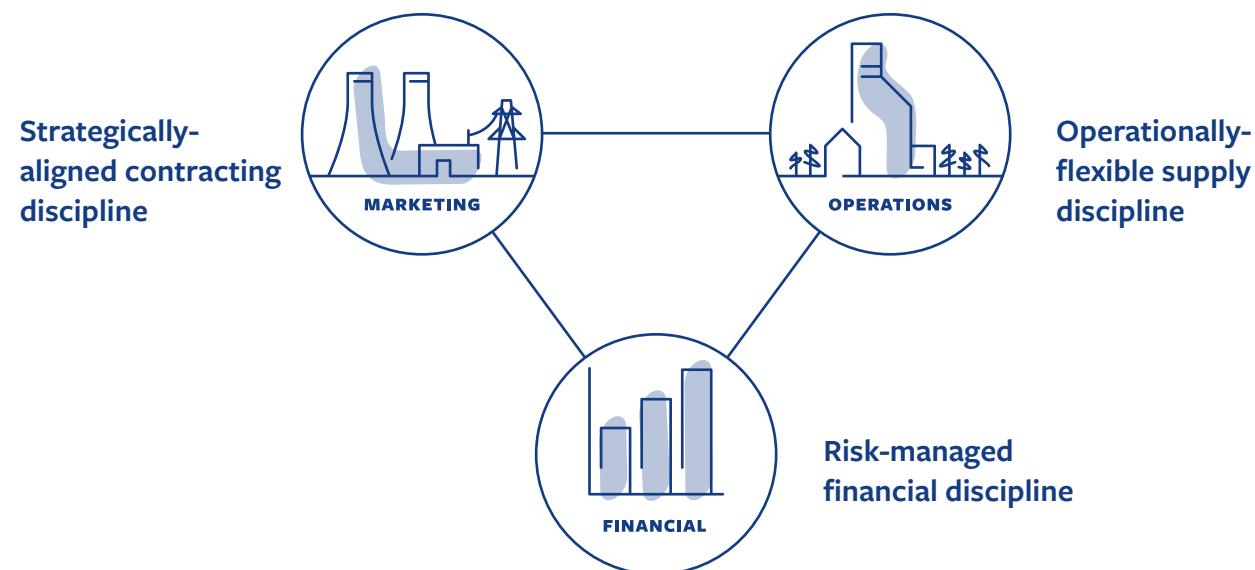
### Our Strategy: Transition Aligned and Resilient

Cameco is a pure-play investment in the growing demand for nuclear energy. We are focused on providing nuclear fuel products and services across the fuel cycle to support the generation of clean, reliable, secure and affordable energy, and on taking advantage of the long-term growth we see coming in our industry.

Cameco's business strategy (see graphic on the right) is to capture full-cycle value by remaining disciplined in our contracting activity, adjusting production to align with commitments under our long-term contract portfolio, and being financially disciplined to allow us to explore other emerging opportunities and to self-manage risk. Our strategy is set within the context of what we believe is a transitioning market environment. In 2022, geopolitical events deepened concerns about energy security and coupled with the ongoing focus on the climate crisis created the conditions for what we believe is transformative change in the nuclear power industry and our business. During 2022, we continued to manage risk and take advantage of opportunities that we believe will add significant long-term value for Cameco. A few notable examples of our actions include:

- ✓ We added 80 million pounds to our portfolio of long-term uranium contracts, with deliveries spanning more than a decade and many of which contain market-related pricing mechanisms.
- ✓ With the improvements in the market, our long-term contract portfolio, and a pipeline of contracting discussions, we began the restart process for our McArthur River mine and Key Lake mill, which had been in care and maintenance since 2018. Starting in 2024, we plan to produce 18 million pounds per year (100% basis) from these operations.

### Cameco's Strategy



- ✓ We announced the acquisition of a greater share in the Cigar Lake mine, increasing our ownership to 54.5% (from 50%).
- ✓ We entered into a strategic partnership with Brookfield Renewable Partners and its institutional partners (Brookfield Renewable) to acquire 100% of Westinghouse Electric Company (Westinghouse), a global provider of specialized technologies, products and services across most phases of the nuclear power sector. Once the transaction closes, we will beneficially own 49% of Westinghouse.

We believe our strategy positions us well to take advantage of the opportunities we anticipate will arise as part of the energy transition and our disciplined approach provides us with the tools needed to help manage and respond to the uncertainties it may create. Read more about our strategy and these 2022 activities in pages 24-31 of our most recent [Annual Report](#).

### Evaluating Resilience Under Different Transition Scenarios

There are multiple initiatives underway globally, including in Canada, that recognize the need to advance nuclear power as part of the transition to decarbonize the energy sector. We completed a transition scenario analysis in 2022, using the *World Energy Outlook 2022*. Nuclear energy is put forward in all three evaluated transition scenarios as a growing source of supply for non-emitting electricity. Read more about work related to transition scenarios on the next page.



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## Transition Scenarios

At Cameco, we believe that maintaining and growing emissions-free nuclear power must remain a central part of many countries', including Canada's, credible plans to achieving their commitments under the Paris Agreement. In 2022, we completed a qualitative transition scenario analysis, using the International Energy Agency's World Energy Outlook 2022. We examined three scenarios:

- **The Stated Policies Scenario (STEPS)** explores how the energy system may evolve if current policies are maintained, including recent developments adopted by governments around the world (e.g., Inflation Reduction Act in the United States), without assuming aspirational or economy-wide targets are met unless they are backed up with sufficiently credible action plans.

- **The Announced Pledges Scenario (APS)** illustrates what could occur within the energy system if all existing targets made by governments worldwide are achieved in full and on time (e.g., Nationally Determined Contributions under the Paris Agreement and longer-term net-zero).
- **The Net Zero by 2050 (NZE)** describes changes required in the energy system to ensure global warming is limited to 1.5°C are presented.

All scenarios examined projected demand growth for non-emitting electricity as part of the transition to a low-carbon economy. All scenarios project an increase in nuclear power supply as part of the non-emitting electricity mix.

## Learnings from Transition Scenarios

Findings from the analysis highlighted growth in demand for non-emitting baseload nuclear power as part of global shifts to decarbonizing energy and growing electrification. These findings are consistent with the trends we are seeing unfold currently across our industry. Cameco has taken action to seize opportunities (read more on [pages 25-26](#)) we see coming for the nuclear industry while acting in alignment with our vision and core values.

IEA SCENARIOS	STEPS	APS	NZE
<b>Increase in temperature by 2100<sup>14</sup></b>	2.6 degrees	2.1 degrees	1.4 degrees
<b>Increase demand for electricity by 2050</b>	↑75% compared to 2021	↑120% compared to 2021	↑150% compared to 2021
<b>Global electricity supply by 2050</b> (from 24,700 terawatt-hours in 2021)	>49,800 TWh	>61,200 TWh	>73,200 TWh
<b>Key considerations around electricity</b>	Significant growth in electricity demand across all scenarios is driven by: <ul style="list-style-type: none"> <li>• Electrification of transportation, building heating and cooling, and industrial processes in advanced economies</li> <li>• Increasing electrical demand in developing economies via growing populations and incomes</li> <li>• 2035 advanced economies reach net-zero emissions in the electricity sector, 2040 global net-zero emissions in the electricity sector reached</li> </ul>		
<b>Projected nuclear power supply by 2050</b> (from 2,776 TWh in 2021)	~4,200 TWh	~5,100 TWh	~5,800 TWh
<b>Important considerations around nuclear</b>	<ul style="list-style-type: none"> <li>• Increased nuclear power generation by 2030, with China as the largest contributor to the increase in nuclear demand</li> <li>• Nuclear growth relies on decisions to extend the lifetime of existing reactors and success of programs to build new reactors</li> </ul>	<ul style="list-style-type: none"> <li>• The United States achieves its ambition of net-zero emissions in the electricity sector by 2035 through faster deployment of renewables, carbon capture, hydrogen and ammonia, and an expansion of nuclear power including small modular reactors (SMRs), investments unlocked through the Inflation Reduction Act</li> </ul>	<ul style="list-style-type: none"> <li>• Annual nuclear capacity additions to 2050 are nearly four times higher than their recent historical average</li> <li>• Widespread reactor lifetime extensions in advanced economies and deployment of new innovative SMRs occur</li> </ul>

<sup>14</sup> International Energy Agency (2021) World Energy Outlook. [Scenario trajectories and temperature outcomes.](#)





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## Transition-Related Opportunities

As a nuclear fuel provider, we believe that increasing demand for clean electricity driven by transportation electrification and increasingly ambitious climate goals will bring significant opportunities for our company. Cameco is well positioned to take advantage of the following opportunities:

### TRANSITION-RELATED OPPORTUNITIES

### HOW IS CAMECO POSITIONED TO TAKE ADVANTAGE OF IT?

#### Rising Demand for Electricity

As electrification of the world's energy system continues, global demand for electricity is expected to increase by about 75%<sup>15</sup> by 2050 from 2021 levels.

We expect our uranium mining and fuel services activities to continue to support the increasing demand for carbon-free baseload electricity in the years to come.

Cameco is a member of Electrifying Canada, a private sector-led initiative to create an actionable framework to electrify a large portion of the Canadian economy.

#### Increased Uptake of Net-Zero Goals

Many countries and companies recognize that to achieve the ambition of the Paris Agreement, net-zero emissions will need to be reached by 2050 or sooner. The United Nations Net Zero Coalition notes that in 2022, more than 70 countries and 3,000 businesses worldwide had committed to reaching net-zero emissions.

We produce and supply uranium fuel, a low-carbon fuel for clean-air nuclear power generation. Cameco has been in the business of providing this critical fuel for over 30 years and is poised to be an important part of the solution as countries and companies work to meet their net-zero goals.

#### Uranium Considered an Important Mineral to Support the Energy Transition

In 2022, the Government of Canada published a Critical Minerals Strategy aimed at increasing the supply of responsibly sourced critical minerals, including uranium, and supporting the development of domestic and global value chains for the green and digital economy.

We are one of the largest global providers of uranium. If we took advantage of all tier-one expansion opportunities, our annual share of tier-one supply could be about 32 million pounds of uranium concentrates.



ABOVE

**Demand for electricity is increasing globally, driven by rapid technology adoption, transportation electrification in advanced economies and rising standards of living in emerging economies.**

<sup>15</sup> IEA World Energy Outlook 2022. Stated Policies Scenario. <https://iea.blob.core.windows.net/assets/830fe099-5530-48f2-a7c1-11f35d510983/WorldEnergyOutlook2022.pdf>



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**TRANSITION-RELATED OPPORTUNITIES****Support for Nuclear Energy as Part of the Energy Transition**

We are seeing an increasing number of government and corporate announcements indicating growing support for nuclear energy, including:

**Renewed Commitment to Nuclear Energy**

Energy security concerns (arising from the recent energy crisis being experienced in some parts of the world and amplified by geopolitical uncertainty) have motivated recent announcements in support of nuclear energy.

**Need for Life Extension of Aging Nuclear Reactors**

As part of the energy transition, power producers and countries are considering life extensions for existing nuclear reactors. As power producers extend the operating lives of their reactors to 60 years, we expect to see increased demand for component updates and refurbishment services, in addition to increased demand for nuclear fuel.

**Support for Small Nuclear Reactors**

There is increasing support for small modular reactor (SMR) technology, especially in Canada with the release of plans, programs and funding specifically targeted at providing resources for the development of SMR technology.

**Inclusion of Nuclear of Energy in Green Taxonomies**

Inclusion of nuclear energy as part of some recently published green taxonomies demonstrates the rise in recent support for nuclear energy. One important example, in 2022, the European Parliament voted to keep nuclear power in the European Union's sustainable finance taxonomy as a "transitional green investment," which indicates that it will help mitigate climate change but cannot yet be replaced by economically and technologically feasible low-carbon alternatives.

For details on announcements that illustrate the growing support for nuclear energy, see the next page.

**HOW IS CAMECO POSITIONED TO TAKE ADVANTAGE OF IT?**

Leveraging the assets and specialized skills of our fuel services division, we have been actively securing new contracts for reactor components to support the refurbishment of Canadian nuclear reactors.

To align with our contract portfolio and customer needs, we restarted production at our McArthur River mine and Key Lake mill aiming to produce 18 million pounds in 2024.

In 2022, we formed a strategic partnership with Brookfield Renewable Partners to acquire Westinghouse Electric Company, a global provider of specialized technologies, products and services across most phases of the nuclear power sector. The pending acquisition, if finalized, is expected to allow us to further participate in and support the growing momentum for nuclear energy.

We are well positioned to provide fuel for SMRs. The size of the market opportunity will depend on which specific SMR designs achieve commercialization, how many units are deployed, and other factors.

We continue to monitor developments in SMR technology and engage directly. For example, we have MOUs in place with several companies to explore areas of cooperation to advance the commercialization and deployment of SMRs.

We participate directly and through industry associations to support the development and deployment of SMR technology in Saskatchewan and around the world.





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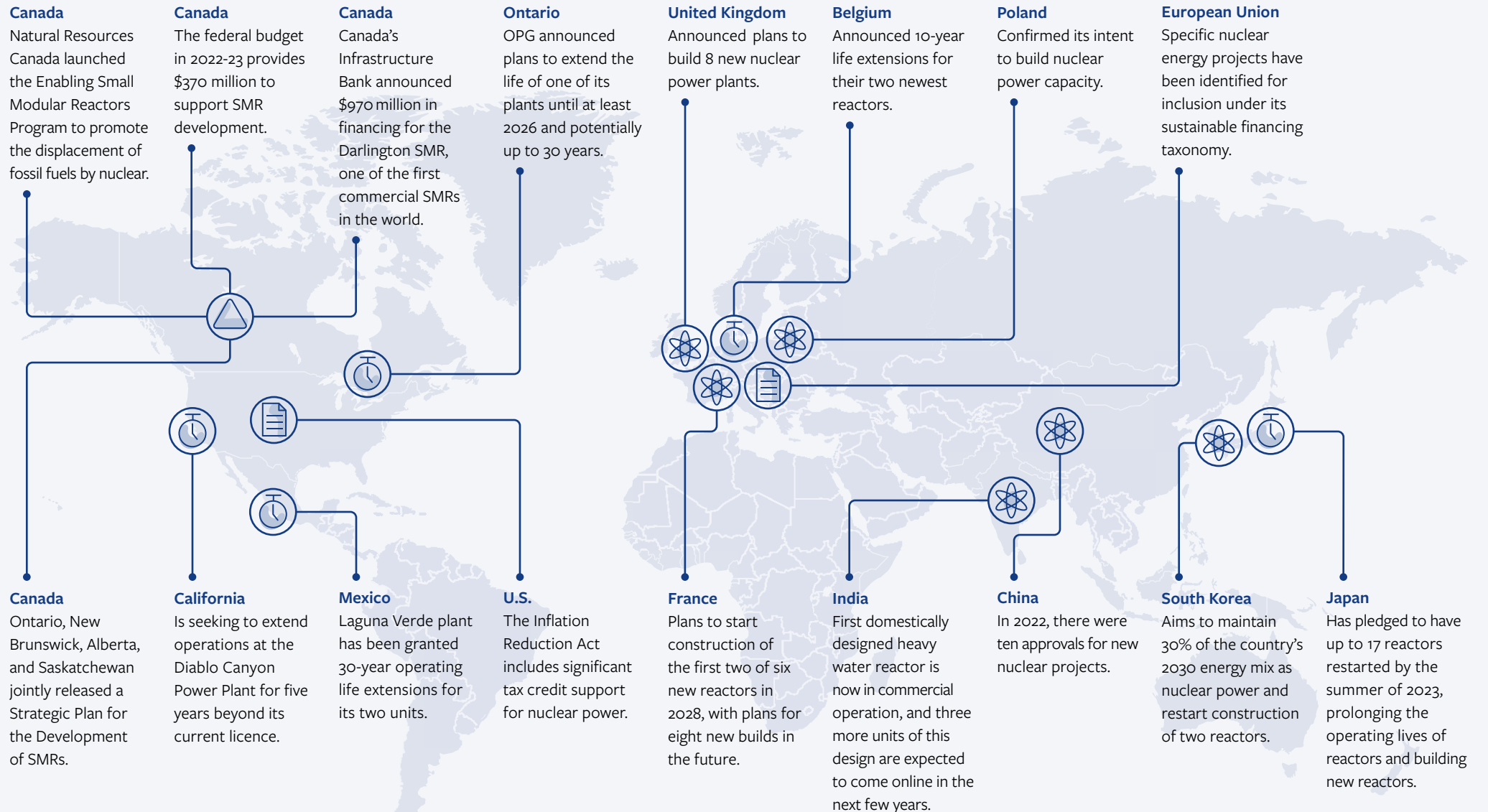
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## Growing Momentum for Nuclear Energy

In 2022, geopolitical events deepened concerns about energy security. These concerns coupled with the ongoing focus on climate created what we believe are transformative tailwinds for the nuclear industry from both a demand and supply perspective. The graphic below highlights a selection of the policy and market developments that illustrate the growing support for nuclear energy.





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## Transition-Related Risks

As previously noted, we identify and assess climate-related transition risks through our annual risk management, strategic planning, and annual market review processes, as well as through meetings of the climate transition working group. We have identified the ways the transition to a low-carbon economy could potentially impact our company and the risks in the table below were determined as the most significant. We monitor and report on these risks on a quarterly basis as part of the climate change enterprise risk.

We disclose material risks to our company, including any applicable risks that could be characterized as climate-related risks, in our quarterly and annual reports, and in our [annual information form](#). The next section of this report describes the **climate-related transition risks** we have assessed to date:

	RISK	POTENTIAL IMPACT ON CAMECO	WHAT DO WE DO TO MITIGATE?
<b>POLICY AND LEGAL</b>			
<b>GHG Regulation</b>	Regulations for large emitters might become more stringent to align with Canada's commitment to net-zero by 2050.	Cameco could experience higher annual operating costs directly due to carbon pricing exposure through Canada's carbon tax on fuels or penalties under compliance programs (e.g., Output-Based Performance Standards [OBPS] in Saskatchewan and Emissions Performance Standards [EPS] in Ontario) if performance targets are not met.	In the short and medium term, we expect to manage the direct risk of increased operating costs through the implementation of targeted energy and emissions management projects that reduce our Scope 1 and Scope 2 emissions as part of achieving Cameco's decarbonization targets outlined through our Low Carbon Transition Plan. Read more about our emissions reduction targets and decarbonization pathway projects on <a href="#">pages 46 to 47</a> .  We actively collaborate with six industry associations and various levels of the Canadian government on processes to develop, review, and implement climate-related policy, regulation, and legislation in alignment with achieving Canada's climate change goals so we can remain well-informed of upcoming regulatory changes and have sufficient time to prepare as needed. Read about our public policy involvement on <a href="#">page 78</a> .
<b>Clean Electricity Regulations</b>	Expected in 2023, Canada's <a href="#">Clean Electricity Regulations</a> (CER) mandate a transition to a net-zero emissions electricity grid by 2035. With a relatively high-emitting electricity grid today, Saskatchewan is likely to be disproportionately impacted by changes necessary to comply with the CER if implemented as currently proposed in 2023.	Cameco is likely to experience indirect cost increases as electricity prices rise to support grid upgrades and changes required to support the federally mandated shift to cleaner electricity sources.	In Saskatchewan, we are regularly in contact with our electricity provider to understand how changing regulation, such as CER, may impact electricity costs in the short and long term. We use this information to proactively inform operating cost planning and help prioritize energy and emissions management projects.  Across our operations, our energy efficiency projects can help reduce our electricity consumption and therefore reduce our exposure to increased costs. We also recognize the shift to cleaner electricity across Canada will be beneficial in helping us achieve our GHG reduction target.



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	RISK	POTENTIAL IMPACT ON CAMECO	WHAT DO WE DO TO MITIGATE?
<b>Clean Fuel Standard</b>	The <u>Canadian Clean Fuel Standard</u> came into force in December 2022. It will require liquid fossil fuel primary suppliers to reduce the lifecycle carbon intensity of their fuel.	Cameco could experience indirect cost increases passed through by suppliers (e.g., trucking, flights).	Our Canadian facilities do not consume large quantities of liquid fuels (diesel and gasoline).  As part of our efforts to reduce costs, we have been focused on consolidating flights and freight shipments over the last number of years, which also has the effect of reducing fuel consumption and associated carbon pricing. We monitor additional costs for fuels purchased by third parties that act on our behalf to transport materials and employees within Canada. To date, these increased costs have been low.
<b>Nuclear Excluded from Green Financing Schemes</b>	A number of countries have developed, or are developing, sustainable or green finance taxonomies to help investors direct capital toward activities and projects aligned with sustainability objectives such as those set out in the Paris Agreement. In many jurisdictions, nuclear power is being assessed for its inclusion in these taxonomies. In a few jurisdictions it has been excluded, such as in Canada's Green Bond Framework.	Nuclear power exclusion from these taxonomies could make nuclear power ineligible for financing under green financing or sustainability-related financing. Ineligibility can delay nuclear energy investment, sustain negative public perceptions, and for Cameco, as a uranium and nuclear fuel producer, it creates an uneven playing field for low-carbon technology investment potentially impacting our measures of success, including "outstanding financial performance" and "supportive communities".	We, on our own accord and through industry associations, have provided information and data to relevant authorities making the case that nuclear energy should be eligible for green financing. We believe that to achieve the ambitions of the Paris Agreement, a technology agnostic energy transition is required.  We advocate for nuclear energy through our participation in the following industry organizations: The World Nuclear Association's "Harmony" programme, the Canadian Nuclear Association, the Nuclear Innovation Institute in Canada, and the Nuclear Energy Institute in the US.
<b>MARKET AND REPUTATION</b>			
<b>Lack of Transparency on Climate Issues</b>	Increasing expectations of investors, customers, employees and stakeholders that companies are transparent and committed to ambitious climate action.	Lack of sufficient transparency and action on climate issues could result in reputational damage with local stakeholders and the investment community.	When we set climate-related targets, we do so only after giving ourselves appropriate time to do our due diligence to research and understand our options, relevant trends, and likely impacts to our business strategy, regulations, workers, customers, investors, and other stakeholders. We then review recommended targets, tangible actions to achieve these targets, and any potential risks to target achievement with appropriate working groups, subject matter experts, operational leadership and executives.  We continually work to improve processes related to emissions data compilation and internal emissions reporting.  We have reported on our GHG emissions for more than 20 years.  We report on climate action and emissions performance through annual reporting directly to federal and provincial governments as required by regulation, this report, and through various third-party rating organizations (e.g., CDP, Sustainalytics, MSCI, and MAC TSM <i>Climate Change Protocol</i> ) important to our customers, investors, and stakeholders.



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## Physical Scenarios and Physical Risks

### Physical Scenarios

In 2022, we assessed projected changes in specific climate variables at our northern Saskatchewan operations (Cigar Lake, McArthur River, Key Lake and Rabbit Lake) for two different emissions scenarios and two-time horizons: 2030-2050 and 2070-2090. Climate variables are the factors that exacerbate each of the climate hazards (e.g., extreme rainfall increases flood hazard, heatwave duration increases heat stress and drought, impacting wildfire risk). The emissions scenarios we used are two Representative Concentration Pathways (RCPs), which were developed by the Intergovernmental Panel on Climate Change (IPCC):

- RCP 4.5, which is viewed as a moderate climate change scenario and a potential ~2°C pathway, in-line with the Paris Agreement; and
- RCP 8.5, which is often used to represent a higher emissions or business-as-usual climate change scenario where no additional emissions reductions policies are enacted. Using RCP 8.5 ensures risks are considered for the highest range of projected climate change.

### Learnings from Scenarios

Studying the impacts of physical climate change scenarios on our northern Saskatchewan operations allowed us to refine our understanding of physical risks (table on next page) and develop a process that we can use across all sites. We will use findings from these studies to identify where our existing climate-related acute and chronic risk management practices are expected to remain sufficient in the years to come and where adaptation and other enhancements may be required.

RIGHT

**We consider how the increase in frequency or severity of flooding could impact our operations.**





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## Physical Risks

To support business continuity and protect our assets, operations and workers, we consider physical risks resulting from climate change that are acute (event driven) or chronic (longer-term shifts in climate patterns). We disclose material risks to our company, including any applicable risks that could be characterized as climate-related risks, in our quarterly and annual reports, and in our [annual information form](#). The table below describes the most significant climate-related physical risks we have assessed to date:



**Wildfires**



**Increased Precipitation**



**Increased Precipitation**



**Higher Temperatures**

CLIMATE HAZARD	Wildfires	Increased Precipitation	Increased Precipitation	Higher Temperatures
<b>RELEVANT LOCATION(S)</b>	Northern Saskatchewan	Northern Saskatchewan	Ontario	All
<b>POTENTIAL IMPACT</b>	More frequent and severe fires can: <ul style="list-style-type: none"> <li>• Directly impact our sites or personnel</li> <li>• Indirectly impact key supply corridors (e.g., power supply, supply of materials)</li> </ul>	An increase in heavy rainfall events could result in: <ul style="list-style-type: none"> <li>• Changes in ground conditions, damaging buried infrastructure</li> <li>• Capacity exceedance of water and tailings management infrastructure, which could result in environmental damage, increased costs, and/or regulatory action</li> </ul>	Severe flooding can: <ul style="list-style-type: none"> <li>• Interrupt production at affected facilities</li> <li>• Damage site infrastructure</li> </ul>	Higher summer temperatures can: <ul style="list-style-type: none"> <li>• Lead to heat stress in workers</li> <li>• Stress cooling systems</li> </ul>
<b>MITIGATION</b>	<ul style="list-style-type: none"> <li>• We maintain buffer zones around our facility infrastructure.</li> <li>• We have on-site fire detection and suppression capabilities (e.g., fire water lines, firefighter equipment, water sources, fire extinguishers, facility fire suppression systems, and fire paneling).</li> <li>• Our emergency response includes personnel training for wildfire fighting, and use of off-site resources from the province and other neighbouring facilities.</li> <li>• We conduct a third-party assessment of our wildfire hazards and preparedness every five years.</li> </ul>	<ul style="list-style-type: none"> <li>• We maintain the capacity to contain a 24-hour probable maximum precipitation event, in all of our tailing facilities. This exceeds the design storm recommended by the Canadian Dam Association based on the rated consequence of failure for our facilities.</li> <li>• Our active tailings management facilities are below ground (in-pit) and therefore are not susceptible to catastrophic failures that could release tailings solids or liquids to the surrounding environment (see <a href="#">Environment &gt; Tailing and Mine Waste Management section</a> for further details)</li> </ul>	<ul style="list-style-type: none"> <li>• As a further layer of protection at our Port Hope conversion facility, a barrier is being constructed to protect from flooding of the Ganaraska River.</li> <li>• For our Blind River refinery, we have installed a berm outside the refinery perimeter to mitigate the impact to the refinery in the unlikely event of a worst-case flood scenario.</li> </ul>	<ul style="list-style-type: none"> <li>• We provide access to climate-controlled environments (permanent facilities or temporary facilities such as jobsite trailers) for project work and/or vehicles for workers exposed to extreme temperatures (heat or cold).</li> <li>• We have procedures and instructions on how to mitigate the potential impact of heat and cold stress on workers.</li> </ul>



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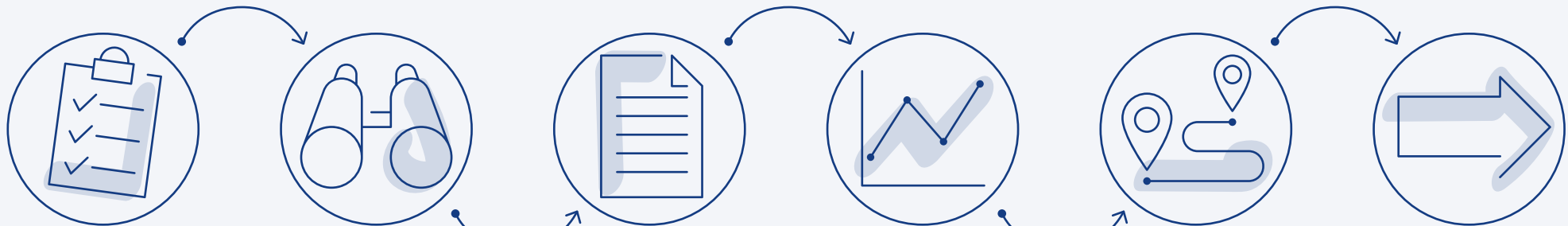
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## SPOTLIGHT

## Understanding the Potential Impacts of Climate on Our Northern Saskatchewan Operations

In 2022, we completed a physical risk assessment across Cameco's four operations in northern Saskatchewan to not only evaluate where our workforce and infrastructure could be vulnerable to changes in climate, but also to evaluate climate risk adaptation options. This assessment involved more than 40 individuals across our sites and gave us an initial understanding of the potential impacts of climate on our Saskatchewan operations. Given the success of the process and outcomes, we plan to use a similar process at our other majority owned operations.



