UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 40-F

ANNUAL REPORT PURSUANT TO SECTION 13(a) or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended **December 31, 2019** Commission file number**: 1-14228**

CAMECO CORPORATION
(Exact name of Registrant as specified in its charter)

CANADA
(Province or other jurisdiction of incorporation or organization)

1090
(Primary Standard Industrial Classification Code Number)

98-0113090
(I.R.S. Employer Identification)

2121 – 11th Street West, Saskatoon, Saskatchewan, Canada, S7M 1J3, Telephone: (306) 956-6200
(Address and telephone number of Registrant's principal executive offices)

Doug Pavlick, Power Resources, Inc., Smith Ranch-Highland Operation,
762 Ross Road, Douglas, Wyoming, USA, 82633
Telephone: (307) 358-6541
(Name, address, (including zip code) and telephone number (including area code) of agent for service in the United States)

Securities registered pursuant to Section 12(b) of the Act:

Title of Class: **Common Shares, no par value**

Trading Symbol(s): **CCJ**

Name of Exchange where Securities are listed: **New York Stock Exchange**

Securities registered or to be registered pursuant to Section 12(g) of the Act: **None**

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: **None**

Information filed with this Form:

☒ Annual Information Form ☒ Audited annual financial statements

Number of outstanding shares of each of the issuer's classes of
capital or common stock as of the close of the period covered by the annual report:

395,797,732 Common Shares outstanding as of December 31, 2019

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

☑ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files).

☑ Yes ☐ No

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 12b-2 of the Exchange Act.

Emerging growth company ☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act. ☐

Certain statements in this Form 40-F constitute “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. In Exhibit 99.1 see “Caution about forward-looking information.”

***Certifications and Disclosure Regarding Controls and Procedures*.**

(a) **Certifications regarding controls and procedures**. See Exhibits 99.9 and 99.10.

(b) **Evaluation of disclosure controls and procedures**. As of December 31, 2019 an evaluation of the effectiveness of Cameco Corporation's "disclosure controls and procedures" (as such term is defined in Rules 13a-15(e) and 15d-15(e) of the United States Securities Exchange Act of 1934, as amended (the "Exchange Act")) was carried out by Cameco Corporation's Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"). Based on that evaluation, the CEO and CFO have concluded that as of such date Cameco Corporation's disclosure controls and procedures are effective to provide a reasonable level of assurance that information required to be disclosed by Cameco Corporation in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in United States Securities and Exchange Commission (the "Commission") rules and forms.

It should be noted that while the CEO and CFO believe that Cameco Corporation's disclosure controls and procedures provide a reasonable level of assurance that they are effective, they do not expect the disclosure controls and procedures or internal control over financial reporting to be capable of preventing all errors and fraud. A control system, no matter how well conceived or operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

(c) **Management's annual report on internal control over financial reporting**. Management, including Cameco Corporation's CEO and CFO, is responsible for establishing and maintaining adequate "internal control over financial reporting" (as that term is defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) for Cameco Corporation. Management conducted an evaluation of the effectiveness of internal control over financial reporting based on the Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that Cameco Corporation's internal control over financial reporting was effective as of December 31, 2019.

(d) **Attestation report of the registered public accounting firm**. The effectiveness of Cameco Corporation's internal control over financial reporting as of December 31, 2019 was audited by KPMG LLP, an independent registered public accounting firm, as stated in its report in Exhibit 99.6 – Report of Independent Registered Public Accounting Firm.

(e) **Changes in internal control over financial reporting**. During the fiscal year ended December 31, 2019, there were no significant changes in Cameco Corporation's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, Cameco Corporation's internal control over financial reporting other than as follows:

During the first quarter of 2019, Cameco Corporation implemented a new marketing system resulting in a material change in internal controls over financial reporting. The new system provides for contract administration, including the processing and recording of delivery obligations as well as revenue forecasting and reporting. The implementation process included extensive involvement by key end users and management and incorporated user acceptance testing, change management procedures, data migration strategies and a parallel run period where users validated the new system. Post-implementation reviews and testing were conducted by management to ensure that internal controls surrounding the implementation process were properly designed to prevent material financial statement errors.

Audit & Finance Committee Financial Expert. Cameco Corporation's board of directors has determined that at least one member of its audit and finance committee (the "audit committee") is the sole audit committee financial expert. The audit committee financial expert is Daniel Camus. Mr. Camus has been determined by Cameco Corporation's board of directors to be an independent director as such term is defined under the Canadian Securities Administrators' National Instrument 52-110 (Audit Committees) ("NI 52-110"), the Commission's audit committee independence requirements, and the rules of the New York Stock Exchange relating to the independence of audit committee members.

Information concerning the relevant experience of Mr. Camus is included in his biographical information contained in Cameco Corporation's Annual Information Form in Exhibit 99.1. The Commission has indicated that the designation of a person as an audit committee financial expert does not make such person an "expert" for any purpose, impose any duties, obligations or liability on such person that are greater than those imposed on members of the audit committee and board of directors who do not carry this designation, or affect the duties, obligations or liability of any other member of the audit committee or board of directors.

Code of Ethics. Cameco Corporation's code of conduct and ethics (the "Code") is applicable to all directors, officers and employees of Cameco Corporation, including the CEO and CFO. The Code, as well as Cameco Corporation's corporate governance practices and mandates of the board of directors and its committees, and position descriptions for the chief executive officer and the non-executive chair, can be found on Cameco Corporation's website at www.cameco.com under "About – Governance" and are also available in print to any shareholder upon request. Since the adoption of the Code, there have not been any waivers, including implied waivers, from any provision of the Code. In 2019, Cameco Corporation amended its previously filed Code and made non-substantive changes including updates to document and privacy legislation references, contact information and clarified wording.

The Code was furnished to the Commission on January 24, 2020 as Exhibit 1 to a report on Form 6-K and is incorporated by reference herein as Exhibit 99.17.

Principal Accountant Fees and Services. See Exhibit 99.4.

Off-Balance Sheet Arrangements. In the normal course of operations, Cameco Corporation enters into certain transactions that are not required to be recorded on its balance sheet. These activities include the issuing of financial assurances and long-term product purchase contracts. They are disclosed in the following sections of Exhibit 99.3 – 2019 Management's Discussion and Analysis and the notes to the financial statements in Exhibit 99.2 – 2019 Consolidated Audited Financial Statements:

(a) **Financial assurances**. In the 2019 Management's Discussion and Analysis, see the disclosure at "Off-balance sheet arrangements" (page 44). In the 2019 Consolidated Audited Financial Statements, see the disclosure at notes 15, 21 and 25 of the financial statements.

(b) **Long-term product purchase contracts**. In the 2019 Management's Discussion and Analysis, see the disclosure at "Off-balance sheet arrangements" (page 44).

(c) **Other arrangements**. In the 2019 Management's Discussion and Analysis, see the disclosure at "Off-balance sheet arrangements" (page 45). In the 2019 Consolidated Audited Financial Statements, see the disclosure at note 13 of the financial statements.

Tabular Disclosure of Contractual Obligations. See Exhibit 99.5.

Identification of the Audit Committee. Cameco Corporation has a separately-designated standing audit committee established in accordance with Section 3(a)(58)(A) of the Exchange Act. Cameco Corporation's audit committee is comprised of: Daniel Camus (chair), Ian Bruce, Catherine Gignac and Jim Gowans.

Audited Annual Financial Statements. The report of the independent registered public accounting firm relating to Cameco Corporation's Consolidated Audited Financial Statements as at December 31, 2019 and 2018 is included in Exhibit 99.7 – Report of Independent Registered Public Accounting Firm – Public Company Accounting Oversight Board (United States) Standards.

Mine Safety Disclosure. Neither Cameco Corporation nor any of its subsidiaries is the "operator" of any "coal or other mine", as those terms are defined in section 3 of the Federal Mine Safety and Health Act of 1977 (30 U.S.C. 802), that is subject to the provisions of such Act (30 U.S.C. 801 et seq.). Therefore, the provisions of Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 16 of General Instruction B to Form 40-F requiring disclosure concerning mine safety violations and other regulatory matters do not apply to Cameco Corporation or any of its subsidiaries or U.S. mines.

Disclosure Pursuant to the Requirements of the New York Stock Exchange.

(a) **Corporate governance practices**. Disclosure of the significant ways in which Cameco Corporation's corporate governance practices differ from those required for U.S. companies under the NYSE listing standards can be found on Cameco Corporation's website at www.cameco.com under "About – Governance."

(b) **Presiding director at meetings of non-management directors**. Cameco Corporation schedules regular director sessions in which Cameco Corporation's "non-management directors" (as that term is defined in the rules of the NYSE) meet without management participation. Mr. Ian Bruce, as non-executive chair of Cameco Corporation, serves as the presiding director (the "Presiding Director") at such sessions. Each of Cameco Corporation's non-management directors is "independent" as such term is used in the rules of the NYSE. Cameco Corporation's criteria for director independence are available on Cameco Corporation's website at www.cameco.com under "About – Governance."

(c) **Communication with non-management directors**. Shareholders may send communications to Cameco Corporation's Presiding Director or non-management directors by mailing (by regular mail or other means of delivery) to the corporate head office at 2121 – 11th Street West, Saskatoon, Saskatchewan, Canada, S7M 1J3, in a sealed envelope marked "Private and Strictly Confidential – Attention: Chair of the Board of Directors of Cameco Corporation". Any such envelope will be delivered unopened to the Presiding Director for appropriate action. The status of all outstanding concerns addressed to the Presiding Director will be reported to the board of directors as appropriate.

(d) **Corporate governance guidelines**. According to Section 303A.09 of the NYSE Listed Company Manual, a listed company must adopt and disclose a set of corporate governance guidelines with respect to specified topics. Such guidelines and the charters of the listed company's most important committees of the board of directors are required to be posted on the listed company's website and be available in print to any shareholder upon request. Cameco Corporation operates under corporate governance guidelines that are consistent with the requirements of Section 303A.09 of the NYSE Listed Company Manual. Cameco Corporation's corporate governance guidelines and the charters of its most important committees of the board of directors can be found at Cameco Corporation's website at www.cameco.com under "About – Governance" and are available in print to any shareholder who requests them.

(e) **Independent directors**. The names of Cameco Corporation's non-management directors are: Ian Bruce; Daniel Camus; Donald Deranger; Catherine Gignac; Jim Gowans; Kathryn Jackson; Don Kayne; and Anne McLellan. Each of the non-management directors is "independent", as such term is used in the rules of the NYSE.

EXHIBIT INDEX

Exhibit No.	Description
99.1	2019 Annual Information Form
99.2	2019 Consolidated Audited Financial Statements
99.3	2019 Management's Discussion and Analysis
99.4	Principal Accountant Fees and Services
99.5	Tabular Disclosure of Contractual Obligations
99.6	Report of Independent Registered Public Accounting Firm – Internal Control Over Financial Reporting
99.7	Report of Independent Registered Public Accounting Firm – Public Company Accounting Oversight Board (United States) Standards
99.8	Consent of Independent Registered Public Accounting Firm
99.9	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the U.S. Securities Exchange Act of 1934, as amended
99.10	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the U.S. Securities Exchange Act of 1934, as amended
99.11	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
99.12	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
99.13	Consent of Alain D. Renaud, P. Geo.
99.14	Consent of Scott Bishop, P. Eng.
99.15	Consent of Lloyd Rowson, P. Eng.
99.16	Consent of Gregory M. Murdock, P. Eng.
99.17	Code of Conduct and Ethics (as amended and restated as of July 2019) (incorporated by reference to Cameco Corporation's Form 6-K, furnished to the Commission on January 24, 2020)

UNDERTAKING AND CONSENT TO SERVICE OF PROCESS

Undertaking

Cameco Corporation undertakes to make available, in person or by telephone, representatives to respond to inquiries made by the Commission staff, and to furnish promptly, when requested to do so by the Commission staff, information relating to: the securities registered pursuant to Form 40-F; the securities in relation to which the obligation to file an annual report on Form 40-F arises; or transactions in said securities.

Consent to Service of Process

Cameco Corporation has previously filed a Form F-X in connection with the class of securities in relation to which the obligation to file this report arises.

Any change to the name or address of the agent for service of process of Cameco Corporation shall be communicated promptly to the Commission by an amendment to the Form F-X referencing the file number of the relevant registration statement.

SIGNATURES

Pursuant to the requirements of the Exchange Act, Cameco Corporation certifies that it meets all of the requirements for filing on Form 40-F and has duly caused this annual report to be signed on its behalf by the undersigned, thereto duly authorized.

DATED this 27th day of March, 2020.

CAMECO CORPORATION

By: */s/ Grant Isaac*
Name: Grant Isaac
Title: Senior Vice-President and Chief Financial Officer

EXHIBIT 99.1

Cameco Corporation

2019 Annual Information Form

March 27, 2020

Cameco Corporation

2019 Annual information form

March 27, 2020

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Important information about this document

This annual information form (AIF) for the year ended December 31, 2019 provides important information about Cameco Corporation. It describes our history, our markets, our operations and projects, our mineral reserves and resources, our approach to environmental, social and governance matters (ESG), our regulatory environment, the risks we face in our business and the market for our shares, among other things.

It also incorporates by reference:

- our management's discussion and analysis for the year ended December 31, 2019 (2019 MD&A), which is available on SEDAR (sedar.com) and on EDGAR (sec.gov) as an exhibit to our Form 40-F; and
- our audited consolidated financial statements for the year ended December 31, 2019 (2019 financial statements), which are also available on SEDAR and on EDGAR as an exhibit to our Form 40-F.

Throughout this document, the terms *we, us, our, the company* and *Cameco* mean Cameco Corporation and its subsidiaries.

We have prepared this document to meet the requirements of Canadian securities laws, which are different from what United States (US) securities laws require.

The information contained in this AIF is presented as at December 31, 2019, the last day of our most recently completed financial year, and is based on what we knew as of March 10, 2020, except as otherwise stated. Certain information contained in this AIF has been further updated, including the discussion on page 50, *Temporary suspension of production at Cigar Lake operation due to Coronavirus (COVID-19) pandemic* and on page 109, *Risks that can affect our business – Legal and other risks – Public health issues and disease outbreaks.*

Reporting currency and financial information

Unless we have specified otherwise, all dollar amounts are in Canadian dollars. Any references to $(US) mean US dollars.

The financial information in this AIF has been presented in accordance with International Financial Reporting Standards (IFRS).

Caution about forward-looking information

Our AIF and the documents incorporated by reference include statements and information about our expectations for the future. When we discuss our strategy, plans and future financial and operating performance, or other things that have not yet taken place, we are making statements considered to be *forward-looking information* or *forward-looking statements* under Canadian and US securities laws. We refer to them in this AIF as *forward-looking information*. In particular, the discussions under the headings *Market overview and developments* and *Marketing framework – balanced contract portfolio* in this AIF contain forward-looking information.

Key things to understand about the forward-looking information in this AIF:

- It typically includes words and phrases about the future, such as *anticipate, believe, estimate, expect, plan, will, intend, goal, target, forecast, project, strategy* and *outlook* (see examples on page 2).
- It represents our current views, and can change significantly.
- It is based on a number of *material assumptions*, including those we have listed below, 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 below. We recommend you also review other parts of this document, including *Risks that can affect our business* starting on page 93, and our 2019 MD&A, 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 near and longer term prospects, and it may not be appropriate for other purposes. We will not necessarily update this information unless we are required to by securities laws.

Examples of forward-looking information in this AIF

- our expectation that the current market environment will give way to strong long-term fundamentals driven by increasing populations and the impact of growing electricity demand on the world's climate
- our belief that nuclear energy will play a central role in providing safe, reliable, affordable carbon-free baseload electricity and achieving a low-carbon future
- our expectations about 2020 and future global uranium supply, consumption, demand, prices, and contracting volumes
- our expectation that that the uranium industry will continue to be cyclical and that utilities will re-enter the long-term market to ensure they have the reliable supply of uranium they need to run their reactors
- our expectation that current market uncertainty will give way to increasing concerns about the security of future supply and increases in demand for uranium from producers and financial players
- our belief that uranium available in the spot market will not be adequate to satisfy the growing backlog of long-term demand
- our expectation that there will be increased competition to secure uranium under long-term contracts on terms that will ensure the availability of reliable primary supply to meet growing demand
- our expectation about 2020 and future consumption of conversion services
- our expectation that our approach to long-term contracting will enable us to realize increases linked to higher market prices in the future
- our expectations relating to care and maintenance costs, including incurring between $150 million and $170 million in 2020
- our expectations relating to uranium purchases
- our expectation that production at McArthur River/Key Lake will be the first of our operations to restart once we see the appropriate market signals
- the discussion of our expectations relating to our Canada Revenue Agency (CRA) transfer pricing dispute, including that the Tax Court of Canada's (Tax Court) ruling will be upheld on appeal and our estimate of the amount and timing of expected cash taxes, transfer pricing penalties and disbursements award
- our expectations for future tax payments and rates, including effective tax rates
- future plans and expectations for our uranium properties, advanced projects, and fuel services operating sites, including production levels and the suspension of production at certain properties
- our expectations for our production restart plans, including that all critical project work can be completed within a one year time frame and that an experienced workforce will be available
- estimates of operating and capital costs and mine life for our tier one uranium operations
- estimated decommissioning and reclamation costs for uranium properties and fuel services operating sites
- the discussion of Joint Venture Inkai LLP's (JV Inkai) expansion plans for a 10.4 million pound per year operation
- our mineral reserve and resource estimates
- our expectations that the price of uranium, production costs and recovery rates will allow us to operate or develop a particular site or sites
- estimates of metallurgical recovery and other production parameters for each uranium property
- production estimates at the Cigar Lake and Inkai operations
- our expectation that the US Department of Energy (DOE) will make available a portion of its excess uranium inventory over the next two decades

Material risks

- actual sales volumes or market prices for any of our products or services are lower than we expect for any reason, including changes in market prices, loss of market share to a competitor or trade restrictions
- we are adversely affected by changes in currency exchange rates, interest rates, royalty rates, or tax rates
- our production costs are higher than planned, or our cost reduction strategies are unsuccessful, or necessary supplies are not available, or not available on commercially reasonable terms
- our strategies may change, be unsuccessful or have unanticipated consequences
- 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
- a major accident at a nuclear power plant
- we are impacted by changes in the regulation or public perception of the safety of nuclear power plants, which adversely affect the construction of new plants, the relicensing of existing plants and the demand for uranium
- government laws, regulations, policies or decisions that adversely affect us, including tax and trade laws and sanctions on nuclear fuel imports

- our estimates and forecasts prove to be inaccurate, including production, purchases, deliveries, cash flow, revenue, costs, decommissioning, reclamation expenses, or our tax expense
- we are unable to enforce our legal rights under our existing agreements, permits or licences
- we are subject to litigation or arbitration that has an adverse outcome, including lack of success in our dispute with CRA
- we are unsuccessful in our dispute with CRA and this results in significantly higher cash taxes, interest charges and penalties that could result in a material adverse effect on us
- we are unable to utilize letters of credit to the extent anticipated in our dispute with CRA
- there are defects in, or challenges to, title to our properties
- our mineral reserve and resource estimates are not reliable, or there are unexpected or challenging geological, hydrological or mining conditions
- we are affected by environmental, safety and regulatory risks, including increased regulatory burdens or delays
- necessary permits or approvals from government authorities cannot be obtained or maintained
- we are affected by political risks
- our uranium suppliers fail to fulfil delivery commitments or our uranium purchasers fail to fulfil purchase commitments
- our Cigar Lake development, mining or production plans are delayed or do not succeed for any reason
- any difficulties in milling of Cigar Lake ore at the McClean Lake mill
- water quality and environmental concerns could result in a potential deferral of production and additional capital and operating expenses required for the Cigar Lake operation
- JV Inkai's development, mining or production plans are delayed or do not succeed for any reason
- our expectations relating to care and maintenance costs prove to be inaccurate
- we are affected by natural phenomena, including inclement weather, fire, flood and earthquakes
- operations are disrupted due to problems with our own or our suppliers' or customers' facilities, the unavailability of reagents, equipment, operating parts and supplies critical to production, equipment failure, lack of tailings capacity, labour shortages, labour relations issues, strikes or lockouts, underground floods, cave-ins, ground movements, tailings dam failures, transportation disruptions or accidents, unanticipated consequences of our cost reduction strategies, or other development and operating risks

Material assumptions

- our expectations regarding sales and purchase volumes and prices for uranium and fuel services, trade restrictions, and that counterparties to our sales and purchase agreements will honour their commitments
- our expectations regarding the demand for and supply of uranium
- our expectations regarding spot prices and realized prices for uranium
- that the construction of new nuclear power plants and the relicensing of existing nuclear power plants will not be more adversely affected than expected by changes in regulation or in the public perception of the safety of nuclear power plants
- our ability to continue to supply our products and services in the expected quantities and at the expected times
- our expected production levels for uranium and conversion services
- our cost expectations, including production costs, purchase costs, operating costs, capital costs, and the success of our cost reduction strategies
- our expectations regarding tax rates and payments, royalty rates, currency exchange rates and interest rates
- our expectations about the outcome of our dispute with CRA, including that the Tax Court ruling will be upheld on appeal
- our mineral reserve and resource estimates, and the assumptions upon which they are based, are reliable
- our understanding of the geological, hydrological and other conditions at our uranium properties
- our ability to abide by the provisions of the subsoil code and New Currency Law (as defined below) related to JV Inkai
- our Cigar Lake development, mining and production plans succeed
- the McClean Lake mill is able to process Cigar Lake ore as expected
- operations are not significantly disrupted as a result of political instability, nationalization, terrorism, sabotage, blockades, civil unrest, breakdown, natural disasters, outbreak of illness (such as a pandemic like COVID-19), governmental or political actions, litigation or arbitration proceedings, the unavailability of reagents, equipment, operating parts and supplies critical to production, labour shortages, labour relations issues, strikes or lockouts, underground floods, cave-ins, ground movements, tailings dam failure, lack of tailings capacity, transportation disruptions or accidents, unanticipated consequences of our cost reduction strategies, or other development or operating risks

- our expectation that the Tax Court ruling will apply in principle to subsequent years not covered by the decision
- our expectation that we will recover certain amounts remitted to the CRA
- we are able to utilize letters of credit to the extent anticipated in our dispute with CRA
- our decommissioning and reclamation estimates, including the assumptions upon which they are based, are reliable
- JV Inkai's development, mining and production plans succeed
- that care and maintenance costs will be as expected
- our and our contractors' ability to comply with current and future environmental, safety and other regulatory requirements, and to obtain and maintain required regulatory approvals

About Cameco

Our head office is in Saskatoon, Saskatchewan. We are one of the world's largest providers of uranium fuel needed to energize a clean-air world. Our competitive position is based on our controlling ownership of the world's largest high-grade reserves and low-cost operations. Utilities around the world rely on our nuclear fuel products to generate power in safe, reliable, carbon-free nuclear reactors.

Strategy

Our strategy is to focus on our tier-one assets and profitably produce at a pace aligned with market signals in order to preserve the value of those assets and increase long-term shareholder value, and to do that with an emphasis on safety, people and the environment. You can find more information about our strategy at page 8 and in our 2019 MD&A.

Cameco Corporation
2121 – 11th Street West
Saskatoon, Saskatchewan
Canada S7M1J3
Telephone: 306.956.6200

This is our head office, registered office and principal place of business.

We are publicly listed on the Toronto and New York stock exchanges, and had a total of 1,885 employees at December 31, 2019.

Business segments

URANIUM

Our uranium production capacity is among the world's largest. However, in 2019, with many of our operations in care and maintenance, we accounted for about 9%of world production. We have controlling ownership of the world's largest high-grade mineral reserves.

Product
- uranium concentrates (U_3O_8)

Mineral reserves and resources

Mineral reserves
- approximately 461 million pounds proven and probable

Mineral resources
- approximately 424 million pounds measured and indicated
- approximately 175 million pounds inferred

Tier-one operations
- McArthur River and Key Lake, Saskatchewan
- Cigar Lake, Saskatchewan
- Inkai, Kazakhstan

Tier-two operations
- Rabbit Lake, Saskatchewan
- Smith Ranch-Highland, Wyoming
- Crow Butte, Nebraska

Advanced projects
- Millennium, Saskatchewan
- Yeelirrie, Australia
- Kintyre, Australia

Exploration and corporate development
- focused on North America
- approximately 0.8million hectares of land

FUEL SERVICES

We are an integrated uranium fuel supplier, offering refining, conversion and fuel manufacturing services.

Products

- uranium trioxide (UO_3)
- uranium hexafluoride (UF_6)
  (we have about 25% of world primary conversion capacity)
- uranium dioxide (UO_2)
- fuel bundles, reactor components and monitoring equipment used by CANDU reactors

Operations

- Blind River refinery, Ontario
  (refines uranium concentrates to UO_3)
- Port Hope conversion facility, Ontario
  (converts UO_3 to UF_6 or UO_2)
- Cameco Fuel Manufacturing Inc. (CFM), Ontario (manufactures fuel bundles and reactor components)

For information about our revenue and gross profit by business segment for the years ended December 31, 2019 and 2018, see our 2019 MD&A as follows:

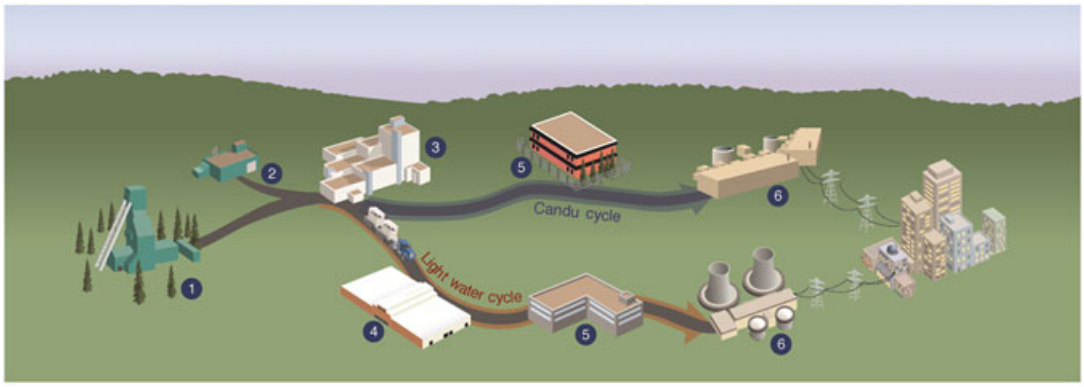
- uranium – page 46
- fuel services – page 48

Other fuel cycle investments

Enrichment

In 2019, we signed a binding agreement to increase our interest in Global Laser Enrichment (GLE) from 24% to 49%. GLE is testing a third-generation enrichment technology that, if successful, will use lasers to commercially enrich uranium. Closing of the agreement is conditional upon further regulatory and other approvals.

The nuclear fuel cycle



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

1 Mining

Once an orebody is discovered and defined by exploration, there are three common ways to mine uranium, depending on the depth of the orebody and the deposit's geological characteristics:

- *Open pit mining* is used if the ore is near the surface. The ore is usually mined using drilling and blasting.
- *Underground mining* is used if the ore is too deep to make open pit mining economical. Tunnels and shafts provide access to the ore.
- *In situ recovery (ISR)* does not require large scale excavation. Instead, holes are drilled into the ore and a solution is used to dissolve the uranium. The solution is pumped to the surface where the uranium is recovered.

1 Milling

Ore from open pit and underground mines is processed to extract the uranium and package it as a powder typically referred to as *uranium concentrates* (U_3O_8) or *yellowcake*. The leftover processed rock and other solid waste (*tailings*) is placed in an engineered tailings facility.

2 Refining

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

3 Conversion

For light water reactors, the UO_3 is converted to *uranium hexafluoride* (UF_6) gas to prepare it for enrichment. For heavy water reactors like the CANDU reactor, the UO_3 is converted into powdered *uranium dioxide* (UO_2).

4 Enrichment

Uranium is made up of two main isotopes: U-238 and U-235. Only U-235 atoms, which make up 0.7% of natural uranium, are involved in the nuclear reaction (fission). Most of the world's commercial nuclear reactors require uranium that has an enriched level of U-235 atoms.