### Step 1

#### Climate vulnerability assessment

Cameco subject matter experts:

- ✓ Created a list of facility infrastructure components (e.g., buildings, pipelines, pumping stations, tailings facilities).
- ✓ Qualitatively assessed climate vulnerability for each component, based on how significantly a climate variable (e.g., extreme heat, precipitation) interacts with each of them.

### Step 2

#### Climate summaries

A third-party expert:

- ✓ Used a 20-year period of observed climate data to model likely climatic changes for 2030-2050 and 2070-2090 under two scenarios: Representative Concentration Pathway (RCP) 4.5 (a moderate climate change scenario) and RCP 8.5 (a high emissions business-as-usual scenario).

### Step 3

#### Risk assessment

Internal subject matter experts worked with a third-party expert to:

- ✓ Combine information from step 1 and step 2 to define potential risks to our assets and workforce along with their triggers.
- ✓ Identify existing controls and evaluate for adequacy under projected future climate conditions.
- ✓ Assess inherent and residual risk levels, in accordance with our Risk Management Program.

### Step 4

#### Risk management and adaptation pathways

- Identify adaptation measures to address key risks.
- Develop a decision-making process for prioritizing adaptation measures.

Adaptation measures may include gathering more information, developing or adjusting policies, assessing insurance needs, or investing in operational processes or modifications to our physical assets.

### Results

#### Northern Saskatchewan operations

We have completed a physical risk assessment for each of the following sites:

- ✓ Cigar Lake
- ✓ McArthur River
- ✓ Key Lake
- ✓ Rabbit Lake

Initial findings indicate that changes to precipitation and wildfire patterns are the most prominent risk triggers.

Baseline water stress for these locations is currently low and this is not projected to change in the future.

### Next steps

#### We plan to:

- Refine the assessment for the highest-scoring risks including precipitation changes and wildfire patterns.
- Develop and implement an adaptation action plan for our northern Saskatchewan operations.
- Complete physical risk assessments for all our majority owned and operated facilities over the next five years.





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**ANALYST CORNER**

SASB EM-MM-110a.2

## IV. Metrics and Targets

Metrics and targets are important tools to measure and monitor progress. We are focused on better understanding the impact of climate-related risks and opportunities and reducing our GHG emissions.

### Climate-Related Metrics

We have tracked and reported GHG emissions for more than two decades. Our performance on Scope 1 and Scope 2 is on [page 45](#). In 2022, we took preliminary steps to quantify our Scope 3 emissions. In 2023, we will continue to refine our Scope 3 emissions profile to better understand our total Scope 3 emissions, our most significant Scope 3 categories and to identify the companies in our value chain that make the largest contribution. Where practical, we will begin to engage with key value chain partners and suppliers on developing their energy and emissions management capabilities and identify Scope 3 emissions reduction opportunities.

### Climate-Related Targets

We have a suite of Environmental, Social and Governance targets that focus on our priority topics on [pages 7](#) and [8](#). The sidebar summarizes our four climate-related targets. These targets replace our previously published targets.

In 2022, we set a new target to reduce our Scope 1 and Scope 2 GHG emissions by 30% by 2030, from 2015 levels. Through this 30 by 30 target, we are demonstrating our commitment to doing our part to help achieve the ambitions of the Paris Agreement to, “limit global temperature rise to well below 2 degrees Celsius (°C), above pre-industrial levels, and to pursue efforts to limit global temperature rise even further to 1.5°C” in addition to the Government of Canada’s commitments to the Agreement.

In our 2021 ESG Report, we had noted that our Low Carbon Transition Plan would determine appropriate timing for Cameco to target achieving net-zero. Through our work to develop this plan in 2022, we recognized that the decarbonization technologies and other solutions required to achieve net-zero do not yet exist, outside of significant investments in carbon offsets. We have committed to being an active and constructive partner in addressing the global challenge of climate change. As such we will first focus on operational changes that lower our Scope 1 and Scope 2 emissions prior to investing in carbon offsets to address any remaining hard-to-abate emissions. We will add a timeline to our longer-term net-zero ambition when our immediate decarbonization plans to achieve our 30 by 30 target are sufficiently underway and we better understand what decarbonization options could be available to support our journey to net-zero beyond 2030.

### How We Plan to Achieve Our Targets: Decarbonization Themes

We plan to reach our corporate-wide 30 by 30 target by implementing practical and strategic energy and emissions management projects across five themes: efficiency, electrification, waste to value, fuel switching, and carbon economy. For our Scope 2 emissions, achieving reductions will largely be dependent on the success of our electricity utility in Saskatchewan decarbonizing its grid in accordance with current public plans. [Page 47](#) of this report illustrate our planned pathway and describe these themes in more detail.



#### IN FOCUS

### Cameco’s Climate-Related Targets



#### Net-Zero Ambition and 30 by 30

Towards achievement of our longer-term net-zero ambition, work with our operations to reach a 30% absolute reduction in Cameco’s combined Scope 1 and 2 emissions total by 2030, from 2015 levels.



#### Decarbonization Pathways

Develop tailored decarbonization pathways for operationally controlled sites in 2023.



#### Scope 3

Refine the calculation of our Scope 3 emissions profile in 2023.



#### Physical Risks

Engage a third-party expert to conduct physical risk assessments of our Fuel Services Division’s operations in 2023.

### Linked to Compensation

Our decarbonization pathways target is tied to executive and employee compensation for 2023.



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Air Quality

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# Environment

## 30 by 30

We have set a new target to reduce our combined Scope 1 and Scope 2 GHG emissions by 30% by 2030, from our 2015 base year.

## 22,000

More than 22,000 samples related to water quality are collected each year.

## Level A

Audits of our Tailings Management Facilities resulted in level A ratings in all indicators of the TSM Protocol.

**We recognize and embrace our responsibility to manage our activities with care for the protection of environmental resources. At Cameco, our stewardship is guided by a rigorous policy and programs designed to minimize our impacts on air, land, and water, and to safeguard the biodiversity of surrounding ecosystems.**





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**ANALYST CORNER**

SASB EM-MM-140a.1

# Water

## WHY IT MATTERS TO CAMECO

Responsible water management is critical to our business. We recognize the importance of preserving this resource for the Indigenous Peoples and local communities we share it with today.

## Our Approach

We work continuously with regulators, governments, researchers, and communities to understand possible impacts, develop best practices, and make changes that mitigate potential impacts on the environment. At our sites and facilities, we have robust water management and monitoring programs that apply to all withdrawals and discharges, and we tailor our water management practices to local uses and conditions. As an organization, water security is not a significant risk since we only withdraw water in areas of low baseline water stress<sup>16</sup>.

## Water Management in Saskatchewan

Although northern Saskatchewan is considered a region of low baseline water stress<sup>16</sup>, and our uranium mining and milling processes in the area do not require large volumes of freshwater withdrawal, we must still manage water to operate our facilities safely and efficiently. We focus on monitoring and managing our water intakes and water discharges, and on developing practices that support the continued protection of the environment.

## Water Sources and Uses

The vast majority of water (groundwater, surface water, or precipitation) managed by our Saskatchewan facilities is not intentionally withdrawn for mining use but instead intercepted as part of our mining operations through mine dewatering or from the operation of our tailings management facilities. Wherever possible, we use this intercepted water to support our operational water requirements. For example, at our McArthur River mine, we collect clean groundwater that comes into the mine and use this water for industrial purposes both underground and on-surface at the mine.

Where necessary, additional water is withdrawn from local surface water bodies or groundwater sources for specific purposes, such as for potable water and industrial uses like jet boring. Water withdrawn for these purposes is a very small proportion (around 1%) of the total water we manage in northern Saskatchewan. We are currently studying how even more of the water needed for the jet boring mining method at our Cigar Lake mine could be recycled and re-used. If we can identify a viable technology, then we would expect to see a reduction in the amount of surface water directly withdrawn for underground use by the Cigar Lake mine.



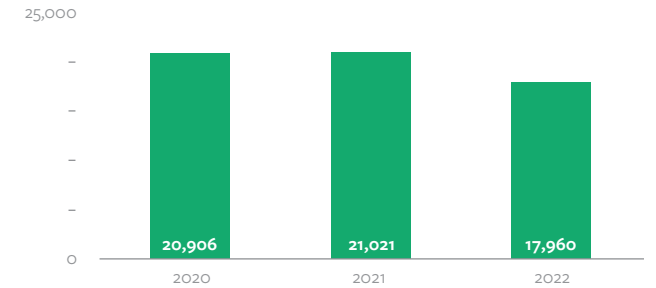
We only withdraw water in areas with low baseline water stress.



## OUR PERFORMANCE

### Water Withdrawal

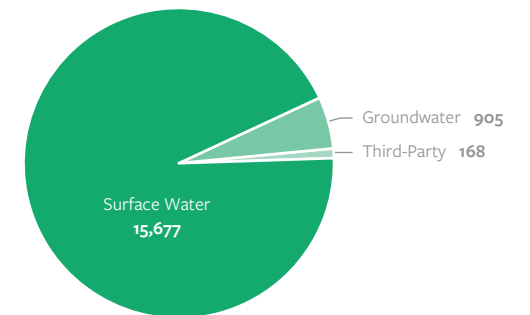
(includes water intercepted) thousand m<sup>3</sup>



The volume of water withdrawn has remained relatively stable over time. Note: Water withdrawn includes water we intercept and manage. The vast majority of water managed by our Saskatchewan facilities is intercepted as part of our mining operations through mine dewatering or from the operation of our tailings management facilities.

### 2022 Water Discharges

thousand m<sup>3</sup>



Note: Discharges to third-party includes municipal water treatment plants, public or private utilities, and other organizations involved in the provision, transport, treatment, disposal, or use of water effluent. Water withdrawn includes water we intercept and manage.

<sup>16</sup> Cameco uses World Resources Institute's Aqueduct Water Risk Atlas to in defining areas of water stress: <https://www.wri.org/aqueduct>



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## Water Discharges

At Cameco, we carefully manage our treated water discharges to keep potential risks to human health and the environment as low as reasonably achievable and to comply with all legal and regulatory requirements. To protect people and the environment, we have implemented management tools consistent with our overall management approach, which include:

### Inflow Reduction

In our underground mines in northern Saskatchewan, we need to actively collect water that flows into the underground mines from the surrounding rock structures and pump it out to maintain safe mining conditions. Some techniques we use to minimize the amount of water that flows into the mines include ground freezing (circulating a brine that helps to freeze the ground around the ore), pressure grouting (injecting grout into the voids of the rock), and shotcrete (spraying concrete on the walls of the mine). These techniques also reduce the risk of an uncontrolled inflow of groundwater. By reducing the amount of water that comes into the mine, we reduce the amount of water we need to manage, treat, and subsequently, release.

### Water Segregation and Diversion

The best way to keep water clean is to keep it segregated from our processes. Where practical, we divert water or otherwise keep it from coming into contact with radioactive materials or mineralized rock. By doing this, we reduce the amount of water we handle and ultimately need to treat and release.

### Water treatment

Water is treated and released in accordance with our operating approvals. We use conventional water treatment processes to make sure water is safe before it is released to the environment. We have made significant investments to improve the quality of water released from our Saskatchewan mining and milling operations to surface water bodies.



We use water treatment processes and monitoring to make sure water is safe before it is released to the environment.

### Discharge monitoring

We have robust monitoring programs to verify that human health and the environment remain protected in the vicinity of our operations. We adhere to regulatory requirements from the Canadian Nuclear Safety Commission, Saskatchewan Ministry of Environment, and Environment and Climate Change Canada. These authorities set the levels for a variety of substances that are allowed in the treated water that is released. To meet these requirements, we use either an automatic interval sampling system or a batch pond release method. The automatic interval sampling system involves collecting samples and monitoring the continuous discharge of treated water, which is subject to strict and routine testing. The batch pond release method involves storing treated water in a holding pond and testing the water quality. If it meets the required quality, it is released; if it does not, then we can send the batch of water for treatment again. In November 2022, we exceeded the regulatory limit for total suspended solids for a partial pond release. Before releasing the water, we conducted water quality sampling, which indicated acceptable water quality, but upon release, in-line sensors detected excess suspended solids and additional controls were activated that halted the flow. The remaining water was recycled for additional treatment. Downstream monitoring completed after the event showed no negative impacts to the receiving environment.



### MEET OUR PEOPLE

## Kaylyn Natomagan

PROCESS OPERATOR 3

MCARTHUR RIVER MINE, SASKATCHEWAN

Kaylyn Natomagan's office resembles a high-tech cockpit. Surrounded by eight screens in McArthur River's central control room, she is the eyes and ears of the site, making sure that all circuits are running smoothly. "I watch a lot of screens and take a lot of calls," Kaylyn says with a laugh and characteristic modesty.

Monitoring pumps and pH levels isn't where Kaylyn expected her career to lead her. She started with site services in 2014 after taking a career preparation course through Northlands College.

"My dad (Alvin) worked in site services for Cameco, so I thought I'd be in site services running heavy equipment," says Kaylyn, who hails from Pinehouse. "But once I met the process crew, I didn't want to leave. I love having my process family. We're a great team."

The site's process team handles four areas: water treatment; underground where the ore is mined; slurry loadout where a mixture of liquid and ore is pumped to trucks and sent to Key Lake mill; and the central control room which monitors all aspects of the other areas. Process operators must learn all four areas to earn senior operator status. "Underground is my favourite area now – even though it used to be my least favourite," says Kaylyn. "Learning more about the process, I fell in love with it."

As she continues working towards senior operator status, Kaylyn has also become a rookie member of McArthur's emergency response team (ERT). "It's something else to have under my belt and I like helping people."



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### Watershed Stewardship

As part of our environmental monitoring programs, we take more than 22,000 samples related to water quality each year. We collect water samples at or immediately downstream of our operations (near-field), in close proximities to our operations (mid-field), and at locations at a further distance (five to ten kilometres) from our operations (far-field). These samples are sent for testing for different chemicals and other indicators of quality to both internal laboratories and an accredited third-party facility. The laboratories use a variety of analytical techniques, including inductively coupled plasma-mass spectroscopy, known for its ability to detect very low concentrations of most elements in the periodic table in either a liquid or solid sample.

We also maintain a groundwater monitoring program. We collect groundwater samples in the vicinity of our operations and monitor for changes in composition. Every five years, environmental monitoring data, including groundwater, is assessed in detail and compared to previous predictions to validate that the environment remains protected. Read more about our [environmental risk assessments](#).

In addition to our own programs, independent community-based environmental monitoring programs in northern Saskatchewan (read more on [pages 55 and 56](#)) provide opportunities for community members to participate in and collect environmental samples. These programs have shown that water remains safe to drink and that traditionally harvested foods remain safe to eat.

>22,000  
samples related to water  
quality taken each year

### Water Management in Our Fuel Services Division

The four facilities in our Fuel Services Division manage water from a combination of municipal water sources, surface water from nearby waterbodies, groundwater, and precipitation. Our Fuel Services Division uses water for steam generation, fire protection and emergency response, process and laboratory facility uses, drinking water, sanitary services, and cooling purposes. We also extract groundwater as part of environmental remediation.

A large proportion of the water we withdraw is used as non-contact cooling water (water that is used for cooling and that does not come into direct contact with any solids, liquids or gases used in our processes, or finished products). Cooling water is returned to the environment or the municipal sanitary sewer system. Out of our four Fuel Services Division facilities, our Port Hope conversion facility requires the most water for the once-through non-contact cooling water. To improve water management at this facility, we are currently transitioning to a new closed loop cooling water system (see sidebar to read more). Learn more about our [water management in our fuel services division](#).

### Water Management in the US

In our US operations, we mine using in situ recovery (ISR) methods. These operations do not require large volumes of fresh water for mining activities. At our US operations, we primarily manage brackish, non-potable groundwater for mining operations and active groundwater restoration. Read more about our [water management practices in the US](#).



IN FOCUS

### Improving Cooling Water Management

In 2022, we started the installation of a new closed-loop cooling water system at our Port Hope conversion facility to replace the existing open loop system. Rather than using harbour water for process cooling and then discharging it back to the harbour, the new system will circulate water in a closed cycle and would eliminate the need to use surface water for once-through cooling purposes. The system will use air-cooled chillers with free-cooling technology to reduce energy use in colder temperatures. We expect to complete the work in 2023.





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# Tailings and Mining Waste Management



## WHY IT MATTERS TO CAMECO

Tailings are an inevitable byproduct of most mining activities. Responsible and safe management of mining waste streams is critical to protecting the environment as well as the safety of our workers, operations and communities. To strengthen our tailings management approach, we seek to apply lessons learned from industry incidents and are committed to continuous improvement.

## Operational Context

Tailings management is relevant only to our Canadian operations because the in situ recovery method used in our US operations does not produce tailings or waste rock.

We maintain four tailings facilities in Saskatchewan, two at our Key Lake site and two at our Rabbit Lake site. Both Key Lake and Rabbit Lake have one active in-pit tailings facility (**in-pit facility**) and one above-ground tailings management facility (**above-ground tailings facility**).

Our two **in-pit facilities** allow us to store tailings in the excavation of former mine pits. The design of these facilities with permeable surround, which have both been in operation for more than 20 years, was identified as an industry best practice by our independent tailings review board. The storage of tailings below ground within in-pit facilities means that these facilities are not susceptible to catastrophic failures that could release tailings solids or liquids to the surrounding environment. In addition, reuse of former mine pits reduces our overall land disturbance. The design allows for containment of tailings water during the operating phase and allows groundwater to bypass the facilities after they are decommissioned.

Our two **above-ground tailings facilities** are no longer used for ongoing tailings placement. We have repurposed these facilities to safely dispose of radiologically contaminated solids at Rabbit Lake, and both solid and liquid waste at Key Lake. Use of these tailings facilities for disposal of these waste types avoids additional land disturbance. Both above-ground tailings facilities use engineered dams to contain the tailings. The dams were constructed using the centerline and modified centerline methods at Rabbit Lake and the single-stage method at Key Lake, both which contribute to structural stability. The closure plans for these facilities include the construction of engineered covers, designed to minimize infiltration through the facility and promote surface drainage to help protect the surrounding environment.



We maintain four tailings facilities in Saskatchewan, two at our Key Lake site and two at our Rabbit Lake site.

## DEFINITIONS

Mining at our operations in northern Saskatchewan requires the excavation of rock to access the uranium-bearing ore. This waste rock is classified as either mineralized or non-mineralized. Waste rock generated during underground mining is moved to the surface for storage (see [page 43](#)). Each rock type is carefully segregated for both operational and post-closure management effectiveness. Our operations in northern Saskatchewan are currently underground, resulting in a low waste rock to ore production ratio.

Milling of uranium ore produces tailings, which are primarily composed of the residual rock left after the uranium is recovered, mineral precipitates, sewage, and minor amounts of processing chemicals. These tailings are safely stored on-site within engineered tailings management facilities. The annual tonnage of tailings produced is dependent on the ore grade and the production rate. The high uranium grade of our mines in northern Saskatchewan means we obtain more uranium per tonne of rock processed than low-grade facilities, resulting in lower amounts of tailings produced compared to other mining operations.



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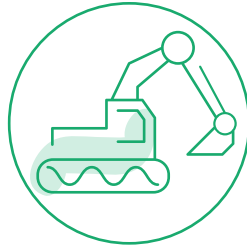
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## Managing Tailings Facilities Through Their Lifecycle



### Construction and Design

#### Stable Tailings Facilities

Our two above-ground tailings facilities use engineered dams to contain the tailings. The dams were constructed using the centerline, modified centerline and single stage method. These construction methods contribute to structural stability. Our two active in-pit tailings facilities store tailings below the natural ground surface and therefore pose no risk of a flow-type failure associated with dams.

#### Protecting Groundwater

Our in-pit facilities use a permeable surround design concept that allows groundwater to bypass the facility after closure, minimizing the impact to groundwater. Upon closure, our above-ground tailings facilities will be graded, covered and vegetated to minimize water entering the facility and reduce the impact to groundwater. [Read more.](#)



### Good Management Practices

#### Towards Sustainable Mining (TSM) Tailings Management Protocol

We follow the TSM Tailings Management Protocol developed by the Mining Association of Canada (MAC). For our tailings facilities, every year we self-assess our practices, and every three years, we undergo third-party verification.

The TSM protocol has been the leading system for over 20 years for credible performance measurement and reporting, including rigorous standards to verify that tailings facilities are responsibly managed.

Read how the TSM protocol compares to the Global Industry Standard on Tailings Management (GISTM) and what enhancements are being made to TSM [here](#).



### Monitoring

#### Regular Inspections

At our four tailings facilities, we conduct a range of daily, weekly, monthly, and annual inspections to examine various aspects of tailings management. These inspections include monitoring the geotechnical (physical structure) and geochemical (chemical composition and distribution) stability of the tailings and their associated containment structures.

#### Environmental Monitoring

We monitor groundwater and surface water downgradient of the above-ground facilities to verify that water quality remains at estimated and allowable levels.



### Assessments and Reviews

#### Assessments

The following assessments are designed to support the continued safe operations of our tailings and identify risks:

1. Independent tailings review board
2. Dam safety reviews
3. Consequence of failure classification
4. Facility risk assessments
5. Updating our precipitation estimates
6. Other reviews

Read more about each of these type of assessments on [pages 41](#) and [42](#).

#### Learnings From Events

Over the past decade, we have completed reviews of international incidents related to tailings dam (including Mount Polley, Fundao and Brumadinho). Read about our learnings [here](#).



### Long-Term Risks

#### Environmental Risk Assessments

We have assessed the geochemical stability of our tailings, developed hydrogeological models and we use this information in environmental risk assessment models to evaluate the potential impacts to surface water from our tailings management facilities once decommissioned. For each site, a summary of the latest environmental risk assessment is available on our [website](#).



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## Tailings Management Practices

We employ broad, risk-based practices to effectively manage our tailings and mine waste storage facilities. We are committed to maintaining our rating and adherence to the MAC TSM tailings management protocols.

Analysis of tailings failures in the mining sector have indicated that inadequate management practices can contribute to failures. Learnings from recent incidents continue to deepen our focus on maintaining robust management practices at our tailings facilities.

### Towards Sustainable Mining Tailings Management Protocol

At Cameco, we follow the Towards Sustainable Mining Tailings Management Protocol (TSM protocol 2019 version) developed by the Mining Association of Canada (MAC). The goal of this TSM protocol is to minimize harm from both physical and chemical risk associated with tailings, including zero catastrophic failures and no significant adverse effects on the environment or human health. For our tailings facilities, every year we self-assess our practices, and every three years, we undergo third-party verification. Our most recent assessments are:

- At our **Key Lake operation**, we completed an internal audit and external verification in 2021. We achieved an A rating across all protocol indicators. Possible ratings range from Level C to Level AAA, with increasing ratings reflecting the comprehensiveness of the relevant management system. Level A is the expectation and a rating that is reflective of good management practices.
- At our **Rabbit Lake operation**, we completed an internal audit in 2022. The results indicate that the Rabbit Lake operation is in conformance with the TSM tailing management protocol.

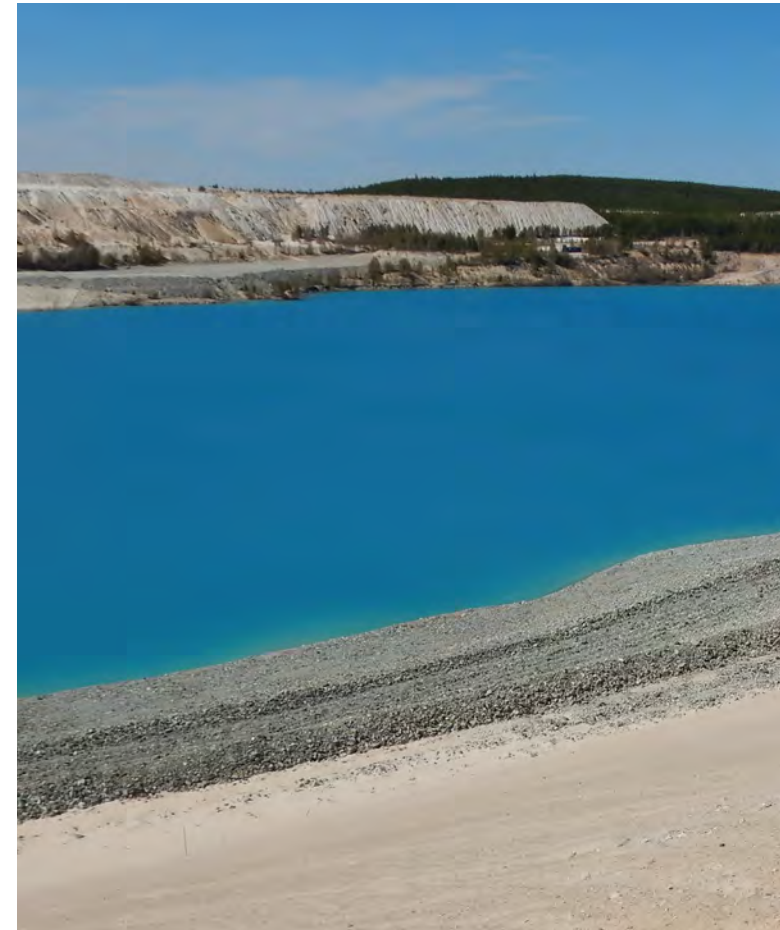
Following the best practices identified in the TSM protocol, means:

- ✓ Our Chief Operating Officer is accountable for tailings management
- ✓ We conduct annual tailings management reviews
- ✓ We have:
  - A tailings management standard and commitment
  - Site-specific tailings management systems
  - Emergency preparedness and response plans
  - Site-specific operation, maintenance, and surveillance (OMS) manuals

### Gaps against the Global Industry Standard on Tailings Management (GISTM)

The Mining Association of Canada conducted a gap analysis between the GISTM and the TSM protocol and shared the results publicly in 2021. MAC indicated that the TSM protocol met or exceeded the GISTM in a several aspects (this document contains detailed information). Using MAC's gap analysis, we conducted a GISTM audit of our facilities in 2021, which revealed opportunities to better align with the GISTM. We are taking actions over time to address those that make sense for our facilities.

Cameco remains committed to the MAC TSM protocol. The tailings management component of the TSM protocol is an accepted and mature framework, which we feel provides a more robust and rigorous system for measuring tailings performance than the GISTM. As such, we do not plan to fully implement GISTM at this time. We will, however, continue to monitor the development and uptake of GISTM, including through our active membership on the MAC TSM tailings working group, which is working to improve alignment with GISTM.



ABOVE

Every year, Cameco's tailing facilities are self-assessed using Toward Sustainable Mining protocols. Third-party verification is completed every three years.



We follow the Towards Sustainable Mining Tailings Management Protocol.





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## Tailings Assessments

Frequent reviews and assessments help us identify and appropriately manage risks in the design, structure, or management of our tailings facilities. We conduct different assessments of our tailings facilities including:

### Working with an Independent Tailings Review Board

In 2022, we continued to address and incorporate recommendations from the independent tailings review board. The board meets annually to review our tailings facilities' design, management, and performance, and to provide an independent, qualified, non-binding opinion on the state and risk associated with our tailings facilities. The review board includes two experts, each with more than 35 years of national and international experience in mining waste management and tailings. Based on their review, the board concluded that overall, Cameco's four tailings facilities were in sound condition without evidence of immediate dam safety or pit-slope stability issues and were being managed consistent with sound engineering practices.

### Completing Dam Safety Reviews

For our two above-ground tailings facilities with dams, we completed dam safety reviews in accordance with Canadian Dam Association guidelines in 2020. Based on the consequence of failure classification (see above) of these facilities, dam safety reviews are conducted every 10 years. The goal of a dam safety review is to assess and evaluate the safety of a dam against potential failure modes. The review is conducted by a qualified engineer and is based on current knowledge and guidelines, which might be different than at the time of construction.

At Rabbit Lake, the dam safety review found that the dams were in a satisfactory condition, there were no dam safety deficiencies apparent, and that the dams appear stable with no visible signs that would suggest potential geotechnical instability.

At Key Lake, the dam safety review found the facility to be generally in sound condition without evidence of any dam safety issues, and that it is being managed consistent with sound engineering and good industry practice.

### Assessing Consequence of Failure

While significant effort is put into ensuring our tailings facilities are stable, and we remain confident in the stability of these facilities, it is good practice to assess the consequence of a dam failure. Studies to assess a dam failure scenario for our two above-ground tailings facilities were completed in 2020. The results of these studies allow us to classify the dams in accordance with standard consequence classifications and enhance our emergency response plans. It is important to note that this assessment is not an indication of the likelihood of failure, rather it assesses the consequence of failure, should one occur. In accordance with the Canadian Dam Association's consequence classification rating system for dams, dams are classified as having a Low, Significant, High, Very High, or Extreme Consequence based on defined criteria. Under this set of criteria, our dams were determined to have a "Significant" consequence (the second-lowest level in the scale, [see graphic here](#)). Significant consequence means a low potential for loss of life, people are only temporarily in the inundation zone, no significant loss or deterioration of biodiversity or landscape, and low economic losses.

RIGHT

James Senga, Senior Lab Technologist, at Cameco's Key Lake operation tests water samples.





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## Risk Assessments

In 2021, we conducted a Failure Modes and Effects Analysis (FMEA) for three out of our four tailings facilities. FMEA is a systematic, proactive method to identify where and how a facility might fail and to assess the relative impact of different failures. The FMEA process was able to highlight critical controls for each facility, areas of risk that were well managed, and areas that could be reduced further through additional study or implementation of mitigative actions. From this process, a risk register was developed that presents the current known risks and ranking, and that can be updated to reflect changes to existing risks and to add new risks as they become known.

## Updating Our Precipitation Estimates

We recognize that climate change has the potential to impact the intensity of future precipitation events. In 2021, we initiated a project to assess how a range of hypothetical storm events and snowpacks may be impacted by climate change. While more work is required to validate these estimates, once complete, we expect to use this information to support the continued safe operation of our tailings facilities and in developing closure designs. Read about the climate-related physical risk assessment we conducted in 2022 on [page 32](#).

## Other Reviews

We conduct reviews at regularly scheduled intervals and as required including:

- **Annual performance reviews** assess the operational, geotechnical, and geochemical aspects of the tailings facility performance.
- Our **5-year Groundwater and Environmental Performance Review** includes an evaluation of our groundwater monitoring program. The review assesses measured conditions relative to previously predicted conditions and identifies changes or corrective actions, where required.
- As required, we also conduct an **evaluation of tailings geochemistry** to confirm that geochemical controls remain consistent with predictions. This evaluation is conducted during the annual performance reviews and through a periodic drilling program.

ABOVE

Cameco's Key Lake tailings management facility was audited and achieved an A rating across all TSM tailings management protocol indicators in 2021.



## MEET OUR PEOPLE

### Marilyn Sinclair

JBS OPERATOR

CIGAR LAKE MINE, SASKATCHEWAN

Marilyn Sinclair is blazing a trail worth following in northern Saskatchewan. Marilyn became the second female jet boring system (JBS) operator ever at Cameco's Cigar Lake operation last November. It has been a steady climb for the Cumberland House native, who got her start with Cameco as a site services trainee in April 2014.

"Ever since I was a kid I loved big equipment, and I knew I wanted to work with it when I grew up," said Marilyn. "I've worked very hard and took all the training I needed and I've worked with a lot of good teams along the way. That's been my favourite thing, coming up with a plan with my team and working on it together."

Even while she's been focused on developing her own career, Marilyn also hopes that she can inspire other young females in northern Saskatchewan. "I want to be a role model to the younger females coming up in the north, to take on these types of jobs and to climb the ladder how I have, and become somebody, become a supervisor or whatever path they are interested in. It's a very rewarding career."

Marilyn is self-motivated and driven, and she is grateful for the support she's received along the way. "Cameco has always had my back 100% and I greatly appreciate that people have seen where I was coming from and where I wanted to get to, and have tried to help me," said Marilyn. "Not only that, but they've also pushed me to keep advancing as well. Cameco takes care of you and that's the kind of company that I want to work at for the rest of my career."



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## Waste Rock and Other Mining Wastes

Mining waste from our Saskatchewan sites also includes waste rock. Waste rock is rock that has been excavated to gain access to ore but does not have metal concentrations of economic interest. At Cameco, our active mines are underground and generate low waste rock volumes. We classify waste rock based on its mineral and elemental content. Waste rock comes in the following three general types with management procedures varying on the associated risk of each rock type.

### Mineralized

Low-grade uranium ore with greater than 0.03% U<sub>3</sub>O<sub>8</sub> concentration. Mineralized waste rock is currently generated by our McArthur River mine and is transported to our Key Lake mill where it is combined with mineralized waste from other deposits, ground and blended with high-grade ore slurry from the McArthur River mine before entering the remainder of the milling process. Mineralized waste rock at our operations is stored on engineered, lined pads or managed by other seepage control systems to minimize soil and groundwater contamination. As part of our decommissioning plans, mineralized waste rock will be milled, or otherwise disposed of within the mine workings or mine pits.

### Non-Mineralized

Rock that has no economical uranium concentrations (less than 0.03% U<sub>3</sub>O<sub>8</sub>) and is categorized as either clean or potentially acid-generating based on the likelihood of acidification.

This is how we manage the two categories of non-mineralized waste:

### Clean

Rock that has little uranium (less than 0.03% U<sub>3</sub>O<sub>8</sub>) and is not potentially acid-generating. Wherever possible, we reuse clean waste rock to replace underground material removed during extraction, to produce sprayed concrete (shotcrete), or for road maintenance. Clean waste rock piles remaining on site will be regraded to blend into the natural environment, covered (as necessary), and revegetated with native vegetation species (read more on [page 52](#)).

### Potentially Acid-Generating

Rock potentially containing sufficient concentrations of sulfide minerals that could oxidize and generate acid rock drainage. Although we generate very low volumes of this type of rock, we store it for longer periods in engineered, lined pads. Potentially acid-generating rock is disposed of in a manner suitable for effective management of acid and leachate generation.

We also generate sludges and slimes through the mining and milling process. At our Key Lake, McArthur River and Rabbit Lake operations these waste streams are incorporated into tailings or placed underground within the mine workings for disposal. At our Cigar Lake mine, slimes generated during mining are stored on surface in lined facilities. Upon completion of mining activities, we plan to return the slimes to the underground workings for final disposal.

All waste rock is classified and monitored, both directly through elemental testing for general rock classification, and indirectly through monitoring of water quality. Periodically, Cameco re-evaluates various waste rock types to confirm classifications and management practices are sound and up to date. We also evaluate the risks and the potential long-term effects of waste streams. To mitigate risks, programs and procedures are developed for the effective management of each material type, both in the short and long term.

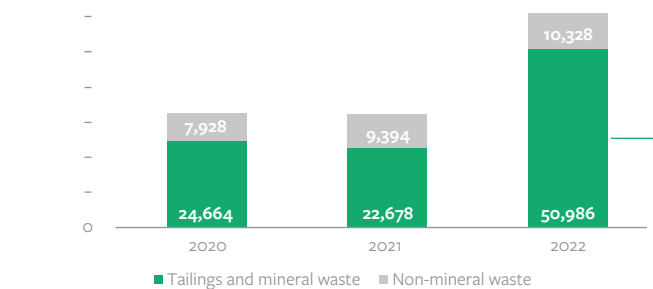


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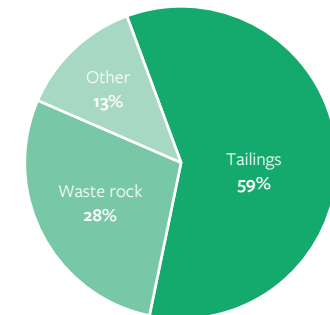
#### Waste

tonnes

70,000



#### 2022 Tailings and Mineral Waste Breakdown



At Cameco, our active mines are underground operations and generate low waste rock volumes. The increase in mining waste volume is related to the restart of our McArthur River/Key Lake facility in 2022.



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# Non-Mineral Waste

## WHY IT MATTERS TO CAMECO

We generate and manage waste from our operations. We are committed to managing our waste streams in accordance with our compliance obligations and in a way that protects people and the environment, paying special attention to hazardous and radioactive waste.

## Radioactive Waste

We consider the ALARA principle across our operations (see [page 62](#) for radiation safety) and for the management of all wastes, including radioactive waste. Following this principle means that we design our systems and procedures to minimize worker exposure to this waste. Radioactive waste has different classifications depending on the jurisdiction and must be managed in the following ways:

- At our Fuel Services Division in Ontario, we classify radioactive waste into contaminated non-combustible and contaminated combustible categories. We have programs to incinerate combustible waste and to decontaminate scrap metal and release it to a third party for recycling. Other waste is safely stored at a licensed Cameco facility until it is further processed and released from regulatory control or transferred to another licensed facility.
- In Saskatchewan, we refer to waste generated with low levels of radioactive contamination as contaminated waste. This waste is transferred to above-ground tailings facilities at Key Lake and Rabbit Lake for placement and cover.
- In the US, we generate 11 e(2) byproduct which is transferred to another licenced facility in the US where uranium is recovered from the waste and the remaining material is safely disposed of. We also refer to this as contaminated waste.

- Prior to Cameco’s formation in 1988, the site where our Port Hope conversion facility is located had been used for the storage of legacy radioactive waste for several decades. After meeting prescribed waste acceptance criteria, this waste is eligible for disposal in a government-owned, long-term waste management facility. Vision in Motion is an ongoing project at the Port Hope conversion facility that supports characterization and disposal of this waste (see our [2020 ESG report](#) for details).

## Non-hazardous Wastes

We seek to reduce the amount of waste we generate and to divert as much as we can by reusing, recycling, or recovering material. Recyclable materials are either picked up by municipal recycling authorities or shipped to off-site recycling programs. Non-recyclable materials are disposed of at Cameco-operated landfills or transported to local municipal landfills. Read about our recycling efforts [here](#).

## Hazardous Waste

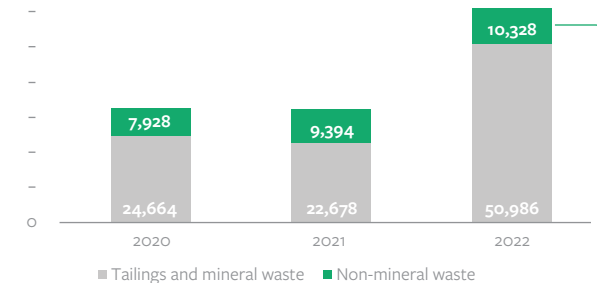
At all of Cameco’s operated facilities, hazardous waste is collected and stored on site in designated hazardous waste storage areas and picked up or transferred to a third party for disposal or recycling.



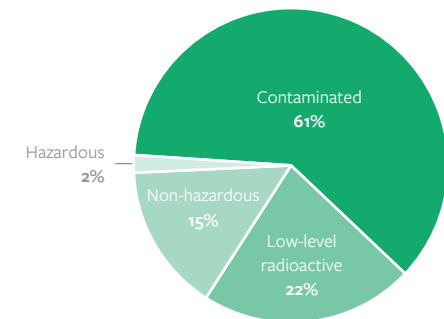
## OUR PERFORMANCE

### Waste

tonnes  
70,000



## 2022 Non-mineral Waste Breakdown



In addition to tailings and mineral waste (see preceding pages), we generate and manage hazardous, non-hazardous and contaminated waste. We do not generate intermediate or high-level radioactive waste in either our mining operations or in our fuel services division. The increase in tailings and mineral waste, and slight increase in non-mineral waste is related to restart activities at Key Lake and McArthur River in 2022.



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SASB EM-MM-110a.1

SASB EM-MM-110a.2

# GHG Emissions and Energy Use

## WHY IT MATTERS TO CAMECO

At Cameco, we recognize the critical nature of the fight against climate change, and want our employees, customers, investors, and community partners near our operations to know we are fully committed to being an active and constructive partner in addressing this challenge.

## Sources of GHG Emissions

Our GHG emissions are directly related to the type and amount of energy we consume. Cameco quantifies emissions following the globally recognized GHG Protocol Corporate Standard.

### Scope 1

Our Scope 1 emissions are primarily associated with the consumption of gaseous fuels (propane, natural gas) for heating. We also use diesel and gasoline to operate heavy-duty and light vehicles across operations, and relatively small quantities of diesel for back-up power generating at our mine and mill facilities in Saskatchewan. We release small quantities of GHG emissions from chemical processes during milling and from Cameco-operated landfills.

### Scope 2

All Scope 2 emissions arise from electricity consumption and correlate to the emissions intensity of grid-supplied electricity in the regions we operate. Our main source of power for our northern Saskatchewan operations is hydroelectric<sup>17</sup>, however, our Scope 2 emissions use a single emissions factor that reflects the energy mix from the entire provincial grid. In Ontario, power largely comes from non-emitting sources (nuclear power, hydroelectric, and wind). As such, facilities in this region make up a small fraction of our Scope 2 emissions total compared to operations in Saskatchewan and in the United States where utilities continue to rely on fossil fuels.

We anticipate that Scope 2 emissions will decline over time, even if electricity consumption rates hold steady or increase slightly, because power generating facilities in Canada and the United States are subject to increasingly stringent regulations that limit GHG emissions intensity. Our largest electricity uses include ventilation for mines and process areas, freeze plants which are used for water management at Cigar Lake and McArthur River mines, and running the pumps and motors we use in our production and water management processes.

### Scope 3

In 2022, we started developing an inventory of our Scope 3 emissions. At this stage, we are focused on refining the quantification process and reducing uncertainty in the results. We continue to work with our suppliers to improve our Scope 3 emissions estimate and to understand the opportunities and challenges of decarbonizing our value chain.

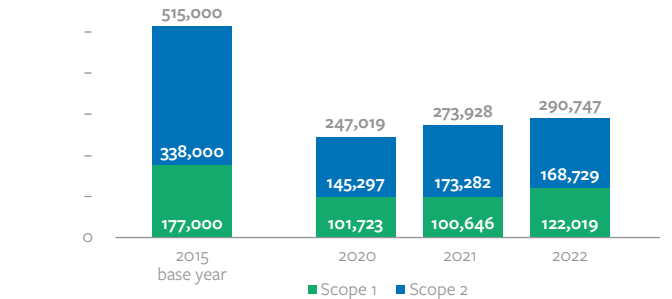


## OUR PERFORMANCE

### GHG Emissions – Operational Control

tonnes CO<sub>2</sub>e

600,000



For the last three years, our GHG emissions have been lower than our 2015 base year due to the non-producing state of several of our operations. In 2020 and 2021 we temporarily suspended production at our Cigar Lake mine due to the COVID-19 pandemic, further reducing emissions. In 2022, we had normal operation of Cigar Lake and were preparing our Key Lake and McArthur River operations to resume production, leading to higher emissions levels. In the near term, we anticipate that our GHG emissions will increase as we ramp up production at McArthur River and Key Lake.

<sup>17</sup> The region of northern Saskatchewan where Cameco's facilities are located is largely served by power provided by Island Falls Hydroelectric Station.



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SASB EM-MM-110a.2

## Our GHG Reduction Target

**We will work across our operations to achieve a 30% absolute reduction in Cameco’s combined<sup>18</sup> Scope 1 and Scope 2 emissions by 2030, from 2015 levels<sup>19</sup>.**

We have chosen 2015 as our base year as it is the most recent year that represents normal operations at all facilities. Since 2018, our combined Scope 1 and 2 emissions have been below our 30% reduction target as production was curtailed at our Rabbit Lake, McArthur River, Key Lake, and US operations in response to a global slowdown in uranium demand. In addition, in 2020 and 2021 we temporarily curtailed production at Cigar Lake for precautionary reasons to manage the risks to our employees, their families and communities from the Covid-19 pandemic. Today, we are seeing a significant improvement in the market due to a global focus on energy security, electrification, decarbonization and other factors. In response to our contracting success resulting from the improving market conditions, we have resumed production at McArthur River and Key Lake operations.

Our 2030 target assumes an increased level of activity at our operations as the demand for our products improve. As a result, our emissions are expected to increase from our recent 2020-2022 levels over the short-term. Our 30 by 30 reduction target means that we will work to permanently reduce our Scope 1 and Scope 2 emissions by 155,000 tonnes CO<sub>2</sub>e across our operated facilities by 2030. Under this target, we will also strive to achieve a minimum reduction of 30,000 tonnes CO<sub>2</sub>e from Scope 1 emissions specifically.

This sub-target demonstrates our commitment to reducing the direct carbon footprint of Cameco facilities and maintain alignment with facility-based emissions reductions required by regulators.

Our 30% target is set within the context of ongoing favorable market conditions that could enable further increases in production whether they come from our tier-one active operations, tier-two curtailed operations, development of advanced projects, or acquisition of new assets. We will review our emissions reductions targets as part of our planned Low Carbon Transition Plan three-year review cycle.

### Developing a Low Carbon Transition Plan

In 2022, we focused on developing Cameco’s Low Carbon Transition Plan including determining an appropriate GHG reduction target and potential decarbonization pathways. We engaged third party experts to help match our challenges and opportunities to emerging technologies. Additionally, our Climate Change team developed an intake and evaluation process for emissions reduction ideas, collaborating across the organization to consolidate, categorize and quantify opportunities.

The development of our Low Carbon Transition Plan has been informed by our recent efforts to implement an energy management Information system at several operations (see [page 48](#)). The system improves our ability to visualize, monitor and manage our energy use and emissions profile in real time, tracking spikes and following trends. This data is critical to day-to-day operational management at our sites and enables strategic energy use reduction and process change decisions where they will matter most.

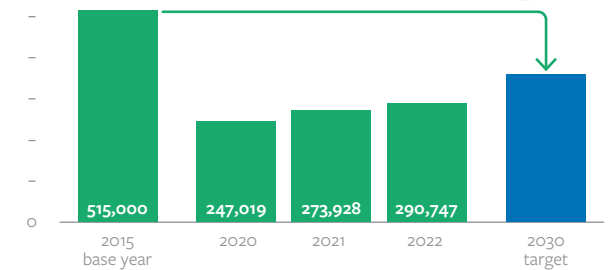


#### OUR PERFORMANCE

### GHG Emissions Target

tonnes CO<sub>2</sub>e

600,000



Since 2018, our combined Scope 1 and 2 emissions have been below our 30% reduction target as production was curtailed at our Rabbit Lake, McArthur River, Key Lake, and U.S. operations in response to a global slowdown in uranium demand. In addition, in 2020 and 2021, we temporarily curtailed production at Cigar Lake for precautionary reasons to manage the risks to our employees, their families and communities from the Covid-19 pandemic.

We are pursuing energy and emissions management activities to seize this generational opportunity for Cameco and maintain our commitment to being an active and constructive partner in the fight against climate change – first by ensuring our 2030 emissions are 30% below our 2015 base year and then by achieving our longer-term net-zero ambition.

In 2023, we plan to complete site-by-site decarbonization plans, defining the highest potential projects, identifying potential third-party funding sources, and more detailed cost and benefit projections. This work will support the integration of energy and emissions management actions within longer-term life of asset plans, budgeting, and capital allocation.

<sup>18</sup> This target covers all the facilities where we maintain operational control. The GHG Protocol Corporate Accounting and Reporting Standard defines two distinct approaches to consolidate corporate GHG emissions: the equity share and operational control approaches. Under the operational control approach, a company accounts for 100% of emissions from operations over which it or one of its subsidiaries has operational control. Cameco uses appropriate GHG Protocol guidance for all Scope 1, 2 and 3 emissions quantification practices.

<sup>19</sup> In 2015, Cameco’s combined Scope 1 and 2 emissions total was 515,000 tonnes CO<sub>2</sub>e (Scope 1: 177,000 T CO<sub>2</sub>e and Scope 2: 338,000 T CO<sub>2</sub>e). Scope 3 emissions are not included within Cameco’s 30 by 30 target.



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## Decarbonization Themes

The illustration to the right represents one potential progression to achieve our 30 by 30 target and journey towards our long-term net-zero ambition. While the specifics continue to be developed, the decarbonization themes we are exploring are based on our current understanding of existing, emerging, and potential future technologies. Leading up to 2030, we expect the efficiency, waste to value, and electrification themes to account for the majority of our targeted emissions reductions. At this time, we do not intend to use carbon offsets as part of our plan to reach our 30 by 30 target. We also anticipate leveraging emissions reductions through Saskatchewan’s provincial grid decarbonization, as the power utility progresses towards its ambition to reduce GHG emissions by 50% by 2030 from a 2005 baseline.

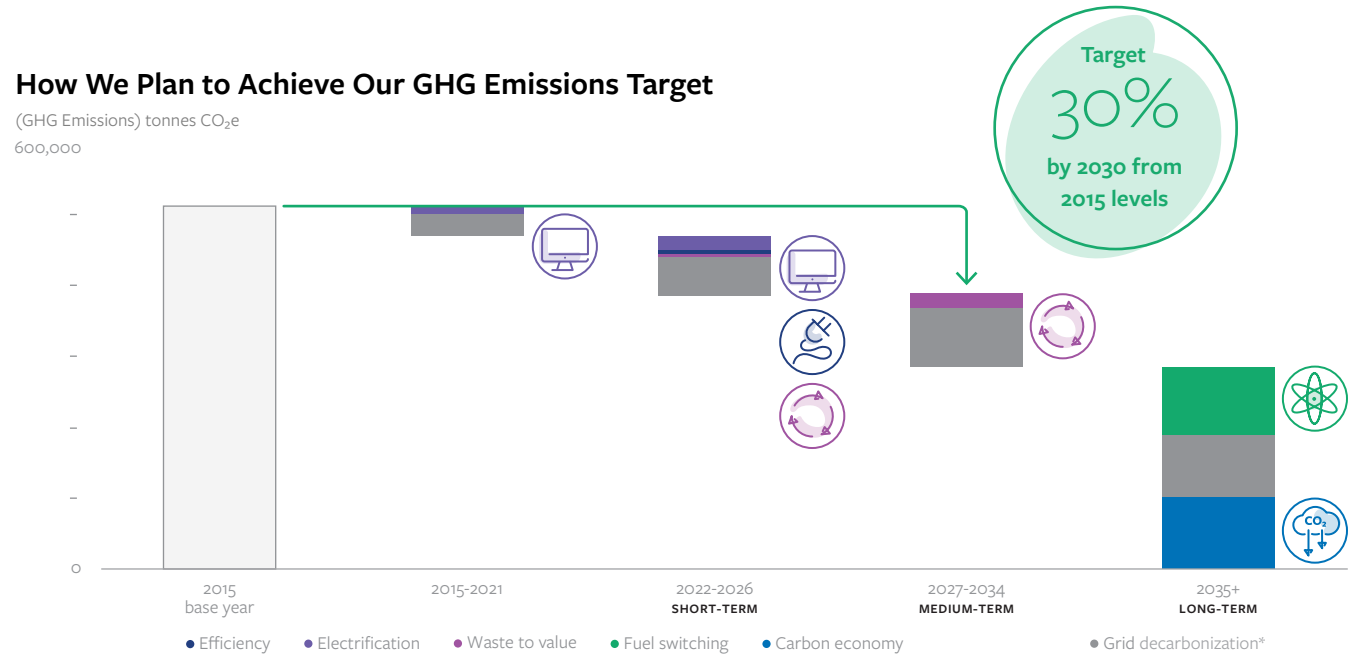


We will work across our operations to achieve a 30% absolute reduction in Cameco’s combined Scope 1 and Scope 2 emissions by 2030, from 2015 levels.

\* Grid decarbonization represents the potential impact the achievement of SaskPower’s 2030 grid decarbonization ambition can make to reducing Cameco’s emissions profile. SaskPower is Saskatchewan’s provincial power utility. Cameco has no direct control over the achievement of SaskPower’s grid decarbonization ambition, as a result we have visualized these reductions as separate from our decarbonization themes.

## How We Plan to Achieve Our GHG Emissions Target

(GHG Emissions) tonnes CO<sub>2</sub>e  
600,000



## Five Decarbonization Themes



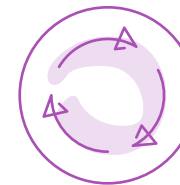
### Efficiency

Improvements and retrofits that reduce the energy and fuel needed to run our operations. In the short and medium term, we are exploring emissions-reduction opportunities such as mine ventilation-on-demand systems and LED lighting retrofits. Read about our progress on the next page.



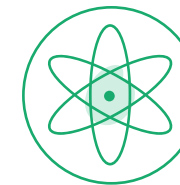
### Electrification

Moving from fossil-fuelled to electric-powered vehicles and equipment. This will turn some of our Scope 1 emissions into Scope 2 emissions but lowers overall emissions due to the improved energy efficiency of electric vehicles. The benefit increases over time as the emissions intensity of the electrical grid decreases.



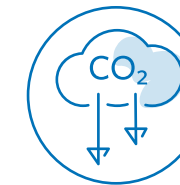
### Waste to Value

Transforming traditional process wastes into value-add opportunities such as waste heat capture and utilization, and solar pre-heating for HVAC systems.



### Fuel Switching

Replacing high-emissions energy sources such as propane and natural gas with low-carbon alternatives, such as nuclear and hydrogen. This could include on-site generation of low-carbon power or steam.



### Carbon Economy

Participating in offerings such as carbon capture utilization and storage options and carbon offsets. However, we will monitor developments in the carbon offset space in the regions where Cameco operates to determine their applicability as part of our long-term decarbonization time horizon.