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

5 Fuel manufacturing

Natural or enriched UO_2 is pressed into pellets, which are baked at a high temperature. These are packed into zircaloy or stainless steel tubes, sealed and then assembled into fuel bundles.

6 Generation

Nuclear reactors are used to generate electricity. U235 atoms in the reactor fuel fission, creating heat that generates steam to drive turbines. The fuel bundles in the reactor need to be replaced as the U-235 atoms are depleted, typically after one or two years depending upon the reactor type. The used – or *spent* – fuel is stored or reprocessed.

Spent fuel management

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

Major developments

2017

January

- TEPCO Electric Power Company Holdings, Inc. (TEPCO) confirmed it would not withdraw a termination notice, claiming force majeure, for a uranium supply contract with Cameco Inc., which notice is being disputed. We are seeking $700 million (US) in damages plus interest and legal costs.

September

- We consolidate global marketing activities in Canada at our corporate office in order to enhance operational efficiency and reduce costs.

November

- We announce production from the McArthur River mining and Key Lake milling operations in northern Saskatchewan will be temporarily suspended by the end of January 2018.
- We announce a reduction in our planned annual dividend to $0.08 per share commencing in 2018.

December

- We close the restructuring of JV Inkai, which reduced Cameco's ownership interest in JV Inkai to 40% on January 1, 2018.

2018

July

- We announce production from the McArthur River mining and Key Lake milling operations in northern Saskatchewan will be suspended for an indeterminate duration.

September

- We announce the Tax Court of Canada has ruled unequivocally in our favour in our dispute of the reassessments issued by CRA for the 2003, 2005 and 2006 tax years.

October

- We receive notification that CRA has filed an appeal with the Federal Court of Appeal regarding the Tax Court of Canada decision, which found in favour of Cameco for the 2003, 2005 and 2006 tax years.

2019

July

- We announce that a tribunal of international arbitrators has ruled in favour of Cameco Inc. in its contract dispute with TEPCO, awarding $40.3 million (US) in damages and $5 million (US) for costs, expenses and pre-award interest.
- We enter into a new collective agreement with unionized employees at our McArthur River and Key Lake operations, which expires on December 31, 2022.
- We enter into a new three-year collective agreement with unionized employees at our Port Hope conversion facility, which expires on July 1, 2022.

How Cameco was formed

Cameco was incorporated under the *Canada Business Corporations Act* on June 19, 1987.

We were formed when two crown corporations were privatized and their assets merged:

- Saskatchewan Mining Development Corporation (SMDC) (uranium mining and milling operations); and
- Eldorado Nuclear Limited (uranium mining, refining and conversion operations) (now Canada Eldor Inc.).

There are constraints and restrictions on ownership of shares in the capital of Cameco (Cameco shares) set out in our company articles, and a related requirement to maintain offices in Saskatchewan. These are requirements of *the Eldorado Nuclear Limited Reorganization and Divestiture Act* (Canada), as amended, and *The Saskatchewan Mining Development Corporation Reorganization Act*, as amended, and are described on pages 115 and 116.

We have made the following amendments to our articles:

2002	• increased the maximum share ownership for individual non-residents to 15% from 5% • increased the limit on voting rights of non-residents to 25% from 20%
2003	• allowed the board to appoint new directors between shareholder meetings as permitted by the *Canada Business Corporations Act*, subject to certain limitations • eliminated the requirement for the chair of the board to be ordinarily resident in the province of Saskatchewan

We have one main subsidiary:

- Cameco Europe Ltd., a Swiss company we have 100% ownership of through subsidiaries

At January 1, 2020, we do not have any other subsidiary that is material, either individually or collectively.

For more information

You can find more information about Cameco on SEDAR (sedar.com), EDGAR (sec.gov) and on our website (cameco.com).

See our most recent management proxy circular for additional information, including how our directors and officers are compensated and any loans to them, principal holders of our securities, and securities authorized for issue under our equity compensation plans. We expect the circular for our April 30, 2020 annual meeting of shareholders to be available on March 31, 2020.

See our 2019 financial statements and 2019MD&A for additional financial information.

Our strategy

Our strategy is set within the context of a challenging market environment, which we expect to give way to strong long-term fundamentals driven by increasing populations, and the impact of growing electricity demand on the world's climate. Nuclear energy must 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 power needed, not only reliably, but also safely and affordably, and in a way that will help avoid some of the worst consequences of climate change.

Tier-one focus

We are a pure-play nuclear fuel investment, focused on providing a clean source of energy, and taking advantage of the long-term growth we see coming in our industry. Our strategy is to focus on our tier-one assets and profitably produce at a pace aligned with market signals in order to preserve the value of those assets and increase long-term shareholder value, and to do that with an emphasis on safety, people and the environment.

For more information on our strategy, see our 2019 MD&A.

Market overview and developments

Growing confidence

Market access and trade policy issues were at the top of the list of factors affecting the market in 2019. These issues created uncertainty and consumed a significant amount of time and focus from our customers and contributed to the delay of end-user demand in the spot market. Despite the significant demand created by the reduction in primary supply in 2019, at least half of the activity in the spot market has been churn, the same material changing hands many times. In contrast, interest in long-term contracting increased compared to 2018. While the volume of uranium executed under long-term contracts is still below annual consumption levels, it reached its highest level since 2012 and there continues to be significant interest. We believe that underlying this interest is the recognition that the demand cycle is on an upswing while the production cycle has swung down and the market needs to transition to one where price reflects an economic return on primary production. This gives us confidence that the uranium market will undergo the same transition we have seen in the conversion market and that is beginning to occur in the enrichment market.

Supply is not guaranteed

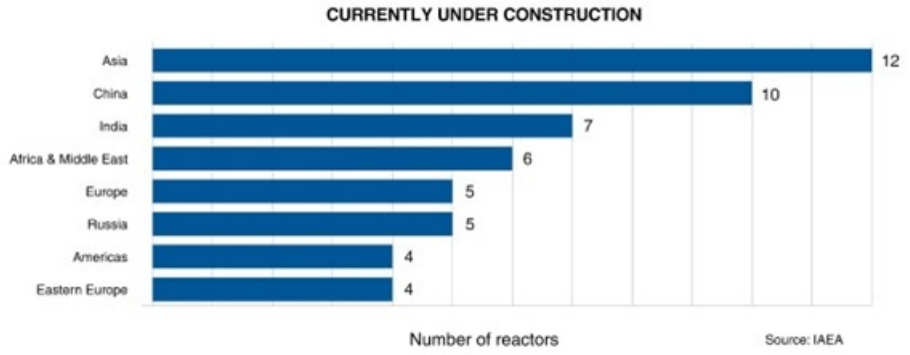
Economic realities and government-driven trade policies continue to have an impact on the security of supply in our industry. Not only does it not make sense to invest in future primary supply, even the lowest-cost producers are deciding to preserve long-term value by leaving uranium in the ground. Adding to security of supply concerns today is the role of commercial and state-owned entities in the uranium market, and the disconnect between where uranium is produced and where it is consumed. Nearly 80% of primary production is in the hands of state-owned enterprises, after taking into account the cuts to primary production that have occurred over the last several years. Furthermore, almost 90% of primary production comes from countries that consume little-to-no uranium, and 90% of uranium consumption occurs in countries that have little-to-no primary production. As a result, government-driven trade policies can be particularly disruptive for the uranium market. Some of the more significant supply developments are:

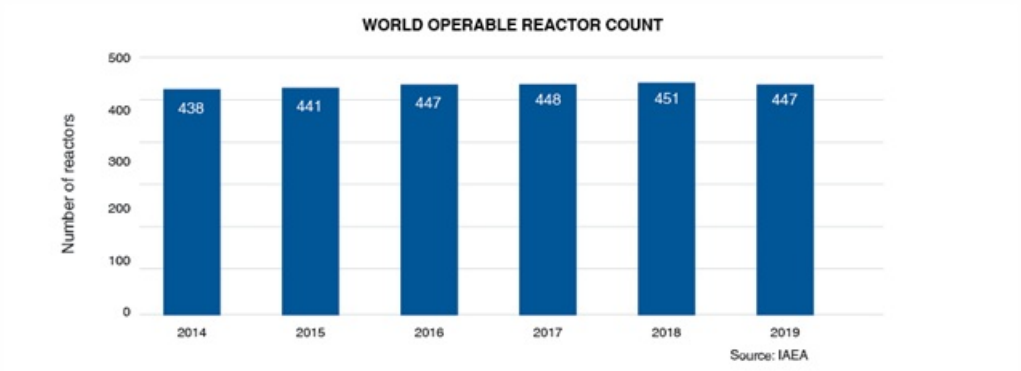
- In the US, which has the largest fleet of nuclear reactors in the world, the US Nuclear Fuel Working Group (NFWG) was established to further analyze the state of nuclear fuel production in the US. This action followed the determination by the President of the United States under Section 232 of the *Trade Expansion Act* that imports of foreign uranium do not constitute a national security threat, and that new restrictions on imports were not required. The NFWG has submitted its report to the President, however, the details of the report have not been made public. On February 10, 2020, the US government unveiled a 2021 budget request to purchase $150 million (US) of uranium from domestic suppliers to address the production challenges currently facing the US uranium mining industry and to ensure a backup supply of uranium in the event of a supply disruption.
- The concern regarding expanded sanctions on Iran that could extend to countries providing nuclear fuel products and services to Iran (i.e. Russia, China, and some European nations), and therefore disrupt Russian nuclear fuel imports into the US. Compounding this concern is the continued uncertainty regarding Russian sanctions and whether existing quotas on imports of Russian uranium into the US, under the Russian Suspension Agreement, will be extended or amended prior to its expiry in 2020.
- Trade tensions with China continue. On August 14, 2019, the US issued sanctions that involved China General Nuclear Power Group and three of its subsidiaries, effectively banning US companies from supplying these groups with specific nuclear-related commercial or dual-use goods. This has not impacted uranium sales.
- Kazatomprom (KAP) announced that, given current market conditions, it intends to extend its current production limits (20% reduction from planned production volumes) across all its production assets through 2021. Combined with reductions from prior years, KAP indicated its cutbacks are equivalent to stopping all production in Kazakhstan for about one year. They have also indicated that a return to full production will not occur until there is a sustained market recovery. In addition, during the third quarter of 2019 KAP offered a secondary placement of its shares, increasing its publicly-traded share capital from 15% to 18.8%.
- Energy Resources of Australia Ltd. reconfirmed that it is required to discontinue mining and processing activities at the Ranger uranium mine in the Northern Territory of Australia by January 2021.
- The board of directors of Orano's Cominak mine announced that the mine will shut down in March 2021 due to depletion of reserves.

Demand has recovered and is growing

The demand gap left by forced and premature nuclear reactor shut-downs since March of 2011 has been filled. According to the International Atomic Energy Agency (IAEA) five new reactors began commercial operation in 2019, and 53 reactors are under construction. With a number of reactor construction projects recently approved, and many more planned, the demand for uranium is growing. This growth is largely occurring in Asia and the Middle East. Some of this growth is tempered by early reactor retirements, plans for reduced reliance on nuclear, or phase-out policies in other regions. However, there is growing recognition of the role nuclear power must play in providing safe, reliable, affordable carbon-free baseload electricity and achieving a low-carbon future. Some of the more significant demand developments are:

- The World Nuclear Association's 2019 Nuclear Fuel Report shows demand is forecast to be higher in all scenarios examined over the period 2019 through 2040. In addition, the report shows that under all demand scenarios, the industry needs to at least double projected primary uranium production by 2040, which will require the appropriate market signals to ensure current levels of production continue, the return of idled production capacity, completion of projects under development, and development of currently planned and prospective projects.
- In its latest uranium market outlook report, UxC increased its annual demand outlook by 8 million pounds per year and moved its assumed structural deficit from 2026 to 2022.
- In May 2019, the International Energy Agency released its first nuclear report in 20 years, "Nuclear Power in a Clean Energy System". The report highlights that a steep decline in nuclear power would threaten energy security and climate change goals and result in billions of tonnes of additional carbon emissions by 2040.
- In October 2019, the IAEA held its first ever conference recognizing the critical role for nuclear power in combating climate change, "International Conference on Climate Change and the Role of Nuclear Power". The IAEA advocates that it will be difficult to achieve the goal of reducing greenhouse gas emissions without a significant increase in nuclear power.
- In November 2019, the European Parliament adopted a resolution recognizing the role of nuclear energy in achieving its 2050 climate plan calling for net zero emissions.
- In 2019, China National Nuclear Company received the first new construction approval in China in about three years for units 1 and 2 at Zhangzhou, and construction began at unit 1 in October 2019.
- NextEra Energy's Turkey Point 3 and 4 in Florida received the first ever subsequent licence renewal, allowing them to operate for 80 years.
- Duke Energy announced it is seeking to renew the operating licences to 80 years for the 11 reactors it operates in North and South Carolina to support carbon reduction plans. Tennessee Valley Authority also announced plans to extend the licences for its six reactors in Tennessee and Alabama to 80 years.
- Three Mile Island nuclear power plant was retired from service by Exelon after 45 years of operation in Pennsylvania.
- In Ohio, a bill was passed providing funding to support the ongoing operation of the Perry and Davis-Besse nuclear power plants, similar to incentives enacted by other states including Illinois, New Jersey, New York, Connecticut, and pending legislation in Pennsylvania.
- There were reports that Kyushu Electric Power Co. and other utilities in Japan expect to temporarily close their currently operating units over the coming years to complete the implementation of the antiterrorism measures required by the nuclear regulators. Some of these units are expected to shut down starting in 2020 before returning to service within a year.
- Brazil announced the possible construction of six more nuclear reactors by 2050, in addition to completion of Angra unit 3, which is currently under construction.

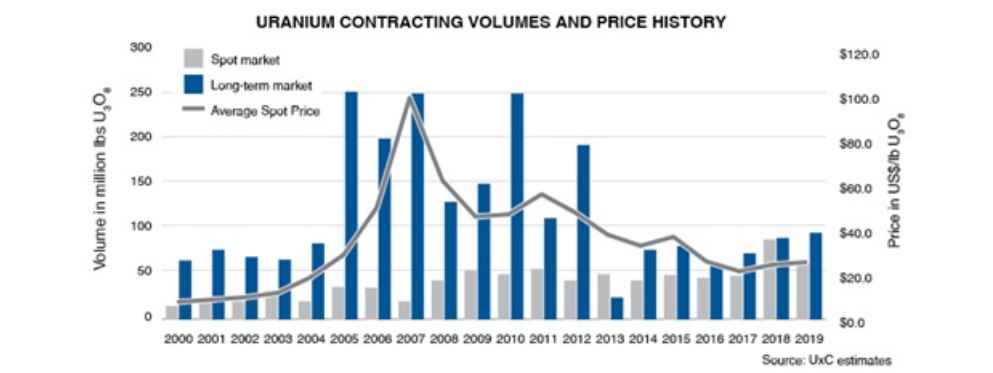




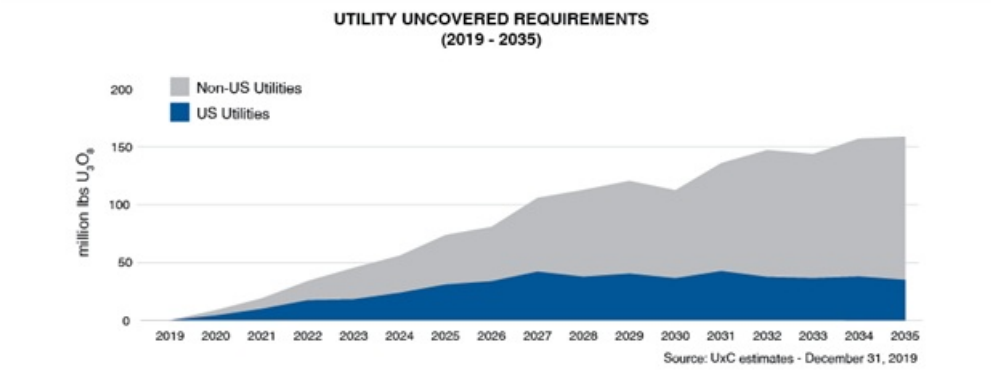
Opportunities for those who can wait

UxC reports that over the last five years only 396 million pounds have been locked-up in the long-term market, while over 831 million pounds have been consumed in reactors. We remain confident that utilities have a growing gap to fill.

Like other commodities, the uranium industry is cyclical. History demonstrates that in general, when prices are rising and high, uranium is perceived as scarce, and a lot of contracting activity takes place. The heavy contracting that takes place during price runs, drives investment in higher-cost sources of production. Once that production is in the market, it tends to stay in the market longer than is economically rational, creating the perception that uranium is abundant and always will be, and prices decline. When prices are declining and low, like we have seen over the past eight years, there is no perceived urgency to contract, and contracting activity and investment in new supply drops off. After years of low investment in supply, as has been the case since 2011, security of supply tends to overtake price concerns at some point, and utilities re-enter the long-term market to ensure they have the reliable supply of uranium they need to run their reactors.



We believe the current backlog of long-term contracting presents a substantial opportunity for commercially motivated suppliers like us that can weather the low-price part of the cycle. As a low-cost producer, we manage our operations with these price cycles in mind.



In our industry, customers do not come to the market right before they need to load uranium into their reactors. To operate a reactor that could run for more than 60 years, natural uranium and the downstream services have to be purchased years in advance, allowing time for a number of processing steps before it arrives at the power plant as a finished fuel bundle. At present, we believe there is a significant amount of uranium that needs to be contracted to keep reactors running into the next decade.

UxC estimates that cumulative uncovered requirements are about 1.5 billion pounds to the end of 2035. The longer the recovery of the long-term market is delayed, the less certainty there will be about the availability of future supply to fill growing demand. In fact, recent data from the US Energy Information Administration shows that utility inventories are starting to decline and are approaching levels that could put security of supply at risk. Ultimately, we expect the current market uncertainty to give way to increasing concerns about the security of future supply.

As utilities' uncovered requirements grow, annual supply declines, demand for uranium from producers and financial players increases, and with trade policy potentially restricting access to some markets, we believe the pounds available in the spot market will not be adequate to satisfy the growing backlog of long-term demand. As a result, we expect there will be increased competition to secure uranium under long-term contracts on terms that will ensure the availability of reliable primary supply to meet growing demand.

Global population is on the rise, and with the world's need for safe, clean, reliable baseload energy, nuclear remains an important part of the energy mix. We remain confident in the future of the nuclear industry. With demand coming on in the form of restarts and new reactors, and supply becoming less certain as a result of low prices, production curtailments, lack of investment, and market access and trade policy issues, we're continuing to expect a market transition. While the timing of a market transition remains uncertain, we will continue to take the actions we believe are necessary to position the company for long-term success. Therefore, we will undertake contracting activity which aligns with the uncertain timing of a market recovery and is intended to ensure we have adequate protection and will benefit from higher prices under our contract portfolio, while maintaining exposure to the rewards that come from having uncommitted, low-cost supply to deliver into a strengthening market.

Marketing framework – balanced contract portfolio

As with our corporate strategy and approach to capital allocation, the purpose of our marketing framework is to deliver value. Our approach is to secure a solid base of earnings and cash flow by maintaining a balanced contract portfolio that optimizes our realized price.

We evaluate our strategy in the context of our market environment and continue to adjust our actions in accordance with our marketing framework:

- First, we will not produce from our tier-one assets to sell into an oversupplied spot market. We will not produce from these assets unless we can deliver our tier-one pounds under long-term contracts that provide an acceptable rate of return on these assets for our owners.
- Second, we do not intend to build up an inventory of excess uranium. Excess inventory serves to contribute to the sense that uranium is abundant and creates an overhang on the market, and it ties up working capital on our balance sheet.
- Third, in addition to our committed sales, we will capture demand in the market where we think we can obtain value. We will take advantage of opportunities the market provides, where it makes sense from an economic, logistical and strategic point of view. Those opportunities may come in the form of spot, mid-term or long-term demand, and will be additive to our current committed sales.
- Fourth, once we capture demand, we will decide how to best source material to satisfy that demand. Depending on the timing and volume of our production, purchase commitments, and our inventory volumes, this means we will be active buyers in the market in order to meet our demand obligations.
- And finally, in general, if we choose to source material to meet demand by purchasing it, we expect the price of that material will be more than offset by the leverage to market prices in our sales portfolio over a rolling 12-month period.

In addition to this framework, our contracting decisions always factor in who the customer is, our desire for regional diversification, the product form, and logistical factors.

Ultimately, our goal is to protect and extend the value of our contract portfolio on terms that recognize the value of our assets and provide adequate protection when prices go down and allow us to benefit when prices rise. We believe using this framework will allow us to create long-term value for our shareholders. Our focus will continue to be on maximizing cash flow, so we can execute on our strategy and self-manage risk.

Long-term contracting

Uranium is not traded in meaningful quantities on a commodity exchange. Utilities have historically bought the majority of their uranium and fuel services products under long-term contracts with suppliers, and have met the rest of their needs on the spot market. We sell uranium and fuel services directly to nuclear utilities around the world as uranium concentrates, UO_2 and UF_6, conversion services, or fuel fabrication. We have a solid portfolio of long-term sales contracts that reflect the long-term, trusting relationships we have with our customers.

In general, we are always active in the market, buying and selling uranium when it is beneficial for us and in support of our long-term contract portfolio. We undertake activity in the spot and term markets prudently, looking at the prices and other business factors to decide whether it is appropriate to purchase or sell into the spot or term market. Not only is this activity a source of profit, it gives us insight into underlying market fundamentals.

We deliver large volumes of uranium every year, therefore our net earnings and operating cash flows are affected by changes in the uranium price. Market prices are influenced by the fundamentals of supply and demand, market access and trade policy issues, geopolitical events, disruptions in planned supply and demand, and other market factors.

The objectives of our contracting strategy are to:

- maximize realized price while reducing volatility of our future earnings and cash flow
- focus on meeting the nuclear industry's growing annual uncovered requirements with our future uncommitted supply while ensuring adequate regional diversity
- establish and grow market share with strategic customers

We target a ratio of 40% fixed-pricing and 60% market-related pricing in our portfolio of long-term contracts, including mechanisms to protect us when the market price is declining and allow us to benefit when market prices go up. This is a balanced and flexible approach that allows us to adapt to market conditions and put a floor on our average realized price, and deliver the best value to shareholders over the long term.

This approach has allowed us to realize prices higher than the market prices during periods of weak uranium demand, and we expect it will enable us to realize increases linked to higher market prices in the future.

Fixed-price contracts for uranium: are typically based on a term-price indicator at the time the contract is accepted and escalated over the term of the contract.

Market-related contracts for uranium: are different from fixed-price contracts in that they may be based on either the spot price or the long-term price, and that price is as quoted at the time of delivery rather than at the time the contract is accepted. These contracts sometimes provide for discounts, and often include floor prices and/or ceiling prices, which are usually escalated over the term of the contract.

Fuel services contracts: the majority of our fuel services contracts are at a fixed price per kgU, escalated over the term of the contract, and reflect the market at the time the contract is accepted.

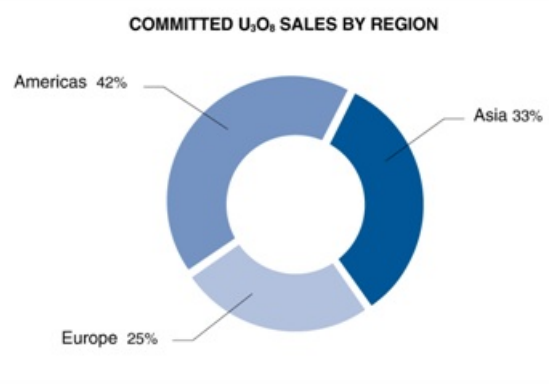
Optimizing the contract portfolio

We work with our customers to optimize the value of our existing contract portfolio. In cases where a customer is seeking relief due to a challenging policy, operating, or economic environment, we evaluate their specific circumstances and assess their long-term sustainability. Where we deem the customer's long-term demand to be at risk, we may consider options that allow us to benefit from converting that uncertain future value into certain present value. In contrast, where the customer is considered to have a more certain and predictable future, we may offer relief. For example, in a low price environment, we may blend in more market-related volumes in the near term, but only where the customer is willing to extend the terms and conditions of that contract out into the future, and only where it is beneficial to us.

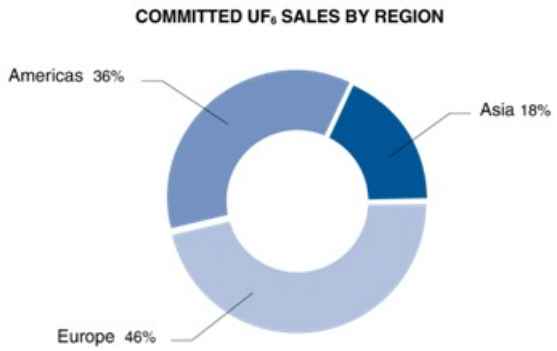
Contract portfolio status

We have commitments to sell over 130 million pounds of U_3O_8 with 31 customers worldwide in our uranium segment, and over 36 million kilograms as UF_6 conversion with 28 customers worldwide in our fuel services segment. The annual average sales commitments over the next five years in our uranium segment is around 19 million pounds, with commitment levels in 2020 and 2021 higher than in 2022 through 2024.

Customers – U3O8:
Five largest customers account for 60% of commitments



Customers – UF6 conversion:
Five largest customers account for 60% of commitments



Managing our contract commitments

To meet our delivery commitments, we use our uranium supply, which includes uranium obtained from:

- our existing production
- purchases under our JV Inkai agreement, from NUKEM, under long-term agreements and in the spot market
- our existing inventory

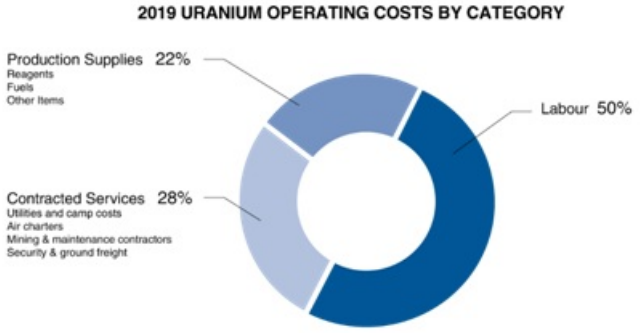
We allow sales volumes to vary year-to-year depending on:

- the level of sales commitments in our long-term contract portfolio
- our production volumes
- purchases under existing and/or new arrangements
- discretionary use of inventories
- market opportunities

Managing our costs

Production costs

In order to operate efficiently and cost-effectively, we manage operating costs and improve plant reliability by prudently investing in production infrastructure, new technology, and business process improvements. Like all mining companies, our uranium segment is affected by the cost of inputs such as labour and fuel.



Given the current market dynamics, in 2020, our only operating property will be Cigar Lake. Our McArthur River/Key Lake, Rabbit Lake, and US operations are currently on care and maintenance. While we have these operations on standby, our annual cash production costs will reflect the operating cost of mining and milling our share of Cigar Lake mineral reserves, which is estimated to be between $15 and $16 per pound over the entire life-of-mine.

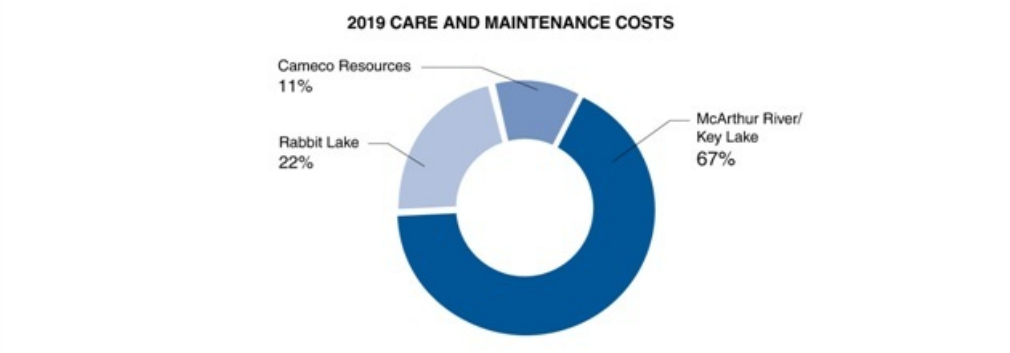
Operating costs in our fuel services segment are mainly fixed. In 2019, labour accounted for about 44% of the total. The largest variable operating cost is for zirconium, followed by anhydrous hydrogen fluoride, and energy (natural gas and electricity).