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## 2022 Progress in our Efficiency Activities

Over the past few years, we have put significant effort towards efficiency, our first decarbonization theme. We have been focused on improving the visibility of energy consumption within our organization and implementing improvements to reduce energy consumption. We have made measurable reductions in energy used for mine ventilation, building heating and ventilation, and compressed air systems, and have several ongoing reduction initiatives at our mining, milling and fuel services facilities. Our 2022 activities include:

### Energy Efficiency at Fuel Services Facilities

To reduce electricity consumption and improve efficiency of our air compressor and industrial boiler systems, we have upgraded controls and enhanced our maintenance activities. To keep this system operating efficiently over time, we have implemented improved monitoring, leak detection and repair processes.

### Building Heating and HVAC Optimization

HVAC optimization continues to be a significant energy and GHG reduction opportunity area given the cold climate in which we operate. In 2022, we established a process to identify HVAC optimization opportunities in the aboveground process facilities of our northern Saskatchewan facilities. Following this process, we completed assessments on more than 200 buildings at McArthur River and Key Lake focused on improving heat retention. At our McArthur River mine, we modified the HVAC system in the mine water treatment plant (a process building with high ventilation rates and a large footprint). At the Cigar Lake camp, we updated ducting and controls to enable heat recovery from exhaust air. In many of our buildings, we have adjusted temperature setpoints to avoid over-heating and reduce electricity and propane consumption.



### Energy Monitoring

Building on work already completed at our Cigar Lake mine, we implemented improvements to energy monitoring and measurement systems at our McArthur River and Key Lake operations to support deployment of an energy management information system. This included installation of power and propane meters, and the development of digital tools to aggregate, contextualize and communicate energy performance information which we then use to plan and execute energy and GHG management actions.

### Lighting Upgrades

We have been regularly updating lighting at our industrial facilities to LEDs. In 2022, we developed project options to implement a large-scale lighting upgrade at McArthur River and Key Lake. These initiatives can impact nearly 2,000 fixtures in process areas, reducing energy consumption and GHG emissions, while enhancing safety and comfort with improved light levels and coverage.

ABOVE

Upgrades to control systems help Cameco monitor equipment operation and increase efficiency, reducing electricity consumption and GHGs.





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SASB EM-MM-160a.1

SASB EM-MM-160a.3

# Land and Biodiversity

## WHY IT MATTERS TO CAMECO

We strive to minimize the impacts of our activities on the land, plants, and animals in our operating areas in compliance with regulations and with a commitment to monitoring and measuring our impacts. A considerable portion (39% of our proven and 51% of our probable) of reserves are in or near sites with protected conservation status or endangered species habitat, as defined by the International Union for Conservation of Nature.

## Operational Context

The mining methods we currently use at Cameco (underground mining and ISR) result in less land disturbance than open-pit mining. Our company-wide footprint is about 3,000 hectares. About 40% of this footprint is from our US ISR operations where the land is occupied by our operations but does not require extensive surface disturbance. Underground mining also requires relatively small surface disturbance. However, we recognize we share this land with Indigenous communities in northern Saskatchewan and we respect their traditional land use. Read about our relationships with Indigenous communities on [page 54](#).

## Biodiversity Protection in the US

Although our sites are currently not in operation, we have plans in place to protect biodiversity. Some of our operations in the US are adjacent to Fort Robinson State Park, which is a wildlife and historic area operated by the State of Nebraska. In order to protect species and habitats in Nebraska, we monitor swift fox presence in active development areas. In Wyoming, our operations conduct baseline wildlife monitoring and have developed wildlife monitoring plans that help avoid conflict with sensitive species. This includes seasonal avian surveys for raptors and sage grouse. We also modify field construction activities during nesting seasons, if located in proximity to active nesting or denning areas.

## Addressing Biodiversity Concerns in our Plans in Australia

For our exploration projects, we take environmental and biodiversity concerns into consideration in the early stages of project development. While work on our two Australian projects (Kintyre and Yeelirrie) is currently on hold, our plans include considerations for biodiversity concerns. Details are available in our [2020 ESG report](#).

RIGHT

We strive to minimize the impacts of our activities on the land, plants, and animals in our operating areas.





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## Biodiversity Protection in Canada

We meet all level AA requirements of the MAC's Towards Sustainable Mining (TSM) biodiversity management protocols for our Key Lake, McArthur River and Cigar Lake operations. As our Rabbit Lake operation is in a safe state of care and maintenance, we currently do not report into TSM. We have specific programs to evaluate and minimize our impact on biodiversity:



### Woodland Caribou Research

Woodland caribou are listed as a threatened species in Canada's *Species at Risk Act*. We have contributed to the body of knowledge on woodland caribou populations and habitat in the Saskatchewan Boreal Shield (SK1) region where we operate by conducting direct data collection and research. We have previously joined with government and industry peers to support University of Saskatchewan research on woodland caribou, including a study that ran from 2014 to 2018 and found that the SK1 region has a relatively large, stable population of woodland caribou. We also have representation on the National Boreal Caribou Knowledge Consortium.



### Wildlife Management

Wildlife management practices are carried out to minimize potential for wildlife and human interactions. Our practices involve educating our workforce and contractors (topics include food and waste management control, consequences for habituated wildlife, wildlife behaviour, basic personal safety precautions, steps to take if wildlife is encountered, the process for reporting, conditioning programs, and wildlife activity notifications).

We also practice attractant management, i.e., removing foods, wastes, or other smells that could potentially attract wildlife to our sites, managing food storage and disposal, and using other means to limit attractants. Additionally, we monitor our sites and surrounding areas. Workers document sightings of a variety of species around our sites, including bear, fox, wolf, or other species that may frequent the area.



### Aquatic Environment Surveys

To understand the potential influence of our operations on aquatic ecosystems, we conduct aquatic surveys every three years on our primary drainage areas. These surveys measure water quality, sediment quality, fish populations, levels of chemicals in fish, and other organisms, in addition to a periodic survey of semi-aquatic mammals.



### Avian Risk Assessments

During exploration activities, or if clearing may be required during a bird's breeding period, we engage a qualified external biologist to complete an avian risk assessment to determine if our activities would pose risks to breeding birds. Risk evaluation includes detection surveys, bird behavioural observations, and habitat evaluation.



### Desktop Review of Species at Risk

We periodically review the scientific literature, published lists from the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), and the *Species at Risk Act* to identify species at risk in northern Saskatchewan. We typically update this review on a five-year cycle in alignment with our environmental risk assessments.



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SASB EM-MM-120a.1

# Air Quality

## WHY IT MATTERS TO CAMECO

Protecting air quality is essential to being a good neighbour and a safe employer. We continually monitor air quality near our facilities and mines. While our mining operations are located in remote areas, our Fuel Services Division facilities are located in or near populated areas in Ontario. Protecting local air quality is a priority for all regions.

## Our Approach

We keep our air emissions well below applicable regulatory limits. We monitor emissions against ambient air quality standards and, where applicable, action levels – emissions levels that are more stringent than regulatory limits – and have processes in place to investigate trends that may push emissions levels beyond those thresholds. This provides an early indication of potentially elevated values, which can be addressed well before regulatory limits are reached. We have formal processes in place to respond to action level or regulatory level exceedances, should they occur.

We conduct ambient air monitoring and stack sampling. By taking samples from ambient air near our facilities, we can detect the presence and concentration of specific substances of concern, including uranium suspended in air, to determine air quality. At all operating mines and facilities, we collect and verify representative samples of emissions at the point of discharge (i.e., the stack) to determine the total mass of pollutants emitted to the atmosphere. Stack sampling is typically completed more frequently at operations in or near communities compared to remote industrial facilities.

## Measuring Air Emissions

Our operations generate the following air emissions that can impact air quality:

AIR EMISSIONS (TONNES)	2020	2021	2022
NOx (excluding N <sub>2</sub> O)	138	119	<b>189</b>
Particulate matter (PM <sub>10</sub> )	149	214	<b>196</b>
Carbon Monoxide (CO)	9	0	<b>32</b>
Ammonia (NH <sub>3</sub> )	38	35	<b>42</b>
Volatile organic compounds (VOCs)	1	0	<b>28</b>
SOx	0	0	<b>63</b>
Hydrogen Fluoride	0.61	0.63	<b>0.55</b>
Uranium	0.05	0.04	<b>0.05</b>

The increase in air emissions is related to the restart activities at Key Lake and McArthur River in 2022.

Note: Air emissions data is limited to the facilities that we own, operate and are currently in production that reach National Pollutant Release Inventory (NPRI) release based threshold quantities within Canada.



## MEET OUR PEOPLE

### Christa Ingalls

OPERATIONS MANAGER

CAMECO FUEL MANUFACTURING, PORT HOPE, ON

Cameco Fuel Manufacturing general manager Doug Jensen insists that Christa Ingalls' initials stand for “continuous improvement” as much as they represent her name. “A real driver for me in all areas is continuous improvement. That’s how you get better” says Christa, manager at CFM in Port Hope, ON.

Christa has applied that philosophy to several roles since joining the company in 2005. She started as a project engineer and went on to hold superintendent roles for both production streams at the Port Hope Conversion Plant – the UF<sub>6</sub> plant whose product is exported to produce fuel for light water reactors; and the UO<sub>2</sub> plant which produces fuel for CANDU heavy water reactors in Canada.

Christa also worked with the corporate technical services and SHEQ groups before being named operations manager at CFM Port Hope – the first woman to hold that role – in 2016.

“In some jobs, you can see what you’ve accomplished at the end of your shift,” she says. “In other roles like mine, it’s a much longer perspective of working on the long-term vision and how to improve things.”

To that end, Christa has focused on building strong relationships with everyone including the site’s union executive and the joint health and safety committee. She believes in transparency, trust and, of course, continuous improvement. “We’ve built a strong team here,” says Christa, “and we’ve been able to accomplish great things.”



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# Decommissioning and Closure

## WHY IT MATTERS TO CAMECO

Our commitment to protecting the environment and the needs of the communities around our operations extends to the full life-cycle of our mines and facilities. This includes planning for decommissioning and preparing our sites for permanent closure.

## Planning

In keeping with the conditions of our licences, permits, and approvals, we develop preliminary decommissioning plans for our mines and fuel services facilities. This conceptual plan describes activities required to reclaim the site to defined final end-state objectives, after the operating life of a facility. The plan includes a preliminary cost estimate for labour, materials, equipment, waste management, regulatory approvals, monitoring, and administration to carry out the plan. This cost estimate is the basis for determining our decommissioning obligations.

## Decommissioning and Reclamation Obligations

At the end of 2022, our estimate for our future decommissioning and reclamation costs (total and undiscounted) for our existing operating assets is approximately \$1.36 billion. Every quarter, we update these estimates based on new cash flow estimates, discount and inflation rates. To ensure we can pay for these future obligations, we have financial assurances of \$1.04 billion (in the form of letters of credit or surety bonds to satisfy current regulatory requirements). The expected timing for these costs is based on each mine or fuel service facility's expected operating life. Our required costs for decommissioning and reclamation in each of the next five years are not expected to be material.

## Proactive Reclamation

If part of an active site is ready for reclamation before the full site reaches the end of its life, we proceed proactively with reclamation work on that area. Some of the projects we have undertaken in the last few years include:

### Water Restoration in the US

Once we complete our mining operations in an area (or unit), we need to confirm that post-mining concentrations of metals, metalloids, and total dissolved solids in the groundwater do not present an unacceptable long-term risk to human health or the environment. We use a combination of physical and chemical processes during groundwater restoration that include reverse osmosis treatment and bioremediation (remediation using microorganisms). In 2022, one mine unit advanced to the stability stage, one mine unit began reverse osmosis treatment, and 109 production wells were evaluated as clean. Once groundwater processing is completed it is monitored for a number of years to verify that water quality is stable. Finally, decommissioning of the mining area can be completed by plugging and abandoning all wells and removing surface infrastructure, followed by revegetation.

### Waste Rock Pile Revegetation at Key Lake

The Key Lake operation continues to undergo progressive reclamation studies. Our planned multi-stage revegetation process begins with native species such as mosses, lichens, and shrubs that create a suitable environment for the introduction of other native species to accelerate natural reforestation.



The local sandy soils, however, make it more difficult to establish vegetation. At one of Key Lake's waste rock piles we have been successful at revegetating a portion of a covered pile through the use of local lake bottom organic sediments as a nutrient source and seed bank to establish shrubs, bushes and trees.



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# Social

50%  
of our employees in northern Saskatchewan are Indigenous.

12  
Indigenous individuals participated in work placements in Cameco.

10 years  
We marked more than ten years of the Eastern Athabasca sampling and testing program.

**Our relationships with our workforce, Indigenous Peoples, and local communities are fundamental to Cameco's success. The protection of our workforce and the public guides our risk assessment and the planning of our operations and product transport activities. To deliver on our vision to energize a clean-air world, we invest in programs to attract and retain a diverse, skilled workforce dedicated to continuous improvement and committed to our values.**





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SASB EM-MM-210a.3

SASB EM-MM-210b.1

# Relationships with Indigenous Peoples and Local Communities

## WHY IT MATTERS TO CAMECO

We believe that Indigenous Peoples and local communities should benefit from resource development on or near their communities or traditional lands, through employment, training, business opportunities, community investment, and environmental stewardship. Cameco has a long history of working collaboratively with Indigenous Peoples and local communities.

## Our Company-wide Approach

The uranium mines, mills and processing facilities we operate are located in three regions: northern Saskatchewan, Ontario and the US. We also have advanced exploration projects in Saskatchewan and Australia. In each of these jurisdictions, we interact with unique local and Indigenous communities. We are committed to open and honest communication, understanding the individual needs of communities, and creating opportunities for shared value.

## Formal Guidelines

Our Code of Conduct and Ethics contains our commitment to communicate with community members in an open and understandable way and to listen to their concerns and ideas about our business activities. In our interactions, we aim to listen respectfully and answer questions honestly, and if we do not know an answer, we strive to find the answer and follow up. We disclose information in good and bad times and in a manner that is timely, complete, accurate, and balanced.

In addition, each of our Canadian operations has public information programs with defined public disclosure protocols that outline how we communicate with local and other audiences. Our public disclosure protocols state that Cameco is committed to honest and ethical communication, both in principle and practice.

## Tailored Engagement

We tailor our engagement approach across our operating areas to reflect the needs of the local communities and our activity level in the area. Engagement activities range from informal community visits and information sharing to formal Cameco- or government-sponsored committees with representation from local and Indigenous communities.

## Opportunities for Shared Value

We respectfully acknowledge the traditional territories of Indigenous Peoples on which our operations are located and reaffirm our commitment to engagement and the promotion of local representation and participation in economic opportunities that arise from our operations. We support the principles of the United Nations Declaration on the Rights of Indigenous Peoples through formal agreements with communities, proactive engagement activities, and working to improve our understanding of local Indigenous Peoples and their cultures. Our commitment to supporting local business development and community priorities is exemplified by the long-term relationships and formal, mutually beneficial agreements we have with Indigenous Peoples in Canada and Australia. Some agreements extend to the promotion of economic development after closure of a site. As an example, community businesses under the Ya' thi Néné Collaboration Agreement – signed with Cameco, Orano Canada Inc. (Orano), four municipalities, and three First Nations in northern Saskatchewan – have first right of refusal for work at our Rabbit Lake facility if a decision is made to decommission the operation.

## RIGHT

Elder gatherings, like this one held in Pinehouse in June 2022, are an important part of Indigenous community culture throughout northern Saskatchewan.





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## Northern Saskatchewan

Since Cameco was formed in 1988, we have worked in close collaboration with northern Saskatchewan communities, the majority of which are Indigenous. We regularly work with more than 17 Indigenous communities around our Cigar Lake mine, McArthur River mine, Key Lake mill, and Rabbit Lake mine and mill.

Our activities in northern Saskatchewan are supported by our community liaisons in seven communities: Black Lake Denesuline First Nation, Fond du Lac Denesuline First Nation, Hatchet Lake Denesuline First Nation, English River First Nation, Lac La Ronge Indian Band, Southend and the Northern Village of Pinehouse. Our [five-pillar approach](#) to corporate responsibility (community engagement, environmental stewardship, workforce development, business development and community investment) guides our engagement in northern Saskatchewan. Key elements include:

### Continued Community-based Monitoring

In addition to our own environmental monitoring programs, we continue to collaborate with community and regional partners through two key programs to uphold our commitments to measuring and mitigating the environmental impacts of our activities:

### Eastern Athabasca Regional Monitoring Program (EARMP)

EARMP is a long-term environmental monitoring program, established in 2011, to monitor the potential cumulative downstream effects of uranium mining and milling operations in the Eastern Athabasca region of northern Saskatchewan. This industry-government partnership brings together Cameco, the Government of Saskatchewan, the Canadian Nuclear Safety Commission, and Orano Canada Inc. All samples are analyzed by the Saskatchewan Research Council (SRC), an accredited third-party laboratory. EARMP has two components: the community program and the technical program. The goal of the EARMP community program is to determine the safety of traditionally harvested food for local consumption through sampling and analytical testing. The goal of the technical program is to monitor potential long-term changes in the aquatic environment far downstream from uranium mining and milling operations in the Eastern Athabasca region. This program collects water, sediment, fish (flesh and bone), and other organisms for analysis. As with the community program, the testing is conducted by CanNorth. Results for 2022 show that regionally sampled traditional foods continue to be safe and healthy dietary choices for residents of the Athabasca Basin. Results are publicly available at [earmp.ca](#).

### Community Based Environmental Monitoring Program (CBEMP)

CBEMP is a component of the collaboration agreement among Cameco, Orano Canada Inc., four municipalities, and three First Nations in northern Saskatchewan (Ya' thi Néné collaboration agreement). Different from the EARMP's region-wide sampling, this CBEMP focuses on traditional foods at the community level. Each year, on a rotating basis, local residents from one or two select communities collect samples of traditional foods for analysis by the SRC. CBEMP results continue to indicate that country foods identified by members of the Black Lake Denesuline First Nation, the Northern Hamlet of Stony Rapids, the Fond du Lac Denesuline First Nation, Hatchet Lake Denesuline First Nation and the Northern Settlement of Wollaston Lake remain safe for consumption. Results are publicly available at [cameconorth.com](#).

### Support for Indigenous Traditional Knowledge

We continued to donate to the English River First Nation's cultural cabin in northern Saskatchewan, which is used to host camps for Elders and students, and as a land base for caribou hunts and other traditional activities. We also provided financial support and employee volunteer time for the Pinehouse Elders' Gathering, a week-long gathering attended by community members from across Saskatchewan. Daily workshops and events highlighted traditional knowledge, food, entertainment, and activities.

### Capacity Building

We continued to offer online courses and work placements that help increase employability in the region. See [page 57](#).

ABOVE

Results from monitoring programs show that regionally sampled traditional foods continue to be safe and healthy dietary choices for residents of the Athabasca Basin.



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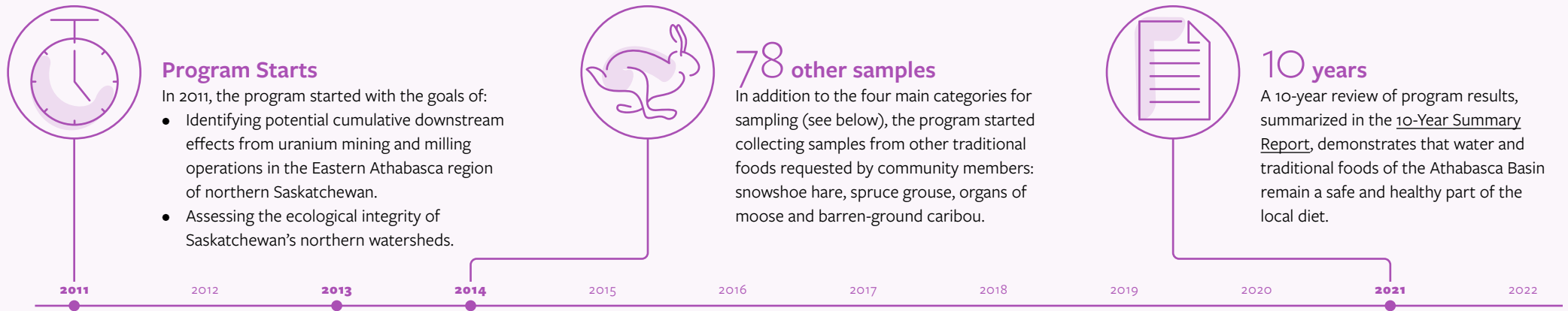
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SPOTLIGHT

# 10 Years of Community Collaboration for Environmental Monitoring

The Eastern Athabasca Regional Monitoring Program (EARMP) is a collaborative industry-government partnership established in 2011 to monitor the safety of traditionally harvested foods. The summary below is a snapshot of our joint efforts, with community and regional partners, and of the results from EARMP over the last ten years. EARMP is similar to a provincial Cumulative Effects Monitoring program that was in place from 1994 to 2008 and was designed to monitor the possible cumulative effects from uranium mining in northern Saskatchewan.



### Program Starts

- In 2011, the program started with the goals of:
- Identifying potential cumulative downstream effects from uranium mining and milling operations in the Eastern Athabasca region of northern Saskatchewan.
  - Assessing the ecological integrity of Saskatchewan's northern watersheds.



### 78 other samples

In addition to the four main categories for sampling (see below), the program started collecting samples from other traditional foods requested by community members: snowshoe hare, spruce grouse, organs of moose and barren-ground caribou.

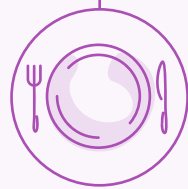


### 10 years

A 10-year review of program results, summarized in the [10-Year Summary Report](#), demonstrates that water and traditional foods of the Athabasca Basin remain a safe and healthy part of the local diet.

### Publicly Available Information

A fundamental objective of the program is to provide the public access to all information collected. All reports and supporting information are available on the [www.earmp.ca](http://www.earmp.ca) website.



### Understanding Local Diet

Human Health Risk Assessments were completed in 2013 and 2018, using all available data collected during the program. These assessments also incorporated information from two community dietary surveys completed in the region, including:

- ✓ A list of traditional foods
- ✓ How much and how often community members consume each food type.

The assessments were used to understand the level of exposure to the chemicals of interest that occur through a traditional diet.

### 7 communities

- The community component of the program monitors the safety of traditionally harvested foods by collecting and testing water, fish, berry, and mammal tissue samples from seven communities located in the Athabasca region:
- Black Lake Dēnesųhné First Nation
  - Fond du Lac Dēnesųhné First Nation
  - Hatchet Lake Dēnesųhné First Nation
  - Stony Rapids
  - Wollaston Lake
  - Camsell Portage
  - Uranium City



### Results

Results show that the water is safe to drink and the food is safe to eat.

### 4 categories of focus:

Samples that were collected and tested since 2011:



Water

47 samples



Fish

431 samples



Mammal

121 samples



Berries

192 samples





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## Increasing Employability in Northern Saskatchewan

One of the ways we share economic value with our northern communities is through employment creation and skill building. We hired 215 Residents of Saskatchewan's North (RSN) in the 12 months between October 2021 and October 2022 as we completed automation and digitization projects at the Key Lake and McArthur River operations, and then following a decision in February of 2022 to restart these operations, moved into the restart planning and implementation phase. These 215 new employees joined our existing RSN employee base of 372 individuals.

### Raising Awareness

To raise awareness, we participate in career fairs in the local communities, showcasing the types of jobs that Cameco offers as a major employer in Saskatchewan's north. In addition, we employ community liaisons through our formal agreements in Pinehouse, English River First Nation, Lac La Ronge Indian Band, Fond du Lac First Nation, Hatchet Lake First Nation, Black Lake First Nation and Southend.

### Capacity Building

We build capacity through scholarships, training, and work placement opportunities. By working to further develop northern talent and increase the skills of local community members, we can support their readiness for permanent employment opportunities when they emerge.



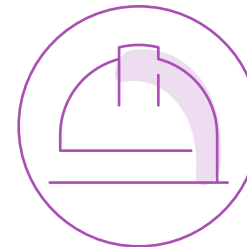
### Scholarships

We offer a pan-northern scholarship program focused on RSN students pursuing post-secondary education as well as seven other scholarships, all in areas ranging from geological science to business. In addition, we support scholarship programs established under our collaboration agreements with Indigenous communities.



### Training

Most roles at our northern Saskatchewan operations require specialized training. Since 2021 we have offered 15 online courses for RSNs. These courses help prepare residents to apply for employment at our sites and enhance skills that can be applied to other employment opportunities in the industry or within their local communities. More than 320 individuals registered for these courses in 2022, 36% of them women.



### Work Placements

We placed 12 learners from our online training courses, six of whom were women, at our northern Saskatchewan operations for three-month work experience placements. These placements provide an opportunity for northern residents to learn about our safety culture, day-to-day site operations and work life at our remote facilities. One community member was offered full-time employment after the completion of her 2022 placement.



ABOVE

Naomi Roberts, Mill Trainee, reviews specifications on R2Key2, a robotic packaging system which increases worker safety and efficiency at Cameco's uranium mill site in Key Lake, SK.



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**ANALYST CORNER**

SASB EM-MM-210a.3

SASB EM-MM-210b.1

## Ontario

Our Ontario facilities are located in three municipalities and include our Cameco Fuel Manufacturing (CFM) facilities (in Port Hope and Cobourg), our Port Hope conversion facility (in Port Hope), and our Blind River refinery (near Blind River). We collaborate with these municipalities and local Indigenous communities. We have a mature public information program to provide relevant information to the community on how activities at our facilities affect the environment and the health and safety of employees and the community. The program is dynamic and uses traditional radio and print media and community-based activities, as well as website and social media outreach to communicate with the public. Read about [community activities at our Ontario sites](#).

## United States

Our operations in the US include three in situ recovery (ISR) operations: Crow Butte in Nebraska, and Smith Ranch-Highland and North Butte in Wyoming. Our mining is predominantly on privately-held ranch land that we lease from the owners, along with some parcels owned by Cameco. The mines are located in sparsely populated areas, and none of the operations have formal collaboration agreements with communities. All sites were in active production from the early 1990s; however, as a result of our 2016 decision to curtail US production due to ongoing weakness in the global uranium market, production ceased in 2018 and our US operations are now in care and maintenance. Since moving to a state of care and maintenance, we have had to decrease our community involvement accordingly.

## Australia

Cameco has been exploring for uranium in Australia since 1996 and holds two of the country’s largest undeveloped uranium deposits, Kintyre and Yeelirrie. Our activities at these two sites have been scaled back and continue at a pace aligned with our contract portfolio and customer needs. We remain committed to our relationships with the local communities and continue to work with community groups in these two areas. We also continue to engage regularly with local governments and government agencies about the status of the projects and local events or occurrences.

## Kazakhstan

Joint Venture Inkai LLP (JV Inkai) is a limited liability partnership between Cameco (40%) and Kazatomprom (60%). Inkai is considered a material uranium property for Cameco. JV Inkai operates an ISR producing mine located in Kazakhstan. The Kazakh Subsoil and Subsoil Use Code imposes local content requirements for works, services and employees. As such, at least 40% of the costs of the acquired goods and equipment, 90% of contract work and 100%, 70% and 60% of employees, depending on their qualifications (workers, engineers and management, respectively), must be of local origin. In accordance with the resource use contract, JV Inkai has also financed education, training and re-training of local employees and has provided support for low-income families in the Suzak District.



### OUR PERFORMANCE

## Strong Support for Canadian Operations

In addition to regular, in-person consultation and feedback sessions with our communities, we conduct periodic public opinion polling<sup>20</sup>. Results show Cameco’s operations continue to see strong support from the communities where we operate.

PUBLIC SUPPORT (%)	2020	2021	2022
Saskatchewan	83	82	<b>84</b>
Northern SK	75	78	<b>75</b>
Port Hope, ON	90	91	<b>93</b>
Blind River, ON	- *	96	<b>- *</b>

\* Polling in Blind River is conducted less frequently than other sites and was not completed in 2020 and 2022.

<sup>20</sup> Due to the continued shutdown of our US operations, we have not conducted polling in this region since 2016.



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# Occupational Safety and Health

## WHY IT MATTERS TO CAMECO

Cameco works in challenging physical environments and with substances that require special attention and care. It is our responsibility to keep the occupational health and safety risks associated with our business at levels as low as reasonably achievable, and to send our workers home safely at the end of their shift or work rotation.

## Our Approach

Safety is a core value at Cameco and the paramount consideration that guides all decisions and actions related to our more than 2,900 employees and contractors. We build safety into the design and operation of our facilities, have a management system that supports the integration of safety into everything we do, and promote a strong safety culture across our workforce.

## Strong Systems

We manage the safety of our workers through programs, systems, and standards with our [Safety, Health, Environment and Quality \(SHEQ\) Policy](#) providing overarching guidance. These include training requirements, operational controls, and management procedures that apply to both employees and contractors. Read how our [management system](#) contributes to a safe work environment. Additional oversight of contractors, including safety performance, is addressed through our contractor management program ([page 81](#)).

## Safety Culture Survey

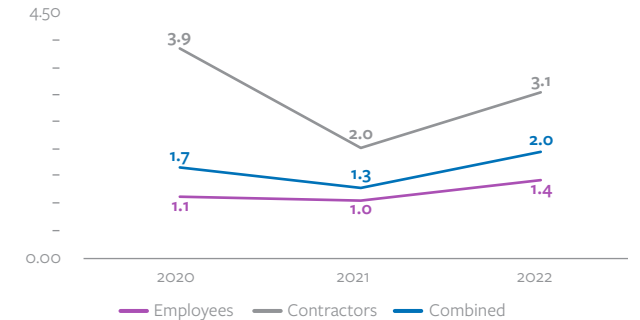
We conduct a safety culture assessment at each Canadian site approximately every five years. The survey provides management with insights on our safety culture and helps us better understand the perceptions of employees and contractors. Our most recent assessments, conducted in 2021 at three locations with over 550 workers, showed an overall trend towards more positive perceptions of Cameco's safety culture. Our next surveys are scheduled for 2023 at Key Lake, Blind River and Rabbit Lake.



## OUR PERFORMANCE

### Total Recordable Injury Rate

incidents per 200,000 worked hours



We did not achieve our safety target in 2022 and continue to work to improve our safety practices and performances. In 2022, most of the injuries were relatively minor with limited potential for more serious outcomes, and more than 40% were ergonomic-related. Read about our ergonomic activities on the next page.

LEFT

● Safety gear is routinely scanned for radioactivity.



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SASB EM-MM-320a.1

## Proactive Safety Behaviours

While good standards and procedures are important, strong safety performance requires more than following procedures. We encourage workers to stop work when they feel unsure or unsafe and to discuss issues with their supervisors and subject matter experts before proceeding. To identify and reduce hazards, we use specific tools and procedures, including:

- Five-point safety system cards, which encourage workers to ask five safety-related questions to eliminate hazards.
- STOP, a safety observation program designed to identify and address unsafe conditions and work practices before an incident or injury occurs.
- Field level risk assessments, job hazard assessments, job task observations, and self-check to assess workplace hazards prior to and during work.

## Training

Training is an important part of the process to help workers understand how to work safely. Training covers all aspects of our business and includes technical operational skills, specific safety procedures, radiation protection, and emergency response. Required training is carefully tracked to verify that qualified individuals carry out activities. For example, we selected six of our common highest-risk tasks across the company to develop and deliver consistent training on. We track training compliance for these six activities and aim for 100% compliance at each site. These six training courses, referred to as the High-Risk Safety Training 6, are:

1. Fall Protection
2. Confined Space
3. Control of Hazardous Energy Refresher
4. Electrical Safety – Non-Electrical Worker
5. Basic Radiation (Refresher)
6. Job Hazard Analysis

In 2022, our sites achieved a 93.3% average level of compliance for these six key safety courses. Sites that have not achieved 100% of required training for safety-related tasks have mechanisms in place to verify that only those currently qualified are allowed to conduct the required activities.

We began mandatory ergonomics training in 2021 and plan to require retraining every three years. This training helps to prevent common ergonomic injuries (e.g., repetitive strain injuries, soft tissue injuries) that can affect employees across the company, both in the office and in our operations.



Our training includes technical operational skills, specific safety procedures, radiation protection, and emergency response.



### IN FOCUS

## Ergonomics

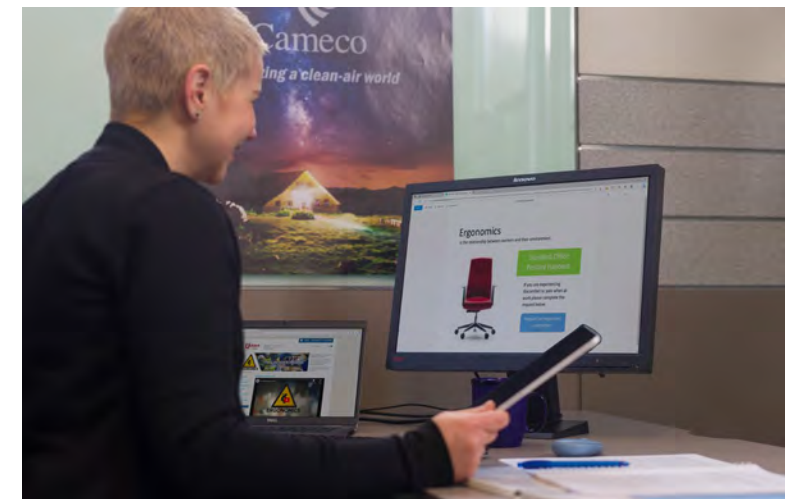
We strive to protect our workers from common injuries related to ergonomics (such as repetitive strain injuries or soft tissue injuries), which can affect employees across the company, both in the office and in our operations. In 2022, we continued to implement our ergonomics standard, which was developed in 2021, across all our sites. The standard is intended to help increase the safety, comfort and performance of our workers.

In 2022, we also:

- ✓ Added guidance to incorporate ergonomics into new facility designs.
- ✓ Provided tools to evaluate tasks and workplaces for ergonomic hazards.
- ✓ Identified formal training to certify Cameco personnel to perform ergonomic assessments.
- ✓ Provided ergonomic injury tracking and trending tools.
- ✓ Continued to promote awareness, including a company webpage with numerous resources.

RIGHT

Cameco promotes ergonomic awareness and education for employees through its internal intranet, Ushare.





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## Tailored Safety Programs

We have safety risks similar to other mining and chemical processing companies, and also experience the unique challenges associated with radiation. Some of the ways we manage these safety risks are noted on the following two pages.



### Mine Safety

Much of the uranium we produce comes from underground mines, which present specific risks that need to be mitigated, including fall of ground, water inflow, and fires. In accordance with occupational safety requirements, we have a highly trained complement of rescue workers at all our facilities.

### Preventing Fall of Ground

We mitigate fall of ground risks by strictly adhering to our corporate Ground Control Standard, conducting in-depth workplace inspections, and providing workers with multiple avenues to report hazardous or uncertain conditions. We also provide specific training on scaling (a technique to clean loose rock from the roof, walls, and rock face), which includes recognition of fall of ground hazards.



### Preventing and Managing Water Inflow

Non-routine water inflow risks are mitigated through proper mapping of the orebody before mining, and the use of best mining practices. Ground freezing also reduces the risk of water inflow and provides additional ground stability. All underground workers receive water inflow prevention and awareness training.



### Preventing Fires

All our facilities must be compliant with the National Fire Code. We also follow strict safe work practices, including requiring hot work permits and emphasizing hazard recognition. In the case of a fire in one of our mines, we have both permanent and mobile underground refuge stations and numerous portable fire extinguishers along with personal protective equipment underground. We also complete annual stench gas release exercises at our mine sites. Stench gas is a powerful odour quickly dispersed throughout an underground mine to alert workers of danger and initiate protective actions.

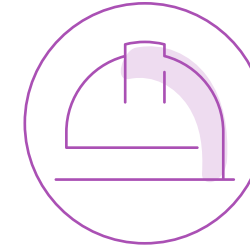


### Hazardous Substances

Across our operations, we work with hazardous substances that pose potential health and safety risks. To protect our employees, we use a layers of defence model across our facilities. A few examples of these layers of defence are described below:

### Engineering Controls

To safely handle hazardous substances we isolate them from the workplace (to the extent possible) with passive and active engineering controls (e.g., tanks with exhaust ventilation). For example, at our Port Hope conversion facility, for specific substances we employ automated leak detection that enables the plant to shut itself down and automatically divert any air in the room to scrubbers before exhausting to the atmosphere.



### Highly Trained Operators

For example, in our Port Hope conversion facility, we have a detailed operator training and certification process. Each area of the plant requires about six to twelve months of training.



### Specialized Processes

We supplement engineering controls with administrative ones and personal protective equipment. For example, we work with beryllium, a metal used in the manufacturing of fuel bundles. Beryllium dust is hazardous to human health and requires specialized controls. We use a zoning system in which rooms are ventilated separately and adhere to a standardized and stringent cleaning regime, including determining the level of surface and airborne dust contamination. All workers wear appropriate respiratory protection and must follow strict protocols for changing clothing when entering and exiting areas where we work with beryllium.



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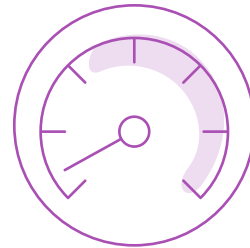
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**Radiation**

The fundamental approach we take to protect workers from radiation risks is to incorporate radiation protection principles into the design and operation of our facilities and core to these are “time, distance, and shielding”. The effectiveness of our control measures is assessed through extensive monitoring of our workers and the work environment.

**Monitoring**

Our goal is to keep doses ALARA.

All employees and contractors designated as nuclear energy workers are monitored to assess their radiation doses.

**External doses** are measured with individually issued dosimeters (a device used to measure an absorbed dose of radiation) that are worn by workers.

**Internal doses** are monitored through personal monitors, area monitoring or bioassay measurements, depending on the site.

**Alerts**

We have extensive area sampling programs to verify that radiation sources are controlled and workplace conditions are safe for our workers.

At locations where conditions can change rapidly, we continuously monitor the radiation levels and have systems that alert workers of elevated conditions.

**Low Radiation Exposure**

The average radiation dose to Cameco site workers is consistently less than 2% of the regulated annual limit for nuclear energy workers.<sup>21</sup>

The average dose to workers (employees and contractors) at Cameco was 0.63 mSv in 2022, while the annual dose limit (set by the Canadian Nuclear Safety Commission) for nuclear energy workers is 50 mSv.<sup>22</sup>



**DEFINITION**

A **millisievert** (mSv) is the International Standard unit used to measure the amount of radiation received. (One millisievert is one thousandth of a sievert.)

**A Few Numbers for Context:<sup>22</sup>**



Typical chest X-ray:

0.10 mSv



Cameco’s workers (average in 2022):

0.63 mSv



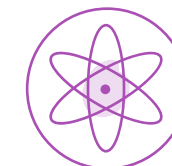
Average total dose from natural background radiation in Canada:

1.8 mSv



Typical chest computerized tomography (CT) scan:

7 mSv



Maximum allowed for nuclear workers:

50 mSv

<sup>21</sup> <https://s3-us-west-2.amazonaws.com/assets-us-west-2/annual/CCO-2022-corporate-profile.pdf>

<sup>22</sup> <http://nuclearsafety.gc.ca/eng/resources/radiation/introduction-to-radiation/radiation-doses.cfm>



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# Nuclear Safeguards

## WHY IT MATTERS TO CAMECO

The uranium and nuclear fuel products that we supply to our utility customers around the world are used exclusively for the generation of zero-emissions nuclear power. We operate in a highly regulated industry with mature and established safeguards. We take our national and international obligations seriously and have designed our programs and processes to meet or exceed all applicable regulations regarding nuclear safeguards.

## Nuclear Safeguard Practices

To implement nuclear safeguards across our business, we employ a variety of practices, such as:

### Established Customer Relationships

Our products are delivered to customers and accounts at licensed and safeguarded facilities in accordance with the Nuclear Cooperation Agreements (NCAs) in place with each respective country. The contracts we execute with our customers require the uranium we provide to be exclusively used for power generation and peaceful purposes (not for military or weapons use). We have long-established relationships with nuclear operating utilities that are safe, reliable operators and are subject to extensive regulation and licensing requirements. New customers are subject to a due diligence process to verify that our contracts meet the requirements of the Canadian NCAs and our corporate requirements.

### Safeguards at Our Operations

All of our operations are subject to the international safeguards regime. Our refinery, conversion plant, and CFM are subject to enhanced safeguards, including frequent inspections by the International Atomic Energy Agency (IAEA), an international organization that works to promote the peaceful use of nuclear energy.

## Safeguards During Transportation

In order to export our uranium products, we must secure the proper export licences and export permits from the CNSC and Global Affairs Canada. These arrangements are governed by the bilateral and multilateral agreements that are in place between countries. The export licence and permit verifies that the facility receiving the material is properly licensed to receive the material, that the competent authorities have been notified, and provides approval so that the material can enter the country where the facility is located. For the import of uranium products going to our facilities in Canada, we are responsible for obtaining an import licence from the CNSC. The licence verifies that Cameco is authorized to receive the material and that our facilities are properly licensed to receive it.



The uranium and nuclear fuel products we supply are used exclusively for the generation of safe zero-emissions nuclear power.



## DEFINITIONS

**Nuclear safeguards** are measures to verify that countries comply with their international obligations not to use nuclear materials for nuclear weapons.

## Following International Nuclear Agreements

**Nuclear co-operation** – We abide by Canadian nuclear policy and conduct business in accordance with the NCAs that Canada has with other countries.

**Non-proliferation** – We are subject to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), an international treaty established in 1970 created to prevent the spread of nuclear weapons and weapons technology, foster the peaceful uses of nuclear energy, and further the goal of achieving general and complete disarmament. As Canada is a signatory to the NPT, we are subject to the treaty and comply with all IAEA requirements. The IAEA monitors what we produce and where we ship our products through a number of inspections and measurements that verify our inventories both within our equipment and of our finished product.



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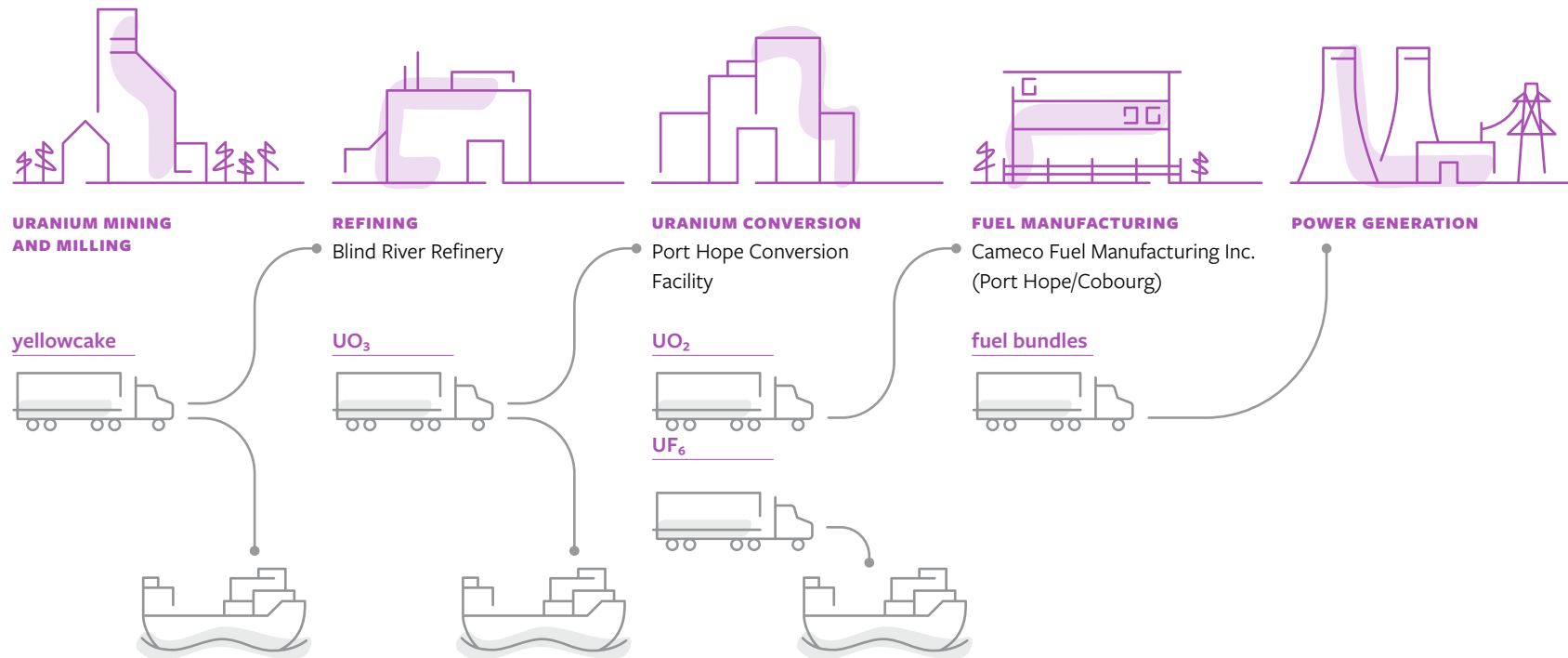
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# Product and Transportation Safety

## WHY IT MATTERS TO CAMECO

We work with products that require special attention and care, and we take this responsibility seriously. Cameco has safely worked with and transported radioactive materials routinely for more than 30 years. Our transportation safety record is not something we take for granted.

## Transport Methods



When transporting uranium product from one Cameco facility to another or to customers with North American delivery locations, we use third-party trucking companies. Outside of North America, we transport our uranium products by sea on large container ships or breakbulk/charter ships operated by third-party transporters. Our sites and transportation procedures are regularly inspected by Transport Canada and the CNSC.

## Expectations

Our SHEQ Program contains two key transport standards, one for ground transport in North America and one for marine transport. We review and update these standards at least every three years. The applicable standard is provided to the carrier during the bidding process as part of the contract.

## North American Ground Transport Standard

For our trucking providers, this standard states our requirements, including level of driver training (e.g., Transportation of Dangerous Goods [TDG] Class 7), radiation protection programs, reporting requirements, transport security, condition of the equipment used, and emergency contact.

## Marine Transport Standard

This standard sets out our expectations, including with respect to TDG Class 7 training, radiation protection programs, reporting requirements, transport security, condition of the equipment used, and emergency contact.





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## Qualifications

We work with a small set of specialized carriers and freight forwarders that are qualified to deal with Class 7 radioactive materials. Cameco conducts pre-screening of our carriers, independent of the procurement process. All carriers and freight forwarders used by Cameco are expected to have formal quality assurance programs. When we ship UF<sub>6</sub>, U<sub>3</sub>O<sub>8</sub>, UO<sub>2</sub>, or UO<sub>3</sub> outside of Canada, we hire a freight forwarder, a logistics company that coordinates the transport of the product from our facility to the shipping location specified by the customer. For example, a freight forwarder coordinates booking the trucking to meet the ocean carrier and the corresponding slot on the vessel and verifies that all the necessary documentation to support the shipment is in place.

## Audits

We audit carriers (other than shipping or rail lines) every three years to assess compliance with our transport standards. We also audit all freight forwarders that we use, including auditing their audits of any subcontracted companies they employ.

### CAMECO PRODUCTS

**Triuranium octoxide (U<sub>3</sub>O<sub>8</sub>), also known as yellowcake** – solid, directly from our Key Lake and Orano’s McClean Lake mills

**Uranium trioxide (UO<sub>3</sub>)** – solid, after it has been processed in our Blind River refinery

**Uranium dioxide (UO<sub>2</sub>)** – solid ceramic-grade powder, from our Port Hope conversion facility

**Uranium hexafluoride (UF<sub>6</sub>)** – filled as liquid and turns solid, from our Port Hope conversion facility

**Fuel bundles** – a set of fuel rods, each containing ceramic UO<sub>2</sub> pellets

To enhance training opportunities, we also include one or two of our carriers or trucking companies when we complete full-scale emergency exercises.

## Information and Labelling

We follow specific requirements for marking containers with information regarding the contents and how to handle them safely. We also follow appropriate category labelling, which indicates the level of radiation coming off the container, and placarding requirements, which are affixed to the sea container, flat rack, or truck.

## Our Products and Packaging

Our products are packaged and handled to maintain safety. Packaging for uranium products must meet the rigorous requirements found in the CNSC’s *Packaging and Transport of Nuclear Substances Regulations, 2015*. For additional quality assurance, we also audit our drum manufacturers.

### PACKAGING

Drums transported in trucks or secured within a sea container, which is then placed inside a vessel

Transported from Blind River refinery to Port Hope conversion facility in totes specifically designed for this purpose, or drums secured within a sea container, which is then placed inside the vessel

Drums transported in trucks, or drums secured within a sea container, which is then placed inside the vessel

Specially designed cylinders. The cylinder is placed on a cradle system on top of a specialized sea container (flat rack) or trailers

Specially designed protective packaging to preserve product integrity



ABOVE

Slurry truck transport from McArthur River mine to Key Lake mill.



According to the IAEA, in more than 50 years there has never been a transport incident that has caused a significant radiological hazard to people or the environment.<sup>23</sup>

<sup>23</sup> <https://www.iaea.org/topics/transporting-radioactive-materials>



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# Public Safety and Emergency Preparedness

## WHY IT MATTERS TO CAMECO

Keeping our employees, contractors and the general public safe is the ultimate goal of our programs. Taking the time to prepare for emergencies and maintain public safety leads to a stronger reputation, community relationships, and improved safety for all.

## Public Safety

In accordance with our Risk Management Program, we systematically identify and track the potential risks that could threaten public safety at every facility we operate. As risks are identified, we work to change processes, materials or systems, where we can, to minimize or eliminate the potential hazard. We use process hazard assessments to identify hazards, examine our controls, and minimize risks.

Using a risk-based approach to public safety, we direct significant efforts towards our Fuel Services Division facilities. Our activities focus on:

### Keeping Public Radiation Exposure Low

Our goal is to keep radiation doses ALARA. At our Port Hope conversion facility, we monitor fence line doses, model the potential dose to public, and use both high-volume air samplers and dust fall jars to monitor trends and respond to any increase in emissions. Cameco's average public dose across our three Fuel Services Division sites is well below the public dose limit of 1 mSv (for reference, the average annual dose from natural background radiation in Canada is 1.8 mSv).

### Minimizing Chemical Risks

Within our Fuel Services Division, we manage a number of hazardous chemicals, such as HF, UF<sub>6</sub>, and fluorine gas. We use a defence-in-depth approach to protect our people and the public. This starts with the specialized design of our facilities and systems (the first layer) and extends through multiple controls up to the last layer of defence, which is emergency response.

## Emergency Preparedness and Response

We are the primary responders for all of our sites with the exception of Cameco Fuel Manufacturing, where the municipal fire departments fulfill that role. Therefore, we prepare and train our own emergency response teams. For example, at our Port Hope conversion facility, we train our workers up to the technician level for emergency response and follow National Fire Protection Association 472, a standard that outlines the levels of competence required by responders to emergencies involving hazardous materials. Many of our workers have industrial firefighting professional certification and we have our own fire truck at the facility. We typically complete either one full-scale or one tabletop exercise each year.

During transportation of our materials, we have an emergency response assistance plan (ERAP) that sets out procedures in the event of an emergency. We also have a network of emergency response contractors on retainer through Green for Life in Canada and US Ecology/National Response Corporation in the US. If a significant transport incident were to occur, then we rapidly deploy to the site and contact the incident commander who retains control of the emergency situation. Cameco will then offer emergency assistance and provide materials expertise and our specialized radiation monitoring devices. We collect any spilled material and package and ship anything that is contaminated back to our mine sites where it is handled accordingly. After any incident, we follow best practices in sharing learnings with industry, for example, through the World Nuclear Transport Institute.



ABOVE

Cameco maintains highly-trained fire, emergency and rescue teams at each of our operations.



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# Inclusion and Diversity

## WHY IT MATTERS TO CAMECO

We understand the value of a diverse workforce and we embrace, encourage, and support workplace inclusion. Members of a diverse workplace bring new ideas, perspective, experiences, and expertise to the company. Our goal is to create an inclusive work environment, with a diverse and representative workforce being our measure of success.

## Our Approach

Our goal is a workplace where everyone feels welcome, valued, and an integral part of the team. To achieve our goal, we are committed to creating a safe, innovative, and inclusive culture where we act as “one Cameco”. We adhere to all laws in the countries where we operate, including human rights, labour and employment laws (e.g., *Canadian Employment Equity Act*<sup>24</sup>) and share the values reflected in the *Universal Declaration of Human Rights*.

We support inclusion and diversity through:

## Policies and programs

Our commitment to diversity begins at the top through our [Board Diversity Policy](#). Our [People Policy](#) describes our commitment to developing and supporting a flexible, skilled, stable, and diverse workforce. Our People Policy is supported by our Respectful Workplace Program, our Workplace Inclusion and Accommodation Program, and our Inclusion and Diversity Plan. We developed a gender-neutral language guide to raise awareness about our word choices during daily business emails and interactions.

## Training

All employees and leaders take mandatory respectful workplace training. We updated this training in 2022 and will roll it out in Q2 2023. All employees, including our executives, also participate in a mandatory 3.5-hour course on unconscious bias. As of December 31, 2022, 86% of our organization had taken this unconscious bias training.

## Awareness

We work to support awareness and understanding of the benefits of inclusion and diversity at Cameco through open and respectful communication that fosters awareness and understanding. Much of this work is led or supported by our Inclusion and Diversity Committee, which includes 32 volunteer employees and leaders drawn from all company locations and diversity groups. This committee advocates for, leads, and supports change, and it reports to the President and CEO, and the senior Vice-President and Chief Corporate Officer.



ABOVE

Tara Richardson, mine geologist at our Cigar Lake operation.

<sup>24</sup> As a Canadian federally regulated employer, we comply with the *Employment Equity Act*. The act requires us to engage in proactive employment practices to increase the representation of four designated groups: Indigenous people, visible minorities, persons with disabilities, and women.



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### Data

We developed an internal diversity dashboard to provide diversity statistics for employment equity groups by location, position, recruitment/termination, etc. This dashboard allows Cameco to measure the impact of our diversity-related programs on recruitment, particularly of members of employment equity groups. The dashboard is expected to be rolled out in 2023.

### Recruitment

We work to ensure all recruitment processes, including our job postings and job evaluation tools are gender neutral and barrier free. We also continue to give priority to qualified members of employment equity groups, particularly women in non-traditional roles. Preferential recruitment practices help ensure unconscious biases and systemic barriers in our processes are removed. A major focus in 2022 was recruiting women for the restarts at McArthur River and Key Lake. Our goal was a year-end 2022 workforce that had a higher representation of women than our 2017 shutdown representation of 11%. We successfully achieved a representation of 15.3% women at McArthur River and Key Lake by the end of 2022.

### Facilities

At Cameco, we want to foster a work environment that is inclusive and barrier-free. In 2022, Cameco introduced all-gender washrooms at our Corporate Office in Saskatoon and enhanced our existing multipurpose quiet room to be suitable for lactation, prayer, and other needs. We also formed a cross-functional committee to draft a plan for an accessibility and inclusivity review of our Canadian facilities.