Care and maintenance costs

In 2020, we expect to incur between $150 million and $170 million in care and maintenance costs related to the suspension of production at our McArthur River/Key Lake mine and mill, Rabbit Lake mine and mill, and US operations. The largest proportion of these costs will be incurred at McArthur River/Key Lake.

Our expected care and maintenance costs have increased compared to 2019 due to planned expenditures that will allow us to fully assess our operating processes at McArthur River/Key Lake. Consistent with our tier-one strategy, we expect that production at McArthur River/Key Lake will be the first of our operations to restart once we see the appropriate market signals. Therefore, we are focused on improving operational effectiveness, including the use of digital and automation technologies with a particular goal of substantially reducing operating costs and increasing operational flexibility when it comes time to restart these operations. As a result, care and maintenance costs are expected to be higher compared to Rabbit Lake and in the US. Our Rabbit Lake and US operations are higher-cost, and with plenty of idle tier-one capacity and tier-one expansion capacity globally that can come back on line relatively quickly, the restart horizon is less certain.

While Rabbit Lake and our US operations are in standby, we will continue to evaluate our options in order to minimize costs.



Purchases and inventory costs

Our costs are also affected by the purchases of uranium and conversion services we make under long-term contracts and on the spot market.

To meet our delivery commitments, we make use of our mined production, inventories, purchases under long-term contracts, and purchases we make on the spot market. In 2020, the price for the majority of our purchases will be quoted at the time of delivery.

The cost of purchased material may be higher or lower than our other sources of supply, depending on market conditions. The cost of purchased material affects our cost of sales, which is determined by calculating the average of all of our sources of supply, including opening inventory, production, and purchases, and adding royalties, selling costs, and care and maintenance costs. If market prices exceed our cost of produced material including royalties, we expect the cost of sales to increase accordingly.

Financial impact

As greater certainty returns to the uranium market, our view is that the market needs to transition to one where uranium prices reflect the cost of bringing on new primary production to meet growing demand.

We have taken a number of deliberate and disciplined actions to reduce supply and streamline operations. Some of these actions come with a cost in the near term, like care and maintenance costs, but we expect the benefit over the long term will far outweigh those costs.

We believe our actions will help shield the company from the nearer term risks we face and will reward shareholders for their continued patience and support of our strategy to build long-term value.

Supply Sources

Uranium supply sources include primary production (production from mines that are currently in commercial operation) and secondary supply sources (excess inventories, uranium made available from defense stockpiles and the decommissioning of nuclear weapons, re-enriched depleted uranium tails, and used reactor fuel that has been reprocessed).

Primary production

While the uranium production industry is international in scope, there are only a small number of companies operating in relatively few countries. In addition, there are barriers to entry and bringing on and ramping up production can take between seven and 10 years. A number of projects have been cancelled or delayed, and some production has been discontinued due to the low uranium prices that have persisted since 2011. Today's uranium prices are not high enough to encourage investment in new mine development and not high enough to incent some existing mines to continue to produce.

We estimate world mine production in 2019 was about 141 million pounds U_3O_8, up from 138 million pounds in 2018:

- Over 78% of estimated world production came from four countries: Kazakhstan (42%), Canada (13%), Australia (12%) and Namibia (11%).
- About 64% of estimated world production was attributable to four producers. We accounted for about 9% (13 million pounds) of estimated world production in 2019.

Secondary sources

There are a number of secondary sources, but most of these sources are finite and will not meet long-term needs:

- The US government has historically made some of its inventories available to the market, although in smaller and predictable quantities.
- Utilities, mostly in Europe and some in Japan and Russia, use reprocessed uranium and plutonium from used reactor fuel.
- Re-enriched depleted uranium tails and uranium from underfeeding are also generated using excess enrichment capacity.

Uranium from US inventories

We estimate that the DOE has an excess uranium inventory of roughly 100 million pounds U_3O_8 equivalent. We expect a sizeable portion of this uranium will be available to the market over the next two decades, although a significant portion of the inventory requires either further processing or the development of commercial arrangements before it can be brought to market.

DOE Excess Uranium Inventory Management Plan

In March 2008, the DOE issued a policy statement and a general framework for managing this inventory, including the need to dispose of it without disrupting the commercial markets. It was updated in 2013. Under the 2013 Excess Uranium Inventory Management Plan, the DOE increased the allowable amount of material disposed of in a year to equal 15% or less of annual US nuclear fuel requirements. DOE sales are governed by Secretarial Determinations (issued every 2 years), which require that any such sales not have a material adverse impact on the US uranium, conversion and enrichment industries. The most recent Secretarial Determination was issued on May 1, 2017, reducing annual transfers from the DOE to 1,200 MTU (3.1 million pounds U_3O_8) from 1,600 MTU (4.2 million pounds U_3O_8) beginning in 2017. In March 2018, the DOE announced a suspension of excess uranium sales for the remainder of 2018, reducing its distribution of secondary supplies to the market. Subsequently, in May, the suspension was extended through fiscal 2019. Considerations for fiscal year 2020 are ongoing, however the DOE has indicated a commitment to continuing the suspension.

US Congressional Legislation

On May 21, 2015, the *Excess Uranium Transparency and Accountability Act* was introduced into the House and Senate. The purpose of the bipartisan bill is to restrict the DOE's inventory sales under a codified structure. The bill has an annual cap on DOE's uranium transfers of 2,100 MTU (5.5 million pounds U_3O_8) for calendar years 2016 through 2023 and 2,700 MTU (7.1 million pounds U_3O_8) for calendar years 2024 and each year thereafter. The limit includes uranium in all forms. If new legislation is introduced, the limit could be amended.

Trade restraints and policies

The importation of Russian uranium into the US market is regulated by the amended *USEC Privatization Act* and by the Agreement Suspending the Antidumping Action against Russian Uranium Products, which together impose annual quotas on imports of Russian uranium. These quotas were set at the equivalent of 20% of annual US reactor demand and are scheduled to expire at the end of 2020. The existing agreement, and whether or not it will be extended, are currently under review by the Department of Commerce with a determination expected in the first half of 2020.

The US restrictions do not affect the sale of Russian uranium to other countries. About 70% of world uranium demand is from utilities in countries that are not affected by the US restrictions. Utilities in some countries, however, adopt policies that limit the amount of Russian uranium they will buy. The Euratom Supply Agency in Europe must approve all uranium related contracts for members of the European Union (EU), and limits the use of certain nuclear fuel supplies from any one source to maintain security of supply, although these limits do not apply to uranium sold separately from enriched uranium product.

In January 2018, two US uranium producers put forward a petition under Section 232 of the *Trade Expansion Act* due to pressures from state-sponsored (Russia, Kazakhstan, Uzbekistan and China) imports. The petition aimed to have 25% of US

nuclear reactor requirements sourced from the US and a Buy America policy for US government agencies. Currently less than 5% of US requirements are met by US uranium producers. The NFWG was established to further analyze the state of nuclear fuel production in the US. This action followed the determination by the President of the United States under Section 232 of the *Trade Expansion Act* that imports of foreign uranium do not constitute a national security threat, and that new restrictions on imports were not required. The NFWG has submitted its report to the President, however, the details of the report have not been made public. On February 10, 2020, the US government unveiled a 2021 budget request to purchase $150 million (US) of uranium from domestic suppliers to address the production challenges currently facing the US uranium mining industry and to ensure a backup supply of uranium in the event of a supply disruption.

Conversion services

We have about 25% of world UF_6 primary conversion capacity and supply UO_2 for Canadian-made CANDU reactors. For conversion services, we compete with a small number of primary commercial suppliers, in addition to the secondary supplies described above, to meet global demand.

Operations and projects

Uranium

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Uranium production

Cameco's share (million lbs U_3O_8)	**2018**	**2019**	**2020 Plan**
McArthur River/Key Lake	0.1	- [1]	- [1]
Cigar Lake	9.0	9.0	9.0
Rabbit Lake	- [1]	- [1]	- [1]
US ISR Operations	0.1	- [1]	- [1]
Total	**9.2**	**9.0**	**9.0**

[1] The McArthur River/Key Lake operations and the Rabbit Lake operation are in a safe and sustainable state of care and maintenance, and we are no longer developing new wellfields at US ISR Operations.

We expect total production from Inkai to be8.3 million pounds in 2020 on a 100% basis. Due to equity accounting, our share of production is shown as a purchase.

Uranium – Tier-one operations



McArthur River mine/Key Lake mill

McArthur River is the world's largest high-grade uranium mine, and Key Lake is the world's largest uranium mill.

Ore grades at the McArthur River mine are 100 times the world average, which means it can produce more than 18 million pounds per year by mining only 200 to 400 tonnes of ore per day. We are the operator of both the mine and mill.

In 2018, a decision was made to suspend production at the mine and mill for an indeterminate duration.

McArthur River is considered a material uranium property for us.

Location	Saskatchewan, Canada
Ownership	69.805% - McArthur River 83.333% - Key Lake
End product	uranium concentrate
ISO certification	ISO 14001 certified
Mine type	underground
Estimated mineral reserves (our share)	273.6 million pounds (proven and probable), average grade U_3O_8 – 6.91%
Estimated mineral resources[1] (our share)	6.7 million pounds (measured and indicated), average grade U_3O_8 – 2.36% 1.8 million pounds (inferred), average grade U_3O_8 – 2.85%
Mining methods	blasthole stoping raiseboring
Licensed capacity	mine and mill: 25.0 million pounds per year
Total packaged production 2000 to 2019	325.4 million pounds (McArthur River/Key Lake) (100% basis)
2019 production	0 million pounds
2020 production outlook	0million pounds
Estimated mine life	23 years (based upon the production schedule in the March 29, 2019 technical report)
Estimated decommissioning cost[2] (100% basis)	$42 million – McArthur River $222 million – Key Lake

[1]Mineral resources that are not mineral reserves have no demonstrated economic viability.

[2] The Key Lake estimate is under regulatory review.

Business structure

McArthur River is owned by a joint venture (MRJV) between two companies:

- Cameco – 69.805%
- Orano Canada Inc. (Orano) – 30.195%

Key Lake is owned by a joint venture between the same two companies:

- Cameco – 83.333%
- Orano – 16.667%

History

1976	• Canadian Kelvin Resources Ltd. and Asamera Oil Corporation Ltd. form an exploration joint venture, which includes the lands that the McArthur River mine is situated on
1977	• SMDC, one of our predecessor companies, acquires a 50% interest
1980	• McArthur River joint venture is formed • SMDC becomes the operator • Active surface exploration begins • Between 1980 and 1988 SMDC reduces its interest to 43.991%
1988	• Eldorado Resources Limited merges with SMDC to form Cameco • We become the operator • Deposit discovered by surface drilling
1988-1992	• Surface drilling reveals significant mineralization of potentially economic uranium grades, in a 1,700 metre zone at depths of between 500 to 640 metres
1992	• We increase our interest to 53.991%
1993	• Underground exploration program receives government approval – program consists of shaft sinking (completed in 1994) and underground development and drilling
1995	• We increase our interest to 55.844%
1997-1998	• Federal authorities issue construction licences for McArthur River after reviewing the environmental impact statement, holding public hearings, and receiving approvals from the governments of Canada and Saskatchewan
1998	• We acquire all of the shares of Uranerz Exploration and Mining Ltd. (UEM), increasing our interest to 83.766% • We sell half of the shares of UEM to Orano, reducing our interest to 69.805%, and increasing Orano's to 30.195%
1999	• Federal authorities issue the operating licence and provincial authorities give operating approval, and mining begins in December
2003	• Production is temporarily suspended in April because of a water inflow • Mining resumes in July
2009	• UEM distributes equally to its shareholders: - its 27.922% interest in the McArthur River joint venture, giving us a 69.805% direct interest, and Orano a 30.195% direct interest - its 33.333% interest in the Key Lake joint venture, giving us an 83.33% direct interest, and Orano a 16.667% direct interest
2013	• Federal authorities granted a 10-year renewal of the McArthur River and Key Lake operating licences
2014	• After a two-week labour disruption, we enter into a four-year collective agreement with unionized employees at McArthur River and Key Lake operations
2017	• We announce our plan to temporarily suspend production at McArthur River and Key Lake in 2018
2018	• We announce the suspension of production at McArthur River and Key Lake for an indeterminate duration

Technical report

This description is based on the project's technical report: McArthur River Operation, Northern Saskatchewan, Canada, dated March 29, 2019 (effective December 31, 2018).

The report was prepared for us in accordance with *Canadian National Instrument 43-101 – Standards of Disclosure for Mineral Projects* (NI 43-101), by or under the supervision of Linda Bray, P. Eng,
Gregory M. Murdock, P. Eng., and Alain D. Renaud, P.Geo. The following description has been prepared under the supervision of Scott Bishop, P. Eng., Gregory M. Murdock, P. Eng., and Alain D. Renaud, P.Geo. They are all qualified persons within the meaning of NI 43-101, but are not independent of us.
The conclusions, projections and estimates included in this description are subject to the qualifications, assumptions and exclusions set out in the technical report. We recommend you read the technical report in its entirety to fully understand the project. You can download a copy from SEDAR (sedar.com) or from EDGAR (sec.gov).

For information about uranium sales see pages 13 to 15, environmental matters see *Our approach to ESGmatters* and *Theregulatory environment* starting on pages78and 84, and taxes see page 92.

For a description of royalties payable to the province of Saskatchewan on the sale of uranium extracted from orebodies within the province, see page 92.

For a description of risks that might affect access, title or the right or ability to perform work on the property, see *Regulatory risks* starting at page 107, *Environmental risks* starting at page 108and *Legal and other risks* starting at page 109.

About the McArthur River property

Location

The McArthur River mine site is located near Toby Lake, approximately 620 kilometres north of Saskatoon. The mine site is in close proximity to other uranium production operations: the Key Lake mill is 80 kilometres southwest by road and the Cigar Lake mine is 46 kilometres northeast by air.

Access

Access to the property is by an all-weather gravel road and by air. Supplies are transported by truck from Saskatoon and elsewhere. There is a 1.6 kilometre unpaved air strip and an air terminal one kilometre east of the mine site, on the surface lease.

Saskatoon, a major population centre south of the McArthur River property, has highway and air links to the rest of North America.

Leases

Surface lease

The MRJV acquired the right to use and occupy the lands necessary to mine the deposit under a surface lease agreement with the province of Saskatchewan. The most recent agreement was signed in November 2010. It covers 1,425 hectares and has a term of 33 years.

We are required to report annually on the status of the environment, land development and progress on northern employment and business development.

Mineral lease

We have the right to mine the deposit under ML 5516, granted to us by the province of Saskatchewan. The lease covers 1,380 hectares and expires in March 2024. We have the right to renew the lease for further 10-year terms.

Mineral claims

A mineral claim gives us the right to explore for minerals and to apply for a mineral lease. There are 23 mineral claims, totaling 84,508 hectares, surrounding the deposit. The mineral claims are in good standing until 2022, or later.

Environment, social and community factors

The climate is typical of the continental sub-arctic region of northern Saskatchewan. Summers are short and cool even though daily temperatures can sometimes reach above 30°C. The mean daily temperature for the coldest month is below -20°C, and winter daily temperatures can reach below -40°C.

The deposit is 40 kilometres inside the eastern margin of the Athabasca Basin in northern Saskatchewan. The topography and environment are typical of the taiga forested lands in the Athabasca Basin.

We are committed to building long-lasting and trusting relationships with the communities in which we operate. For more information, see *Our approach to ESG matters* at page 78.

No communities are in the immediate vicinity of McArthur River. The community of Wollaston Lake is approximately 120 kilometres by air to the east of the mine site. The community of Pinehouse is approximately 300 kilometres south of the mine by road.

Athabasca Basin community resident employees and contractors fly to the mine site from designated pick-up points. Other employees and contractors fly to the mine from Saskatoon with pick-up points in Prince Albert and La Ronge.

Geological setting

The deposit is in the southeastern portion of the Athabasca Basin in northern Saskatchewan, within the southwest part of the Churchill structural province of the Canadian Shield. The deposit is located at or near the unconformity contact between the Athabasca Group sandstones and underlying metasedimentary rocks of the Wollaston Domain.

The deposit is similar to other Athabasca Basin deposits but is distinguished by its very high grade and overall size. Unlike Cigar Lake, there is no development of extensive hydrothermal clay alteration in the sandstone above the uranium mineralization and the deposit is geochemically simple with negligible amounts of other metals.

McArthur River's geological setting is similar to the Cigar Lake deposit in that the sandstone that overlies the deposit and basement rocks contains large volumes of water at significant pressure.

Mineralization

McArthur River's mineralization is structurally controlled by a northeast-southwest trending reverse fault (the P2 fault), which dips 40-65 degrees to the southeast and has thrust a wedge of basement rock into the overlying sandstone with a vertical displacement ranging between 60 and 80 metres.

The deposit consists of nine mineralized zones with delineated mineral resources and/or reserves: Zones 1, 2, 3, 4, 4 South, A, B, McA North 1 and McA North 2. These and three under-explored mineralized showings, known as McA North 3, McA North 4 and McA South 1, as well as other mineralized occurrences have also been identified over a strike length of 2,700 metres.

The main part of the mineralization, generally at the upper part of the basement wedge, averages 12.7 metres in width and has a vertical extent ranging between 50 metres and 120 metres.

The deposit has two distinct styles of mineralization:

- high-grade mineralization at the unconformity near the P2 reverse fault and within both sandstone and basement rocks
- fracture controlled and vein like mineralization that occurs in the sandstone away from the unconformity and within the basement quartzite

The high-grade mineralization along the unconformity constitutes the majority of the mineralization within the McArthur River deposit. Mineralization occurs across a zone of strongly altered basement rocks and sandstone across both the unconformity and the P2 structure. Mineralization is generally within 15 metres of the basement/sandstone contact with the exception of Zone 2.

Uranium oxide in the form of uraninite and pitchblende (+/- coffinite) occurs as disseminated grains in aggregates ranging in size from millimetres to decimetres, and as massive mineralization up to several metres thick.

Geochemically, the deposit does not contain any significant quantities of the elements nickel, copper, cobalt, lead, zinc, molybdenum and arsenic that are present in other unconformity related Athabasca uranium deposits although locally elevated quantities of these elements have been observed in Zone B.

Deposit type

McArthur River is an unconformity-associated uranium deposit. Deposits of this type are believed to have formed through an oxidation-reduction reaction at a contact where oxygenated fluids meet with reducing fluids. The geological model was confirmed by surface drilling, underground drilling, development and production activities.

About the McArthur River operation

McArthur River is a fully developed property with sufficient surface rights to meet current mining operation needs. Beginning in February 2018, we had a planned production suspension. In response to market conditions, in July 2018 we decided to extend the suspension for an indeterminate duration.

We began construction and development of the McArthur River mine in 1997 and completed it on schedule. Mining began in December 1999 and commercial production on November 1, 2000. We have successfully extracted over 325 million pounds (100% basis) since we began mining in 1999.

The McArthur River reported mineral reserves are contained within seven zones: Zones 1, 2, 3, 4, 4 South, A and B. Prior to care and maintenance, there were two active mining zones and one where development was significantly advanced.

Zone 2 has been actively mined since production began in 1999. The ore zone was initially divided into three freeze panels. As the freeze wall was expanded, the inner connecting freeze walls were decommissioned in order to recover the inaccessible uranium around the active freeze pipes. Mining of Zone 2 is almost complete. About 4.8 million pounds of mineral reserves remain and we expect to recover them using a combination of raisebore and blasthole stope mining.

Zone 4 has been actively mined since 2010. The zone was divided into four freeze panels, and like in Zone 2, as the freeze wall was expanded, the inner connecting freeze walls were decommissioned. Zone 4 has 117.5 million pounds of mineral reserves secured behind freeze walls and it will be the main source of production when mine production restarts. Raisebore mining and blasthole stoping will be used to recover the mineral reserves.

Zone 1 is the next planned mine area to be brought into production. Freezehole drilling was 90% complete and brine distribution construction was approximately 10% complete when work ceased in 2018 as part of the production suspension. Work remaining before production can begin includes completion of the freezehole drilling, brine distribution construction, ground freezing and drill and extraction chamber development. Once complete, an additional 46.6 million pounds of mineral reserves will be secured behind freeze walls. Blasthole stope mining is currently planned as the main extraction method.

Permits

We need three key permits to operate the McArthur River mine:

- Uranium Mine Operating Licence – renewed in 2013 and expires on October 31, 2023 (from the Canadian Nuclear Safety Commission (CNSC));
- Approval to Operate Pollutant Control Facilities – renewed in 2017 and expires on June 30, 2023 (from the Saskatchewan Ministry of Environment (SMOE)); and
- Water Rights Licence and Approval to Operate Works – amended in 2011 and valid for an undefined term (from the Saskatchewan Watershed Authority).

The CNSC licence conditions handbook allows McArthur River to produce up to 25.0 million pounds (100% basis) per year.

Infrastructure

Surface facilities are 550 metres above sea level. The site includes:

- an underground mine with three shafts: one full surface shaft and two ventilation shafts
- 1.6 kilometre gravel airstrip and air terminal
- waste rock stockpiles
- water containment ponds and treatment plant
- a freshwater pump house
- a powerhouse
- electrical substations
- backup electrical generators
- a warehouse
- freeze plants
- a concrete batch plant
- an administration and maintenance shop building
- a permanent residence and recreation facilities
- an ore slurry load out facility

Water, power and heat

Toby Lake, which is nearby and easy to access, has enough water to satisfy all surface water requirements. Collection of groundwater entering our shafts is sufficient to meet all underground process water requirements. The site is connected to the provincial power grid, and it has backup generators in case there is an interruption in grid power.

McArthur River operates throughout the year despite cold winter conditions. During the winter, we heat the fresh air necessary to ventilate the underground workings using propane-fired burners.

Employees

Employees are recruited with preference given to residents of northern Saskatchewan.

Mining methods and techniques

The McArthur River deposit presents unique challenges that are not typical of traditional hard or soft rock mines. These challenges are the result of mining in or near high pressure ground water in challenging ground conditions with significant radiation concerns due to the high-grade uranium ore. As such, mine designs and mining methods are selected based on their ability to mitigate hydrological, radiological and geotechnical risks.

There are three approved mining methods at McArthur River: raisebore mining, blasthole stope mining and boxhole mining. However, only raisebore and blasthole stope mining remain in use.These methods all use ground freezing to mine the McArthur River deposit.

Ground freezing

All the mineralized areas discovered to date at McArthur River are in, or partially in, water-bearing ground with significant pressure at mining depths. This high pressure water source is isolated from active development and production areas in order to reduce the inherent risk of an inflow. To date, McArthur River has relied on pressure grouting and ground freezing to successfully mitigate the risks of the high pressure ground water.

Chilled brine is circulated through freeze holes to form an impermeable freeze barrier around the area being mined. This prevents water from entering the mine, and helps stabilize weak rock formations. Ground freezing reduces, but does not fully eliminate, the risk of water inflows.

Blasthole stoping

Our use of blasthole stoping began in 2011 and has expanded; the majority of ore extraction is now carried out using this method. It is planned in areas where blastholes can be accurately drilled and small stable stopes excavated without jeopardizing the freeze wall integrity. The use of this method has allowed the site to improve operating costs by increasing overall extraction efficiency by reducing underground development, concrete consumption, mineralized waste generation and improving extraction cycle time.

Raisebore mining

Raisebore mining is an innovative non-entry approach that we adapted to meet the unique challenges at McArthur River, and it has been used since mining began in 1999.This method is favourable for mining the weaker rock mass areas of the deposit, and is suitable for massive high-grade zones where there is access both above and below the ore zone.

Initial processing

McArthur River produces two product streams: high-grade slurry and low-grade mineralization. Both product streams are shipped to Key Lake mill to produce uranium ore concentrate.

High-grade slurry is pumped to surface and, after blending and further thickening, it is transported to Key Lake in slurry trucks.

The low-grade mineralization is hoisted to surface and hauled to Key Lake, where it is mixed with water, ground, thickened and blended with the high-grade slurry to a nominal 5% U_3O_8 mill feed grade. It is then processed into uranium ore concentrates and packaged.

New mining areas

We must bring on new mining zones to sustain production. Prior to the production shutdown, two new areas were under active development. Zone 1 was in the freeze drilling stage (90% complete) and Zone 4 South was in the initial freeze drift development stage.

In 2018, all development and construction activities for the new mining zones were halted as part of the production suspension.

Tailings

McArthur River does not have a tailings management facility (TMF) as it ships all mineralized material to Key Lake for final milling and processing.

Waste rock

The waste rock piles are confined to a small footprint on the surface lease and managed in contained facilities. These are separated into three categories:

- clean waste (includes mine development waste, crushed waste, and various piles for concrete aggregate and backfill)
- low-grade mineralization temporarily stored on lined pads until trucked to Key Lake
- waste with acid-generating potential – temporarily stored on lined pads – for concrete aggregate

Water inflow incidents

There have been two notable water inflow incidents at the McArthur River mine. These two inflows have strongly influenced our mine design, inflow risk mitigation and inflow preparedness:

Bay 12 Inflow: Production was temporarily suspended on April 6, 2003, as increased water inflow due to a rock fall in a new development area (Bay 12 located just above the 530 metre level) began to flood the lower portions of the mine, including the underground grinding circuit area. Additional dewatering capacity was installed and the flooded areas were dewatered and repaired. We resumed mining in July 2003 and sealed off the excess water inflow in July 2004.

590-7820N Inflow: In November 2008, there was a small water inflow in the lower Zone 4 development area on the 590 metre level. It did not impact production, but did delay local development for approximately one year. In January 2010, the inflow was sealed off and local development was resumed.

Pumping capacity and treatment limits

Our standard for this mine is to secure pumping capacity of at least one and a half times the estimated maximum sustained inflow. We review our dewatering system and requirements at least once a year and before we begin work on any new zone. As our mine plan is advanced, our dewatering system will be expanded to handle water from the new mine areas. We believe we have sufficient pumping, water treatment and surface storage capacity to handle the estimated maximum sustained inflow.

Production

McArthur River Mine

In 2018, 0.5 million pounds of U_3O_8 was mined in early January in order to complete mining that was in progress at the end of December 2017; our share was 0.35 million pounds. No mining took place in 2019. In 2020, we expect no mine production.

The mine plan is designed to extract all of the current McArthur River mineral reserves. The following is a general summary of the mine plan production schedule guideline and parameters on a 100% basis for these mineral reserves:

Total mine production	● 2,133,000 tonnes of ore ● 386 million pounds of U_3O_8, based on current unmined mineral reserves ● Average grade of 8.21% ● 200 to 400 tonnes per day, varying with ore grade

Note: Broken ore inventory (previously mined material) is not included in the mine production plan total. Current broken inventory consists of 4.2 million pounds of high-grade ore stored underground at McArthur River and 1.4 million pounds of low-grade mineralization stored on the surface stockpile pads at McArthur River and Key Lake.

Key Lake Mill

In 2018, 0.2 million pounds of U_3O_8 was produced as part of the Key Lake final clean out prior to shutdown; our share was 0.1 million pounds. Since then, there has been no production. In 2020, we expect no production.

The mill plan is designed to process all the current McArthur River mineral reserves plus Key Lake low-grade mineralization remaining from the Deilmann and Gaertner pits. In addition, a small amount of recycled product from Blind River and Port Hope facilities is planned to be processed. The following is a general summary of the mill plan production schedule guideline and parameters on a 100% basis for these mineral reserves, mineralized material and product:

Total mill production	● 3,772,000 tonnes of mill feed including blend and recycle material ● Average feed grade of 4.77% ● 393 million pounds of U_3O_8 packaged based on an average recovery of 99.0%

2018 – 2019 Production

In 2018, we had a temporary planned production suspension. In response to market conditions, in July 2018 we decided to extend the suspension for an indeterminate duration. The action resulted in the permanent layoff of approximately 520 site employees. A reduced workforce of approximately 175 Cameco employees remain employed at the McArthur River and Key Lake sites to keep the facilities in a state of safe care and maintenance. We incurred approximately $29 million in severance costs as a result of the permanent layoffs.

We reached a new collective agreement with unionized employees at our McArthur River/Key Lake operations in July 2019. The new agreement expires on December 31, 2022.

2020 Production

Due to continued uranium price weakness, we have suspended production for an indeterminate duration. As a result of the suspension, and the time required to restart the mine and mill, we do not expect the operation to produce any uranium in 2020. Our share of the cash and non-cash costs to maintain both operations during the suspension is expected to range between $8 million and $10 million per month. The increase in care and maintenance costs compared to 2019 is related to planned expenditures to fully assess our operating processes. See *Innovation* below.

The operational changes we have made, including the suspension of production for an indeterminate duration, and the associated workforce reduction, carry with them the risks of a delay in restarting operations and subsequent production disruption.

Production restart plan

Due to the suspension of production for an indeterminate duration, no actual production start-up date is currently available. Year 1 of the production plan represents the first year of assumed production after restart is announced and could potentially occur any time after 2020.

The main steps in preparing the mine and mill for restart of production are:

Restart planning: Detailed restart planning including identification of critical project and maintenance work required to be completed prior to restarting the operations.

Restart announcement: Once conditions required to support restarting the McArthur River and Key Lake operations have been met, an announcement will be made.

Critical project execution: The current assumption is that all critical project work can be completed within a one year time frame.

Maintenance readiness check: As a significant number of the facilities will have been shut down for more than two years, equipment and facility readiness checks will be performed prior to restarting operations.

Recruitment: Recruitment will begin once the restart decision has been made. Workers will be mobilized in stages (restart planning team, maintenance preparation team, and operational team).

Training: It is currently assumed that a sufficient number of experienced workers can be recruited in order to minimize operational training requirements and timelines.

Once critical projects, maintenance readiness checks and sufficient recruitment and training have occurred, the mine and mill will restart operations. It is projected that this will take a minimum of 9 months. Initial mill feed for the Key Lake restart will come from the high-grade broken inventory (4.2 million pounds at a grade of 17% U_3O_8) stored underground at McArthur River.

Production plan

McArthur River currently has sufficient mineral reserves to permit mining for 23 years. Although McArthur River and Key Lake have licence permits for 25 million pounds U_3O_8 production per year, the production profile assumes the following:

- In the year of restart, 4 million pounds of packaged production; and
- For subsequent years, 18 million pounds of packaged production per year until year 21 with production ramping down in the last two years.

Expansion potential

Once the market signals that new supply is needed and a decision is made to restart production, we plan to undertake the work necessary to optimize the capacity of both the McArthur River mine and Key Lake mill, up to a maximum of25 million pounds per year (100% basis), the annual production licence limit. We expect that this paced approach will allow us to extract maximum value from the operation as the market transitions.

Innovation

While McArthur River/Key Lake is in a state of care and maintenance, we are taking the opportunity to fully assess our operating processes with the objective of enhancing the efficiency of these operations. Our goal is to streamline our processes and leverage digital and automation technologies to significantly reduce our future operating costs and increase operational flexibility when the time comes to restart. Any opportunities will be rigorously assessed before an investment decision is made.

Key Lake mill

Location and access

In northern Saskatchewan, 570 kilometres north of Saskatoon. The site is 9 kilometres long and 5 kilometres wide. It is connected to McArthur River by an 80 kilometre all-weather road. There is a 1.6 kilometre unpaved air strip and an air terminal on the east edge of the site.

Permits

We need two key permits to operate the Key Lake mill:

- *Uranium Mill Operating Licence* – renewed in 2013 and expires on October 31, 2023 (from the CNSC); and
- *Approval to Operate Pollutant Control Facilities* – renewed in 2014 and expires on November 30, 2021 (from the SMOE).

The CNSC licence conditions handbook allows the Key Lake mill to produce up to 25.0 million pounds (100% basis) per year.

Supply

All McArthur River ore, including our share, is milled at Key Lake. We do not have a formal toll milling agreement with the Key Lake joint venture.

In June 1999, the Key Lake joint venture (Cameco and UEM) entered into a toll milling agreement with Orano to process their total share of McArthur River ore. The terms of the agreement (as amended in January 2001) include the following:

- processing is at cost, plus a toll milling fee; and
- the Key Lake joint venture owners are responsible for decommissioning the Key Lake mill and for certain capital costs, including the costs of any tailings management associated with milling Orano's share of McArthur River ore

With the UEM distribution in 2009 (see History on page 22 for more information), we made the following changes to the agreement:

- the fees and expenses related to Orano's pro-rata share of ore produced just before the UEM distribution (16.234% – the first ore stream) have not changed. Orano is not responsible for any capital or decommissioning costs related to the first ore stream.
- the fees and expenses related to Orano's pro-rata share of ore produced as a result of the UEM distribution (an additional 13.961% – the second ore stream) have not changed. Orano's responsibility for capital and decommissioning costs related to the second ore stream are, however, as a Key Lake joint venture owner under the original agreement.

The agreement was amended again in 2011 and now requires:

- milling of the first ore stream at the Key Lake mill until May 31, 2028; and
- milling of the second ore stream at the Key Lake mill for the entire life of the McArthur River project

Processing

McArthur River low-grade mineralization, including legacy low-grade mineralized waste rock stored at Key Lake, is slurried, ground and thickened at Key Lake and then blended with McArthur River high-grade slurry to a nominal 5% U_3O_8 mill feed grade. All remaining uranium processing (leaching through to calcined uranium ore concentrate packaging) and tailings disposal also occur at Key Lake.

The Key Lake mill comprises the following eight plants:

- ore slurry receiving plant
- grinding/blending plant
- reverse osmosis plant
- leaching/counter current decantation plant
- solvent extraction plant
- yellowcake precipitation/dewatering/calcining/packing/ammonium sulphate plant
- bulk neutralization/lime handling/tailings pumping
- powerhouse/utilities/acid plant/oxygen plant complex

Recovery and metallurgical testing

The McArthur River original flowsheet was largely based on the use of conventional mineral processing concepts and equipment. Where necessary, testwork was undertaken to prove design concepts or adapt conventional equipment for unique services. Simulated ore was utilized in much of the testwork because the off-site testing facilities were not licensed to receive radioactive materials. Testwork at the Key Lake metallurgical laboratory also confirmed the suitability of the Key Lake mill circuit for processing McArthur River ore with some Key Lake circuit modifications.

To date, numerous changes have been made to both the McArthur River and Key Lake processing and water treatment circuits to improve their operational reliability and efficiency. From a uranium recovery perspective, the most important was to change the McArthur River grinding circuit classification system from screens to cyclones. This was completed in late 2009 and provided a measurable recovery increase as well as reduced particle segregation issues. From 2012 to 2017 Key Lake achieved an annual mill recovery of 99% and this is assumed to continue.

Recent testing at Key Lake has shown that use of a silica coagulant was able to alleviate the issues caused by the cement dilution in the ore from McArthur River. This has eliminated the need to operate the gravity concentrator circuit as well as increased the solvent extraction circuit capacity.

Waste rock

There are five rock stockpiles at the Key Lake site:

- three contain non-mineralized waste rock. These will be decommissioned when the site is closed.
- two contain low-grade mineralized material. These are used to lower the grade of McArthur River ore before it enters the milling circuit.

Treatment of effluent

We modified Key Lake's effluent treatment process to satisfy our licence and permit requirements.

Tailings capacity

There are two TMFs at the Key Lake site:

- an above-ground impoundment facility, where tailings are stored within compacted till embankments. We have not deposited tailings here since 1996, and are looking at several options for decommissioning this facility in the future; and
- the Deilmann pit, which was mined out in the 1990s. Tailings from processing McArthur River ore are deposited in the Deilmann TMF.

Beginning in July 2001, periodic sloughing of the pit walls in the western portion of the Deilmann TMF was experienced. We therefore implemented a long-term stabilization plan and the final phase was completed in 2019. We are completing a study to determine if additional work is warranted.

In 2014, the CNSC approved an increase in Key Lake's tailings capacity. We expect to have sufficient tailings capacity to mill all the known McArthur River mineral reserves and resources, should they be converted to reserves, with additional capacity to toll mill ore from other regional deposits.

Decommissioning and financial assurances

In 2003, we prepared a preliminary decommissioning plan for both McArthur River and Key Lake, which were approved by the CNSC and the SMOE. In 2008, when we renewed our CNSC licence, we revised the accompanying preliminary decommissioning cost estimates. In 2013, when we again renewed our CNSC licence, we revised the accompanying preliminary decommissioning cost estimates. Our Key Lake preliminary decommissioning cost estimate was further revised and we received final approval from the CNSC in 2015. These documents include our estimated cost for implementing the decommissioning plan and addressing known environmental liabilities.

We have submitted an update for the McArthur River preliminary decommissioning cost estimate ($42 million), received the required regulatory approvals, and the letters of credit have been posted with the Saskatchewan government as financial assurances.

We have submitted an update for the Key Lake preliminary decommissioning cost estimate ($222 million), received regulatory feedback, and await regulatory approval.

Operating and capital costs

The following is a summary of the operating and capital cost estimates for the life of mine, stated in constant 2019 dollars and reflecting a forecast life-of-mine mill production of 388 million pounds U_3O_8 packaged.

Operating Costs ($Cdn million)	Total (Year 0 – Year 23)
McArthur River Mining	
Site administration	$1,033.4
Mining costs	1,732.9
Process	311.3
Corporate overhead	189.2
Total mining costs	$3,266.8
Key Lake Milling	
Administration	$1,167.7
Milling costs	1,321.5
Corporate overhead	145.9
Total milling costs	$2,635.1
Total operating costs	**$5,901.9**
Total operating cost per pound U3O8	**$15.21**

Notes:
1. Presented as total cost to the McArthur River Joint Venture.
2. This cost profile assumes the McArthur River mine and Key Lake mill are both in a state of care and maintenance during Year 0 with a decision to restart in Year 1. No such decision has been made.

Estimated operating costs to the MRJV consist of annual expenditures at McArthur River to mine the mineral reserves, process it underground, including grinding, density control and pumping the resulting slurry to surface for transportation to Key Lake.

Operating costs at Key Lake consist of costs for receipt of the slurry, up to and including precipitation of the uranium into yellowcake, including cost of disposal of tailings to the Deilmann TMF.

There will be increased operating costs in the year the decision is made to restart operations. These include recruitment costs to achieve required operating staff levels, required equipment and process circuits, repair costs, and mine working and processing plants commissioning costs.

Capital Costs ($Cdn million)	Total (Year 0 – Year 23)
McArthur River Mine Development	$483.8
McArthur River Mine Capital	
Freeze infrastructure	$122.7
Water management	7.3
Electrical infrastructure	11.0
Other mine capital	123.7
Total mine capital	$264.7
Key Lake Mill Sustaining	
Total mill capital	$184.9
Total capital costs	**$933.4**

Notes:
1. Presented as total cost to the McArthur River Joint Venture.
2. This cost profile assumes the McArthur River mine and Key Lake mill are both in a state of care and maintenance during Year 0 with a decision to restart in Year 1. No such decision has been made.
3. Mine development includes delineation drilling, mine development, probe and grout drilling, freeze drilling, and minor support infrastructure.

Estimated capital costs to the MRJV include sustaining costs for both McArthur River and Key Lake, as well as underground development at McArthur River to bring mineral reserves into production. Overall, the largest segment of capital at McArthur River is mine development. Other significant capital includes freeze infrastructure costs. Capital spending could increase if we

identify and approve investments in projects that we expect will reduce costs and improve operational effectiveness and efficiency. Upon restart, it is estimated that capital expenditures of approximately $8 million at McArthur River and $30 million at Key Lake will be required to replace equipment and return processing equipment to their full production capabilities.

Production from the McArthur River and Key Lake operations has been suspended for an indeterminate duration and no decision has been made to restart operations.

The economic analysis, effective as of December 31, 2018 being the effective date of the technical report, resulted in an estimated pre-tax net present value (NPV) (at a discount rate of 8%) to Cameco for net cash flows from January 1, 2019 forward of $2.97 billion for its share of the current McArthur River mineral reserves. Using the total capital invested to December 31, 2018, along with the operating and capital estimates for the remainder of the mineral reserves, the pre-tax internal rate of return (IRR)was estimated to be 11.6%.

The analysis was from the point of view of Cameco, which owns 69.805% of the MRJV, and incorporated a projection of Cameco's sales revenue from its proportionate share of the related production, less its share of related operating and capital costs of the MRJV, as well as royalties and surcharges that will be payable on the sale of concentrates.

For the purpose of the economic analysis, the projected impact of income taxes was excluded due to the nature of the required calculations. McArthur River operates as an unincorporated joint venture and is, therefore, not subject to direct income taxation at the joint venture level. It is not practical to allocate a resulting income tax cost to Cameco's portion of the McArthur River operation, as Cameco's tax expense is a function of several variables, most of which are independent of its investment in McArthur River.

Economic Analysis ($Cdn M)	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
Production volume (000's lbs U3O8)	-	2,788	12,508	12,550	12,663	12,591	12,621	12,611	12,550	12,556	12,587	12,553	12,569
Sales revenue	$ -	$ 131.7	$ 572.2	$ 577.5	$ 602.8	$ 618.7	$ 635.0	$ 651.6	$ 662.9	$ 683.3	$ 698.0	$ 709.1	$ 719.4
Operating costs	68.2	137.5	171.1	169.5	169.0	168.9	170.1	172.9	177.5	177.9	179.3	179.9	180.0
Capital costs	3.7	31.1	36.7	31.9	31.0	42.9	36.8	34.7	35.0	42.6	43.6	74.4	32.0
Basic royalty	-	5.6	24.3	24.5	25.6	26.3	27.0	27.7	28.2	29.0	29.7	30.1	30.6
Resource surcharge	-	3.9	17.2	17.3	18.1	18.6	19.0	19.5	19.9	20.5	20.9	21.3	21.6
Profit royalty	-	-	42.6	49.7	53.5	54.1	57.3	59.6	60.4	62.3	64.1	61.1	69.1
Net pre-tax cash flow	$ (71.9)	$ (46.5)	$ 280.2	$ 284.6	$ 305.5	$ 307.9	$ 324.8	$ 337.2	$ 341.8	$ 351.0	$ 360.4	$ 342.3	$ 386.2

Economic Analysis ($Cdn M)	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Total
Production volume (000's lbs U3O8)	12,567	12,630	12,618	12,602	12,591	12,608	12,611	12,649	12,779	11,705	6,060	272,553
Sales revenue	$ 748.7	$ 757.8	$ 772.9	$ 787.6	$ 780.6	$ 787.7	$ 794.5	$ 796.9	$ 805.1	$ 737.4	$ 381.8	$ 15,413.2
Operating costs	182.1	184.7	185.3	184.5	184.0	182.1	181.8	178.8	175.4	171.0	148.6	4,080.3
Capital costs	33.5	23.6	21.7	21.4	21.6	21.9	17.7	11.9	6.4	1.4	-	657.5
Basic royalty	31.8	32.2	32.8	33.5	33.2	33.5	33.8	33.9	34.2	31.3	16.2	655.1
Resource surcharge	22.5	22.7	23.2	23.6	23.4	23.6	23.8	23.9	24.2	22.1	11.5	462.4
Profit royalty	73.1	75.7	78.1	80.5	79.5	80.8	82.5	84.2	86.6	78.5	31.7	1,465.0
Net pre-tax cash flow	$ 405.9	$ 418.9	$ 431.7	$ 444.1	$ 438.9	$ 445.7	$ 454.9	$ 464.3	$ 478.2	$ 433.0	$ 173.8	$ 8,092.9
Pre-tax NPV (8%) to January 1, 2019	$ 2,973.5											
Pre-tax IRR (%)	11.6%											

Notes:

1. For the purposes of performing the economic analysis, Year 0 is assumed to be 2019, and Year 1 is assumed to be 2020.
2. The economic analysis assumes the McArthur River mine and Key Lake mill are both in a state of care and maintenance during 2019 with a restart occurring in 2020. No such restart decision has been made.
3. Production volume does not include recycled product received from the Blind River Refinery and the Port Hope Conversion Facility.
4. Operational and capital spending in Year 0 is representative of annual spending while the McArthur River mine and Key Lake mill are both in a state of care and maintenance.

Our expectations and plans regarding McArthur River/Key Lake, including forecasts of operating and capital costs, net cash flow, production and mine life are forward-looking information and are based specifically on the risks and assumptions discussed on pages 2, 3 and 4. We may change our operating or capital spending plans in 2020, depending upon uranium markets, our financial position, results of operation, a decision to invest in cost reduction and operational efficiency projects, or other factors. Estimates of expected future production, and capital and operating costs are inherently uncertain, particularly beyond one year, and may change materially over time.

Exploration, drilling, sampling, data quality and estimates

There are no historical mineral resource estimates within the meaning of NI 43-101 to report. The original McArthur River mineral resource estimates were derived from surface diamond drilling from 1980 to 1992. In 1988 and 1989, this drilling first revealed significant uranium mineralization. By 1992, we had delineated the mineralization over a strike length of 1,700 metres at depths of between 500 to 640 metres. The very high grade found in the drillholes justified the development of an underground exploration project in 1993.

Exploration

Drilling has been carried out extensively from both surface and underground in order to locate and delineate mineralization. Surface exploration drilling is initially used in areas where underground access is not available and is used to guide the underground exploration programs.

There was no exploration drilling in 2019 during the mine production suspension.

Drilling

Surface drilling

We have carried out surface drilling since 2004, to test the extension of mineralization identified from the historical surface drillholes, to test new targets along the strike, and to evaluate the P2 trend northeast and southwest of the mine. Surface drilling since 2004 has extended the potential strike length to more than 2,700 metres.

We have completed preliminary drill tests of the P2 trend at 300 metre intervals or less over 11.5 kilometres (5.0 kilometres northeast and 6.4 kilometres southwest of the McArthur River deposit) of the total 13.75 kilometres strike length of the P2 trend. Surface exploration drilling in 2015 focused on additional evaluation in the southern part of the P2 trend south of the P2 main mineralization. Starting in 2016, exploration efforts shifted away from the P2 trend to the north part of the property.

Underground drilling

In 1993, regulators approved an underground exploration program, consisting of shaft sinking, lateral development and drilling. We completed the shaft in 1994.

We have drilled more than 1,260 underground drillholes since 1993 to get detailed information along 1,800 metres of strike length. The drilling was primarily completed from the 530 and 640 metre levels.

Other data

In addition to the exploration drilling, geological data has been collected from the underground probe and grout, service, drain, freeze, and geotechnical drill programs.

Recent activity

In 2017, we continued with underground infill definition drilling of Zone B and Zone 4 in order to provide the information required for more detailed mining plans. In 2018, all underground infill definition drilling was halted as part of the production suspension.

Sampling, analysis and data verification

Surface samples

Surface holes were generally drilled on sections spaced between 50 and 200 metres with 12 to 25 metres between holes on a section when necessary that are generally 50 to 200 metres apart. Drilled depths average 670 metres.

The orientation of mineralization is variable but, in general, vertical holes generally intersect mineralization at angles of 25 to 45 degrees, resulting in true widths being 40 to 70% of the intersected width. Angled holes usually intercept mineralization closer to perpendicular, giving intercepts that are closer to true width.

Any stratigraphy exhibiting noteworthy alteration, structures or radiometric anomalies is split and sampled.

Given that the vast majority of the deposit has been delineated from underground, few surface holes are currently sampled and used for mineral resource and reserve estimation purposes.

Underground samples

Underground drilling is generally planned to provide close to true thicknesses results. All underground exploration holes are core drilled and gamma probed whenever possible. McArthur River uses a high-flux gamma probe designed and constructed by alphaNUCLEAR, a member of the Cameco group of companies. This high-flux gamma probe utilizes two Geiger Müller tubes to detect the amount of gamma radiation emanating from the surroundings. The count rate obtained from the high-flux probe is compared against chemical assay results to establish a correlation to convert corrected probe count rates into equivalent % U_3O_8 grades. The consistency between probe data and chemical assays demonstrates that secular equilibrium exists within the deposit. A small portion of the data used to estimate mineral resources is obtained from assays. It is collected to determine the U_3O_8 content when radiometric probing is not available, or to provide correlation samples to validate probing results. In these cases, the core depth is validated by comparing the down-hole gamma survey results with a hand-held scintillometer on core before it is logged, photographed, and then sampled for uranium analysis. Basement sampling procedures depend on the length of the interval sampled, and attempts are made to avoid having samples cross lithological boundaries.

When sampled, the entire core from each sample interval is taken for assay. This reduces the sample bias inherent when splitting core. Core recovery throughout the deposit has generally been very good. However, in areas of poor core recovery uranium grade determination is based on radiometric probe results if available.

The typical sample collection process at our operations includes the following procedures:

- marking the sample intervals on the core boxes, at the nominal 50 cm sample length, by a geoscientist;
- collection of the samples in plastic bags, taking the entire core;
- documentation of the sample location, including assigning a sample number, and description of the sample, including radiometric values from a hand-held device;
- bagging and sealing, with sample tags inside bags and sample numbers on the bags; and
- placement of samples in steel drums for shipping.

Sample security

Current sampling protocols dictate that all samples are collected and prepared under the close supervision of a qualified geoscientist in a restricted core processing facility. The core samples are collected and transferred from the core boxes to high-strength plastic sample bags, then sealed. The sealed bags are then placed in steel drums and shipped in compliance with the Transport of Dangerous Goods regulations with tamper-proof security seals. Chain of custody documentation is present from inserting samples into steel drums to the final delivery of results by the Saskatchewan Research Council Geoanalytical Laboratories (SRC).

All samples collected are prepared and analysed under the close supervision of qualified personnel at SRC, which is a restricted access laboratory licensed by the CNSC.

Analysis

Drill core sample preparation is performed at SRC's main laboratory, which is independent of the participants of the MRJV. It involves jaw crushing to 60% @ 2 mm and splitting out a 100 – 200 g sub-sample using a riffle splitter. The sub-sample is pulverized to 90% @ -106 microns using a puck and ring grinding mill. The pulp is then transferred to a labelled plastic snap top vial. Assaying by SRC involved digesting an aliquot of pulp in a 100 ml volumetric flask in concentrated 3:1 HCI:HNO_3, on a hot plate for approximately one hour. The lost volume is then made up using deionized water prior to analysis by ICP-OES. Instruments used in the analysis are calibrated using certified commercial solutions. This method is ISO/IEC 17025:2005 accredited by the Standards Council of Canada.

Quality control and data verification

The quality assurance and quality control procedures used during early drilling programs were typical for the time. Many of the original signed assay certificates from surface drilling are available and have been reviewed by Cameco geologists.

More recent sample preparation and assaying is being completed under the close supervision of qualified personnel at SRC and includes preparing and analysing standards, duplicates and blanks. A standard is prepared and analysed for each batch of samples and one out of every 40 samples is analysed in duplicate.

In 2013, McArthur River implemented an SQL server based centralized geological data management system to manage all drillhole and sample related data. All core logging, sample collection, downhole probing and sample dispatching activities are carried out and managed within this system. All assay and geochemical analytical results obtained from the external laboratory are uploaded directly into the centralized database, thereby mitigating the potential for manual data transfer errors. The database used for the current mineral resource and mineral reserve estimates was validated by Cameco qualified geoscientists.

Additional quality control measures procedures taken include:

- review of drillhole collar coordinates and downhole deviations in the database against planned location of the holes;
- comparison of the information in the database against the original data, including paper logs, assay certificates and original probing data files;
- validation of core logging information in plan and section views, and review of logs against photographs of the core;
- checking for data errors such as overlapping intervals and out of range values;
- radiometric probes undergo annual servicing and re-calibration as well as additional checks including control probing to ensure precision and accuracy of the probes; and
- validating uranium grades comparing radiometric probing, core radioactivity measurements and sample assay results.

Since the start of commercial production, we have regularly compared information collected from production activities, such as freezeholes, raisebore pilot holes, radiometric scanning of scoop tram buckets and mill feed sampling, to the drillhole data. We have also compared the uranium block model with mine production results on a monthly basis to ensure an acceptable level of accuracy was maintained.

Our geoscientists, including a qualified person as such term is defined in NI 43-101, have witnessed or reviewed drilling, core handling, radiometric probing, logging and sampling facilities used at the McArthur River operation and consider the methodologies to be satisfactory and the results representative and reliable.

Accuracy

We are satisfied with the quality of data and consider it valid for use in the estimation of mineral resources and reserves for McArthur River. Comparison of actual mine production with past expected production supports this opinion.

Mineral reserve and resource estimates

Please see page 72 for our mineral reserve and resource estimates for McArthur River.

Uranium – Tier-one operations



Cigar Lake

Cigar Lake is the world's highest grade uranium mine, with grades that are 100 times the world average. We are a 50% owner and the mine operator. Cigar Lake uranium is milled at Orano's (previously AREVA's) McClean Lake mill.

Cigar Lake is considered a material uranium property for us.

Location	Saskatchewan, Canada
Ownership	50.025%
End product	uranium concentrate
ISO Certification	ISO 14001 certified
Mine type	underground
Estimated mineral reserves (our share)	86.3 million pounds (proven and probable), average grade U_3O_8 – 14.69%
Estimated mineral resources[1] (our share)	50.8 million pounds (measured and indicated), average grade U_3O_8 – 14.44% 11.9 million pounds (inferred), average grade U_3O_8 – 5.92%
Mining method	jet boring system (JBS)
Licensed capacity	mine: 18.0 million pounds per year (our share 9.0 million pounds per year)
Total production 2014 to 2019	82.9 million pounds (100% basis)
2019 production	9.0 million pounds (18.0 million pounds on 100% basis)
2020 production outlook	9.0 million pounds (18.0 million pounds on 100% basis)
Estimated mine life	2029 (based on current mineral reserves)
Estimated decommissioning cost[2] (100% basis)	$62 million

[1] Mineral resources that are not mineral reserves have no demonstrated economic viability.

[2] This updated estimate is under regulatory review.

Business structure

Cigar Lake is owned by a joint venture of four companies (CLJV):
- Cameco – 50.025% (operator)
- Orano – 37.100%
- Idemitsu Canada Resources Ltd. – 7.875%
- TEPCO Resources Inc. – 5.000%

History

1976	• Canadian Kelvin Resources and Asamera Oil Corporation form an exploration joint venture, which includes the lands that the Cigar Lake mine was built on
1977	• SMDC, one of our predecessor companies, acquires a 50% interest
1980	• Waterbury Lake joint venture formed, includes lands now called Cigar Lake
1981	• Deposit discovered by surface drilling – it was delineated by a surface drilling program between 1982 and 1986
1985	• Reorganization of the Waterbury Lake joint venture - Cigar Lake Mining Corporation becomes the operator of the Cigar Lake lands and a predecessor to Orano becomes the operator of the remaining Waterbury Lake lands • SMDC has a 50.75% interest
1987-1992	• Test mining, including sinking shaft 1 to 500 metres and lateral development on 420 metre, 465 metre and 480 metre levels
1988	• Eldorado Resources Limited merges with SMDC to form Cameco
1993-1997	• Canadian and Saskatchewan governments authorize the project to proceed to regulatory licensing stage, based on recommendation of the joint federal-provincial panel after public hearings on the project's environmental impact
2000	• JBS tested in waste and frozen ore
2001	• Joint venture approves a feasibility study and detailed engineering begins in June
2002	• Joint venture is reorganized, new joint venture agreement is signed, Rabbit Lake and JEB toll milling agreements are signed, and we replace Cigar Lake Mining Corporation as Cigar Lake mine operator
2004	• Environmental assessment process is complete • CNSC issues a construction licence
2005	• Development begins in January
2006	• Two water inflow incidents delay development: - in April, shaft 2 floods - in October, underground development areas flood • In November, we begin work to remediate the underground development areas
2008	• Remediation interrupted by another inflow in August, preventing the mine from being dewatered
2009	• Remediation of shaft 2 completed in May • We seal the 2008 inflow in October
2010	• We finish dewatering the underground development areas in February, establish safe access to the 480 metre level, the main working level of the mine, and backfill the 465 metre level • We substantially complete clean-up, inspection, assessment and securing of underground development and resume underground development in the south end of the mine
2011	• We begin to freeze the ground around shaft 2 and restart freezing the orebody from underground and from the surface • We resume the sinking of shaft 2 and early in 2012 achieve breakthrough to the 480 metre level, establishing a second means of egress for the mine • We receive regulatory approval of our mine plan and begin work on our Seru Bay project • Agreements are signed by the Cigar Lake and McClean Lake joint venture participants to mill all Cigar Lake ore at the McClean Lake mill and the Rabbit Lake toll milling agreement is terminated
2012	• We achieve breakthrough to the 500 metre level in shaft 2 • We assemble the first JBS unit underground and move it to a production tunnel where we commence preliminary commissioning
2013	• CNSC issues an eight-year operating licence • We begin jet boring in ore

2014	• First Cigar Lake ore shipped to McClean Lake mill • McClean Lake mill starts producing uranium concentrate from Cigar Lake ore
2015	• We declared commercial production in May
2016	• We updated the CNSC on our commissioning activities to satisfy a condition in our federal licence.