## Pay Equity

Cameco is committed to gender pay equity. We continue to work on closing any pay gaps; this involves a regular review during the annual compensation cycle and reviews at the time of promotions and recruitment. Questions or concerns about pay equity can be directed at any time to the corporate compensation management team.

## Women in Leadership

Diversity is also an important element of senior management and board leadership (read about board diversity on [page 73](#)). We strive for a percentage of women in senior management that, at a minimum, reflects the proportion of women in our workforce. We met this specific target in 2022 (28% of senior management were women while 24% of the workforce were women in 2022). We expect that our long-term inclusion and diversity efforts will result in more women being identified and prepared for senior-level positions within the company.



A major focus in 2022 was hiring women during the restart of our McArthur River and Key Lake operations.



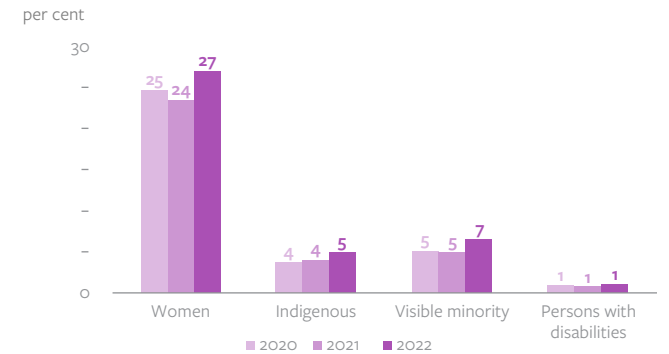
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## Diversity Across Our Workforce



Figures as of December 31 each year. This chart only includes employees from our Canadian operations (including temporary and casual), as other jurisdictions are not (at this time) required to collect or maintain diversity information on employees.

## Diversity in Management



We continue to improve our workplace practices to foster an inclusive environment that aims to support a diverse workforce and their advancement into leadership positions. This data only covers Canadian employees. Management includes all manager positions and above select professional and supervisory positions.



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## Indigenous Employment

Working closely with the Indigenous communities around our operations has always been part of the way we do business. We employ Indigenous individuals across our business areas in a variety of skilled positions, from operators and supervisors to technicians and corporate professional roles. In northern Saskatchewan, we have had a long-standing commitment to maximizing the employment of Indigenous individuals.

In 2022, we focused on Indigenous recruitment and hiring to support the restart of our McArthur River and Key Lake operations. Our goal was to achieve a year-end 2022 workforce with Indigenous representation that was higher than 48%, the level in 2017 prior to shutdown. We were successful in achieving that goal, with an Indigenous representation of 50.9% at McArthur River and Key Lake, and 50% across northern Saskatchewan as of December 31, 2022.

## Indigenous Training Program

Our goal is to provide opportunities and sustainable benefits for Indigenous people through employment, education, and training. See [page 57](#) for details on how we work to build the capacity of northern residents to apply for permanent roles in the region.



Indigenous individuals comprised 50% of the workforce at our operations in northern Saskatchewan at the end of 2022.

ABOVE

McArthur River employees Wayne McKenzie and Kaylin Natomagan specialize in process operations.



### MEET OUR PEOPLE

## Donald Misponas

HEAVY EQUIPMENT OPERATOR

KEY LAKE, SASKATCHEWAN

Donald Misponas' career has spanned more than 30 years as a heavy equipment operator and trainer. The Key Lake resident has worked at all four Cameco sites in northern Saskatchewan for both Cameco and Pinehouse Business North (PBN). While he has spent most of his career operating heavy equipment in the mining industry, he's equally adept at helping those with a heavy heart.

Last year Donald started volunteering at the Muskwa Lake Wellness Camp, near his home community of Pinehouse. The camp provides land-based health intervention to address alcoholism, suicide rates and overdose deaths in northern Saskatchewan communities. In recognition of his efforts, Donald and his wife Effie (the camp's main counsellor) were named Citizens of the Year for 2022 by community leaders at the Pinehouse annual meeting in late December.

"Whether it's young or old people, I love helping," said Donald, who started at Cameco in 1986. "I've been sober for almost 23 years and the struggle is real. So being able to help people who are in a tough spot, it really means something. I wasn't looking for a reward but to see our efforts recognized and that my community and my leaders noticed this, it touched my heart."

Following the temporary shutdowns at Key Lake and McArthur River in 2018, Donald was asked to rejoin the mill at Key Lake. While his career is winding down, he jumped at the opportunity for one final stint in a Cameco uniform. "I started here in my mid 20s and I couldn't think of a better place to finish my career," said Donald. "I'm happy to be back."



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# Employee Development

## WHY IT MATTERS TO CAMECO

We believe that building the skills and competency of our workforce is critical to attracting and retaining talent, mitigating risks, and developing a team that is engaged and stays informed on industry trends and best practices. We work to develop and retain high performing team members through workforce planning, building competencies for operational and professional development, and training and coaching for all employees.

## Workforce Planning

We conduct an annual review of human capital at Cameco. This includes identifying key positions, assessing succession readiness for those positions, and determining incumbents' potential and performance, including risk and impact of loss.

## Defining Competencies

Cameco has an orderly, logical and documented approach to determining what employees must know and do at a particular job or in a specific profession. This approach helps employees build competencies based on appropriate education, skills, experience, and behaviours, and provides a means of measuring, monitoring, and improving the performance of employees.

For example, Cameco has four leadership competencies under the acronym "ABLE": *Achieve results, Build trust, Lead change, and Energize people*. For each competency, there are three primary characteristics and five examples of what each leadership characteristic would look like in the work environment. We believe all employees can be leaders in different capacities so the characteristics and responsibilities outlined under ABLE are things that can be exhibited and practiced by all employees. We work to build awareness around the competencies through company-wide communications.

## Training and Coaching

Every Cameco employee receives a foundational suite of training during onboarding including site-specific orientations, and training related to respectful workplace, unconscious bias, IT security, and our Code of Conduct and Ethics. In addition, most positions at our operations have a detailed job task analysis and specific compliance training (for example, safety and operational training). All training requirements are assigned, and completion is tracked, in our internal learning management system. To help employees develop their technology skills, we provide access to Cameco's Digital Learning Centre, an online portal with a wide array of digital-themed courses, presentations, and podcasts from upskilling basic digital skills to software development.

Our performance management approach is based on a coaching model, with frequent, meaningful conversations about past performance and future goals. These conversations focus on key priorities, behaviours, expectations, and career growth and development.



## MEET OUR PEOPLE

### Joshua Eaglechild

SUPERVISOR, SITE SERVICES  
KEY LAKE, SASKATCHEWAN

Joshua Eaglechild is living proof that hard work and persistence pays off. Initially part of a general Cameco recruitment process in English River First Nation in 2009, two years passed before he was offered a job at McArthur River as a bus driver and labourer. "It felt like they ghosted me," recalled Joshua with a laugh. "But I kept bugging the recruiter saying I want to work for Cameco. I think they eventually got tired of me asking and they finally decided to hire me."

Once his opportunity arrived, Joshua made it count. Over the last 12 years, he's advanced from the bus driver position to supervisor of site services at the Key Lake mill with a team of 16. From ensuring slurry trucks are on the road, the airport runway and mill roads are cleared, and garbage is properly disposed of, his team plays a vital role in making sure the mill can run smoothly. He's also the captain of the mill's emergency response team.

"I never really thought about moving up the ladder, I just wanted to work hard, so every day I did. This work ethic is something that I got from my father and my mother. I've just always wanted to learn every day and grow."

He's grateful that Cameco has allowed him to embrace that mentality, develop his skills and build a second family in the process. "I'm proud to work here. Not only is the pay great and the support for your advancement and growth, but this place is also like a second home. The people here are my real friends. And being from the north, I love being able to work outside and my role allows me to do that and enjoy the beautiful nature."



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# Health and Wellness

## WHY IT MATTERS TO CAMECO

The health and well-being of our employees is important to us. Our philosophy recognizes the importance of maintaining balance across four essential health dimensions: physical, intellectual, emotional and spiritual.

We offer a variety of company-wide and site-specific programs and initiatives to support financial, physical, and mental well-being, including a group benefits program and an employee and family assistance program. Read more about our wellbeing programs on our [website](#). To support financial wellness, we offer a retirement program and employee share ownership plan. To foster physical wellness, we have on-site fitness facilities, lifestyle programs, and team activities. In 2022, we introduced an online wellness HUB, Health Connect, on our employee intranet site to promote health and well-being resources available through all our service providers. We also offer flexible work arrangements, which includes a hybrid-working environment for our corporate office location.

Based on our most recent organizational health and wellness assessment, we are currently developing a mental health action plan that will guide future mental health programming, and further health and wellbeing programming.



## RIGHT

Health and wellness supports at Cameco includes fitness facilities at all our northern Saskatchewan operations.

# Unions

## WHY IT MATTERS TO CAMECO

Cameco respects the rights of our employees to associate and welcomes the contributions of organized labour. In 2022, 28% of our employees were covered under collective bargaining agreements.

Unionized employees at our Key Lake and McArthur River sites, our Port Hope conversion facility, and Cameco Fuel Manufacturing are represented by the United Steelworkers. For more than two decades, our collective bargaining agreement (CBA) for our Key Lake and McArthur River sites has included a northern preference provision, which gives preference to northern and northern Indigenous workers in hiring, apprenticeships, recall, and retention during workforce reductions within the first 10 years of employment.

We endeavour to be proactive in our communications, honest and transparent as decisions are made, and engage early to build trust with all union representatives. Along with the standard grievance process for specific issues and the formal bargaining process at the end of each CBA expiry, we host ongoing meetings between union and management (approximately four to seven per year) that have specific agendas. In 2022, we completed negotiations for a new collective agreement at the Port Hope conversion facility. The collective agreement for our Key Lake and McArthur River sites expired at the end of December 2022. Negotiation for our Key Lake and McArthur River collective agreement began in 2023.



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# Governance

## Top 15%

ranked in the 2022 Globe and Mail's Board Games.

## 8 out of 9

of our board members are independent.

## 100%

of our board members participated in climate-related education and we updated the skills matrix to incorporate climate change experience in our sustainability skill.

**At Cameco, we believe that sound governance is the foundation for strong corporate performance. We are dedicated to our core value of integrity and apply high standards of ethical behaviour and transparency to our business activities. We have a suite of policies, programs and practices to manage and protect our systems, information and assets.**







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# Corporate Governance

## WHY IT MATTERS TO CAMECO

We view effective corporate governance as an essential element in the ongoing success and sustainability of our company. We are committed to governance practices that align with our values and our strategy, and that are consistent with regulatory expectations and evolving best practices.

Our board of directors plays an important role in providing oversight of the management team and providing direction for our strategy and business affairs. The board guides Cameco to operate as a sustainable business, to optimize financial returns while effectively managing risk, and to conduct our business in a way that is transparent, independent and ethical.

## Board Composition and Renewal

The nominating, corporate governance and risk committee reviews director competencies every year against a skills matrix to validate that they continue to meet Cameco's needs. Each director completes a self-assessment of their competencies following a prescribed rating scale and meets with the nominating, corporate governance and risk committee chair or the board chair to review their self-assessment. The committee reviews the results for consistency and to confirm that the directors possess skills in these areas. We have term limits and a retirement policy for directors and have added one new director in the past five years. Read more on page 30 of our [2023 Management Proxy Circular](#).



In 2022, Cameco's board conducted an independent board effectiveness assessment focused on board succession, renewal and refreshment.

## Board Diversity

A board with a mix of diverse skills, backgrounds, experience, gender, and age, that also reflects the evolving demographics and geographic areas where we carry out business, is important for sound decision-making and good governance. The board has a formal diversity policy, which includes a set of measurable objectives for achieving diversity on the board, including the identification and nomination of directors who are women or who have Indigenous heritage. Of our current directors, three are women (33% of the total number of directors). To incorporate Indigenous perspectives and to reflect the communities where we operate, especially since a significant portion of Cameco's operations are in northern Saskatchewan, our diversity policy requires at least one director to have Indigenous heritage and be from Saskatchewan. Of our current directors, one is Indigenous (11% of the total number of directors), and we have had Indigenous directors on our board since 1992. Our diversity policy also requires the board to have directors with extensive experience in geographical areas where we have or anticipate having significant business interests, and to represent a range of ages. Read more on page 34 of our [2023 Management Proxy Circular](#).

## For More Information

- [2023 Management Proxy Circular, page 45, 'Our Corporate Governance'](#)
- [Code of Conduct and Ethics](#)
- [2022 Annual Report](#)
- [2022 Annual Information Form](#)

Our key governance documents are available on our website ([cameco.com/about/governance](https://cameco.com/about/governance)).



## GOVERNANCE INFORMATION

### ETHICS

Code of Conduct and Ethics for directors, executives and employees	Yes
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### BOARD COMPOSITION AND INDEPENDENCE

Size of board	9
Independent directors	8
Separate chair and CEO	Yes
Independent chair (required)	Yes
Comprehensive board assessment process	Yes
Directors that are financially literate	100%
Board meetings held in 2022	14
Average meeting attendance	99%

### BOARD RENEWAL AND DIVERSITY

Annual election of directors	Yes
Average age of directors	65
Mandatory retirement age	Yes
Average director tenure	9.5 years
Women board members	33% (3)
Board Diversity Policy	Yes
Indigenous board members	11% (1)

All chart information as of December 31, 2022.



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# Governance For ESG Matters

## WHY IT MATTERS TO CAMECO

We are dedicated to conducting our business responsibly and overseeing and managing our risks in a diligent manner. We integrate key ESG factors (safety performance, a clean environment, and supportive communities) into our executive and employee compensation strategy as success in these areas is critical to Cameco's long-term success and sustainability.

## Role of the Board and the Safety, Health and Environment Committee

Our board is responsible for overseeing the integration of sustainability and ESG principles throughout the company. The board's goal is to help ensure we operate as a sustainable business, optimizing financial returns while effectively managing risk, including ESG matters and climate-related risks. The board also oversees our strategic planning process and annual corporate objectives; and approves incentive compensation for our executives, all of which are based on performance against our four measures of success, including ESG performance. ESG governance, risk oversight and disclosure are regular topics of discussion at board and committee meetings.

Oversight of sustainability and ESG reporting and disclosure, including climate-related reporting and disclosure, has been delegated by the board to the Safety, Health and Environment (SHE) committee for review and to make recommendations to the board.

## ESG Steering Committee

Chaired by the senior vice-president and chief corporate officer, our multi-disciplinary ESG Steering Committee reviews our approach to sustainability, ESG governance and reporting, and evolving trends.

## Compensation Tied to ESG

Our compensation program emphasizes our balanced scorecard approach and our commitment to integrating ESG measures into our executive compensation. 50% of our short-term incentive targets for employees, including executives, are tied to ESG performance measures.



BOARD / BOARD COMMITTEE	ESG TOPICS
BOARD OF DIRECTORS	<ul style="list-style-type: none"> <li>Business strategy</li> <li>Opportunity and impact of energy transition on business strategy</li> <li>COVID-19 pandemic</li> </ul>
NOMINATING, CORPORATE GOVERNANCE AND RISK	<ul style="list-style-type: none"> <li>Oversight of the Risk Management Program</li> <li>Board diversity</li> </ul>
SAFETY, HEALTH AND ENVIRONMENT	<ul style="list-style-type: none"> <li>Regulatory compliance</li> <li>Occupational health and safety</li> <li>Radiation protection</li> <li>Public safety</li> <li>Water</li> <li>Tailings and mine waste</li> <li>Non-mineral waste</li> <li>Indigenous relationships</li> <li>Air quality</li> <li>Climate change-related policy and regulation (i.e., GHG emission pricing)</li> <li>Biodiversity and land</li> <li>Product safety</li> <li>Transportation safety</li> <li>Nuclear safeguards</li> </ul>
HUMAN RESOURCES AND COMPENSATION	<ul style="list-style-type: none"> <li>Inclusion and diversity</li> <li>Indigenous workforce</li> <li>Unions</li> <li>Employee engagement</li> </ul>
AUDIT AND FINANCE	<ul style="list-style-type: none"> <li>Tax strategy</li> <li>Anti-competition</li> <li>Supply chain diversity spend</li> <li>Anti-corruption</li> <li>Business ethics and integrity</li> </ul>
TECHNICAL	<ul style="list-style-type: none"> <li>Cybersecurity</li> </ul>



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## Management Approach for ESG Matters

At Cameco, ESG principles are integrated within our strategy and our business planning processes and reporting. We have a strong and well-established management system and practices, and we strive to continuously improve their rigour.

### Cameco's Management System

Our management system describes the framework of policies, processes, and procedures we use to help us fulfill all the tasks required to achieve our objectives and strategy. The Cameco management system (CMS) sets out our vision, values, and measures of success. It identifies our policies and also speaks to our strategic planning process, leadership alignment and accountability, compliance and assessment, people and culture, process identification and work management, risk management, communications and stakeholder support, knowledge and information management, change management, problem identification and resolution, and continual improvement. (Read more about [Cameco's management system](#).)

### Stringent Regulatory Environment

In addition to following the same provincial or state and federal compliance requirements for environmental and social performance as other mining companies, the facilities we operate are federally regulated through their entire lifecycle by national regulators including the Canadian Nuclear Safety Commission (CNSC) and the United States Nuclear Regulatory Commission (NRC) or its designate.

Some of the enhanced oversight activities that apply to our facilities include:

#### Inspections

Our operations are regularly inspected by the applicable regulatory authorities to verify that we have systems in place to protect people and the environment ([read more about our systems for environmental protection](#)).

#### Relicensing

We are subject to a comprehensive relicensing process by the federal regulator on a regular basis. The relicensing proceedings are multi-year processes that culminate with public proceedings that feature interventions and [participant funding](#).

#### Transparency

These life-cycle regulators regularly provide independent reports (that include the environmental and social performance) of our operated facilities to the public. For example, the CNSC publishes [annual regulatory oversight reports for our Canadian operations](#).

#### Audits

Read about our [internal and external audits](#).



## ESG Governance

### Board of Directors

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### Safety, Health and Environment Committee

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### Executive Team

MANAGEMENT

### ESG Steering Committee

INCLUDES REPRESENTATIVES FROM:

- Executives
- Investor Relations
- Risk management
- Finance
- Governance
- Sustainability
- Safety, health, environment and quality (SHEQ)
- Communications
- Legal
- Corporate strategy

### Subject Matter Experts

INCLUDES:

- Operations
- Human resources
- Safety, health, environment and quality (SHEQ)
- Investor relations
- Risk management
- Finance
- Tax and treasury
- Indigenous, community and stakeholder relations
- Legal
- Governance
- Supply chain management
- Customer relations
- Corporate strategy

TRACK ESG PERFORMANCE, INITIATIVES, AND PROGRESS

\* Report ESG performance and progress



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# Business Ethics and Integrity

## WHY IT MATTERS TO CAMECO

At Cameco, one of our four core values is integrity. Through our personal and professional integrity, we lead by example, earn trust, honour our commitments, and conduct our business ethically. Our reputation for maintaining high standards of ethical behaviour has helped Cameco to grow into the global business it is today.

## Business Ethics

Our [Code of Conduct and Ethics](#) guides how we uphold our value of integrity. The Code applies to all employees, executives and members of Cameco's board and subsidiary boards and sets out our principles and guidelines for ethical behaviour at Cameco and with our shareholders, our communities and all our stakeholder groups. Read more on pages 54 through 56 of our [2023 Management Proxy Circular](#). Cameco's corporate ethics program is underpinned by:

## Conduct and Ethics Committee

Our conduct and ethics committee is the management group responsible for oversight of ethics matters and practices. Our conduct and ethics committee includes representatives from internal audit, human resources, legal, and our executive team. The committee actively reviews all ethics hotline matters as they arise and formally meets quarterly to review the current status of ethics matters. Our executives and the audit and finance committee of the board receive quarterly updates on any new matters that could impact the integrity of financial reporting or the credibility of Cameco's senior management. Additionally, the conduct and ethics committee provides recommendations to the board of directors on matters relating to the Code of Conduct and Ethics, conflict of interest standards, and any related policies and programs.

## SOX Compliance

Controls around key ethics-related risks are assessed annually by our internal Sarbanes-Oxley (SOX) compliance function and audited by our external auditors.

## Conduct and Ethics Training

All new Cameco employees take a mandatory Code of Conduct and Ethics training course. Every year, employees in certain functional areas complete Code of Conduct and Ethics online training and submit a declaration statement. At least every three years, all employees complete this online training and declaration statement. The training includes key issues such as conflicts of interest, fraud prevention, privacy matters, acceptable gifts and invitations from vendors, respectful workplace matters, and avenues available to raise concerns about ethics matters.

## Ethics Hotline

We encourage our employees to speak to their manager, or to the human resources, legal, or internal audit groups regarding any ethics concerns. Through a third-party service provider, we also offer an anonymous ethics hotline that is open to all employees, contractors, and suppliers from across our operations. Information about the hotline is broadly communicated to employees and is included in our [Supplier Code of Conduct and Ethics](#) to let suppliers know they can communicate any concerns to us in this way. Every year, we complete a benchmarking exercise of our hotline statistics against other companies comparable to our size and industry, based on information obtained from a third party. Results of our benchmarking are reported to our executive team and to the audit and finance committee of the board. In 2022, 28 ethics-related matters were reviewed, investigated and addressed under the conduct and ethics committee's formalized processes.



REPORTS TO OUR ETHICS HOTLINE	2020	2021	2022
Ethics reporting rate [reports per 100 employees]	0.37	1.03	<b>1.33</b>
Total ethics reports	7	20	<b>28</b>
NUMBER OF REPORTS BY CATEGORY			
Unethical conduct or conflict of interest	3	6	<b>7</b>
Safety, health, environment	1	5	<b>3</b>
Discrimination or harassment	2	4	<b>8</b>
Violation of laws, regulations, policies or procedures	1	2	<b>7</b>
Theft, embezzlement, or fraud	–	1	<b>3</b>
Privacy	–	2	–
Harm to property or security of persons	–	–	–
Financial reporting and accounting	–	–	–
Manipulation or falsification of data	–	–	–

In 2020 we had fewer reports than what we normally see. We believe company-wide disruptions to our operations and a move to remote work because of the COVID-19 pandemic factored into the number of reports for that year.



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**ANALYST CORNER**

SASB EM-MM-210a.3

SASB EM-MM-510a.1

## Anti-corruption

Cameco places great importance on the integrity of our relationships with government agencies, officials, political parties, leaders, and candidates for public office around the world and is committed to maintaining high standards of ethical behaviour throughout our value chain. Cameco has no production in countries with high levels of corruption risk (as determined by the 20 lowest rankings in Transparency International's Corruption Perception Index). We believe that all business transactions, no matter where they occur in the world, must be conducted in a manner that enhances our reputation for integrity and best business practices. We uphold these values in the following ways:

### Anti-corruption Program

Our Global Anti-Corruption Program supplements our Code of Conduct and Ethics by setting out the principles, practices, and rules employees, and third parties acting on behalf of Cameco, are expected to follow. This program applies to all our operating subsidiaries, including our offices in the US, Australia, Europe, and Kazakhstan. Examples of actions we take as part of our program include monitoring in-country risk, conducting applicable due diligence related to third parties and affiliated entities, and monitoring gifts and hospitality. Our Global Anti-Corruption Program sets out the reporting and approval requirements for political contributions which is further supplemented by Cameco's Political Donations Standard. We also complete an anti-corruption risk assessment as part of our Risk Management Program (read more on [page 21](#)). We have had an Anti-Corruption Policy/Program since 1996.

Our program includes:

- **Integrity Due Diligence and Monitoring** – Our Integrity Due Diligence Procedure formally documents the key processes and requirements involved in our risk-based due diligence process. All documentation prepared or obtained as part of this procedure is maintained and stored for the duration of the relationship and for at least an additional 10 years.
- **Risk Assessment Procedure** – Our Risk Assessment Procedure supplements the regular quarterly and annual risk assessments that are required as part of the ERM process.
- **Monitoring Procedure** – Our Monitoring and Testing Procedure sets out the process for developing and implementing annual testing and monitoring activities, including the requirement to conduct due diligence on high risk third parties at least every two years.

### Training

In addition to Code of Conduct and Ethics training, we provide scenario-based and discussion-centric anti-corruption training to employees who are in certain functional areas, conduct business in higher-risk countries, or directly interact with public officials. We provide similar training to third parties that act as our representatives in higher-risk countries.

### Fraud Risk Assessment

We complete a full fraud risk assessment every two years which seeks to identify Cameco's vulnerabilities to fraudulent activity and assess the risk (likelihood and impact) that those exposures may result in potential material misstatements in the financial statements, material loss and/or reputational damage.



ABOVE

Every employee at Cameco is required to comply with our Code of Conduct and Ethics.



We have had an Anti-Corruption Program since 1996.



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SASB EM-MM-210a.3

## Human Rights

We are committed to respecting and observing the protection of human rights and share the values reflected in international proclamations about human rights, such as the Universal Declaration of Human Rights. We respect human rights wherever we operate and prohibit human trafficking, slavery, and child labour within our operations and our supply chain. We strive to provide a safe and healthy working environment that is free from harassment and discrimination. We have formalized our commitment to human rights in our Code of Conduct and Ethics and our People Policy. We also have a Supplier Code of Conduct and Ethics that sets standards for those who provide goods and/or services to Cameco and states our expectation that they comply with all human rights, labour and employment laws in the countries where they operate. Cameco assesses the risk around respectful workplace and protected grounds in the *Canadian Human Rights Act* annually as part of our Risk Management Program.

## Competition Law Compliance

Competition laws (referred to in the US as “antitrust laws”) are an important aspect of free and open markets. They are designed to provide consumers with product choice and competitive prices, to protect competitors from unfair competition, and to promote economic efficiency. A mere allegation of anti-competitive conduct can be damaging to a company’s reputation and disruptive to its business. We endeavor to follow competition and antitrust laws in all our interactions with our customers, suppliers, and competitors. In 2022, there were no legal actions initiated against Cameco related to anti-competitive behaviour. We work to prevent anti-competitive behaviour in the following ways:

### Competition Law Program

Our Competition Law Compliance Program guides our actions and is updated regularly. It outlines our expectations of all employees, executives, and directors.



### Training

In addition to mandatory Code of Conduct and Ethics training for all employees, we provide targeted competition law training to employees in certain functional areas to support them in understanding the rules. These employees have been selected because they are in higher-risk roles or directly interact with our suppliers, customers, and competitors. Our training covers high-risk areas including discussions with competitors, arrangements with customers and suppliers, and joint ventures.

### Transparent Disclosure

Our corporate reputation, both locally and internationally, is tied to how we communicate with our stakeholders. We continually provide important financial and operational details to the public, ensuring that complete, accurate and balanced information is disclosed openly and honestly. We have a Corporate Disclosure Policy, as well as a program and procedures that govern our disclosure controls and practices. The board’s audit and finance committee is responsible for overseeing the review of our disclosure controls and procedures once a year and recommending any significant changes to the board for approval.

### Public Policy Involvement

We co-operate and engage with government bodies and regulatory agencies about public policy positions, laws and regulations that are relevant to our business. Our activities may include direct lobbying on specific policy proposals or advocating our positions on issues of key importance to the company through industry or business associations such as the Saskatchewan Mining Association, the Mining Association of Canada, and the Canadian Nuclear Association, among others. At all times, we conduct ourselves ethically and with integrity, and duly publicly report interactions with government officials on the lobbying registries in jurisdictions that maintain such systems.



We are committed to respecting and observing the protection of human rights.