Technical report

This description is based on the project's technical report: Cigar Lake Operation, Northern Saskatchewan, Canada, dated March 29, 2016 (effective December 31, 2015) except for some updates that reflect developments since the technical report was published. The report was prepared for us in accordance with NI 43-101, by or under the supervision of Scott Bishop, P. Eng., Alain G. Mainville, P. Geo., and Leslie D. Yesnik, P. Eng. The following description has been prepared under the supervision of Scott Bishop, P. Eng., Alain D. Renaud, P.Geo, and Lloyd Rowson, P. Eng. They are all qualified persons within the meaning of NI 43-101, but are not independent of us.
The conclusions, projections and estimates included in this description are subject to the qualifications, assumptions and exclusions set out in the technical report except as such qualifications, assumptions and exclusions may be modified in this AIF. We recommend you read the technical report in its entirety to fully understand the project. You can download a copy from SEDAR (sedar.com) or from EDGAR (sec.gov).

For information about uranium sales see pages 13 to 15, environmental matters see *Our approach to ESG matters and The regulatory environment* starting on pages78 and 84, and taxes see page 92.

For a description of royalties payable to the province of Saskatchewan on the sale of uranium extracted from orebodies within the province, see page 92.

For a description of risks that might affect access, title or the right or ability to perform work on the property, see *Regulatory risks* starting at page 107, *Environmental risks* starting at page 108and *Legal and other risks* starting at page 109.

About the Cigar Lake property

We began developing the Cigar Lake underground mine in 2005, but development was delayed due to water inflows. In October 2014, the McClean Lake mill produced the first uranium concentrate from ore mined at the Cigar Lake operation. Commercial production was declared in May 2015.

Location

The Cigar Lake mine site is located near Waterbury Lake, approximately 660 kilometres north of Saskatoon. The mine site is in close proximity to other uranium production operations: McClean Lake mill is 69 kilometres northeast by road and McArthur River mine is 46 kilometres southwest by air from the mine site.

Access

Access to the property is by an all-weather road and by air. Site activities occur year round, including supply deliveries. There is an unpaved airstrip and air terminal east of the mine site.

Saskatoon, a major population centre south of the Cigar Lake deposit, has highway and air links to the rest of North America.

Leases

Surface lease

The CLJV acquired the right to use and occupy the lands necessary to mine the deposit under a surface lease agreement with the province of Saskatchewan. The lease covers approximately 1,042 hectares and expires in May 2044.

We are required to report annually on the status of the environment, land development and progress on northern employment and business development.

Mineral lease

We have the right to mine the deposit under ML 5521, granted to the CLJV by the province of Saskatchewan. The lease covers 308 hectares and expires in December 2021. The CLJV has the right to renew the lease for further 10-year terms.

Mineral claims

A mineral claim gives us the right to explore for minerals and to apply for a mineral lease. There are 38 mineral claims totaling 95,293 hectares, adjoining the mineral lease and surrounding the site. The mineral claims are in good standing until 2028 or later.

Environment, social and community factors

The climate is typical of the continental sub-arctic region of northern Saskatchewan. Summers are short and cool even though daily temperatures can sometimes reach above 30°C. The mean daily temperature for the coldest month is below -20°C, and winter daily temperatures can reach below -40°C.

The deposit is 40 kilometres west of the eastern margin of the Athabasca Basin in northern Saskatchewan. The topography and environment are typical of the taiga forested lands in the Athabasca Basin. This area is covered with 30 to 50 metres of overburden. Vegetation is dominated by black spruce and jack pine. There is a lake known as “Cigar Lake” which, in part, overlays the deposit.

We are committed to building long-lasting and trusting relationships with the communities in which we operate. For more information, see *Our approach to ESG matters* at page 78.

The closest inhabited site is Points North Landing, 56 kilometres northeast by road. The community of Wollaston Lake is approximately 80 kilometres by air to the east of the mine site.

Athabasca Basin community resident employees and contractors fly to the mine site from designed pick-up points. Other employees and contractors fly to site from Saskatoon with pickup points in Prince Albert and La Ronge.

Geological setting

The deposit is at the unconformity contact separating late Paleoproterozoic to Mesoproterozoic sandstone of the Athabasca Group from middle Paleoproterozoic metasedimentary gneiss and plutonic rocks of the Wollaston Group. The Key Lake, McClean Lake and Collins Bay deposits all have a similar structural setting. While Cigar Lake shares many similarities with these deposits, it is distinguished from other similar deposits by its size, very high grade, and the high degree of clay alteration.

Cigar Lake’s geological setting is similar to McArthur River’s: the permeable sandstone, which overlays the deposit and basement rocks, contains large volumes of water at significant pressure. Unlike McArthur River, however, the deposit is flat lying.

Mineralization

The Cigar Lake deposit has the shape of a flat- to cigar-shaped lens and is approximately 1,950 metres in length, 20 to 100 metres in width, and ranges up to 13.5 metres thick, with an average thickness of about 5.4 metres. It occurs at depths ranging between 410 to 450 metres below the surface. The eastern part of Cigar Lake is approximately 670 metres long by 100 metres wide and the western part is approximately 1,280 metres long by 75 metres wide.

The deposit has two distinct styles of mineralization:

- high-grade mineralization at the unconformity which includes all of the mineral resources and mineral reserves
- fracture controlled, vein-like mineralization which is located either higher up in the sandstone or in the basement rock mass

Most of the uranium metal is in the high-grade mineralization at the unconformity, which has massive clays and high-grade uranium concentrations. This is currently the only economically viable style of mineralization, in the context of the selected mining method and ground conditions.

The uranium oxide in the form of uraninite and pitchblende occurs as disseminated grains in aggregates ranging in size from millimetres to decimetres, and as massive lenses of mineralization up to a few metres thick in a matrix of sandstone and clay. Coffinite (uranium silicate) is estimated to form less than 3% of the total uranium mineralization.

Geochemically, the deposit contains quantities of the elements nickel, copper, cobalt, lead, zinc, molybdenum and arsenic, but in non-economic concentrations. Higher concentrations of these elements are associated with massive pitchblende or massive sections of arseno-sulphides.

Deposit type

Cigar Lake is an unconformity-associated uranium deposit. Deposits of this type are believed to have formed through an oxidation-reduction reaction at a contact where oxygenated fluids meet with reducing fluids.

About the Cigar Lake operation

Cigar Lake is a developed property with sufficient surface rights to meet current mining operation needs. We are currently mining in the eastern part of the ore body.

Permits

Please see page 46 for more information about regulatory approvals for Cigar Lake.

Infrastructure

Surface facilities are 490 metres above sea level. The site includes:

- an underground mine with two shafts
- access road joining the provincial highway and McClean Lake
- site roads and site grading
- airport and terminal
- employee residence and construction camp
- Shaft No. 1 and No. 2 surface facilities
- freeze plants and brine distribution equipment
- surface freeze pads
- water supply, storage and distribution for industrial water, potable water and fire suppression
- propane, diesel and gasoline storage and distribution
- electrical power substation and distribution
- compressed air supply and distribution
- mine water storage ponds and water treatment
- sewage collection and treatment
- surface and underground pumping system installation
- waste rock stockpiles
- garbage disposal landfill
- administration, maintenance and warehousing facilities
- underground tunnels
- ore load out facility
- concrete batch plant
- Seru Bay pipeline
- emergency power generating facilities

The Cigar Lake mine site contains all the necessary services and facilities to operate a remote underground mine, including personnel accommodation, access to water, airport, site roads and other necessary buildings and infrastructure.

Water, power and heat

Waterbury Lake, which is nearby, provides water for the industrial activities and the camp. The site is connected to the provincial electricity grid, and it has standby generators in case there is an interruption in grid power.

Cigar Lake operates throughout the year despite cold winter conditions. During the winter, we use propane-fired burners to heat the fresh air necessary to ventilate the underground workings.

Employees

Employees are recruited with preference given to residents of northern Saskatchewan.

Mining methods

We use the JBS method to mine the Cigar Lake deposit.

Bulk ground freezing

The permeable sandstone that overlays the deposit and basement rocks contains large volumes of water under significant pressure. From surface, we freeze the ore zone and surrounding ground in the area to be mined to prevent water from entering the mine, to help stabilize weak rock formations, and meet our production schedule. This system freezes the deposit and underlying basement rock in two to four years, depending on water content and geological conditions. We have identified greater variation of the freeze rates of different geological formations encountered in the mine, based on information obtained through surface freeze drilling. To manage our risks and to meet our production schedule, the area being mined must meet

specific ground freezing requirements before we begin jet boring. Bulk freezing reduces but does not eliminate the risk of water inflows.

Artificial ground freezing is accomplished by drilling a systematic grid of boreholes through the orebody from surface. A network of supply and return pipes on surface convey a calcium chloride brine to and from each hole. The warm brine returning from each hole is chilled to a temperature of approximately -30ºC at the surface freeze plant and recirculated.

JBS mining

After many years of test mining, we selected jet boring, a non-entry mining method, which we have developed and adapted specifically for this deposit. This method involves:

- drilling a pilot hole into the frozen orebody, inserting a high pressure water jet and cutting a cavity out of the frozen ore;
- collecting the ore and water mixture (slurry) from the cavity and pumping it to storage (sump storage), allowing it to settle;
- using a clamshell, transporting the ore from sump storage to an underground grinding and processing circuit;
- once mining is complete, filling each cavity in the orebody with concrete; and
- starting the process again with the next cavity.

This is a non-entry method, which means mining is carried out from headings in the basement rock below the deposit, so employees are not exposed to the ore. This mining approach is highly effective at managing worker exposure to radiation levels. Combined with ground freezing and the cuttings collection and hydraulic conveyance system, jet boring reduces radiation exposure to acceptable levels that are below regulatory limits.

The mine equipment fleet is currently comprised of three JBS units plus other equipment to support mine development, drilling and other services, and is sufficient to meet production requirements for the remainder of the mine life.

We have divided the orebody into production panels. At least three production panels need to be frozen at one time to achieve the full annual production rate of 18 million pounds. One JBS machine will be located below each frozen panel and the three JBS machines required are currently in operation. Two machines actively mine at any given time while the third is moving, setting up, or undergoing maintenance.

Mine development

Mine development for construction and operation uses two basic approaches: for good quality, competent rock mass, drill and blast with conventional ground support is applied. Most permanent areas of the mine which contain the majority of the installed equipment and infrastructure are hosted in competent rock mass and are excavated and supported conventionally. The production tunnels immediately below the orebody are primarily in poor, weak rock mass and are excavated and supported using the New Austrian Tunnelling Method (NATM). NATM was adopted as the primary method of developing new production cross-cuts, replacing the former Mine Development System (MDS).

NATM, as applied at Cigar Lake, involves a multi-stage sequential mechanical excavation, extensive external ground support and a specialized shotcrete liner. The liner system incorporates yielding elements which permit controlled deformation required to accommodate additive pressure from mining and ground freezing activities. The production tunnels have an inside diameter of five metres and are approximately circular in profile.

Since 2010, when the mine was dewatered, significant spalling, cracking and deterioration of the tunnel segments were identified in all four crosscuts excavated with the former MDS tunnel boring technique. Steps were taken to halt the deterioration and the affected area was reinforced. Two geotechnical consultants were retained to provide advice on the need for any possible further tunnel reinforcement or change in excavation and ground support methodology. Based on their recommendations, we retrofitted the affected production tunnels using NATM techniques, which effectively extended their life to allow the safe recovery of the ore above them. Three of the four MDS crosscuts at Cigar Lake are decommissioned and have since been backfilled. The fourth production tunnel remains active and will be backfilled once production is complete.

We plan our mine development to take place away from known groundwater sources whenever possible. In addition, we assess all planned mine development for relative risk and apply extensive additional technical and operating controls for all higher risk development.

Mine access

There are two main levels in the mine: the 480 and 500 metre levels. Both levels are located in the basement rocks below the unconformity. Mining is conducted from the 480 metre level which is located approximately 40 metres below the ore zone. The main underground processing and infrastructure facilities are located on this level. The 500 metre level is accessed via a ramp from the 480 metre level. The 500 metre level provides for the main ventilation exhaust drift for the mine, the mine dewatering sump and additional processing facilities. All construction required for production has been completed.

Processing

Cigar Lake ore slurry is processed in two locations:

Cigar Lake – The ore slurry produced by the JBS is pumped to Cigar Lake's underground crushing, grinding and thickening facility. The resulting finely ground, high density ore slurry is pumped 500 meters to surface to one of the two slurry holding tanks. It is blended and thickened, removing excess water. The final slurry, at average grade of approximately 14%, is pumped into transport truck containers like the ones used at McArthur River.

Water from this process, including water from underground operations, is treated on the surface. Any excess treated water is released into the environment.

McClean Lake – Containers of ore slurry are trucked to Orano's McClean Lake mill, 69 kilometres to the northeast for further processing (Leaching to Yellowcake Packaging). See *Toll milling agreement* below for a discussion of this arrangement.

Recovery and metallurgical testing

Extensive metallurgical test work was performed on core samples of Cigar Lake ore over a seven year period from 1992 to 1999. This work was used to design the McClean Lake mill circuits relevant to Cigar Lake ore and associated modifications. Samples used for metallurgical test work may not be representative of the deposit as a whole. Additional test work, completed in 2012 with drill core samples, verified that a high uranium recovery rate could be achieved regardless of the variability of the ore. Test work also concluded that more hydrogen gas evolution took place than previously anticipated, which resulted in modifications to the leaching circuit. Leaching modifications were completed in 2014.

The 1992 – 1999 work was performed in France at Orano's SEPA test centre. The results of this test work have provided the core process criteria for the design of the additions and modifications required at the McClean Lake mill for processing Cigar Lake ore. To date, a range of monthly average ore grades, as high as 28% U_3O_8, have been processed at the McClean Lake milling facility. Based on the test results and past mill performance, an overall uranium recovery of 98.5% is expected.

There is a risk that elevated arsenic concentration in the mill feed may result in increased leaching circuit solution temperatures. The leach process cooling system was updated in 2016 and testing confirmed solution temperature control. The plan is to continue to monitor leaching temperature.

Tailings

Cigar Lake site does not have a TMF. The ore is processed at the McClean Lake mill. See *Toll milling agreement* below for a discussion of the McClean Lake TMF.

Waste rock

The waste rock piles are separated into three categories:

- clean rock – will remain on the mine site for use as aggregate for roads, concrete backfill and future site reclamation
- mineralized waste (>0.03% U_3O_8) – will be disposed of underground at the Cigar Lake mine; and
- waste with acid-generating potential – temporarily stored on lined pads.

The latter two stockpiles are contained on lined pads; however, no significant mineralized waste has been identified during development to date.

Production

In 2019, total packaged production from Cigar Lake was 18 million pounds U_3O_8; our share was 9 million pounds, achieving our forecast. In 2020, we expect to produce 18.0 million packaged pounds at Cigar Lake; our share is 9.0 million pounds.

Total mill production	● 172.5 million pounds of U_3O_8, based on current mineral reserves and an overall milling recovery of 98.5% ● Full annual production of 18 million pounds of U_3O_8[1]
Total mine production	● 533 thousand tonnes of ore
Average annual mine production	● 100 to 200 tonnes per day during peak production, depending on ore grade
Average mill feed grade	● 14.7% U_3O_8

[1] In 2016, Orano received approval to increase the annual production of the mill to 24 million pounds U_3O_8.

In 2017, we implemented an extended summer shut-down, reduced the workforce by about 10%, made changes to the shift rotation schedule, and made changes to the commuter flight services at the site. All of these measures were made to further reduce costs and improve efficiency at the operation.

In alignment with our continued efforts to reduce costs, in 2019 our production plan for the Cigar Lake mine included an extended shut-down during the third quarter, resulting in reduced flight and camp costs. The shut-down consisted of a four-week vacation period, preceded by a two-week maintenance period with mine start-up before the end of the third quarter. In 2020, our Cigar Lake production plan contemplates an extended shutdown during the third quarter. The shut-down will consist of a four-week production outage, preceded by a two-week maintenance period with mine start-up planned before the end of the third quarter.

The operational changes we have made, which are intended to achieve cost savings and improve efficiency, carry with them increased risk of production disruption.

The collective agreement between Orano and unionized employees at the McClean Lake mill expired on May 31, 2019. Unionized employees at McClean Lake ratified a three-year collective bargaining agreement in November 2019.

Decommissioning and financial assurances

In 2002, our *preliminary decommissioning plan* for Cigar Lake was approved by the CNSC and the SMOE. We revised this plan and the accompanying *preliminary decommissioning cost estimate* when we renewed our federal licence in 2008. We revised this plan and the accompanying *preliminary decommissioning cost estimate* again when we received our operating licence in 2013.

We, along with our joint venture participants, have letters of credit posted as financial assurances with the government of Saskatchewan, to cover the amount in the 2013 *preliminary decommissioning cost estimate* ($49 million).

We have submitted an update for the Cigar Lake *preliminary decommissioning cost estimate*, $62 million, and await regulatory feedback and ultimately approval.

The reclamation and remediation activities associated with waste rock and tailings at the McClean Lake mill are covered by the plans and cost estimates for this facility.

Water inflow and mine/mill development

Cigar Lake water inflow incidents

From 2006 through 2008, the Cigar Lake project suffered several setbacks as a result of three water inflow incidents. The first occurred in 2006, resulting in the flooding of the then partially completed Shaft No. 2. The two subsequent incidents involved inflows in the mine workings connected to Shaft No. 1 and resulted in flooding of the mine workings. We executed recovery and remediation plans for all three inflows. Re-entry into the main mine workings was achieved in 2010 and work to secure the mine was completed in 2011.

The mine is fully remediated and entered commercial production in 2015. Lessons learned from the inflows have been applied to the subsequent mine plan and development in order to reduce the risk of future inflows and improve our ability to manage water inflows.

Increased pumping capacity

In 2012, we increased the installed mine dewatering capacity to 2,500 cubic metres per hour. Mine water treatment capacity has been increased to 2,550 cubic metres per hour, and regulatory approval to discharge routine and non-routine treated water to Seru Bay is in place. As a result, we believe we have sufficient pumping, water treatment and surface storage capacity to handle the estimated maximum inflow.

Current status of development

Construction of all major permanent underground development and process facilities required for the duration of the mine life is complete. A number of underground access drifts and production cross-cuts remain to be driven as part of ongoing mine development to sustain production rates.

On surface, construction of all permanent infrastructure required to achieve nameplate capacity has been completed.

During 2019, we:

- completed and commissioned the freeze plant expansion project;
- implemented an extended summer shutdown, during which maintenance activities were completed as well as a capital upgrade to the mine exhaust fans;
- executed production activities from three production tunnels in the eastern part of the ore body;
- extended our surface brine distribution infrastructure and expanded our ground freezing program ensuring continued frozen ore inventory growth in alignment with our long-term production plans; and
- restarted underground mine development, in alignment with our production plans. Development included focus on lateral access development as well as two new production panels in the eastern portion of the orebody.

In 2020, we expect to:

- continue surface freeze drilling and complete construction and commissioning of the freeze distribution infrastructure expansion in support of future production;
- continue underground mine development and complete three new production tunnels as well as expand ventilation and access drifts in alignment with the long-term mine plan; and
- expand underground piping and infrastructure towards new production panels required to sustain production.

The McClean Lake mill has been expanded to process and package all Cigar Lake ore. Construction of the expanded facility was completed in 2016. Additional minor upgrades related to throughput optimisation are planned for completion in 2020.

Toll milling agreement

The McClean Lake joint venture agreed to process Cigar Lake's ore slurry at its McClean Lake mill, according to the terms in its agreement with the CLJV: JEB toll milling agreement (effective January 1, 2002 and amended and restated effective November 30, 2011), dedicating the necessary McClean Lake mill capacity to process and package 18 million pounds of Cigar Lake uranium concentrate annually.

The CLJV pays a toll milling fee and its share of milling expenses.

The McClean Lake mill started receiving Cigar Lake ore in March 2014 and produced its first drum of Cigar Lake yellowcake in October 2014. All of Cigar Lake's ore slurry from current mineral reserves will be processed at the McClean Lake mill, operated by Orano. Orano does not expect any major infrastructure is necessary at McClean Lake mill in order to receive and process Cigar Lake's mineral reserves. Minor upgrades related to throughput optimisation are planned for completion in 2020.

The McClean Lake joint venture commenced work in 2012 to optimize its TMF to accommodate all of Cigar Lake's current mineral reserves. The first stage of the work is complete with additional work involving increasing the required elevation of a liner for the facility scheduled to take place from 2022 to 2024. With the liner extended, the tailing management facility is expected to have capacity to receive tailings from processing all of Cigar Lake's current mineral reserves.

The McClean Lake joint venture is responsible for all costs of decommissioning the McClean Lake mill. As well, the joint venture is responsible for the liabilities associated with tailings produced from processing Cigar Lake ore at the McClean Lake mill.

Regulatory approvals

There are three key permits that are required to operate the mine.

Operating and processing licences

Federally, Cigar Lake holds a “Uranium Mine Licence” from the CNSC with a corresponding Licence Conditions Handbook (LCH). Provincially, Cigar Lake holds an “Approval to Operate Pollutant Control Facilities” from the SMOE and a “Water Rights Licence to Use Surface Water and Approval to Operate Works” from the Saskatchewan Watershed Authority.

The CNSC licence was issued for an eight-year term in June 2013 and expires on June 30, 2021. The SMOE approval was renewed in 2017 and expires in 2023. The Saskatchewan Watershed Authority water rights licence was obtained in 1988 and was last amended in July 2011. It is valid for an undefined term.

The current Cigar Lake LCH authorizes an annual production rate up to 18 million pounds per year. In 2016, Orano received approval to increase annual production of the McClean Lake mill to 24 million pounds per year.

Water treatment/effluent discharge system

The mine dewatering system was designed and constructed to handle both routine and non-routine water treatment and effluent discharge, and it has been approved and licensed by the CNSC and the SMOE.

We began discharging treated water to Seru Bay in August 2013 following the receipt of regulatory approvals.

The Cigar Lake orebody contains elements of concern with respect to the water quality and the receiving environment. The distribution of elements such as arsenic, molybdenum, selenium and others is non-uniform throughout the ore body, and this can present challenges in attaining and maintaining the required effluent concentrations.

There have been ongoing efforts to optimize the current water treatment process and water handling systems to ensure acceptable environmental performance, which is expected to avoid the need for additional capital upgrades and potential deferral of production.

Operating and capital costs

The following is a summary of the Cigar Lake operating and capital cost estimates for the remaining life of mine, stated in constant 2019 dollars and reflecting a forecast life-of-mine mill production of 169.9 million pounds.

Operating Costs ($Cdn million)	**Total (2020 – 2029)**
Cigar Lake Mining	
Site administration	$404.2
Mining costs	746.8
Process	189.7
Corporate overhead	83.3
Total mining costs	$1,424.0
McClean Lake Milling	
Administration	$394.0
Milling costs	669.6
Corporate overhead	36.0
Toll milling	188.3
Total milling costs	$1,287.9
Total operating costs	**$2,711.9**
Total operating cost per pound U_3O_8	**$15.96**

Note: presented as total cost to the CLJV (100% basis)

Operating costs consist of annual expenditures at Cigar Lake to mine the ore, treat the ore underground, including crushing, grinding and density control, followed by pumping the resulting slurry to surface for transportation to McClean Lake.

Operating costs at McClean Lake consist of the cost of offloading and leaching the Cigar Lake ore slurry into uranium solution and further processing into calcined U_3O_8 product.

Capital Costs ($Cdn million)	Total (2020 – 2029)
Cigar Lake Mine Development	$185.5
Cigar Lake Mine Capital	
Sustaining capital	$83.6
Capacity replacement capital	65.6
Growth capital	-
Reclamation	0.4
Total mine capital	$149.6
McClean Lake mill sustaining capital	$61.9
McClean Lake mill expansion capital	73.3
Total mill capital	$135.2
Total capital costs	**$470.3**

Note: presented as total cost to the CLJV (100% basis)

Estimated capital costs to the CLJV include sustaining capital for Cigar Lake and McClean Lake mill, as well as underground development at Cigar Lake to bring mineral reserves into production. Overall, the largest capital cost at Cigar Lake is surface freeze drilling and brine distribution infrastructure. Other significant capital includes tunnel outfitting and mine development costs.

Our expectations and plans regarding Cigar Lake, including forecasts of operating and capital costs, production and mine life are forward-looking information, and are based specifically on the risks and assumptions discussed on pages 2, 3 and 4. We may change operating or capital spending plans in 2020, depending on uranium markets, our financial position, results of operation and other factors. Estimates of expected future production and capital and operating costs are inherently uncertain, particularly beyond one year, and may change materially over time.

Exploration, drilling, sampling, data quality and estimates

There are no historical estimates within the meaning of NI 43-101 to report. The Cigar Lake uranium deposit was discovered in 1981 by surface exploration drilling.

We focus most of our exploration activities on mineral lease ML 5521. Orano is responsible for exploration activity on the 38 surrounding mineral claims. The data from the exploration program on the 38 mineral claims is not part of the database used for the estimate of the mineral resources and mineral reserves at Cigar Lake.

Exploration

After the 2006 water inflow events, it was recognized that more detailed geophysical information in the immediate deposit area was required. Since 2006, a number of geophysical surveys over the Cigar Lake deposit provided additional knowledge on geological structures and fault zones. In the fall of 2007, a supplementary geophysical program was conducted over a portion of the eastern area of the deposit to identify major structures within the sandstone column. This has allowed for better mine planning and mitigation of potential risk.

Drilling

Surface drilling – mineral lease

The last diamond drillhole of the 1981 program was located south of Cigar Lake and was the discovery hole for the Cigar Lake uranium deposit. The deposit was subsequently delineated by surface drilling during the period 1982 to 1986, and followed by

several small campaigns of drilling for geotechnical and infill holes to 2007. Additional diamond drilling campaigns over the eastern part of the deposit and the western portion were conducted by us between 2007 and 2012, which targeted a broad range of technical objectives. From 2012 until 2016, we managed diamond drilling programs mainly focused on surface ground freezing programs on the eastern part of the deposit. In 2016, we initiated a surface delineation program on the western portion of the deposit, which ended in 2017.

Average drill depths for surface delineation holes range from approximately 460 m to 500 m, with the majority of surface freezeholes drilled to a depth of approximately 462 m. Delineation drilling in the eastern area has been done at a nominal drillhole fence spacing of 25 to 50 m (east-west), with holes at 20 to 25 m (north-south) spacing on the fences. The approximate surface freezehole spacing is 7 x 7 metres.

The western area was historically drilled at a nominal drillhole fence spacing of 200 m, with holes at 20 m spacing on the fences. An additional 32 infill drillholes were completed in 2011 and 2012 by Cameco for select areas, locally reducing the drillhole spacing down to an approximate 15 x 15 m pattern. A total of 51,080 m, for 124 of holes, were drilled during the 2016 and 2017 drilling programs.

Drilling results have been used to delineate and interpret the 3-dimensional geometry of the mineralized areas, the litho structural settings, the geotechnical conditions, and to estimate the distribution and content of uranium and other elements.

Surface freezehole drilling over the eastern part of the deposit is ongoing.

Underground drilling – mineral lease

Diamond drilling from underground is primarily to ascertain rock mass characteristics in advance of development and mining. Cigar Lake Mining Corporation, the previous operator, and Cameco have conducted underground geotechnical drilling since 1989 at Cigar Lake, with the exception of the period from 2007 to 2009 during which time the mine was flooded.

At one time, freezeholes were drilled from underground into the deposit for the purpose of freezing the ground prior to mining. No underground freezeholes have been drilled since 2006. None of them are currently used for freezing or for mineral resource and reserve estimation purposes.

Sampling, analysis and data verification

Sampling

Vertical surface drilling generally represented the true thickness of the zone since the mineralization is flat. All holes are core drilled and gamma probed whenever possible. Cigar Lake uses a high-flux gamma probe designed and constructed by alphaNUCLEAR, a member of the Cameco group of companies. This high-flux gamma probe utilizes two Geiger Müller tubes to detect the amount of gamma radiation emanating from the surroundings. The count rate obtained from the high-flux probe is compared against chemical assay results to establish a correlation to convert corrected probe count rates into equivalent % U_3O_8 grades. The consistency between probe data and chemical assays demonstrates that secular equilibrium exists within the deposit.

To validate the core depth, the down-hole gamma survey results were compared to hand-held scintillometer surveys on core. Down-hole gamma surveys and hand-held scintillometer surveys guided sampling of drill core for assay purposes. In the early stages of exploration drilling, sampling intervals were of various lengths, up to 50 centimetres, based on geological differences in the character of the mineralization. Starting in 1983, sampling intervals were fixed at a standard interval of 50 centimetres. All sample results have since been composited to the standard interval of 50 centimetres for mineral resources estimation purpose. On each of the upper and lower contacts of the mineralized zone, at least one additional 50 centimetres sample was taken to ensure that the zone was fully sampled at the 0.10% U_3O_8 cut-off. Starting in 1983, all drilling and sample procedures were standardized and documented. This gives us a high degree of confidence in the accuracy and reliability of results of all phases of the work.

When sampled, the entire core from each sample interval was taken for assay, except for some of the earliest sampling in 1981 and 1982. This reduced the sample bias inherent when splitting core. Core recovery throughout the deposit has generally been very good. However, in areas of poor core recovery uranium grade determination is based on radiometric probe results.

The typical sample collection process at our operations included the following procedures:

- marking the sample intervals on the core boxes, at the nominal 50 cm sample length, by a geoscientist;
- collection of the samples in plastic bags, taking the entire core;
- documentation of the sample location, including assigning a sample number, and description of the sample, including radiometric values from a hand-held device;
- bagging and sealing, with sample tags inside bags and sample numbers on the bags; and
- placement of samples in steel drums for shipping.

Sample security

Current sampling protocols dictate that all samples are collected and prepared under the close supervision of a qualified geoscientist in a restricted core processing facility. The core samples are collected and transferred from the core boxes to high-strength plastic sample bags, then sealed. The sealed bags are then placed in steel drums and shipped in compliance with the Transport of Dangerous Goods regulations with tamper-proof security seals. Chain of custody documentation is present from inserting samples into steel drums to the final delivery of results by SRC. All samples collected are prepared and analysed under the close supervision of qualified personnel at SRC, which is a restricted access laboratory licensed by the CNSC.

Analysis

Since 2002, sample preparation has been done at SRC, which is independent of the participants of CLJV. It involves jaw crushing to 60% @ -2 mm and splitting out a 100 – 200 g sub-sample using a riffle splitter. The sub-sample is pulverized to 90% @ -106 microns using a puck and ring grinding mill. The pulp is then transferred to a labelled plastic snap top vial. Assaying by SRC involved digesting an aliquot of pulp in a 100 ml volumetric flask in concentrated 3:1 HCl:HNO_3, on a hot plate for approximately one hour. The lost volume is then made up using deionized water prior to analysis by ICP-OES. Instruments used in the analysis are calibrated using certified commercial solutions.

Quality control and data verification

The quality assurance and quality control procedures used during the early drilling programs were typical for the time. The majority of uranium assays in the database were obtained from Loring Laboratories Ltd., which is independent of the participants of CLJV. For uranium assays up to 5% U_3O_8, 12 standards and two blanks were run with each batch of samples and for uranium assays over 5% U_3O_8, a minimum of four standards were run with each batch of samples.

More recent sample preparation and assaying is being completed under the close supervision of qualified personnel at SRC and includes preparing and analysing standards, duplicates and blanks. A standard is prepared and analysed for each batch of samples and one out of every 40 samples is analysed in duplicate.

The original database, which forms part of the database used for the current mineral resource and mineral reserve estimates, was compiled by previous operators. Many of the original signed assay certificates are available and have been reviewed by Cameco geologists.

In 2013, Cigar Lake implemented an SQL server based centralized geological data management system to manage all drillhole and sample related data. All core logging, sample collection, downhole probing and sample dispatching activities are carried out and managed within this system. All assay and geochemical analytical results obtained from the external laboratory are uploaded directly into the centralized database, thereby mitigating potential for manual data transfer errors. The database used for the current mineral resource and mineral reserve estimates was validated by Cameco qualified geoscientists.

Additional data quality control measures taken include:

- review of drillhole collar coordinates and downhole deviations in the database against planned location of the holes;
- comparison of the information in the database against the original data, including paper logs, assay certificates and original probing files;
- validation of core logging information in plan and section views, and review of logs against photographs of the core;
- checking for data errors such as overlapping intervals and out of range values;
- radiometric probes undergo annual servicing and re-calibration as well as additional checks including control probing to ensure precision and accuracy of the probes; and
- validating uranium grades comparing radiometric probing with core radioactivity measurements and sample assay results.

Since the start of commercial production, we have compared the uranium block model with mine production results on a quarterly basis to ensure an acceptable level of accuracy is maintained.

Our geoscientists, including a qualified person as such term is defined in NI 43-101, have witnessed or reviewed drilling, core handling, radiometric probing, logging and sampling facilities used at the Cigar Lake operation and consider the methodologies to be satisfactory and the results representative and reliable.

Accuracy

We are satisfied with the quality of data and consider it valid for use in the estimation of mineral resources and reserves for Cigar Lake. Comparison of actual mine production with expected production supports this opinion.

Mineral reserve and resource estimates

Please see page 72 for our mineral reserve and resource estimates for Cigar Lake.

Temporary suspension of production at Cigar Lake operation due to Coronavirus (COVID-19) pandemic

On March 23, 2020, we announced that we were temporarily suspending production at the Cigar Lake operation due to the Coronavirus (COVID-19) pandemic. For further information, please see our Material Change Report dated March 24, 2020 filed on SEDAR. This unplanned event may lead to variability in our 2020 outlook presented in our 2019 MD&A, and other information presented in this AIF which is based on information predating the March 23, 2020 announcement. We are not yet able to provide an assessment of the implications of this suspension.

Uranium – Tier-one operations



Inkai

Inkai is a very significant uranium deposit, located in Kazakhstan.

The operator is JV Inkai limited liability partnership, which we jointly own (40%) with KAP (60%).

Inkai is considered a material uranium property for us.

Location	South Kazakhstan
Ownership[1]	40%
End product	uranium concentrate
Certifications	BSI OHSAS 18001 ISO 14001 certified
Estimated mineral reserves (our share)	100.7 million pounds (proven and probable), average grade U_3O_8-0.03%
Estimated mineral resources (our share) [2]	12.8 million pounds (measured and indicated), average grade U_3O_8 0.03%-0.03% 30.0 million pounds (inferred), average grade U3O8
Mining method	in situ recovery (ISR)
Licensed capacity	10.4 million pounds per year (our share 4.2 million pounds per year)[1]
Total production 2009 to 2019	57.5 million pounds (100% basis)
2019 production	8.3 million pounds (100% basis)
2020 forecast production	8.3 million pounds (100% basis)[1]
Estimated mine life	2045 (based on current licence term)
Estimated decommissioning cost (100% basis)	$11 million (US) (under reviews)

[1]We signed an agreement with our partner KAP and JV Inkai to restructure and enhance Inkai. Under the agreement, effective January 1, 2018, our ownership interest in the joint venture dropped to 40% and we will equity account for our investment. However, our share of production will gradually be reduced to 40% as JV Inkai increases production as provided for under the agreement. Due to the transition to equity accounting, our share of production will be shown as a purchase. For more information, see *Production increase and restructuring – Implementation Agreement* on page 57.

[2] Mineral resources that are not mineral reserves have no demonstrated economic viability.

Business structure

JV Inkai is a Kazakhstan limited liability partnership between two companies:

- Cameco – 40%
- KAP – 60%

History

1976-78	● Deposit is discovered ● Exploration drilling continues until 1996
1979	● Regional and local hydrogeology studies begin ● Borehole tests characterize the four aquifers within the Inkai deposit (Uvanas, Zhalpak, Inkuduk and Mynkuduk)
1988	● Pilot test in the northeast area of block 1 begins, lasts 495 days and recovers 92,900 pounds of uranium
1993	● First Kazakhstan estimates of uranium resources for block 1
1996	● First Kazakhstan estimates of uranium resources for block 2 ● Kazakhstan regulators registers JV Inkai, a joint venture among us, Uranerzbergbau-GmbH and KATEP
1997	● KAP is established
1998	● KATEP transfers all of its interest in JV Inkai to KAP ● We acquire all of Uranerzbergbau-GmbH's interest in JV Inkai, increasing our interest to 66 2/3% ● We agree to transfer a 6 2/3% interest to KAP, reducing our holdings to a 60% interest
1999	● JV Inkai receives a mining licence for block 1 and an exploration with subsequent mining licence for blocks 2 and 3 from the government of Kazakhstan
2000	● JV Inkai and the government of Kazakhstan sign a subsoil use contract (called the *resource use contract*), which covers the licences issued in 1999 (see above)
2002	● Pilot leach test in the north area of block 2 begins
2005	● Construction of ISR commercial processing facility at block 1 begins
2006	● Complete pilot leach test at block 2 ● Exploration-delineation drilling initiated at block 3
2007	● Sign Amendment No.1 to the resource use contract, extending the exploration period at blocks 2 and 3
2008	● Commission front half of the main processing plant in the fourth quarter, and begin processing solution from block 1
2009	● Sign Amendment No. 2 to the resource use contract, which approves the mining licence at block 2, extends the exploration period for block 3 to July 13, 2010, and requires JV Inkai to adopt the new tax code and meet the Kazakhstan content thresholds for human resources, goods, works and services ● Commission the main processing plant, and started commissioning the first satellite plant
2010	● Receive regulatory approval for commissioning of the main processing plant ● File a notice of potential commercial discovery at block 3 ● Receive approval in principle for the extension of block 3 exploration for a five-year appraisal period that expires July 2015, and an increase in annual production from blocks 1 and 2 to 3.9 million pounds (100% basis)
2011	● Receive regulatory approval for commissioning of the first satellite plant ● Sign Amendment No. 3 to the resource use contract, which extends the exploration period for block 3 to July 2015 and provides government approval to increase annual production from blocks 1 and 2 to 3.9 million pounds (100% basis) ● Sign a memorandum of agreement with KAP to increase annual production from blocks 1 and 2 from 3.9 million pounds to 5.2 million pounds (100% basis)

2012	● Sign a memorandum of agreement with KAP setting out the framework to increase annual production from blocks 1 and 2 to 10.4 million pounds (100% basis), to extend the term of JV Inkai's resource use contract through 2045 and to cooperate on the development of uranium conversion capacity, with the primary focus on uranium refining rather than uranium conversion ● Start construction of a test leach facility at block 3
2013	● Sign Amendment No. 4 to the resource use contract, which provides government approval to increase annual production from blocks 1 and 2 to 5.2 million pounds (100% basis)
2015	● At block 3, construction of the test leach facility is completed and the pilot leach test initiated
2016	● Sign an agreement with KAP and JV Inkai to restructure and enhance JV Inkai, subject to closing, increasing KAP's holdings to a 60% interest and reducing our holdings to a 40% interest. ● Sign Amendment No. 5 to the resource use contract, which extends the exploration period for block 3 to July 2018
2017	● In December, close the agreement with KAP and JV Inkai to restructure and enhance JV Inkai. Under the agreement, effective January 1, 2018, our ownership interest dropped to 40% and we will equity account for our investment. ● Sign Amendment No. 6 to the resource use contract, which grants JV Inkai the right to produce up to 10.4 million pounds per year and extends the term of the resource use contract until July 13, 2045.

Technical report

This description is based on the project's technical report: Inkai Operation, South Kazakhstan Oblast, Republic of Kazakhstan, dated January 25, 2018 (effective January 1, 2018) except for some updates that reflect developments since the technical report was published. The report was prepared for us in accordance with NI 43-101, by or under the supervision of Darryl Clark, PhD, FAusIMM, Alain G. Mainville, P. Geo., Stuart B. Soliz, P. Geo., and Robert J. Sumner, PhD, P. Eng. The following description has been prepared under the supervision of Scott Bishop, P. Eng., and Alain D. Renaud, P.Geo. They are both qualified persons within the meaning of NI 43-101, but are not independent of us.

For information about environmental matters, see *Our approach to ESG matters* and *The regulatory environment* starting on pages 78 and 84.

For a description of royalties payable to the government of Kazakhstan on the sale of uranium extracted from orebodies within the country and taxes, see page 92.

For a description of risks that might affect access, title or the right or ability to perform work on the property, see *Political risks* starting at page 104, *Regulatory risks* starting at page 107, *Environmental risks* starting at page 108, and *Legal and other risks* starting at page109.

The conclusions, projections and estimates included in this description are subject to the qualifications, assumptions and exclusions set out in the technical report except as such qualifications, assumptions and exclusions may be modified in this AIF. We recommend you read the technical report in its entirety to fully understand the project. You can download a copy from SEDAR (sedar.com) or from EDGAR (sec.gov).

About the Inkai property

Location

Inkai is located in the Suzak District of Turkestan Oblast, Kazakhstan near the town of Taikonur, 350 kilometres northwest of the city of Shymkent and 155 kilometres east of the city of Kyzyl-Orda. JV Inkai's corporate office is located in Shymkent.

Access

The road to Taikonur is the primary road for transporting people, supplies and uranium product to and from the mine. It is a paved road that crosses the Karatau Mountains. Rail transportation is available from Almaty to Shymkent, then northwest to Shieli, Kyzyl-Orda and beyond. A rail line also runs from the town of Dzhambul to a KAP facility to the south of Taikonur. From Almaty and Astana, commercial airline services are available to Shymkent and Kyzyl-Orda.

Property tenure – MA area and mining allotment

The resource use contract between the Republic of Kazakhstan and JV Inkai (the resource use contract) grants JV Inkai the rights to explore for and to extract uranium from the subsoil contained in the Mining Allotment Area (the MA Area). The MA

Area is the 139 square kilometres area in which JV Inkai currently has the right to mine, as covered by the Mining Allotment, which includes block 1 and portions of blocks 2 and 3. The Mining Allotment was the document issued by the Geology Committee of the Republic of Kazakhstan to JV Inkai in July 2017, which graphically and descriptively defines the area in which JV Inkai has the right to mine. As provided for in Amendment No. 6, it is part of the resource use contract. JV Inkai owns uranium extracted from the subsoil contained in the MA Area and has the right to use the surface of the MA Area. JV Inkai has obligations under the resource use contract which it must comply with in order to maintain these rights.

In addition to complying with its obligations under the resource use contract, JV Inkai, like all subsoil users, is required to abide by the work program appended to its resource use contract, which relates to its mining operations.

Under Kazakhstan law, subsoil and mineral resources belong to the state. Currently, the state provides access to subsoil and mineral resources under a resource use contract (hydrocarbons and uranium only) and a licence (the rest of mineral resources). Minerals extracted from subsoil by a subsoil user under a resource use contract are the property of the subsoil user unless the subsoil code (as defined below) or a resource use contract provides otherwise.

A resource use contract gives the contractor a right to use the surface of the property while exploring, mining and reclaiming the land. However, this right must be set forth in a land lease agreement with the applicable local administrative authorities.

On a regular basis, JV Inkai obtains from local authorities the necessary land lease agreements for new buildings and infrastructure. JV Inkai does not hold land leases for the entire MA Area. JV Inkai obtains land leases gradually only for surface area required for exploration, mining or construction of new infrastructure.

Environment, social and community factors

Inkai lies in the Betpak Dala Desert, which has a semi-arid climate, minimal precipitation and relatively high evaporation. The average precipitation varies from 130 to 140 millimetres per year, and 22 to 40% of this is snow. The surface elevation within the MA Area ranges from 140 to 300 metres above mean sea level.

The area also has strong winds. The prevailing winds are northeast. Dust storms are common. The major water systems in the area include the Shu, Sarysu and Boktykaryn rivers.

The resource use contract prescribes that a certain level of employees be from Kazakhstan. See*Resource use contract* on page 58 for more information.

JV Inkai must give preference to local businesses. See*Kazakhstan government and legislation – local content* –on page 60 for more information.

In accordance with JV Inkai's corporate responsibility strategy and to comply with its obligations under the resource use contract, JV Inkai finances projects and provides goods and services to support the district's social infrastructure.

Geological setting

South-central Kazakhstan geology is comprised of a large relatively flat basin of Cretaceous to Quaternary age continental clastic sedimentary rocks. The Chu-Sarysu basin extends for more than 1,000 kilometres from the foothills of the Tien Shan Mountains located on the south and southeast sides of the basin, and merges into the flats of the Aral Sea depression to the northwest. The basin is up to 250 kilometres wide, bordered by the Karatau Mountains on the southwest and the Kazakh Uplands on the northeast. The basin is composed of gently dipping to nearly flat-lying fluvial-derived unconsolidated sediments composed of inter-bedded sand, silt and local clay horizons.

The Cretaceous and Paleogene sediments contain several stacked and relatively continuous, sinuous "roll-fronts" or oxidation reduction (redox) fronts hosted in the more porous and permeable sand and silt units. Several uranium deposits and active uranium ISR mines are located at these regional oxidation roll-fronts, developed along a regional system of superimposed mineralization fronts. The overall stratigraphic horizon of interest in the basin is approximately 200 to 250 metres in vertical section.

The Inkai deposit is one of these roll-front deposits. It is hosted within the Lower and Middle Inkuduk horizons and Mynkuduk horizon which comprise fine, medium and coarse-grained sands, gravels and clays. The redox boundary can be readily recognised in core by a distinct colour change from grey and greenish-grey on the reduced side to light-grey with yellowish stains on the oxidized side, stemming from the oxidation of pyrite to limonite.

The sands have high horizontal hydraulic conductivities. Hydrogeological parameters of the deposit play a key role in ISR mining. Studies and mining results indicate Inkai has favourable hydrogeological conditions for ISR mining.

Mineralization

Mineralization in the Middle Inkuduk horizon occurs in the central, western and northern parts of the MA Area. The overall strike length is approximately 35 kilometres. Width in plan view ranges from 40 to 1,600 metres and averages 350 metres. The depth ranges from 262 to 380 metres, averaging 314 metres.

Mineralization in the Lower Inkuduk horizon occurs in the southern, eastern and northern parts of the MA Area. The overall strike length is approximately 40 kilometres. Width in plan view ranges from 40 to 600 metres and averages 250 metres. The depth ranges from 317 to 447 metres, averaging 382 metres.

Mineralization in the Mynkuduk horizon stretches from south to north in the eastern part of the MA Area. The overall strike length is approximately 40 kilometres. Width in plan view ranges from 40 to 350 metres and averages 200 metres. The depth ranges from 350 to 528 metres, averaging 390 metres.

Mineralization comprises sooty pitchblende (85%) and coffinite (15%). The pitchblende occurs as micron-sized globules and spherical aggregates, while the coffinite forms tiny crystals. Both uranium minerals occur in pores on interstitial materials such as clay minerals, as films around and in cracks within sand grains, and as replacements of rare organic matter, and are commonly associated with pyrite.

Deposit type

The Inkai uranium deposit is a roll-front type deposit. Roll-front deposits are a common example of stratiform deposits that form within permeable sandstones in localized reduced environments. The Cretaceous and Paleogene sediments contain several stacked and relatively continuous, sinuous “roll-fronts”, or redox fronts hosted in the more porous and permeable sand and silt units. Microcrystalline uraninite and coffinite are deposited during diagenesis by ground water, in a crescent-shaped lens that cuts across bedding and forms at the interface between oxidized and reduced ground. Sandstone host rocks are medium to coarse grained were highly permeable at the time of mineralization. There are several uranium deposits and active ISR uranium mines at these regional oxidation roll-fronts, developed along a regional system of superimposed mineralization fronts.

About the Inkai operation

Inkai is a developed producing property with sufficient surface rights to meet future mining operation needs for the current mineral reserves. It has site facilities and infrastructure. Plans are progressing to expand the operation to give it the capability to produce up to 10.4 million pounds per year.

Licences

The resource use contract grants JV Inkai the rights to explore for and to extract uranium from the subsoil contained in the MA Area until July 13, 2045. Other material licences JV Inkai currently holds relating to its mining activities are:

- “Licence for radioactive substances handling” valid until December 31, 2024
- “Licence for operation of mining production and mineral raw material processing” with an indefinite term
- “Licence for transportation of radioactive substances within the territory of the Republic of Kazakhstan” valid until December 30, 2024
- “Licence for radioactive waste handling” valid until December 30, 2024

JV Inkai’s material environmental permits are described on page 59.

Infrastructure

There are three processing facilities on the MA Area: the Main Processing Plant (MPP) and two satellite plants, Sat1 and Sat2. The existing MPP, Sat1 and Sat2 circuit capacities were estimated using Inkai daily process summaries. The MPP has an ion exchange (IX) capacity of 2.7 million pounds U_3O_8 per year and a product drying and packaging capacity of 8.3 million pounds U_3O_8 per year. Sat1 and Sat2 have respective IX capacities of 6.0 and 2.3 million pounds U_3O_8 per year.

The following infrastructure currently exists on the MA Area: administrative, engineering and construction offices, a laboratory, shops, garages, holding ponds and reagent storage tanks, enclosures for low-level radioactive waste and domestic waste, an emergency response building, food services facilities, roads and power lines, wellfield pipelines and header houses.

As part of the expansion, the following upgrades are planned:

- expansion of the processing facilities to add processing capacity
- addition of calcining capability at the MPP
- addition of new pumping stations and sand ponds
- expansion of office buildings and the laboratory

At Taikonur, JV Inkai has an employee residence camp with catering and leisure facilities. As part of the expansion, the following upgrades are planned:

- expansion of the camp in a phased approach with construction of two residential blocks for 165 people each and addition of a dining room for 150 people
- construction of a 24 kilometre asphalt paved road connecting the camp to the three processing facilities

Water, power and heat

Groundwater wells provide sufficient water for all planned industrial activities. Potable water for use at the camp and at site facilities is supplied from shallow wells on the site. The site is connected to the national power grid. In case of power outages, there are standby generators. Operations continue throughout the year despite cold winters (lows of -35°C) and hot summers (highs of +40°C).

Employees

Taikonur has a population of about 680 who are mainly employed in uranium development and exploration. Whenever possible, JV Inkai hires personnel from Taikonur and surrounding villages.

Mining

Mining at Inkai is based upon a conventional and well-established ISR process. ISR mining of uranium is defined by the IAEA as:

“The extraction of ore from a host sandstone by chemical solutions and the recovery of uranium at the surface. ISR extraction is conducted by injecting a suitable leach solution into the ore zone below the water table; oxidizing, complexing and mobilizing the uranium; recovering the pregnant solutions through production wells; and finally, pumping the uranium bearing solution to the surface for further processing.”

ISR mining at Inkai is comprised of the following components to produce a uranium-bearing lixiviant (an aqueous solution which includes sulphuric acid), which goes to settling ponds and then to the processing plants for production as yellowcake:

- **Determination of the GT (grade x thickness) cut-off** for the initial design and the operating period. The design sets a lower limit to the pounds per pattern required to warrant installation of a pattern before funds are committed, and the operating cut-off applies to individual producer wells and dictates the lower limit of operation once a well has entered production.
- **Preparation of a production sequence**, which will deliver the uranium-bearing lixiviant to meet production requirements, considering the rate of uranium recovery, lixiviant uranium head grades, and wellfield flow rates.
- **Wellfield development practices**, using an optimal pattern design, distribute barren lixiviant to the wellfield injectors, and then collect lixiviant, which carries the dissolved uranium, back to the MPP, Sat1 or Sat2, as the case may be.

The above factors are used to estimate the number of operating wellfields, wellfield patterns and wellfield houses over the production life. They also determine the unit cost of each of the mining components required to achieve the production schedule, including drilling, wellfield installation and wellfield operation.

There is ongoing wellfield development to support the current production plan.

Processing

As a result of extensive test work and operational experience, a very efficient process of uranium recovery has been established. The process consists of the following major steps:

- uranium in-situ leaching with a lixiviant
- uranium adsorption from solution with IX resin
- elution of uranium from resin with ammonium nitrate
- precipitation of uranium as yellowcake with hydrogen peroxide and ammonia
- yellowcake thickening, dewatering, and drying
- packaging of dry yellowcake product in containers

All plants load and elute uranium from resin while the resulting eluate is converted to yellowcake at the MPP. Inkai is designed to produce a dry uranium product that meets the quality specifications of uranium refining and conversion facilities.

Production

Total production

Based on current mineral reserves, we expect Inkai to produce a total of 214 million pounds U_3O_8 (100% basis, recovered after processing) over the life of the mine from January 2020 to June 2045 inclusive.

Average annual production

Collectively the MPP, Sat1 and Sat2 have the capacity to produce about 8.3 million pounds U_3O_8 per year (100% basis) depending on the grade of the production solution. Construction work for a process expansion of the Inkai circuit to 10.4 million pounds U_3O_8 per year is in progress. The expansion project includes an upgrade to the yellowcake filtration and packaging units and the addition of a pre-dryer and calciner.

Production increase and restructuring – Implementation Agreement

In 2016, we signed an agreement with KAP and JV Inkai to restructure and enhance JV Inkai (the implementation agreement). The restructuring closed in December 2017 and took effect January 1, 2018. This restructuring was subject to obtaining all required government approvals, including an amendment to the resource use contract, which were obtained. The restructuring consisted of the following:

- JV Inkai has the right to produce 10.4 million pounds of U_3O_8 per year, an increase from the prior licensed annual production of 5.2 million pounds.
- JV Inkai has the right to produce until 2045 (previously, the licence terms, based on the boundaries prior to the restructuring, were to 2024 and 2030).
- our ownership interest in JV Inkai is 40% and KAP's ownership interest is 60%. However, during production ramp up, we are entitled to purchase 57.5% of the first 5.2 million pounds, and, as annual production increases above 5.2 million pounds, we are entitled to purchase 22.5% of any incremental production, to the maximum annual share of 4.2 million pounds. Once the ramp up to 10.4 million pounds annually is complete, we will be entitled to purchase 40% of such annual production, matching our ownership interest
- a governance framework that provides protection for us as a minority owner
- the boundaries of the MA Area match the agreed production profile for JV Inkai to 2045
- priority payment of the loan that our subsidiary made to JV Inkai to fund exploration and evaluation of the historically defined block 3 area

With KAP, we completed and reviewed a feasibility study for the purpose of evaluating the design, construction and operation of a uranium refinery in Kazakhstan. In accordance with the agreement, a decision has been made not to proceed with construction of the uranium refinery as contemplated in the feasibility study. We subsequently signed an agreement to licence our proprietary UF_6 conversion technology to KAP, which will allow KAP to examine the feasibility of constructing and operating its own UF_6 conversion facility in Kazakhstan.

The subsoil code allows producers to deviate within 20% (above or below) from the production parameters (including annual production levels) set out in the state approved project documentation, without triggering a mandatory amendment process.

With the change in ownership interests, we account for JV Inkai on an equity basis.