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# Tax Transparency

## WHY IT MATTERS TO CAMECO

Cameco's commitment to ethical behaviour and integrity includes transparency into our corporate taxation. As a resource company, we pay significant amounts of tax across multiple jurisdictions, including income taxes, uranium royalties, property taxes, sales and use tax, and indirect taxes. In addition, we collect and remit employment taxes from our more than 2,400 employees.

## Our Approach

At Cameco, we believe that tax is a fundamental component of overall financial performance. We are guided by our Code of Conduct and Ethics and comply with all tax laws that apply to our operations. Our tax department works collaboratively with other business units to preserve long-term value, and we monitor and adjust to legislative changes in each jurisdiction where we do business. Cameco employs qualified personnel and engages with respected external service providers for their expertise prior to the execution of any significant transactions.

Each quarter, the Chief Financial Officer provides a report to the audit and finance committee of the board updating them on tax-related activities, issues, risks, and the potential impact of legislative or tax policy changes since the prior quarter. We approach all tax authorities in a professional, collaborative, and transparent way. We seek to help them understand our business and resolve uncertain or disputed matters through well-supported tax filing positions, timely audit inquiry responses and clear communication. Where we do not agree with tax authority assessments, we proactively appeal and defend our positions.

As a Canadian multinational company with a global customer base, Cameco needs to charge for various goods and services provided to and from its various subsidiaries and affiliated companies. We do this in compliance with relevant laws in the affected jurisdictions. As such, our consolidated tax rate is a blend of rates applicable in Canada and in the jurisdictions of our foreign subsidiaries and affiliates.

We adhere to the arm's-length principle, seeking to align intercompany pricing and other terms and conditions with comparable contracts between arm's length parties.

## Commitment to Transparency

We have annually reported payments to governments, as required by Canada's Extractive Sector Transparency Measures Act (ESTMA), since 2016. Extending beyond tax transparency, the report details royalties, fees, and other payments made to Indigenous, municipal, provincial, and federal governments in Canada, the US, and Australia by Cameco and our subsidiaries for commercial development related to the exploration and extraction of minerals. Read [Cameco's 2022 ESTMA Report](#).



As a resource company, we pay significant amounts of tax across multiple jurisdictions.





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# Cybersecurity

## WHY IT MATTERS TO CAMECO

In the digital era, cybersecurity threats pose an ongoing risk to organizations across industries. We recognize the high importance of maintaining constant vigilance and resilience to these types of threats.

## Our Approach

We protect our systems, information, and physical assets through a cybersecurity program that aligns with the National Institute of Standards and Technology (NIST) Cybersecurity Framework and implement applicable security controls and benchmarks from the Center for Internet Security (CIS). We also work regularly with government organizations, such as the Canadian Centre for Cyber Security which provides regular updates on emerging issues. We have a well-defined incident response process in place which includes keeping external security specialist firms on retainer and having our security incident response interfaced with our corporate crisis management plans, which enables rapid response and activation of subject matter experts.

## Cybersecurity Risks

On an annual basis, our internal audit team develops a risk-based internal audit plan, which also covers one or more cybersecurity related subjects. As part of our integrated audit, we also engage external auditors to complete reviews every year to examine our security controls and IT internal controls. We also commission third-party cybersecurity experts to complete external multistage penetration tests and use their findings to further enhance our security processes and controls. Each quarter, we present a dashboard to the board that highlights changes to our cybersecurity risk profile, outlines areas of focus, provides a self-rating, and describes how we are responding to the external environment.

In 2022, in addition to our annual testing, we conducted a Backup and Ransomware assessment, focusing on the ‘recover’ phase of the NIST framework. The test examined the backup controls within the recovery phase, which is the last line of defense in the event of a ransomware attack.

## Data Protection

Under the CNSC’s *Nuclear Safety and Control Act*, strict regulations dictate what data we can and cannot expose. At Cameco, apart from controlled nuclear technology (as regulated by CNSC), we also maintain and keep secure employee and contractor personal data, our intellectual property, financial and strategic information about our business, and data on our industrial control systems. We protect this data through a “defense in depth” strategy, that includes several layers of security processes, technology and controls, and incorporates multiple redundancies. We also restrict access to our systems and data and log and monitor sensitive access.



100% of our employees received cybersecurity training in 2022.



## Cybersecurity Awareness

Our board and workforce play a role in protecting Cameco from cybersecurity threats. We work to educate and inform our workforce to recognize potential threats and help prevent cyber-related incidents. As employees join the company, we provide cybersecurity awareness training and require an annual mandatory e-learning module and sign-off. We also run a contractor module, and a special module for employees who use our industrial control systems. We supplement this training with awareness campaigns, topical emails, and articles in Cameco’s weekly email news bulletin and intranet site. In 2022, 100% of our employees completed our information security course. For more information on our board’s role on cybersecurity oversight, see page 50 of Cameco’s Management Proxy Circular.





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# Responsible Supply Chain

## WHY IT MATTERS TO CAMECO

We are committed to fair competition in all dealings with suppliers, supporting local procurement, and making our purchases honestly and objectively. We also want to make sure that our suppliers and contractors respect and uphold our ethical, safety and environmental practices.

## Supplier and Contractor Selection

We use ISNetworld to screen contractors who provide services at our sites. All contractors must meet our basic requirements including demonstrating technical capabilities and having adequate safety practices and appropriate insurance in place. As a supplier to the Canadian nuclear industry, our fuel services facilities follow Canadian Standards Association's (CSA) N299 standard, which sets out quality assurance program requirements for the supply of items and services for nuclear power plants. CSA N299 is designed to ensure there are quality assurance systems in place to verify production processes, inspection, testing, and corrective actions. In accordance with this standard, if a product or service is considered high risk, we have stricter requirements for suppliers to verify that they are qualified to supply the item or service. Cameco only purchases these high-risk items through a supplier that meets or exceeds all our requirements. For example, we have a special vendor approval process for the supply of zirconium, and for transportation of our products, we only work with a small set of specialized carriers and freight forwarders that are qualified to transport radioactive materials.

## Contractor Management Program

Working with contractors is integral to Cameco's operations and construction projects. Cameco has a contractor management program to support a consistent approach to managing contractor activities. This consistent process for prequalification, selection, performance monitoring and review of SHEQ aspects of contractor management helps to secure high quality contractors, fosters and promotes information sharing, reduces SHEQ risks and stimulates continuous improvement in safety performance.

## Expectations of Suppliers

We believe that a sustainable and ethical supply chain starts with choosing suppliers that will uphold our standards. Our [Supplier Code of Conduct and Ethics](#) outlines our expectations for those who provide goods and/or services to Cameco, including their representatives and employees. The Supplier Code requires our suppliers to adhere to all human rights, labour, and employment laws in the countries where they operate. Suppliers and their employees are expected to treat everyone with respect and dignity, not tolerate harassment, and take appropriate action if complaints occur.



RIGHT

Eugenie Lafleur, a warehouseperson at our Cigar Lake operation, is keenly aware of the importance of a responsible and reliable supply chain.



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## Auditing

In addition to screening, we also audit our most critical suppliers in the following ways:

- For critical supplies that come from outside of Canada, such as anhydrous hydrogen fluoride (a crucial input to the conversion process for UF<sub>6</sub> which comes from the US and Spain), we strive to complete a third-party audit of our suppliers' facilities every three years on average to assess safety practices and quality management processes.
- For drum suppliers, Cameco conducts a quality audit on drum manufacturers at least every five years.
- For our transportation providers (trucking), freight-forwarders and transportation emergency response providers, we audit them every one to three years. For our two largest ground transporters, the completion of these audits typically alternates between Cameco staff and a third-party firm. Read more on [page 65](#).
- For our contracted air carriers, audits are conducted on a one-to three-year basis by external subject matter experts.

## Commitment to Local Procurement

We are committed to using local suppliers wherever we operate. It is a commitment codified in our Procurement of Goods and Services Policy and exemplified by our spending in northern Saskatchewan, where we have procured more than \$357 million in services from local companies over the past three years. In 2022, 80% of all service spend at northern Saskatchewan mine sites was with northern local businesses.

In northern Saskatchewan, we have commitments through collaboration agreements with a select number of construction and civil works companies that are Preferred Northern Contractors (PNCs). All PNCs must also follow our standards.



### PROPORTION OF SERVICES PROCURED BY LOCAL PROVIDERS BY CAMECO (% OF SPENDING)

	2020	2021	2022
Company-wide	55	63	<b>66</b>
Northern Saskatchewan	81	82	<b>80</b>
Ontario	41	47	<b>50</b>
US	67	65	<b>51</b>



> \$357 million procured in services from local companies in northern Saskatchewan over the past three years.

### ABOVE

RiseAir is Cameco's primary aviation supplier transporting workers to and from our northern Saskatchewan operations. Procuring flight services locally through RiseAir – which is owned by the Athabasca Basin Development Corporation (75%) and the Prince Albert Development Corporation (25%) – extends financial benefits throughout the north.



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# Performance Table

Below are the metrics that describe our ESG performance for the last three years. The reference column indicates the alignment of that specific metric with the Sustainability Accounting Standards Board (SASB) indicators. In instances where there is no SASB metric suggested, we include the corresponding reference to the metric suggested by the GRI standards. Note that in some cases a single metric aligns with both the SASB and GRI standards but only the SASB reference is noted.

COMPANY CONTEXT	UNIT	2020	2021	2022	REFERENCE
<b>OPERATIONS</b>					
Revenues	thousand CAD \$	1,800,073	1,474,984	<b>1,868,003</b>	GRI 201-1
Total mining production <sup>1</sup>	lbs U <sub>3</sub> O <sub>8</sub>	5,064,503	6,091,172	<b>10,364,262</b>	EM-MM-000.A
Production in our fuel services division (includes results for UF <sub>6</sub> , UO <sub>2</sub> , and fuel fabrication)	KgU	11,641,285	12,097,638	<b>13,014,111</b>	EM-MM-000.A
<b>ENVIRONMENT</b>					
<b>WATER WITHDRAWAL<sup>2</sup></b>					
Water withdrawal by source					
Surface Water	m <sup>3</sup>	6,976,803	7,229,889	<b>6,225,568</b>	GRI 303-3a
Groundwater	m <sup>3</sup>	13,566,559	12,672,643	<b>11,408,475</b>	GRI 303-3a
Third-Party <sup>3</sup>	m <sup>3</sup>	362,927	1,118,096	<b>325,745</b>	GRI 303-3a
Water withdrawal by categorization					
Fresh water <sup>4</sup>	m <sup>3</sup>	19,145,307	19,466,871	<b>16,654,203</b>	GRI 303-3b
Other Water	m <sup>3</sup>	1,760,982	1,553,757	<b>1,305,585</b>	GRI 303-3b
Withdrawal in Areas of High Water Stress, by categorization <sup>5</sup>					
Fresh water	m <sup>3</sup>	0	0	<b>0</b>	EM-MM-140a.1
Other water	m <sup>3</sup>	651,851	564,677	<b>572,901</b>	-
Withdrawal in Areas of High Water Stress, by source <sup>5</sup>					
Surface Water	m <sup>3</sup>	0	0	<b>0</b>	GRI 303-3c
Groundwater	m <sup>3</sup>	651,851	564,677	<b>572,901</b>	GRI 303-3c
Other Water	m <sup>3</sup>	0	0	<b>0</b>	GRI 303-3c

**NOTES**

All references that start with EM-MM refer to SASB metrics for the Extractives & Minerals Processing Sector – Metals & Mining.

For details on indicator boundaries see our [ESG Performance Table](#) (XLS file).

- 1 Cameco's equity share of production from Cameco operated facilities. Cameco's share of production from Joint Venture Inkai mine in Kazakhstan is not included.
- 2 Cameco withdraws water from surface water, collects groundwater, and withdraws water from municipal water utilities in the areas where we operate. Rainwater that comes into contact with our operations is intercepted or collected and stored, which is reflected in our water withdrawal volumes. Cameco does not withdraw wastewater directly from other organizations. Water withdrawal from our exploration activities is not included. In 2022, Cameco updated how this indicator is reported, aligning with updated GRI indicator 303-3. As a result, when compared to the numbers published in the 2021 report, the historical water withdrawal for 2020 was restated from 20,719 to 20,906 thousand m<sup>3</sup>, and the 2021 water withdrawal from 20,778 to 21,021 thousand m<sup>3</sup>.
- 3 Third party water includes municipal water suppliers and municipal wastewater treatment plants, public or private utilities, and other organizations involved in the provision, transport, treatment, disposal, or use of water and effluent.
- 4 Fresh water is defined as water with an average total dissolved solids (TDS) less or equal to 1,000 mg/L for the purpose of this indicator.
- 5 Baseline water stress categorization is determined using the World Resources Institute Aqueduct Water Risk Atlas, available online at: <https://www.wri.org/aqueductAreas>. Cameco's North Butte operation is classified in an area of high water stress (3-4). Cameco withdraws fresh water from a drinking water aquifer at North Butte for use in firewater suppression systems, bathrooms, and sinks within surface buildings. The quantity of water withdrawn is < 5,000 m<sup>3</sup> annually. This is such a small proportion of total water withdrawn that it is not measurable within the corporate total.



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ENVIRONMENT CONTINUED	UNIT	2020	2021	2022	REFERENCE
<b>WATER DISCHARGES<sup>6</sup></b>	m <sup>3</sup>	20,659,254	19,489,976	<b>16,749,704</b>	GRI 303-4a
Water discharged to:					
Surface Water	m <sup>3</sup>	19,445,555	18,431,674	<b>15,676,767</b>	GRI 303-4a
Groundwater	m <sup>3</sup>	1,049,498	915,559	<b>904,674</b>	GRI 303-4a
Third-Party <sup>3</sup>	m <sup>3</sup>	164,201	142,744	<b>168,263</b>	GRI 303-4a
Water discharged by categorization					
Fresh water	m <sup>3</sup>	17,441,452	16,732,695	<b>14,654,491</b>	GRI 303-4b
Other Water	m <sup>3</sup>	3,217,802	2,757,281	<b>2,095,213</b>	GRI 303-4b
Discharge in Areas of High Water Stress <sup>5</sup>					
Fresh water	m <sup>3</sup>	0	0	<b>0</b>	GRI 303-4b
Other Water <sup>7</sup>	m <sup>3</sup>	203,581	164,507	<b>142,536</b>	GRI 303-4b
<b>WATER QUALITY</b>					
Number of incidents of non-compliance associated with water quality permits, standards, and regulations <sup>8</sup>	number	0	0	<b>1</b>	EM-MM-140a.2
<b>TAILINGS AND MINERAL WASTES</b>					
Weight of tailings and mineral waste	tonnes	24,664	22,678	<b>50,986</b>	
Tailings waste <sup>9</sup>	tonnes	2,213	3,782	<b>30,021</b>	EM-MM-150a.5
Waste rock <sup>10</sup>	tonnes	21,022	11,660	<b>14,416</b>	EM-MM-150a.6
Other mineral waste <sup>11</sup>	tonnes	1,429	7,236	<b>6,549</b>	
Per cent of tailings waste recycled	per cent	0	0	<b>0</b>	
Number of tailings impoundments (tailings management facilities) <sup>12</sup>	number	4	4	<b>4</b>	EM-MM-540a.1
Number of tailings impoundments, broken down by Canadian Dam Association Consequence Classification Rating <sup>12</sup>	number	Significant	Significant	<b>Significant</b>	EM-MM-150a.3

## NOTES

- <sup>6</sup> This indicator presents the annual volume of planned water discharge in cubic metres (m<sup>3</sup>) by destination (i.e. surface water, municipal treatment facilities, land, evaporation pond, or deep disposal well) and treatment method (i.e. treated by Cameco, treated by municipal authorities, clean, or untreated). Cameco does not reuse water produced by other organizations. The annual volume of water discharged to evaporation from our Smith Ranch-Highland operation is not included.
- <sup>7</sup> We only dispose of water into licensed disposal wells in our US operations.
- <sup>8</sup> Incidents of non-compliance associated with water quality permits, standards, and regulations are water-related incidents that resulted in formal enforcement actions. In November 2022, we exceeded the regulatory limit for total suspended solids for a partial pond release. Before releasing the water, we conducted water quality sampling, which indicated acceptable water quality, but upon release, in-line sensors detected excess suspended solids and additional controls were activated that halted the flow. The remaining water was recycled for additional treatment. Downstream monitoring completed after the event showed no negative impacts to the receiving environment.
- <sup>9</sup> Includes the amount of tailings generated by Cameco operated facilities.
- <sup>10</sup> The waste rock metric has been adjusted down from 23,089 to 21,022 for 2020, and from 15,443 to 11,660 for 2021, to correct for reductions in rock volume due to onsite reclamation activities not previously accounted for. This metric was previously reported as "annual change in unreclaimed waste rock inventory".
- <sup>11</sup> Includes water treatment sludges and mine slimes that are not stored with tailings.
- <sup>12</sup> Cameco has four tailings facilities but two are in-pit facilities. In-pit facilities are below the ground surface, so we do not classify them with respect to the consequence of a dam failure.


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<b>NON-MINERAL WASTES<sup>13</sup></b>	tonnes	7,928	9,394	<b>10,328</b>	EM-MM-150a.4
Weight of contaminated waste <sup>14</sup>	tonnes	2,493	4,661	<b>6,309</b>	
Contaminated waste diverted	tonnes	0	0	<b>0</b>	
Contaminated waste landfilled or stored	tonnes	2,493	4,661	<b>6,309</b>	
Weight of low-level radioactive waste <sup>15</sup>	tonnes	3,859	2,231	<b>2,266</b>	
Low-level radioactive waste diverted	tonnes	1,043	1,279	<b>868</b>	
Low-level radioactive waste landfilled or stored	tonnes	2,817	952	<b>1,398</b>	
Weight of non-hazardous waste <sup>16</sup>	tonnes	1,330	2,211	<b>1,568</b>	GRI 306-3
Non-hazardous waste diverted	tonnes	645	658	<b>562</b>	GRI 306-4
Non-hazardous waste landfilled or stored	tonnes	685	1,554	<b>1,006</b>	GRI 306-5
Weight of hazardous waste <sup>17</sup>	tonnes	247	291	<b>185</b>	EM-MM-150a.7
Hazardous waste diverted <sup>17</sup>	tonnes	135	230	<b>111</b>	GRI 306-4
Hazardous waste landfilled or stored <sup>17</sup>	tonnes	112	61	<b>74</b>	GRI 306-5

## NOTES

<sup>13</sup> Non-mineral waste does not include solid waste generated as tailings, water treatment sludge and slime, or waste rock. The total amount of contaminated, low-level radioactive, non-hazardous, and hazardous waste generated in each category is separated and presented by disposal method: diverted, landfilled, or stored on site. Diverted materials include those that are recycled, reused, repurposed, or reprocessed. We separate waste into these disposal categories using internal tracking systems that track the inventory of waste on site and the transfer of waste off site. The amount of waste transferred off site is confirmed through information provided by the receiving organization.

<sup>14</sup> Contaminated waste includes industrial materials from our mining operations that have become contaminated with radioactive material. Includes industrial materials, such as protective equipment, paper, cardboard, equipment, tools, metal, plastic, concrete, sand, sludges, insulation, and wood. Contaminated waste also includes 11 e(2) byproduct generated at our US operations. Historical values have been adjusted to account for a change in waste categorization and volume-to-weight conversion factors at one location.

<sup>15</sup> Low-level radioactive waste includes materials from our Fuel Services Division that have become contaminated with radioactive material and are more radioactive than clearance levels and exemption quantities allow. Cameco does not generate intermediate or high-level radioactive waste.

<sup>16</sup> Non-hazardous waste includes domestic, commercial, and industrial materials that become waste, such as plastic, tin, paper and cardboard, tires, metal, wood pallets, kitchen waste, and wood. 2021 values published in the 2021 ESG report have been corrected from 2,192 to 2,211, 663 to 658 and 1,530 to 1,554 for the non-hazardous waste generated, diverted and landfilled or stored respectively.

<sup>17</sup> Hazardous waste includes materials with hazardous properties that may have negative effects to human health or the environment. It includes materials such as used petroleum fuels (oil, diesel, gas), paint and paint-related materials, compressed gas cylinders, and light fixtures. Port Hope Conversion Facility generates small volumes of batteries and electronic waste which are recycled by a third party but not included in the total weight shown here.

Although the total volume of hazardous waste remains unchanged from previously reported, a calculation error resulted in incorrect categorization of waste. For 2020, we are changing the reported value for diverted waste from 155 to 135 tonnes, and the value for landfilled/stored waste from 92 to 112 tonnes. For 2021, we are changing the reported value for diverted waste from 261 to 230 tonnes, and the value for landfilled/stored waste from 30 to 61 tonnes.



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<b>GHG EMISSIONS/ENERGY USE<sup>18</sup></b>					
Gross global Scope 1 emissions (equity share) <sup>18,19</sup>	tonnes CO <sub>2</sub> e	87,019	86,136	<b>102,418</b>	EM-MM-110a.1
Scope 2 emissions (equity share) <sup>18,19</sup>	tonnes CO <sub>2</sub> e	112,418	131,089	<b>129,427</b>	GRI 305-2
Gross global Scope 1 emissions (operational control) <sup>18,20</sup>	tonnes CO <sub>2</sub> e	101,723	100,646	<b>122,019</b>	GRI 305-1
Scope 2 emissions (operational control) <sup>18,20</sup>	tonnes CO <sub>2</sub> e	145,297	173,282	<b>168,729</b>	GRI 305-2
Total energy consumed <sup>21</sup>	GJ	3,055,785	3,062,209	<b>3,511,677</b>	EM-MM-130a.1
Grid electricity	per cent	44	45	<b>42</b>	EM-MM-130a.1
<b>TRANSITION TO A LOW-CARBON ECONOMY</b>					
Scope 1 emissions covered under emissions-limiting regulations (operational control)	per cent	96	96	<b>97</b>	EM-MM-110a.1
Scope 1 emissions covered under emissions-limiting regulations (equity share)	per cent	75	74	<b>74</b>	EM-MM-110a.1
<b>AIR QUALITY<sup>22</sup></b>					
Carbon Monoxide (CO)	tonnes	9	0	<b>32</b>	EM-MM-120a.1
NOx (excluding N <sub>2</sub> O)	tonnes	138	119	<b>189</b>	EM-MM-120a.1
SOx	tonnes	0	0	<b>63</b>	EM-MM-120a.1
Particulate matter (PM <sub>10</sub> )	tonnes	149	214	<b>196</b>	EM-MM-120a.1
Volatile organic compounds (VOCs)	tonnes	1	0	<b>28</b>	EM-MM-120a.1
Ammonia (NH <sub>3</sub> )	tonnes	38	35	<b>42</b>	-
Uranium	tonnes	0.05	0.04	<b>0.05</b>	-
Hydrogen Fluoride	tonnes	0.61	0.63	<b>0.55</b>	RT-CH-120a.1

## NOTES

<sup>18</sup> Cameco's greenhouse gas (GHG) emissions are presented as tonnes of carbon dioxide equivalents (CO<sub>2</sub>e). CO<sub>2</sub>e is used to compare the emissions from various GHG sources based on their global warming potential (GWP). Cameco adopted the GWPs published by Environment and Climate Change Canada (ECCC) and the United States Environmental Protection Agency (US EPA), which reference the International Panel on Climate Change (IPCC). In alignment with changes at ECCC, Cameco has begun transitioning to GWPs from IPCC's Fifth Assessment Report for Canadian operations in the 2022 figures, whereas US operations continue to use GWPs from IPCC's Fourth Assessment Report in alignment with US EPA guidance at the time of calculation.

Cameco's significant sources of direct (Scope 1) GHG emissions include those generated by the consumption of fuel from non-renewable sources and industrial processes. Emission factors are country- and fuel-specific. For our Canadian operations, we have used emission factors published by ECCC through the Greenhouse Gas Reporting Program. For our US operations, we use the emission factors published by the US EPA in the most recent Emission Factors for Greenhouse Gas Inventories document.

Indirect GHG emissions are calculated by applying a utility- or region-specific emission factor to the amount of electricity purchased from that area, which is determined through utility invoices.

<sup>19</sup> Historical values are adjusted year-to-year due to refinements in calculation methodology and emission factors. The difference between previously published numbers and revised numbers is less than 1%. Under the equity share approach, we have adjusted the GHG emissions reported to align with our financial ownership, specifically: 69.805% of McArthur River mine, 83.333% of Key Lake mill, 54.547% of Cigar Lake mine, and we have included 40% of emissions from JV Inkai.

<sup>20</sup> Historical values are adjusted year-to-year due to refinements in calculation methodology and emission factors. The difference between previously published numbers and revised numbers is less than 1%. Operational control basis means we report 100% of GHG emissions from Cameco operated facilities regardless of financial ownership.

<sup>21</sup> Cameco's energy consumption includes fuels and electricity. Energy consumed as fuel includes propane, natural gas, diesel and gasoline and is calculated by applying a fuel- and region-specific energy content factor to the consumed volume. Cameco does not utilize renewable energy sources directly. Energy consumed as electricity is converted from kilowatt hours (kWh) to gigajoules (GJ) using a conversion factor of 0.0036 GJ/kwh. Cameco does not sell energy as electricity, heating, cooling, or steam. Operational control basis means we report 100% of energy consumption from Cameco operated facilities regardless of financial ownership. In previous reports, we had included energy data from operations outside of Cameco's operational control. As a result, the values for prior years have changed from 3,189,800 to 3,055,785 for 2020 and from 3,222,286 to 3,062,209 for 2021.

<sup>22</sup> Air emissions are reported only for operated facilities in Canada that reach NPRI (National Pollutant Release Inventory) release based threshold quantities. Air emissions from our in situ recovery operations in the US are not material for this indicator and are not included. Air emissions of NO<sub>x</sub>, SO<sub>2</sub>, CO, VOCs, PM, PM<sub>10</sub>, PM<sub>2.5</sub> and NH<sub>3</sub> are calculated using the guidance provided by ECCC through the National Pollutant Release Inventory. The total air emissions for these constituents include air emissions released through point sources such as process stacks, storage and handling, fugitive emissions, and as a result of road dust. Air emissions of uranium and Hydrogen Fluoride include air emissions released through point sources.



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<b>BIODIVERSITY/LAND AIR</b>					
Proven reserves in or near sites with protected conservation status or endangered species habitat <sup>23</sup>	per cent	34	38	<b>39</b>	EM-MM-160a.3
Probable reserves in or near sites with protected conservation status or endangered species habitat <sup>23</sup>	per cent	57	53	<b>51</b>	EM-MM-160a.3
<b>ACID-GENERATING SEEPAGE, WASTE ROCK</b>					
Percentage of mine sites where acid-generating seepage into surrounding surface water and/or groundwater is:					
Predicted to occur	per cent	20	33	<b>17</b>	EM-MM-160a.2
Actively mitigated <sup>24</sup>	per cent	20	33	<b>17</b>	EM-MM-160a.2
Under treatment or remediation	per cent	0	0	<b>0</b>	EM-MM-160a.2
Percentage of annual production output in metric tons (on an equity share basis) where acid-generating seepage into surrounding surface water and/or groundwater is:					
Predicted to occur	per cent	64	63	<b>66</b>	EM-MM-160a.2
Actively mitigated	per cent	64	63	<b>66</b>	EM-MM-160a.2
Under treatment or remediation <sup>24</sup>	per cent	0	0	<b>0</b>	EM-MM-160a.2
<b>DECOMMISSIONING/CLOSURE</b>					
Terrestrial acreage disturbed <sup>25</sup>	hectares	3,199	3,199	<b>3,202</b>	EM-MD-160a.3
Terrestrial acreage restored	hectares	–	0	<b>0</b>	EM-MD-160a.3

**NOTES**

<sup>23</sup> Protected conservation status or endangered species habitat in alignment with SASB Standards definition.

<sup>24</sup> Active mitigation includes placing waste rock on a lined facility and collecting seepage.

<sup>25</sup> Cameco's land, leased and owned, currently in use and not yet rehabilitated. This indicator excludes advanced uranium projects (Kintyre, Yeelirrie, Millennium), office structures, exploration activities, operations in which Cameco does not have operational control, or rented facilities that Cameco operates (Cobourg). The definition of land disturbed and not yet rehabilitated is dependent on the jurisdiction of the operation. In Saskatchewan, total land disturbed and not yet rehabilitated is accepted by regulators as "Developed" land. In the US, total land disturbed and not yet rehabilitated is defined by regulators as "Affected Area". For Ontario, total land disturbed is equal to the licensed area of the facility.





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SOCIAL	UNIT	2020	2021	2022	REFERENCE
<b>OCCUPATIONAL SAFETY/HEALTH</b>					
Avg. radiation dose to employees <sup>26</sup>	mSv/year	0.88	0.95	<b>0.91</b>	-
Avg. radiation dose to contractors <sup>26</sup>	mSv/year	0.22	0.24	<b>0.37</b>	-
Avg. radiation dose to employees and contractors <sup>26</sup>	mSv/year	0.59	0.60	<b>0.63</b>	-
<b>Total Recordable Injury Rate (TRIR)<sup>27</sup></b>					
TRIR employees	incidents per 200,000 hours worked	1.1	1.0	<b>1.4</b>	EM-MM-320a.1
TRIR contractors	incidents per 200,000 hours worked	3.9	2.0	<b>3.1</b>	EM-MM-320a.1
TRIR combined (all Cameco)	incidents per 200,000 hours worked	1.7	1.3	<b>2.0</b>	-
Fatality rate employees	fatalities per 200,000 hours worked	0	0	<b>0</b>	EM-MM-320a.1
Fatality rate contractors	fatalities per 200,000 hours worked	0	0	<b>0</b>	EM-MM-320a.1
<b>TRANSPORTATION SAFETY</b>					
Number of transport incidents <sup>28</sup>	number	0	0	<b>0</b>	RT-CH-540a.2
<b>EMPLOYEES</b>					
Total number of employees <sup>29</sup>	number	1,931	2,095	<b>2,424</b>	EM-MM-000.B
Total number of contractors <sup>30</sup>	number of FTEs	389	596	<b>983</b>	EM-MM-000.B
Voluntary turnover rate <sup>31</sup>	per cent	3	4	<b>8</b>	CG-EC-330a.2
Involuntary turnover rate	per cent	1	2	<b>7</b>	CG-EC-330a.2

**NOTES**

<sup>26</sup> The average radiation dose is an arithmetic average of the annual effective doses received by all workers monitored for radiation at Cameco operated facilities at our mining, milling, and fuel services divisions in Saskatchewan, Ontario, and the US.

<sup>27</sup> TRIR as defined by US OSHA. The contractor TRIR value for 2021 has been restated because of the reclassification of a previous injury because of new information.

<sup>28</sup> Transport incidents include any transport incident that involves a release or potential release, per Section 8.2. of the Transportation of Dangerous Goods Regulation in Canada or 49 CFR 171.15 in the US.

<sup>29</sup> This indicator reports the total number of regular and temporary full- and part-time employees.

<sup>30</sup> Full time equivalent (FTE) contractors is equal to the number of contractor hours divided by 2,000 hours, as 2,000 hours is deemed the number of hours for a full-time equivalent employee.

<sup>31</sup> Turnover is calculated on regular full- and part-time employees.


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## SOCIAL CONTINUED

	UNIT	2020	2021	2022	REFERENCE
<b>DIVERSITY AND INCLUSION<sup>32</sup></b>					
Total workforce					
Women	per cent	25	25	24	GRI 405-1
Indigenous	per cent	19	21	25	GRI 405-1
Visible Minority	per cent	7	8	8	GRI 405-1
Persons with Disabilities	per cent	3	3	3	GRI 405-1
Management <sup>33</sup>					
Women	per cent	25	24	27	GRI 405-1
Indigenous	per cent	4	4	5	GRI 405-1
Visible Minority	per cent	5	5	7	GRI 405-1
Persons with Disabilities	per cent	1	1	1	GRI 405-1
<b>UNIONS</b>					
Employees covered under collective bargaining agreements	per cent	24	25	28	EM-MM-310a.1
Employees covered under collective bargaining agreements in Canada	per cent	25	26	29	EM-MM-310a.1
Employees covered under collective bargaining agreements outside of Canada	per cent	0	0	0	EM-MM-310a.1
Number of strikes and lockouts <sup>34</sup>	number	0	0	0	EM-MM-310a.2
Duration of strikes and lockouts	worker days idle	0	0	0	EM-MM-310a.2
<b>RELATIONSHIPS WITH COMMUNITIES</b>					
Number of non-technical delays <sup>35</sup>	number	4	2	0	EM-MM-210b.2
Duration of non-technical delays <sup>35</sup>	days	237	110	0	EM-MM-210b.2

## NOTES

<sup>32</sup> Diversity information for employees is only maintained on all regular and temporary full and part time in Canada. Our US operations are no longer required to file their equity information as the operations have less than 100 employees.

<sup>33</sup> Management includes select professional and supervisory positions, and all manager positions and above.

<sup>34</sup> Work stoppages involving 1,000 or more workers lasting one full shift or longer.

<sup>35</sup> Non-technical delays are defined as all delays that are not technical in nature that result in production interruptions. Non-technical delays in 2020 were related to the global COVID-19 pandemic. The non-technical delays in 2021 were related to COVID-19 and the forest fire in close proximity to our Cigar Lake mine.



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<b>PUBLIC SUPPORT<sup>36</sup></b>					
Saskatchewan	per cent	83	82	<b>84</b>	-
Northern Saskatchewan	per cent	75	78	<b>75</b>	-
Port Hope, Ontario	per cent	90	91	<b>93</b>	-
Blind River, Ontario	per cent	N/A	96	<b>N/A</b>	-
Nebraska	per cent	N/A	N/A	<b>N/A</b>	-
Wyoming	per cent	N/A	N/A	<b>N/A</b>	-
<b>INDIGENOUS RIGHTS</b>					
Proven reserves in or near Indigenous land <sup>37</sup>	per cent	1	75	<b>77</b>	EM-MM-210a.2
Probable reserves in or near Indigenous land <sup>37</sup>	per cent	1	77	<b>76</b>	EM-MM-210a.2
Indigenous employees <i>in all positions</i> at Northern Saskatchewan Operations	per cent	46	48	<b>50</b>	-
Indigenous employees <i>in management positions</i> at Northern Saskatchewan Operations	per cent	8	8	<b>13</b>	-
Progressive Aboriginal Relations Achievement Level <sup>38</sup>		Gold	Three-year cycle	<b>Three-year cycle</b>	-
<b>CONFLICT ZONES</b>					
Percentage of proven reserves in or near areas of conflict	per cent	0	0	<b>0</b>	EM-MM-210a.1
Percentage of probable reserves in or near areas of conflict	per cent	0	0	<b>0</b>	EM-MM-210a.1

**NOTES**

<sup>36</sup> Reported data on public support is taken directly from polling Cameco undertakes in the various regions in which we operate. Data collection is undertaken by marketing research experts using industry-accepted methodology aimed at collecting unbiased opinions of community support. Accuracy of individual polls varies by region and from year to year based on individual sample sizes. It is important to note that polling questions in Ontario are framed in terms of support for Cameco operations specifically while other regions are asked about their support of the uranium industry more broadly.

<sup>37</sup> Cameco defines Indigenous Land as Indigenous Territory, which is overlapping within the area of our northern Saskatchewan operations. Per the constitution of Kazakhstan, the land is owned by the state and there are no groups designated as Indigenous.

<sup>38</sup> The Canadian Council of Aboriginal Business (CCAB) promotes the full involvement of Indigenous people in Canada's economy by building bridges between corporate Canada and Indigenous communities. Progressive Aboriginal Relations (PAR) recognized performance in the areas of Indigenous employment, business development, individual capacity, and community relations. Cameco has been awarded the CCAB's PAR gold level distinction since 2001 on a three-year certification cycle.



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<b>ETHICS</b>					
New employees who have completed Code of Conduct and Ethics course	per cent	100	100	<b>100</b>	–
Targeted employees who have completed annual Code of Conduct and Ethics refresher course <sup>39</sup>	per cent	100	100	<b>100</b>	–
<b>CYBERSECURITY</b>					
Percentage of employees who received cybersecurity training	per cent	99	100	<b>100</b>	–
<b>ANTI-CORRUPTION</b>					
Production in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	tonnes	0	0	<b>0</b>	EM-MM-510a.2
<b>LOCAL PROCUREMENT</b>					
Proportion of services procured by local providers by Cameco	per cent	55	63	<b>66</b>	GRI 204-1
Proportion of services procured by local providers <sup>40</sup> in:					
Northern Saskatchewan <sup>41</sup>	per cent	81	82	<b>80</b>	GRI 204-1
Ontario <sup>42</sup>	per cent	41	47	<b>50</b>	GRI 204-1
US <sup>43</sup>	per cent	67	65	<b>51</b>	GRI 204-1

**NOTES**

- <sup>39</sup> Targeted employees include all directors and above, as well as employees who work in supply chain management, human resources, tax, treasury, finance, investor relations, business technology services, marketing, corporate development, legal and executive offices, must complete a mandatory online Code of Conduct and Ethics (Code) refresher training course, including the requirement to adhere to the Code and report any potential, perceived or actual conflicts of interest. In 2021, targeted employees included all employees.
- <sup>40</sup> Local supplier – Is defined differently for each of Cameco's operating locations as follows:
- <sup>41</sup> Northern Saskatchewan local supplier – A company or joint venture that is at least 50% owned by people or communities from the Northern Saskatchewan Administration District.
- <sup>42</sup> Ontario local supplier – One located in the province of Ontario.
- <sup>43</sup> US local supplier – A supplier located in the same state as the US mine operations. For Crow Butte operations, it is a supplier located in the state of Nebraska. For Smith Ranch-Highland operations it is a supplier located in the state of Wyoming.



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# SASB Index

Below are the metrics and references to qualitative descriptions in this report that align with the Sustainability Accounting Standards Board (SASB) standard for the Extractives & Minerals Processing Sector – Metals & Mining.

REFERENCE	SASB INDICATOR	2022 DATA OR PAGE
<b>GHG EMISSIONS</b>		
EM-MM-110a.1	Gross global Scope 1 emissions (Equity share) [tonnes CO <sub>2</sub> e]	102,418
EM-MM-110a.1	Percentage covered under emissions-limiting regulations	74
EM-MM-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	<a href="#">Pages 33, 45-48</a>
<b>AIR QUALITY</b>		
EM-MM-120a.1	Carbon Monoxide (CO) [tonnes]	32
EM-MM-120a.1	Nitrogen Oxides (NOx) (excluding N <sub>2</sub> O) [tonnes]	189
EM-MM-120a.1	Sulphur Oxides (SOx) [tonnes]	63
EM-MM-120a.1	Particulate matter (PM <sub>10</sub> ) [tonnes]	196
EM-MM-120a.1	Mercury (Hg) [tonnes]	N/A
EM-MM-120a.1	Lead (Pb) [tonnes]	N/A
EM-MM-120a.1	Volatile organic compounds (VOCs) [tonnes]	28
<b>ENERGY MANAGEMENT</b>		
EM-MM-130a.1	Total energy consumed [GJ]	3,511,677
EM-MM-130a.1	Percentage grid electricity	42
EM-MM-130a.1	Percentage renewable	Not reported

REFERENCE	SASB INDICATOR	2022 DATA OR PAGE
<b>WATER MANAGEMENT</b>		
EM-MM-140a.1	Total water withdrawn (fresh and non-fresh) [thousand m <sup>3</sup> ]	17,960
EM-MM-140a.1	Total water consumed	Not reported
EM-MM-140a.1	Percentage of fresh water withdrawn and consumed in regions with High or Extremely High Baseline Water Stress	0
EM-MM-140a.2	Number of incidents of non-compliance associated with water quantity and/or quality permits, standards, and regulations	1
<b>WASTE &amp; HAZARDOUS MATERIALS MANAGEMENT</b>		
EM-MM-150a.4	Total weight of non-mineral waste generated [tonnes]	10,328
EM-MM-150a.5	Total weight of tailings produced [tonnes]	30,021
EM-MM-150a.6	Total weight of waste rock generated [tonnes]	14,416
EM-MM-150a.7	Total weight of hazardous waste generated [tonnes]	185
EM-MM-150a.8	Total weight of hazardous waste recycled [tonnes]	Not reported
EM-MM-150a.9	Number of significant incidents associated with hazardous materials and waste management	Not reported
EM-MM-150a.10	Description of waste and hazardous materials management policies and procedures for active and inactive operations	<a href="#">Page 44</a>
<b>TAILINGS STORAGE FACILITIES MANAGEMENT</b>		
EM-MM-540a.1	Tailings storage facility inventory table: (1) facility name, (2) location, (3) ownership status, (4) operational status, (5) construction method, (6) maximum permitted storage capacity, (7) current amount of tailings stored, (8) consequence classification, (9) date of most recent independent technical review, (10) material findings, (11) mitigation measures, (12) site-specific EPRP	<a href="#">Mine Tailings Disclosure Document</a>
EM-MM-540a.1	Consequence classification by Canadian Dam Association Consequence Classification Rating	Significant
EM-MM-540a.2	Summary of tailings management systems and governance structure used to monitor and maintain the stability of tailings storage facilities	<a href="#">Page 38</a>



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REFERENCE	SASB INDICATOR	2022 DATA OR PAGE
<b>BIODIVERSITY IMPACTS</b>		
EM-MM-160a.1	Description of environmental management policies and practices for active sites	<a href="#">pages 49-51</a>
EM-MM-160a.2	Percentage of mine sites (percentage of mine sites by annual production output in metric tons on an equity share basis) where acid-generating seepage into surrounding surface water and/or groundwater is: 1) predicted to occur	33 (63)
EM-MM-160a.2	Percentage of mine sites (percentage of mine sites by annual production output in metric tons on an equity share basis) where acid-generating seepage into surrounding surface water and/or groundwater is: 2) actively mitigated	33 (63)
EM-MM-160a.2	Percentage of mine sites (percentage of mine sites by annual production output in metric tons on an equity share basis) where acid-generating seepage into surrounding surface water and/or groundwater is: 3) under treatment or remediation	0
EM-MM-160a.3	Percentage of proven reserves in or near sites with protected conservation status or endangered species habitat	39
EM-MM-160a.3	Percentage of probable reserves in or near sites with protected conservation status or endangered species habitat	50.5
<b>SECURITY, HUMAN RIGHTS &amp; RIGHTS OF INDIGENOUS PEOPLES</b>		
EM-MM-210a.1	Percentage of proven reserves in or near areas of conflict	0
EM-MM-210a.1	Percentage of probable reserves in or near areas of conflict	0
EM-MM-210a.2	Percentage of proven reserves in or near Indigenous land	77
EM-MM-210a.2	Percentage of probable reserves in or near Indigenous land	76
EM-MM-210a.3	Discussion of engagement processes and due diligence practices with respect to human rights, Indigenous rights, and operation in areas of conflict	<a href="#">pages 54-58, 78</a>
<b>COMMUNITY RELATIONS</b>		
EM-MM-210b.1	Discussion of process to manage risks and opportunities associated with community rights and interests	<a href="#">pages 54-58</a>
EM-MM-210b.2	Number of non-technical delays	0
EM-MM-210b.2	Duration of non-technical delays	0

REFERENCE	SASB INDICATOR	2022 DATA OR PAGE
<b>LABOUR RELATIONS</b>		
EM-MM-310a.1	Percentage of active workforce covered under collective bargaining agreements	28
EM-MM-310a.1	Percentage of active workforce covered under collective bargaining agreements, employees in Canada	29
EM-MM-310a.1	Percentage of active workforce covered under collective bargaining agreements, employees outside of Canada	0
EM-MM-310a.2	Number of strikes and lockouts	0
EM-MM-310a.2	Duration of strikes and lockouts [days]	0
<b>WORKFORCE HEALTH &amp; SAFETY</b>		
EM-MM-320a.1	Total Recordable Injury Rate as defined by OSHA for employees	1.4
EM-MM-320a.1	Total Recordable Injury Rate as defined by OSHA for contractors	3.1
EM-MM-320a.1	Fatality rate for employees	0
EM-MM-320a.1	Fatality rate for contractors	0
EM-MM-320a.1	Near miss frequency rate (NMFR) for employees	Not reported
EM-MM-320a.1	Near miss frequency rate (NMFR) for contractors	Not reported
EM-MM-320a.1	Average hours of health, safety, and emergency response training for employees	Not reported
EM-MM-320a.1	Average hours of health, safety, and emergency response training for contractors	Not reported
<b>BUSINESS ETHICS &amp; TRANSPARENCY</b>		
EM-MM-510a.1	Description of the management system for prevention of corruption and bribery throughout the value chain	<a href="#">pages 76-77</a>
EM-MM-510a.2	Production in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index [tonnes]	0



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# Limited Assurance Report



## Independent practitioner's limited assurance report on selected ESG performance indicators presented within Cameco Corporation's 2022 ESG Report

To the Board of Directors and Management of Cameco Corporation (Cameco)

We have undertaken a limited assurance engagement on selected ESG performance indicators included in Schedule 1 (the subject matter) as presented within Cameco's 2022 ESG Report (the Report) for the year ended December 31, 2022.

### Management's Responsibility

Management is responsible for the preparation of the subject matter in accordance with the criteria (the applicable criteria) included in Schedule 1 and as presented within the Report.

Management is also responsible for such internal control as management determines necessary to enable the preparation of the subject matter that is free from material misstatement, whether due to fraud or error.

### Our Responsibility

Our responsibility is to express a limited assurance conclusion on the subject matter based on the evidence we have obtained. We conducted our limited assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000, *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* and ISAE 3410, *Attestation Engagements on Greenhouse Gas Statements*. This standard requires that we plan and perform this engagement to obtain limited assurance about whether the subject matter is free from material misstatement.

A limited assurance engagement involves performing procedures (primarily consisting of making inquiries of management and others within the entity, as appropriate, and applying analytical procedures) and evaluating the evidence obtained. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of users of our report. The procedures are selected based on our professional judgment, which includes identifying areas where the risks of material misstatement, whether due to fraud or error, in preparing the subject matter in accordance with the applicable criteria are likely to arise.

Our limited assurance procedures included, but were not limited to the following:

- Making enquiries of corporate management and senior executives to obtain an understanding of the overall governance and internal control environment relevant to the management, aggregation and reporting of the subject matter;
- Conducted a limited number of virtual interviews to further understand data measurement, collection, reporting and control processes for the subject matter;
- Analytical reviews and trend analysis of reported data for the subject matter;
- Additional testing procedures over underlying data for the subject matter, as applicable; and
- Reviewed the subject matter disclosure in the Report to ensure consistency with the evidence obtained and adherence to the applicable criteria.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement and, consequently, the level of assurance obtained is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

## Our Independence and Quality Management

We have complied with the relevant rules of professional conduct/code of ethics applicable to the practice of public accounting and related to assurance engagements, issued by various professional accounting bodies, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Canadian Standard on Quality Management 1, *Quality Management for Firms that Perform Audits and Reviews of Financial Statements, or Other Assurance or Related Services Engagements*, which requires the firm to design, implement and operate a system of quality management, including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

## Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that Cameco's subject matter for the year ended December 31, 2022 is not prepared, in all material respects, in accordance with the applicable criteria.

## Purpose of Statement and Restriction of Use

The subject matter has been prepared by Cameco's management in accordance with the applicable criteria to report to the Board of Directors. As a result, the subject matter may not be suitable for another purpose. Our report is intended solely for Cameco.

We acknowledge the disclosure of our report, in full only, by Cameco at its discretion, without assuming or accepting any responsibility or liability to any other third party in respect of this report.

*PricewaterhouseCoopers LLP*

Chartered Professional Accountants  
Vancouver, British Columbia  
July 6, 2023



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## Schedule 1

Our limited assurance engagement was performed on the following selected ESG performance indicators:

#	ESG PERFORMANCE INDICATOR	CRITERIA	2022 VALUE	REPORT PAGE(S)
1	Air Quality- Uranium (tonnes) (For the year ended December 31, 2022)	Air emissions are reported only for operated facilities in Canada that reach NPRI (National Pollutant Release Inventory) release based threshold quantities. Air emissions are calculated using the guidance provided by Environment and Climate Change Canada through the National Pollutant Release Inventory. Air emissions of uranium are calculated using site specific data released through point sources.	0.05	87
2	Total Energy Consumed (GJ) (For the year ended December 31, 2022)	SASB EM-MM-130a.1	3,511,677	87
3	Gross global Scope 1 emissions (equity share) (tonnes CO <sub>2</sub> e) (For the year ended December 31, 2022)	SASB EM-MM-110a.1	102,418	87
4	Gross global Scope 1 emissions (operational control) (tonnes CO <sub>2</sub> e) (For the year ended December 31, 2022)	GRI 305-1	122,019	87
5	Scope 2 emissions (equity share) (tonnes CO <sub>2</sub> e) (For the year ended December 31, 2022)	GRI 305-2	129,427	87
6	Scope 2 emissions (operational control) (tonnes CO <sub>2</sub> e) (For the year ended December 31, 2022)	GRI 305-2	168,729	87
7	Total Recordable Injury Rate (TRIR) – TRIR employees (incidents per 200,000 hours worked) (For the year ended December 31, 2022)	SASB EM-MM-320a.1	1.4	89
8	Total Recordable Injury Rate (TRIR) – TRIR contractors (incidents per 200,000 hours worked) (For the year ended December 31, 2022)	SASB EM-MM-320a.1	3.1	89
9	Number of Transport Incidents (number) (For the year ended December 31, 2022)	SASB RT-CH-540a.2 and management's internally developed criteria stated within Cameco's performance table; Transport incidents include any transport incident that involves a release or potential release, per Section 8.2. of the Transportation of Dangerous Goods Regulation in Canada or 49 CFR 171.15 in the US.	0	89
10	Avg. radiation dose to employees and contractors (mSv/year) (For the year ended December 31, 2022)	The average radiation dose is an arithmetic average of the annual effective doses received by all workers monitored for radiation at Cameco-operated facilities at the mining, milling, and fuel services divisions in Saskatchewan, Ontario, and the US.	0.63	89




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#	ESG PERFORMANCE INDICATOR	CRITERIA	2022 VALUE	REPORT PAGE(S)
11	Water Withdrawal (m <sup>3</sup> ) (For the year ended December 31, 2022)	GRI 303-3a	17,959,788	84
12	Weight of tailings and mineral waste (tonnes) (For the year ended December 31, 2022)	The total of Tailings waste (computed in accordance with SASB EM-MM150a.5), Waste rock (computed in accordance with SASB EM-MM-150a.6), and Other mineral waste defined by management to include water treatment sludges and mine slimes that are not stored with tailings.	50,986	85
13	Non-hazardous waste diverted (tonnes) (For the year ended December 31, 2022)	GRI 306-4	562	86
14	Hazardous waste diverted (For the year ended December 31, 2022)	GRI 306-4	111	86
15	Total workforce – Women (per cent) (As at at December 31, 2022)	GRI 405-1	24%	90
16	Management – Women (per cent) (As at at December 31, 2022)	GRI 405-1	27%	90
17	Total workforce – Indigenous (per cent) (As at at December 31, 2022)	GRI 405-1	25%	90
18	Management – Indigenous (per cent) (As at at December 31, 2022)	GRI 405-1	5%	90
19	Indigenous employees <i>in all positions</i> at Northern Saskatchewan Operations (per cent) (As at at December 31, 2022)	Number of Northern Saskatchewan Operations employees that have self identified as indigenous divided by the total number of Northern Saskatchewan Operations Employees.  Diversity information for employees is only maintained on all regular and temporary full- and part-time in Canada. No contractors are included in this metric.	50%	91
20	Production in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index (tonnes) (For the year ended December 31, 2022)	SASB EM-MM-510a.2	0	92
21	Proportion of services procured by local providers in: Northern Saskatchewan (per cent) (For the year ended December 31, 2022)	GRI 204-1	80%	92



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# Forward-looking Statements

## Caution About Forward-looking Information

Our ESG Report includes statements and information about our expectations for the future. When we discuss our strategy, plans, 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 United States (US) securities laws. We refer to them in this ESG Report as forward-looking information.

Forward-looking information typically includes words and phrases about the future, such as: anticipate, believe, estimate, expect, plan, will, intend, goal, target, forecast, project, strategy and outlook. It represents our current views and can change significantly. Commitments, goals and targets discussed in this report are aspirational and there can be no assurance that they will be achieved.

The forward-looking information in our ESG Report is based on a number of material assumptions, including those we have listed on page 5-6 of our 2022 Annual MD&A, which may prove to be incorrect. Actual results and events may be significantly different from what we currently expect, due to the risks associated with our business. We list a number of these material risks on page 4-5 of our 2022 Annual MD&A. We recommend you also review our most recent annual information form, which includes a discussion of other material risks that could cause actual results to differ significantly from our current expectations. Forward-looking information is designed to help you understand management's current views of our economic, environmental, social and governance-related impacts and objectives, and it may not be appropriate for other purposes. We will not necessarily update this information unless we are required to by securities laws.

Examples of forward-looking information in this ESG Report include: our views regarding our ability address environmental, social and governance (ESG) risks and opportunities, including our expectation that nuclear power must be a central part of the solution to the world's shift to a low-carbon climate resilient economy; our planned measures to address climate change impacts in our operations and their timing; our expectations respecting the impact of new technology to enable us to achieve our ESG goals; our expectations regarding continued and increased government support for energy conservation and emissions reduction; our expectations about uranium supply, consumption and demand; our goals regarding waste reduction and plans for reusing, recycling, or recovering material; our decommissioning estimates and reclamation plans; our commitment to local procurement and supply chain management; our workforce health and safety goals and assessments; and our commitment to diversity and workforce development plans.

Material risks that could lead to different results include the risks that: our strategies may change, be unsuccessful or have unanticipated consequences; changing views of governments regarding the pursuit of carbon reduction strategies; our estimates and forecasts or the data underlying our estimates prove to be inaccurate; we are affected by environmental, safety and regulatory risks, including workforce health and safety, climate-related risks and increased regulatory burdens or delays; we are affected by terrorism, sabotage, blockades, civil unrest, social or political activism, outbreak of illness (such as a pandemic like COVID-19), accident or a deterioration in political support for, or demand for, nuclear energy; we are impacted by changes in the regulation or public perception of the safety of nuclear power plants; risks relating to the development and use of new technology or lack of appropriate technologies needed to advance our goals; negative publicity with respect to the handling of environmental or social matters; and disruptions in our operations and other development and operating risks.

Material assumptions that we have made include assumptions regarding: the nuclear industry, including its growth profile, market conditions and the demand for and supply of uranium; the continuing pursuit of carbon reduction strategies by governments, and the role of nuclear energy in the pursuit of those strategies; our ability to implement our strategies successfully; our ability, and our contractors' ability, to comply with current and future environmental, safety and other regulatory requirements and to obtain and maintain required regulatory approvals; our expectations on production at McArthur River/Key Lake; our ability to deploy sufficient capital to fund the expenditures and implement the operational changes necessary to achieve our environmental and social goals; and the availability or development of technologies needed to achieve our ESG goals.

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