2020 and 2021 Production

We expect total production from Inkai to be 8.3 million pounds (100% basis) in 2020 and 2021. Due to KAP's announced plans to maintain its aggregate production reduction of 20% through 2021, an adjustment to the implementation agreement, as described above, has been made. As a result of this adjustment, we are entitled to purchase 59.4% of JV Inkai's planned production in 2020 and 2021 which equates to 4.9 million pounds per year. Our share of the profits earned by JV Inkai on the sale of its production will be included in "income from equity-accounted investees" on our consolidated statement of earnings.

Sales

There are annual uranium sales contracts entered into between JV Inkai and a Cameco subsidiary to purchase Cameco's share of Inkai production for each year, as well as similar contracts between JV Inkai and KAP. JV Inkai currently has no other forward-sales commitments for its uranium production.

In accordance with the Kazakhstan government's resolution on uranium concentrate pricing regulations, product is currently purchased from JV Inkai at a price equal to the uranium spot price, less a 5% discount.

Project funding and cash distribution

We had an outstanding loan for Inkai's work on block 3 prior to the restructuring. Under the implementation agreement, the partners agreed that JV Inkai would distribute excess cash, after working capital requirements, as priority repayment of this loan. In 2019, principal and interest payments of $92.7 million (US) were received, which repaid the loan in full. As a result, excess cash, after working capital requirements, will be distributed to the partners as dividends. Our share of dividends follows our production purchase entitlements as described above.

Resource use contract

The resource use contract was signed by the Republic of Kazakhstan and JV Inkai and then registered on July 13, 2000 based on the licence granted on April 20, 1999. The resource use contract provides for JV Inkai's mining rights to the MA Area, as well as containing obligations with which JV Inkai must comply in order to maintain such rights. There have been six amendments to the resource use contract, the most recent in November 2017, being Amendment No. 6 to:

- define the boundaries of the MA Area to match the agreed production profile for JV Inkai to 2045
- increase the annual production rate from the MA Area to 10.4 million pounds U_3O_8
- extend the extraction term from the MA Area until July 13, 2045

The other prior significant amendments to the resource use contract are as follows:

- In 2007, Amendment No. 1 to the resource use contract was signed, extending the exploration period of blocks 2 and 3 for two years.
- In 2009, Amendment No. 2 to the resource use contract was signed, adopting the 2009 Tax Code, implementing local content and employment requirements, and extending the exploration period at block 3.
- In 2011, Amendment No 3 to the resource use contract was signed, increasing production and giving JV Inkai government approval to carry out a five-year assessment program on block 3 that included delineation drilling, uranium resource estimation, construction and operation of a processing plant at block 3, and completion of a feasibility study.
- In 2013, Amendment No. 4 to the resource use contract was signed to increase annual production from blocks 1 and 2 to 5.2 million pounds U_3O_8.
- In 2016, Amendment No. 5 to the resource use contract was signed, extending the exploration period at block 3 to July 13, 2018.

In addition to complying with its obligations under the resource use contract, JV Inkai, like all subsoil users, is required to abide by the work program appended to the resource use contract, which relates to its mining operations. The current work program, to increase the annual production rate to 10.4 million pounds U_3O_8, is attached to Amendment No. 6.

Environment

JV Inkai has to comply with environmental requirements during all stages of the operation, and develop an environmental impact assessment for examination by a state environmental expert before making any legal, organizational or economic decisions that could have an effect on the environment and public health.

As required under Kazakhstan law, JV Inkai has a permit for environmental emissions and discharges for the operation that is valid until December 31, 2022. JV Inkai also holds certain water use permits which have various expiry dates.

JV Inkai carries environmental insurance, as required by the resource use contract and environmental law.

Decommissioning

JV Inkai's decommissioning obligations are defined by the resource use contract and the subsoil code. JV Inkai is required to maintain a fund, which is capped at $500,000 (US), as security for meeting its decommissioning obligations.

JV Inkai has developed a preliminary decommissioning plan to estimate total decommissioning costs, and updates the plan every five years, or when there is a significant change at the operation that could affect decommissioning estimates. The preliminary decommissioning estimate is $11 million (US) and is under review.

Groundwater is not actively restored post-mining in Kazakhstan. See page 89 for additional details.

Kazakhstan government and legislation

Subsoil law

The principal legislation governing subsoil exploration and mining activity in Kazakhstan is the *Code of the Republic of Kazakhstan on Subsoil and Subsoil Use No. 125-VI dated December 27, 2017* (which became effective on June 28, 2018), as amended (the subsoil code). It replaced *the Law on the Subsoil and Subsoil Use dated June 24, 2010*, as amended.

In general, the rights held by JV Inkai are governed by the old subsoil law that was in effect at the time of the resource use contract registration in July 2000. The subsoil use rights held by JV Inkai came into effect upon the initial issuance of these licences (April 1999) and the execution and the state registration of the resource use contract (July 2000).

The subsoil code defines the framework and procedures connected with the granting, transfer and termination of subsoil rights, and the regulation of the activities of subsoil users. The subsoil, including mineral resources in their underground state, are Kazakhstan state property. Resources brought to the surface belong to the subsoil user, unless otherwise provided by contract or law. The state has priority and approval rights with regards to strategic deposits with some exceptions (for example, for inter-group transfers in certain circumstances), if a subsoil user transfers its subsoil rights or if there is a transfer (direct or indirect) of an ownership interest in a subsoil user.

Subsoil rights go into effect when a contract with the competent authority is finalized and registered. Pursuant to the subsoil code, the subsoil user is given, among other things, the exclusive right to conduct mining operations, to build production facilities, to freely dispose of its share of production and to negotiate extensions of the contract, subject to restrictions and requirements set out in the subsoil code.

Currently, the Ministry of Energy of the Republic of Kazakhstan is the competent authority on hydrocarbons and uranium under the subsoil code.

Stabilization

The subsoil code provides, subject to a number of exceptions, that any licences issued and contracts executed before the enactment of the subsoil code remain valid. Therefore, the resource use contract remains valid. Most of the general provisions of the subsoil code apply to subsoil contracts concluded and licences issued before the subsoil code enactment. At the same time, the subsoil code's special provisions on uranium do not have retrospective effect except for the obligations in the spheres of education, science and social, and regional economic development during production.

Overall, the Republic of Kazakhstan has gradually weakened the stabilization guarantee, particularly in relation to the new projects, and the national security exception in the subsoil code is applied broadly to encompass security over strategic national resources.

Amendment No. 2 to the resource use contract eliminated the tax stabilization provision that applied to JV Inkai.

Transfer of subsoil rights and priority rights

The subsoil code liberates to some extent the regime of regulatory approvals by requiring the consent for the transfer of an object connected with the subsoil use right only in relation to hydrocarbons, uranium and deposits under a solid minerals licence. In addition, it abolished the requirement to obtain consent in case of a charter capital increase without change in shareholding and a transaction with government, state body, national management holding or national company. As previously, failing to obtain the consent of the competent authority makes the transaction void.

Similar to the old subsoil law, the subsoil code provides the state with the priority right only with respect to a subsoil use right related to a strategic subsoil area and an object connected with the subsoil use right related to the strategic subsoil area. The exemptions from the requirement to obtain the consent of the competent authority discussed above also exempts a transaction from the requirement to obtain a waiver of the priority right of the state.

The subsoil code has introduced a new requirement, which is a change of control notification to be made within 30 calendar days from such change. The subsoil code provides that control means inter alia holding more than 25% shares (participatory interests or securities convertible in shares), having voting rights for more than 25% of all votes in the highest management body.

Dispute resolution

The subsoil code contains provisions on resolution of disputes by a court order (meaning state courts) on a number of specific issues such as disputes regarding revocation of licences or termination of resource use contracts. The provisions on termination of resource use contracts for uranium are not retroactive.

At the same time, the subsoil code is silent on the status of arbitration clauses contained in resource use contracts currently in effect. Therefore, strictly speaking, the subsoil code does not disallow international arbitration.

The resource use contract contains a dispute resolution clause referring contractual disputes to international arbitration. We believe the subsoil code does not affect this right.

Contract termination

The subsoil code introduces specific grounds for unilateral termination of subsoil use contracts (hydrocarbons and uranium).

For unilateral termination of subsoil use contracts on uranium, they do not have retrospective effect pursuant to the subsoil code. Therefore, those specific grounds should not apply to the resource use contract.

The subsoil code applies some general grounds for unilateral repudiation retrospectively. Those are (i) a breach of the requirement to obtain the competent authority's consent for transfer of a subsoil use right or an object connected with subsoil use right for hard minerals containing a major or strategic deposit which lead to a threat to national security; and (ii) actions of subsoil user during subsoil use operations at major deposits of hard minerals leading to a change in the economic interest of the Republic of Kazakhstan which creates a threat to national security.

Local content

The subsoil code imposes local content requirements for works, services and employees.

The resource use contract imposes local content requirements on JV Inkai with respect to employees, goods, works and services. As such, at least 40% of the costs of the acquired goods and equipment, 90% of contract works and 100%, 70% and 60% of employees, depending on their qualifications (workers, engineers and management, respectively), must be of local origin.

Prior to the subsoil code, the local content requirement used to be imposed in relation to goods as well. Since accession to the World Trade Organization, however, Kazakhstan amended its local content requirements, abolishing the local content requirements for goods. If this requirement remains in resource use contracts entered into prior to January 1, 2015, it will be automatically abolished on January 1, 2021, unless amended earlier. As the resource use contract has not been amended to remove the local content requirements for goods yet, it will continue to apply to goods procured by JV Inkai until January 1, 2021, unless amended earlier.

Strategic deposits

The subsoil code provides that all uranium deposits are strategic deposits. According to a governmental resolution On Determination of the Strategic Subsoil Areas Importance dated June 28, 2018 No. 389, 137 areas are strategic deposits, including Inkai's blocks.

Transfer of subsoil use rights on strategic areas is subject to the priority right and the competent authority's consent, as described above.

Reintroduction of the licensing regime

The subsoil code reintroduces the licensing regime for widespread and solid minerals except uranium. The regime of the resource use contracts only applies to exploration and production rights for hydrocarbons and uranium. As such, the rights to explore and produce uranium will continue to be provided on the basis of a resource use contract.

Decommissioning

The subsoil code modified the general provisions related to decommissioning. Some of them are applied retroactively. One of such modifications introduces a new requirement to provide financial security for a subsoil user's decommissioning obligations in the form of a guarantee, insurance and/or bank deposit.

The subsoil code also contains special provisions on decommissioning of uranium wellfields. They do not have retroactive effect.

Uranium special regulations

The subsoil code differentiates uranium from the rest of solid minerals and provides an additional and distinct set of rules to govern uranium mining specifically.

The subsoil code provides that a uranium deposit is granted for mining only to a uranium national company (a joint stock company created by a decree of the government of Kazakhstan with the controlling stock belonging to the state or the national management fund on the basis of direct negotiations).

The subsoil code further stipulates that a subsoil use right for uranium mining (or a share in such subsoil use right) granted to a uranium national company on the basis of direct negotiations may only be further transferred to its subsidiary entities where the uranium national company holds more than 50% of the shares (participating interests) directly or indirectly. Such a transferee, in turn, may only transfer the subsoil use right (or share in the subsoil use right) to the uranium national company's subsidiary entities where the uranium national company holds more than 50% of the shares (participating interests) directly or indirectly.

The uranium special rules also regulate issues such as termination of the uranium subsoil use right, provision of a uranium deposit and its extension/reduction, conditions, and periods of mining and project and design documents. The subsoil code does not make these special uranium rules retroactive, subject to a few exceptions.

Currency control regulations

Under *the Law of the Republic of Kazakhstan on Currency Regulation and Currency Control No. 167-VI*dated July 2, 2018 (effective from July 1, 2019) (the Currency Law), in the event of an emergency situation presenting a threat to economic security and stability of the financial system of Kazakhstan, the Kazakhstan government based on a joint recommendation from the National Bank of Kazakhstan (the NBK) and other relevant state authorities is entitled to introduce a special currency regime for a period of up to one year. The following terms and requirements may potentially be imposed under such special currency regime:

- the requirement to deposit money on an interest free basis with a Kazakhstan bank or the NBK for a set period;
- the requirement to obtain a special permit from the NBK to carry out certain foreign exchange transactions;
- the requirement to sell foreign currency received by Kazakhstan residents;
- the restriction on use of overseas bank accounts;
- the establishment of a term for the return of foreign currency earnings and limits on volumes, amount and currency of settlement under foreign exchange transactions; and

- other temporary currency restrictions.

Under the Currency Law, the requirements of the special currency regime may not restrict:

- the performance of obligations by Kazakhstan residents towards non-residents of Kazakhstan arising as a result of such non-residents of Kazakhstan performing their obligations under currency contracts entered into before the introduction of the special currency regime; and
- the transfer by non-residents of Kazakhstan of dividends, interest and other proceeds under deposit, and securities.

Since the Currency Law has become effective, the following substantial changes envisaged by the Currency Law are noteworthy:

- amendment to the definition of Kazakhstan residents
- introduction of a requirement for Kazakhstan legal entities to confirm the purpose of the purchase and use of foreign currency in the Kazakhstan market
- cancellation of the current currency operations registration and notification regimes and introduction of one regime for currency operations monitoring; and
- new requirements applicable to export/import operations with customs clearance in the territory of Kazakhstan.

The resource use contract grants JV Inkai a measure of protection from currency control regulations, granting it the right to freely transfer funds, in state and other currencies, inside and outside of Kazakhstan with the exception that financial transactions within Kazakhstan must be concluded in the national currency.

Operating, capital costs and economic analysis

The following is a summary of the operating and capital cost estimates for the remaining life of mine, stated in constant 2019 dollars and reflecting a forecast life-of-mine production of 214 million pounds U_3O_8 and a 311 Kazakhstan Tenge to 1 Cdn dollar exchange rate assumption.

Operating Costs ($Cdn million)	**Total (2020– 2045)**
Site administration	$465.3
Processing costs	232.3
Mining costs	555.5
Corporate overhead	358.5
Total operating costs	**$1,611.6**
Average cost per pound U_3O_8	**$7.53**

Note: presented as total cost to JV Inkai (100% basis)

Estimated operating costs consist of annual expenditures to mine and process the mineral reserves into U_3O_8 as well as site administration and corporate overhead costs.

Capital Costs ($Cdn million)	**Total (2020 – 2045)**
Total wellfield development	$473.4
Construction and maintenance capital	104.8
Sustaining capital	54.7
Total capital costs	**$632.9**

Note: presented as total cost to JV Inkai (100% basis)

The economic analysis, effective as of January 1, 2018 being the effective date of the technical report for Inkai, undertaken from the perspective of JV Inkai, based on JV Inkai's share (100%) of Inkai mineral reserves, results in an after tax NPV of $2.2 billion (at a discount rate of 12%), for the net annual cash flows from January 1, 2018 to mid-2045 totalling $8.9 billion. Using the total capital invested, along with the operating and capital cost estimates for the remainder of mineral reserves, the

after tax IRR is estimated to be 27.1%. Payback for JV Inkai, including all actual costs was achieved in 2015, on an undiscounted, after tax basis. All future capital expenditures are forecasted to be covered by operating cash flow.

Annual Cash Flows – 100% JV Inkai basis

Annual cash flows ($Cdn M)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Production volume (000's lbs U_3O_8)	6,896	8,351	10,406[1]	10,399[1]	10,399	10,293	9,305	9,445	8,526	7,979	7,417	5,776	6,134
Sales Revenue	$229.3	$337.2	$531.4	$642.1	$679.2	$696.7	$629.8	$639.3	$577.1	$540.1	$502.0	$391.0	$415.2
Operating Costs	67.0	77.5	89.8	86.0	86.6	87.8	82.0	82.3	79.1	77.2	76.2	69.0	70.0
Capital Costs	59.4	81.1	75.3	45.0	49.9	37.6	36.9	37.9	43.0	34.5	32.7	25.2	28.0
Mineral Extraction Tax	14.2	18.3	20.5	19.2	19.6	19.0	16.1	16.4	14.4	14.0	13.3	9.8	10.4
Corporate Income Tax	23.7	39.7	74.9	96.9	103.8	107.9	97.6	99.3	89.0	82.2	75.5	57.1	61.2
Net cash flow	**$65.1**	**$120.6**	**$271.0**	**$395.1**	**$419.3**	**$444.5**	**$397.2**	**$403.4**	**$351.5**	**$332.2**	**$304.5**	**$230.0**	**$245.7**

2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	Total
6,986	7,908	9,650	8,389	7,522	6,186	6,917	7,321	9,115	9,412	8,876	8,762	8,892	8,421	3,475	229,159
$472.9	$535.3	$653.2	$567.8	$509.1	$418.7	$468.2	$495.5	$617.0	$637.1	$600.8	$593.1	$601.8	$570.0	$235.2	$14,786.1
73.8	75.3	80.7	78.5	74.3	71.8	73.9	75.2	81.3	83.3	81.2	80.0	81.3	82.3	65.3	2,188.5
27.6	30.3	37.7	34.8	29.9	26.0	31.2	29.9	39.5	38.4	36.0	34.9	35.2	34.3	11.5	1,063.5
11.5	12.5	15.3	12.7	10.7	9.4	10.4	10.7	13.4	14.2	13.1	13.0	13.1	13.0	5.5	383.5
71.3	82.5	102.8	88.6	79.0	62.6	71.3	76.3	97.4	100.6	94.5	93.0	96.0	90.2	30.8	2,245.5
$288.7	**$334.7**	**$416.7**	**$353.2**	**$315.2**	**$248.9**	**$281.5**	**$303.5**	**$385.4**	**$400.6**	**$376.1**	**$372.1**	**$376.2**	**$350.2**	**$122.1**	**$8,905.1**

Note: Effective January 1, 2018 and presented from the perspective of JV Inkai and based on JV Inkai's share (100%) of the mineral reserves at an 85% recovery.

[1] Due to KAP's announced plans to maintain its aggregate production reduction of 20% through 2021, we expect total production from JV Inkai to be 8.3 million pounds in 2020 and 2021.

Estimated capital costs include wellfield development to mine the mineral reserves as well as construction and maintenance capital along with sustaining capital. Construction capital is heavily weighted to 2020 to 2021 due to the capital required for the production ramp up to 10.4 million pounds annually as well as upgrades to existing facilities.

Our expectations and plans regarding Inkai, including forecasts of operating and capital costs, net annual cash flow, production and mine life are forward-looking information, and are based specifically on the risks and assumptions discussed on pages 2, 3 and 4. Operating or capital spending plans may change in 2021, depending on uranium markets and other factors. Estimates of expected future production, net annual cash flows, and capital and operating costs are inherently uncertain, particularly beyond one year, and may change materially over time.

Exploration, drilling, sampling, data quality and estimates

Exploration at Inkai began in the 1970s and progressed until 1996. Since 2006, exploration and delineation drilling is conducted by JV Inkai, with the main focus on block 3. From 2013 to 2016, delineation drilling was conducted at block 1 and block 2 to better establish the mineralization distribution and to support further development and wellfield design.

We have relied on historical data to estimate mineral reserves and resources for portions of the MA Area that came from blocks 1 and 2. Extensive exploration and delineation work was completed in the portion of the MA Area that came from block 3. It was used to estimate mineral reserves and resources. There are no historical mineral resources and reserves estimates within the meaning of NI 43-101 to report.

Exploration

Exploration drilling

JV Inkai's uranium exploration and delineation drilling programs were conducted by drilling vertical holes from surface. Delineation of the deposit on the MA Area and its geological structural features was carried out by drilling on a grid at prescribed density of 3.2 to 1.6-kilometre line spacing and 200 to 50-metre hole spacing with coring. Increasing level of geological knowledge and confidence is obtained by further drilling at grids of 800 to 400 x 200 to 50 metre with coring and 200 to 100 x 50 to 25 metre grid, usually without core.

Vertical holes are drilled with a triangular drill bit for use in unconsolidated formations down to a certain depth and the rest of the hole is cored. At the Inkai deposit, approximately 50% of all exploration holes are cored through the entire mineralized interval, and 70% core recovery is required for assay sampling. Radiometric probing, hole deviation, geophysical and hole diameter surveys are done by site crews and experienced contractors.

As the mineralized horizons lie practically horizontal and the drill holes are nearly vertical, the mineralized intercepts represent the true thickness of the mineralization.

The total number of exploration holes drilled before 2018 on the MA Area was approximately 4,500.

The drilling results were used for the identification of the horizons and mineralization encountered and served for the geological modelling, the estimation of uranium distribution and content, and the understanding of hydrogeological and metallurgical characteristics.

In 2019, JV Inkai continued the infill drilling program started in 2018 in the central and western parts of the MA Area aimed at upgrading the inferred and indicated resources and probable reserves to higher categories. From the beginning of the drilling program, a total of 1,208 drillholes (487,638 metres) were drilled, including 482 core holes (196,727 metres) and 716 non-core holes (290,910 metres). Drilling was carried out by progressively tightening from 400 by 100 metres to 200 by 50 metres grids. The infill drilling program was completed in September 2019. The preparation of a resource estimate report was initiated in October 2019 and is planned to be completed in 2020, incorporating the infill drilling results from 2018 and 2019.

Sampling analysis and data verification

The sampling, sample preparation, analyses, and geophysical downhole logging during the exploration and delineation programs follow the procedures and manuals which adhere to the requirements set out in the State Reserves Commission guidelines.

Sampling

- Detailed sampling procedures guide the sampling interval within the mineralization. Holes are drilled on progressively tightening grids: 3.2 to 1.6 kilometre x 200-50 metre, 800-400 metre x 200-50 metre and 200-100 metre x 50-25 metre. When core recoveries are higher than 70% and radioactivity greater than a certain threshold, core samples are taken at intervals of 0.2 to 1.2 metres. Sample intervals are also differentiated by barren or low permeability material.
- The drillholes are nearly vertical and the mineralized horizons are almost horizontal, so the mineralized intercepts represent the true thickness of the mineralization.
- JV Inkai surveys the drillholes, logging radiometric, electrical (spontaneous potential and resistivity), caliper and deviation data.
- Sampling is done on half of the core. The average core sample length is 0.4 metre.

- The split core is tested for grainsize and carbonate content.
- Core recovery is considered acceptable given the unconsolidated state of the mineralized material.

Sample security

JV Inkai's current sampling process follows the strict regulations imposed by the Kazakhstan government, and includes the highest level of security measures, quality assurance and quality control. We have not been able to locate the documents describing sample security for historical Kazakhstan exploration on the MA Area, but we believe the security measures taken to store and ship samples were of the same high quality.

Analysis

- The core samples for uranium and radium determination are ground down to 1.0 mm grain size and are further subdivided by one or three times quartering until the final representative weight of samples and duplicates is reached (0.2 kg).
- The laboratory tests for uranium and radium were performed by the Central Analytical Laboratory of JSC Volkovgeology, a company related to KAP, the other owner of JV Inkai. The laboratory is certified and licensed by the National Centre for Accreditation of the Republic of Kazakhstan.
- The uranium content was determined by using the X-ray fluorescence spectrum analysis. The radium content was determined from the gamma-X-ray spectrum analysis.

Quality control and data verification

- Our geoscientists, including a qualified person as such term is defined in NI 43-101, have witnessed or reviewed drilling, core handling, radiometric probing, logging and sampling facilities used at the Inkai mine and consider the methodologies to be satisfactory and the results representative and reliable.
- We confirmed the correlation between radioactive readings and calculated radium grades.
- We carried out a data verification process that validated the historic Kazakh mineral resource and reserve estimate.
- All drilling, logging, core drilling, and subsequent core splitting and assaying, were completed under the direction of various geological expeditions of the USSR Ministry of Geology and later under the supervision of JSC Volkovgeology.
- Based on numerous quality assurance and quality controls applied by JSC Volkovgeology, including internal checks and inter-laboratory checks, the repeatability of the results for uranium and radium confirmed the accuracy required and no significant systematic deviations were found.
- Sampling and analysis procedures have been examined by an independent consultant and found to be detailed and thorough.
- The findings are supported by results of the leach tests and wellfield drilling results on the MA Area.

Accuracy

We are satisfied with the quality of data and consider it valid for use in the estimation of mineral resources and reserves for the MA Area. Comparison of the actual mine production with the expected production supports this opinion.

All of the drillhole information in use at Inkai is regularly provided to Cameco. The current database has been validated a number of times by geologists with JV Inkai, JSC Volkovgeology, the State Reserve Commission, Two Key LLP and Cameco and is considered relevant and reliable.

Mineral reserve and resource estimates

Please see page 72 for our mineral reserve and resource estimates for Inkai.

Uranium – Tier-two operations

Rabbit Lake

Located in Saskatchewan, Canada, our 100% owned Rabbit Lake operation opened in 1975, and has the third largest uranium mill in the world. Due to market conditions, we suspended production at Rabbit Lake during the second quarter of 2016.

Location	Saskatchewan, Canada
Ownership	100%
End product	Uranium concentrates
ISO certification	ISO 14001 certified
Mine type	Underground
Estimated reserves	-
Estimated resources	38.6 million pounds (indicated), average grade U_3O_8: 0.95% 33.7 million pounds (inferred), average grade U_3O_8: 0.62%
Mining methods	Vertical blasthole stoping
Licensed capacity	Mill: maximum 16.9 million pounds per year; currently 11 million
Licence term	Through October, 2023
Total production: 1975 to 2019	202.2 million pounds
2019 production	0 million pounds
2020 production outlook	0 million pounds
Estimated decommissioning cost[1]	$213 million

[1] This updated estimate is currently under regulatory review.

Production suspension

The facilities remained in a state of safe and sustainable care and maintenance throughout 2019.

While in standby, we continue to evaluate our options in order to minimize care and maintenance costs. We expect care and maintenance costs to range between $30 million and $35 million annually.

US ISR Operations

Located in Nebraska and Wyoming in the US, the Crow Butte and Smith Ranch-Highland (including the North Butte satellite) operations began production in 1991 and 1975. Each operation has its own processing facility. Due to market conditions, we curtailed production and deferred all wellfield development at these operations during the second quarter of 2016.

Ownership		100%
End product		Uranium concentrates
ISO certification		ISO 14001 certified
Estimated reserves	*Smith Ranch-Highland:*	-
	North Butte-Brown Ranch:	-
	Crow Butte:	-
Estimated resources	*Smith Ranch-Highland:*	24.9 million pounds (measured and indicated), average grade U_3O_8: 0.06% 7.7 million pounds (inferred), average grade U_3O_8: 0.05%
	North Butte-Brown Ranch:	9.5 million pounds (measured and indicated), average grade U_3O_8: 0.07% 0.4 million pounds (inferred), average grade U_3O_8: 0.07%
	Crow Butte:	14.0 million pounds (measured and indicated), average grade U_3O_8: 0.25% 1.8 million pounds (inferred), average grade U_3O_8: 0.16%
Mining methods		In situ recovery (ISR)
Licensed capacity	[1] *Smith Ranch-Highland:*	Wellfields: 3 million pounds per year; processing plants: 5.5 million pounds per year
	Crow Butte:	Processing plants and wellfields: 2 million pounds per year
Licence term	*Smith Ranch-Highland:*	Through September, 2028
	Crow Butte:	Through October, 2024
Total production: 2002 to 2019		33.0 million pounds
2019 production		0 million pounds
2020 production outlook		0 million pounds
Estimated decommissioning cost[2]		Smith Ranch-Highland: $219 million (US), including North Butte
		Crow Butte: $52 million (US)

[1] Including Highland mill.

[2] The updated estimates are currently under regulatory review.

Production and curtailment

As a result of our 2016 decision, production at the US operations ceased in 2018.

We expect ongoing cash and non-cash care and maintenance costs to range between $14 million (US) and $16 million (US) for 2020.

Future production

We do not expect any production in 2020.

Impairment

In 2017, due to the continued weakening of the uranium market and a reduction in mineral reserves, we recorded a $184 million write down of our US assets.

Uranium – advanced projects

Work on our advanced projects has been scaled back and will continue at a pace aligned with market signals.

Millennium

Location	Saskatchewan, Canada
Ownership	69.9%
End product	Uranium concentrates
Potential mine type	Underground
Estimated resources (our share)	53.0 million pounds (indicated), average grade U_3O_8: 2.39% 20.2 million pounds (inferred), average grade U_3O_8: 3.19%

Background

The Millennium deposit was discovered in 2000, and was delineated by surface drilling work between 2000 and 2013.

Yeelirrie

Location	Western Australia
Ownership	100%
End product	Uranium concentrates
Potential mine type	Open pit
Estimated resources	128.1 million pounds (measured and indicated), average grade U_3O_8: 0.15%

Background

The Yeelirrie deposit was discovered in 1972 and is a near-surface calcrete-style deposit that is amenable to open pit mining techniques. It is one of Australia's largest undeveloped uranium deposits.

Kintyre

Location	Western Australia
Ownership	100%
End product	Uranium concentrates
Potential mine type	Open pit
Estimated resources (our share)	53.5 million pounds (indicated), average grade U_3O_8: 0.62% 6.0 million pounds (inferred), average grade U_3O_8: 0.53%

Background

The Kintyre deposit was discovered in 1985 and is amenable to open pit mining techniques.

2019 project updates

We believe that we have some of the best undeveloped uranium projects in the world. However, in the current market environment our primary focus is on preserving the value of our tier-one uranium assets. We continue to await a signal from the market that additional production is needed prior to making any new development decisions.

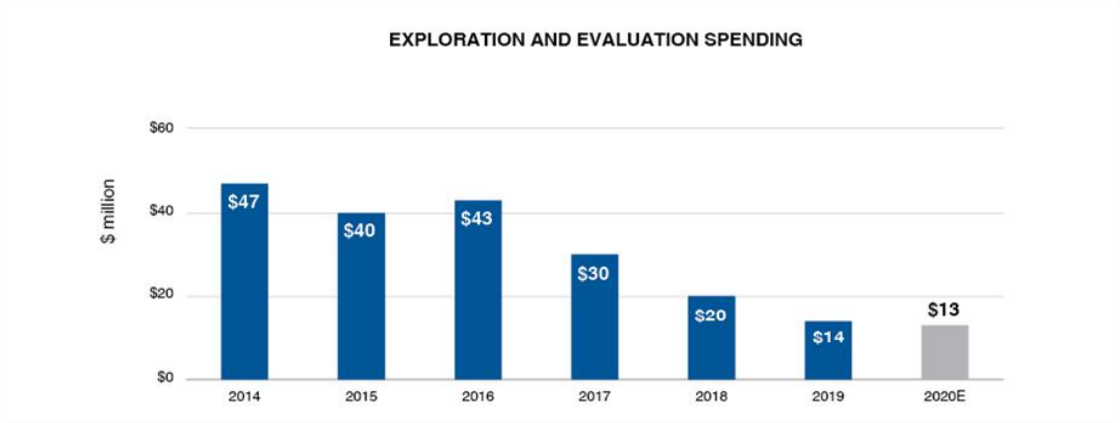
Planning for the future

2020 Planned activity

No work is planned at Millennium, Yeelirrie or Kintyre. Further progress towards a development decision is not expected until market conditions improve.

Uranium – exploration and corporate development

Our exploration program is directed at replacing mineral reserves as they are depleted by our production, and is key to sustaining our business. However, during this period of weak uranium prices, and as we have ample idled production capacity, we have reduced our spending to focus only on exploration near our existing operations where we have established infrastructure and capacity to expand. Globally, we have land with exploration and development prospects that are among the best in the world, mainly in Canada, Australia and the US. Our land holdings total about 0.8 million hectares (1.9 million acres). In northern Saskatchewan alone, we have direct interests in about 0.7 million hectares (1.7 million acres) of land covering many of the most prospective exploration areas of the Athabasca Basin.



2019 UPDATE

Brownfield exploration

Brownfield exploration is uranium exploration near our existing operations, and includes expenses for advanced exploration on the evaluation of projects where uranium mineralization is being defined.

In 2019, we spent about $4 million on brownfields and advanced uranium projects in Saskatchewan and Australia. At the US operations we spent $1 million.

Regional exploration

We spent about $9 million on regional exploration programs (including support costs), primarily in Saskatchewan's Athabasca Basin.

PLANNING FOR THE FUTURE

We will continue to focus on our core projects in Saskatchewan under our long-term exploration strategy. Long-term, we look for properties that meet our investment criteria. We may partner with other companies through strategic alliances, equity holdings and traditional joint venture arrangements. Our leadership position and industry expertise in both exploration and corporate social responsibility make us a partner of choice.

Acquisition program

Currently, given the conditions in the uranium market, our extensive portfolio of reserves and resources and our belief that we have ample idle production capacity, our focus is on navigating by our investment-grade rating and preserving the value of our tier-one assets. We expect that these assets will allow us to meet rising uranium demand with increased production from our best margin operations, and will help to mitigate risk in the event of prolonged uncertainty.

However, we continually evaluate acquisition opportunities within the nuclear fuel cycle that could add to our future supply options, support our sales activities, and complement and enhance our business in the nuclear industry. We will invest when an opportunity is available at the right time and the right price. We strive to pursue corporate development initiatives that will leave us and our shareholders in a fundamentally stronger position. As such, an acquisition opportunity is never assessed in isolation. Acquisitions must compete for investment capital with our own internal growth opportunities. They are subject to our capital allocation process.

Fuel services

Refining, conversion and fuel manufacturing

We have about 25% of world UF_6 primary conversion capacity and are a supplier of natural UO_2. Our focus is on cost-competitiveness and operational efficiency.

Our fuel services segment is strategically important because it helps support the growth of the uranium segment. Offering a range of products and services to customers helps us broaden our business relationships and expand our uranium market share.



Blind River refinery

Blind River is the world's largest commercial uranium refinery, refining uranium concentrates from mines around the world into UO_3.

Location	Ontario, Canada
Ownership	100%
End product	UO3
ISO certification	ISO 14001 certified
Licensed capacity	18 million kgU as UO3 per year, approved to 24 million subject to the completion of certain equipment upgrades (advancement depends upon market conditions)
Estimated decommissioning cost	$48 million

Markets

UO_3 is shipped to Port Hope for conversion into either UF_6 or UO_2.

Capacity

In 2012, the CNSC granted an increase to our annual licensed production capacity from 18 million kgU per year as UO_3 to 24 million kgU as UO_3, subject to the completion of certain equipment upgrades. These upgrades will be advanced based on market conditions.

Licensing

In February 2012, the CNSC granted our Blind River refinery a 10-year operating licence.



Port Hope conversion services

Port Hope is the only uranium conversion facility in Canada and a supplier of UO_2 for Canadian-made CANDU reactors.

Location	Ontario, Canada
Ownership	100%
End product	UF6, UO2
ISO certification	ISO 14001 certified
Licensed capacity	12.5 million kgU as UF6 per year 2.8 million kgU as UO2 per year
Estimated decommissioning cost	$129 million



Cameco Fuel Manufacturing Inc. (CFM)

CFM produces fuel bundles and reactor components for CANDU reactors.

Location	Ontario, Canada
Ownership	100%
End product	CANDU fuel bundles and components
ISO certification	ISO 14001 certified
Licensed capacity	1.2 million kgU as UO2 fuel pellets for finished bundles
Estimated decommissioning cost	$21 million

Fuel services produced 13.3 million kgU, 27% higher than 2018. This was a result of increasing demand.

Licensing

In February 2012, the CNSC approved a ten-year licence for CFM.

In February 2017, the CNSC approved a ten-year operating licence for the Port Hope conversion facility.

Conversion services

At its UO_2 plant, Port Hope converts UO_3 to UO_2 powder, used to make pellets for Canadian CANDU reactors and CANDU reactors in other countries and blanket fuel for light water nuclear reactors.

At its UF_6 plant, Port Hope converts UO_3 to UF_6, and then ships it to enrichment plants primarily in the US and Europe. There, it is processed to become low enriched UF_6, which is subsequently converted to enriched UO_2 and used as reactor fuel for light water nuclear reactors.

Anhydrous hydrofluoric acid (AHF) is a primary feed material for the production of UF_6. We have agreements with more than one supplier of AHF to provide us with diversity of supply.

Port Hope conversion facility clean-up and modernization (Vision in Motion)

Vision in Motion is a unique opportunity that demonstrates our continued commitment to a clean environment. It has been made possible by the opening of a long-term waste management facility by the government of Canada's Port Hope Area Initiative project. There is a limited opportunity during the life of this project to engage in clean-up and renewal activities that seek to address subsurface contamination and legacy waste at the Port Hope Conversion facility inherited from historic operations and operational practices that have been of some regulatory interest in the past. We made significant progress on the Vision in Motion project in 2019 and will continue with the implementation work in 2020.

Labour relations

A new collective agreement with unionized employees at our conversion facility in Port Hope was reached. The new agreement is for three years and expires on July 1, 2022. The previous contract expired in June 2019.

Fuel manufacturing

CFM's main business is making fuel bundles for CANDU reactors. CFM presses UO_2 powder into pellets that are loaded into tubes, manufactured by CFM, and then assembled into fuel bundles. These bundles are ready to insert into a CANDU reactor core. CFM also produces many different zirconium-based reactor components for CANDU reactors.

Manufacturing services agreements

A substantial portion of CFM's business is the supply of fuel bundles to the Bruce Power A and B nuclear units in Ontario. We supply the UO_2 for these fuel bundles.

Labour relations

Unionized employees represented by United Steel Workers Local 14193, at CFM's operations in Ontario, accepted a new three-year collective agreement in 2018. The contract expires May 30, 2021.

Mineral reserves and resources

Our mineral reserves and resources are the foundation of our company and fundamental to our success.

We have interests in a number of uranium properties. The tables in this section show the estimates of the proven and probable mineral reserves, and measured, indicated, and inferred mineral resources at those properties. However, only three of the properties listed in those tables are material uranium properties for us: McArthur River/Key Lake, Cigar Lake and Inkai. Mineral reserves and resources are all reported as of December 31, 2019.

We estimate and disclose mineral reserves and resources in five categories, using the definition standards adopted by the Canadian Institute of Mining, Metallurgy and Petroleum Council, and in accordance with NI 43-101. You can find out more about these categories at www.cim.org.

About mineral resources

Mineral resources do not have to demonstrate economic viability, but have reasonable prospects for eventual economic extraction. They fall into three categories: measured, indicated and inferred. Our reported mineral resources are exclusive of mineral reserves.

- *Measured and indicated mineral resources* can be estimated with sufficient confidence to allow the appropriate application of technical, economic, marketing, legal, environmental, social and governmental factors to support evaluation of the economic viability of the deposit.
  - *measured resources*: we can confirm both geological and grade continuity to support detailed mine planning
  - *indicated resources*: we can reasonably assume geological and grade continuity to support mine planning
- *Inferred mineral resources* are estimated using limited geological evidence and sampling information. We do not have enough confidence to evaluate their economic viability in a meaningful way. You should not assume that all or any part of an inferred mineral resource will be upgraded to an indicated or measured mineral resource, but it is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.

Our share of uranium in the following mineral resource tables is based on our respective ownership interests. Mineral resources that are not mineral reserves have no demonstrated economic viability.

About mineral reserves

Mineral reserves are the economically mineable part of measured and/or indicated mineral resources demonstrated by at least a preliminary feasibility study. The reference point at which mineral reserves are defined is the point where the ore is delivered to the processing plant, except for ISR operations where the reference point is where the mineralization occurs under the existing or planned wellfield patterns. Mineral reserves fall into two categories:

- *proven reserves*: the economically mineable part of a measured resource for which at least a preliminary feasibility study demonstrates that, at the time of reporting, economic extraction could be reasonably justified with a high degree of confidence
- *probable reserves*: the economically mineable part of a measured and/or indicated resource for which at least a preliminary feasibility study demonstrates that, at the time of reporting, economic extraction could be reasonably justified with a degree of confidence lower than that applying to proven reserves

We use current geological models, an average uranium price of $44 (US) per pound U_3O_8, and current or projected operating costs and mine plans to estimate our mineral reserves, allowing for dilution and mining losses. We apply our standard data verification process for every estimate.

Our share of uranium in the mineral reserves table below is based on our respective ownership interests.

Qualified persons

The technical and scientific information discussed in this AIF, including mineral reserve and resource estimates, for our material properties (McArthur River/Key Lake, Cigar Lake and Inkai) was approved by the following individuals who are qualified persons for the purposes of NI 43-101:

McArthur River/Key Lake

- Greg Murdock, general manager, McArthur River/Key Lake, Cameco
- Scott Bishop, director, development, technical services, Cameco
- Alain D. Renaud, lead geologist, resources evaluation, technical services, Cameco

Cigar Lake

- Scott Bishop, director, development, technical services, Cameco
- Alain D. Renaud, lead geologist, resources evaluation, technical services, Cameco
- Lloyd Rowson, general manager, Cigar Lake, Cameco

Inkai

- Scott Bishop, director, development, technical services, Cameco
- Alain D. Renaud, lead geologist, resources evaluation, technical services, Cameco

Important information about mineral reserve and resource estimates

Although we have carefully prepared and verified the mineral reserve and resource figures in this document, the figures are estimates, based in part on forward-looking information.

Estimates are based on our knowledge, mining experience, analysis of drilling results, the quality of available data and management's best judgment. They are, however, imprecise by nature, may change over time, and include many variables and assumptions including:

- geological interpretation
- extraction plans
- commodity prices and currency exchange rates
- recovery rates
- operating and capital costs

There is no assurance that the indicated levels of uranium will be produced, and we may have to re-estimate our mineral reserves based on actual production experience. Changes in the price of uranium, production costs or recovery rates could make it unprofitable for us to operate or develop a particular site or sites for a period of time. See page 1 for information about forward-looking information, and page 93 for a discussion of the risks that can affect our business.

Please see pages 76, 77 and 78 for the specific assumptions, parameters and methods used for the McArthur River, Cigar Lake and Inkai mineral reserve and resource estimates.

Our estimate of mineral resources and mineral reserves may be materially affected by the occurrence of one or more of the risks described under the heading *Reserve and resource estimates are not precise* on page 101. In addition to those risks, our estimates of mineral resources and mineral reserves for certain properties may be materially affected by the occurrence of one or more of the following risks or factors:

McArthur River and Cigar Lake mineral resource and reserve estimates

- Water inflows – see *Flooding at McArthur River and Cigar Lake* at page 94
- Technical challenges – see *Technical challenges at Cigar Lake and McArthur River* at page 95

Inkai mineral resource and reserve estimates

- *Political risks* – see page 104

The extent to which our estimates of mineral resources and mineral reserves may be affected by the foregoing issues could vary from material gains to material losses.

Important information for US investors

We present information about mineralization, mineral reserves and resources as required by NI 43-101 of the Canadian Securities Administrators, in accordance with applicable Canadian securities laws. As a foreign private issuer filing reports with the US Securities and Exchange Commission (SEC) under the Multijurisdictional Disclosure System, we are not required to comply with the SEC's disclosure requirements relating to mining properties. Investors in the US should be aware that the disclosure requirements of NI 43-101 are different from those under applicable SEC rules, and the information that we present concerning mineralization, mineral reserves and resources may not be comparable to information made public by companies that comply with the SEC's reporting and disclosure requirements for mining companies.

Mineral reserves

As at December 31, 2019 (100% basis – only the shaded column shows Cameco's share)

Proven and probable

(tonnes in thousands; pounds in millions)

		PROVEN			PROBABLE			TOTAL MINERAL RESERVES			OUR SHARE RESERVES	
PROPERTY	MINING METHOD	TONNES	GRADE % U_3O_8	CONTENT (LBS U_3O_8)	TONNES	GRADE % U_3O_8	CONTENT (LBS U_3O_8)	TONNES	GRADE % U_3O_8	CONTENT (LBS U_3O_8)	CONTENT (LBS U_3O_8)	METALLURGICAL RECOVERY (%)
Cigar Lake	UG	261.9	15.50	89.5	270.8	13.90	83.0	532.7	14.69	172.5	**86.3**	98.5
Key Lake	OP	61.1	0.52	0.7	-	-	-	61.1	0.52	0.7	**0.6**	99
McArthur River	UG	2,034.0	7.14	320.2	538.5	6.04	71.7	2,572.5	6.91	391.9	**273.6**	99
Inkai	ISR	204,440.9	0.04	160.0	152,994.7	0.03	91.8	357,435.6	0.03	251.8	**100.7**	85
Total		**206,797.9**	**-**	**570.4**	**153,804.0**	**-**	**246.5**	**360,601.9**	**-**	**816.9**	**461.2**	**-**

(UG – underground, OP – open pit, ISR – in situ recovery).

Note that the estimates in the above table:

- use a constant dollar average uranium price of approximately $44 (US) per pound U_3O_8
- are based on exchange rates of $1.00 US=$1.25 Cdn and 405 Kazakhstan Tenge to $1.00 Cdn

Metallurgical recovery

We report mineral reserves as the quantity of contained ore supporting our mining plans, and provide an estimate of the metallurgical recovery for each uranium property. The estimate of the amount of valuable product that can be physically recovered by the metallurgical extraction process is obtained by multiplying the quantity of contained metal (content) by the planned metallurgical recovery percentage. The content and our share of uranium in the table above are before accounting for estimated metallurgical recovery.

Changes this year

Our share of proven and probable mineral reserves decreased from 467 million pounds U_3O_8 at the end of 2018, to 461 million pounds at the end of 2019. The change was primarily the result of:

- production at Cigar Lake and Inkai, which removed 13 million pounds from our mineral inventory

partially offset by:

- a mineral resource and reserve estimate update at Cigar Lake, which added approximately 7 million pounds of proven and probable reserves.

Mineral resources

As at December 31, 2019 (100% basis – only the shaded columns show Cameco's share)

Measured, indicated and inferred

(tonnes in thousands; pounds in millions)

	MEASURED RESOURCES (M)			INDICATED RESOURCES (I)				OUR SHARE	INFERRED RESOURCES			OUR SHARE
PROPERTY	TONNES	GRADE % U_3O_8	CONTENT (LBS U_3O_8)	TONNES	GRADE % U_3O_8	CONTENT (LBS U_3O_8)	TOTAL M+I CONTENT (LBS U_3O_8)	TOTAL M+I CONTENT (LBS U_3O_8)	TONNES	GRADE % U_3O_8	CONTENT (LBS U_3O_8)	INFERRED CONTENT (LBS U_3O_8)
Cigar Lake	11.6	8.54	2.2	307.1	14.66	99.3	101.5	50.8	182.1	5.92	23.8	11.9
Fox Lake	-	-	-	-	-	-	-	-	386.7	7.99	68.1	53.3
Kintyre	-	-	-	3,897.7	0.62	53.5	53.5	53.5	517.1	0.53	6.0	6.0
McArthur River	97.8	2.57	5.5	85.0	2.12	4.0	9.5	6.7	41.0	2.85	2.6	1.8
Millennium	-	-	-	1,442.6	2.39	75.9	75.9	53.0	412.4	3.19	29.0	20.2
Rabbit Lake	-	-	-	1,836.5	0.95	38.6	38.6	38.6	2,460.9	0.62	33.7	33.7
Tamarack	-	-	-	183.8	4.42	17.9	17.9	10.3	45.6	1.02	1.0	0.6
Yeelirrie	27,172.9	0.16	95.9	12,178.3	0.12	32.2	128.1	128.1	-	-	-	-
Crow Butte	1,601.0	0.19	6.7	939.3	0.35	7.3	14.0	14.0	531.4	0.16	1.8	1.8
Gas Hills - Peach	687.2	0.11	1.7	3,626.1	0.15	11.6	13.3	13.3	3,307.5	0.08	6.0	6.0
Inkai	36,680.9	0.03	21.3	21,132.2	0.02	10.7	32.0	12.8	116,394.6	0.03	75.0	30.0
North Butte - Brown Ranch	621.3	0.08	1.1	5,530.3	0.07	8.4	9.5	9.5	294.5	0.07	0.4	0.4
Ruby Ranch	-	-	-	2,215.3	0.08	4.1	4.1	4.1	56.2	0.14	0.2	0.2
Shirley Basin	89.2	0.16	0.3	1,638.2	0.11	4.1	4.4	4.4	508.0	0.10	1.1	1.1
Smith Ranch - Highland	3,711.3	0.10	7.9	14,372.3	0.05	17.0	24.9	24.9	6,861.0	0.05	7.7	7.7
Total	**70,673.2**	**-**	**142.6**	**69,384.7**	**-**	**384.6**	**527.2**	**424.0**	**131,999.0**	**-**	**256.4**	**174.7**

Note that mineral resources:

- do not include amounts that have been identified as mineral reserves
- do not have demonstrated economic viability

Changes this year

- Our share of measured and indicated mineral resources slightly increased from 423 million pounds U $_3O_8$ at the end of 2018, to 424 million pounds at the end of 2019. Our share of inferred mineral resources is 175 million pounds U_3O_8, a slight decrease of 1 million pounds from the end of 2018. The variance in mineral resources was primarily the result of the Cigar Lake mineral resource estimate update and minor mineral resource estimation work at McArthur River.

Key assumptions, parameters and methods

McArthur River

Key assumptions

- Mineral reserves assume a 99.4% planned mine recovery and have allowances for expected waste (42% average) and backfill (6.8% average) dilution as part of the normal mining extraction process. Mineral resources do not include such allowances.
- An average uranium price of $44 (US) per pound U $_3O_8$ with a $1.00 (US) = $1.25 (Cdn) fixed exchange rate was used to estimate the mineral reserves, taking into account the annual forecast realized prices.
- Mining rates assume annual packaged production of 18 million pounds.

Key parameters

- Grades of U_3O_8 were obtained from chemical assaying of drill core or from equivalent % U_3O_8 grades obtained from radiometric probing results. In areas of poor core recovery (usually < 75%) or missing samples, the grade was determined from probing.
- When not measured, densities are determined using formulas based on the relation between density measurements of drill core and chemical assay grades.
- Mineral resources are estimated at a minimum mineralized thickness of 1.0 metre and at a minimum grade of 0.50% U_3O_8. Reported mineral reserves are based on pounds U_3O_8 recovered per excavation, translating into an average cut-off grade of 0.80% U_3O_8.
- Mineral reserves are estimated based on the use of raisebore and blasthole stope mining methods in conjunction with freeze curtains.
- Reasonable expectation for eventual economic extraction of the mineral resources is based on the long-term forecast uranium price, anticipated production costs and the tonnage and grade of the mineralized areas.

Key methods

- The models were created from the geological interpretation in section and plan views and in 3-dimensions from surface and underground drillhole information.
- Mineral resources and mineral reserves were estimated using 3-dimensional block models. Ordinary kriging and inverse distance squared methods were used to estimate the grade and density.
- Maptek Vulcan and Leapfrog Geo software were used to generate the mineral resource and reserve estimates.

Cigar Lake

Key assumptions

- Mineral reserves have been estimated with an average allowance of 37% dilution at 0% U_3O_8.
- Mineral reserves have been estimated based on 90% mining recovery. Mineral resources do not include dilution and mining recovery.
- The mining rate is assumed to vary between 100 and 200 tonnes per day and a full mill production rate of approximately 18 million pounds U_3O_8 per year.
- Areas being mined must meet specific ground freezing requirements before jet boring begins.
- An average uranium price of $44 (US) per pound U_3O_8 with a $1.00 (US) = $1.25 (Cdn) fixed exchange rate was used to estimate the mineral reserves, taking into account the annual forecast realized prices.

Key parameters

- Grades of U_3O_8 were obtained from chemical assaying of drill core or from equivalent % U_3O_8 grades obtained from radiometric probing results. In areas of poor core recovery (usually < 75%) or missing samples, the grade was determined from probing.
- When not measured, densities are determined using formulas based on the relation between density measurements of drill core and chemical assay grades.
- Mineral resources have been estimated using a minimum mineralization thickness of 1.0 metre and a minimum grade of 1.0% U_3O_8.
- Mineral reserves have been estimated on the basis of designed JBS cavities with positive economics from the estimated recovered uranium.
- Reasonable expectation for eventual economic extraction of the mineral resources is based on the long-term forecast uranium price, anticipated production costs and the tonnage and grade of the mineralized areas.

Key methods

- The geological interpretation of the orebody was done in section and plan views and in 3-dimensions from surface drillhole information.

- Mineral resources and mineral reserves were estimated using 3-dimensional block models. Geostatistical conditional simulation (with sequential Gaussian simulation) and inverse distance squared methods were used to estimate the grade and density.
- Maptek Vulcan and Leapfrog Geo software were used to generate the mineral resource and reserve estimates.

Inkai

Key assumptions

- Mineral resources have been estimated based on the use of the ISR extraction method and yellowcake production.
- Average metallurgical recovery of 85%.
- Mineral reserves have been reported based on average uranium price of $44 (US) per pound U_3O_8, derived from the production schedule and annual forecast prices, with exchange rates of $1.00 US = $1.25 Cdn and 405 Kazakhstan Tenge to $1.00 Cdn.

Key parameters

- Grades (%U_3O_8) were obtained from gamma radiometric probing of drillholes, checked against assay results and prompt fission neutron logging results to account for disequilibrium.
- Average density of 1.70 tonnes per cubic metre was used, based on historical and current sample measurements.
- The production rate is based upon mineral reserves.
- Mineral resources are estimated using a minimum grade of 0.012% U_3O_8 per drillhole interval and minimum Grade x Thickness (GT) of 0.071 m% U_3O_8 for Block 1 and 0.047 m% U_3O_8 for Blocks 2 MA and 3 MA per hole
- Mineral reserves represent the in-situ ore available for production within the term of the resource use contract.
- A cut-off for the mineral reserves of 0.13 m% U_3O_8 is applied on the estimated GT value for each block of the model.
- Reasonable expectation for eventual economic extraction of the mineral resources is based on the long-term forecast uranium price, anticipated production costs and the tonnage and grade or quality of the mineralized areas.

Key methods

- The geological interpretation of the orebody was done in section and plan views derived from surface drillhole information.
- Mineral resources were estimated with the GT method, where the estimated variable is the uranium grade multiplied by the thickness of the interval, and using two-dimensional block models.
- A resource block must be confined to one aquifer taking into consideration the distribution of local aquitards.
- Considerations of the rate of in-situ uranium recovery, lixiviant uranium head grades, wellfield flow rates and production requirements to define the production sequence.
- Geological modelling and mining software used were AtomGeo and Maptek Vulcan.

Our approach to ESG matters

Our uranium is used around the world in the generation of safe, carbon-free, affordable, base-load nuclear energy. As we seek to bring the benefits of carbon-free nuclear energy to the world, we will do so in a manner that reflects our values. We are committed to identifying and addressing the environmental, social and governance (ESG) risks and opportunities that we believe may have a significant impact on our ability to add long-term value.

Sustainability: A key part of our strategy, reflecting our values

We view sustainability as an integrated approach to conducting business. We integrate sustainability principles and practices into all stages of our activities, from exploration to decommissioning, including factoring them into our objectives and approach to compensation, our overall corporate strategy, and our day-to-day operations. We adopt established and recognized management system frameworks to guide our integrated approach, which is embedded within ethical business practices and our robust and transparent governance framework. We seek to be transparent with our stakeholders, keeping them updated on the risks and opportunities that we believe may have a significant impact on our ability to add long-term value.

We have a sustainability policy that describes our commitments in this regard. We encourage you to review our sustainability policy at cameco.com/about/governance/policies-programs.

Safety and the environment

We employ an integrated Safety, Health, Environment and Quality (SHEQ) management system that applies to all phases and aspects of our business. The system is governed by one integrated SHEQ policy that recognizes that the safety and health of our workers and the public, protection of the environment, and quality of our processes are the highest priority during all stages of our activities. The policy is supported by multiple corporate SHEQ management programs. We maintain ISO 14001 certification at a corporate level. We encourage you to review our SHEQ policy at cameco.com/about/governance/policies-programs.

Climate change: Nuclear power is part of the solution

There is growing recognition from key global agencies, such as the United Nations Economic Commission for Europe, the United Nations Intergovernmental Panel on Climate Change, and the Union of Concerned Scientists that uranium is the cleanest energy fuel in the world and of the role nuclear power must play in ensuring safe, reliable and affordable carbon-free electricity generation. Indeed, for the first time in nearly two decades, the International Energy Agency released a report on nuclear energy in the hopes of bringing it back into the global energy debate. The report highlighted that a steep decline in nuclear power would threaten energy security and climate change goals and result in four billion tonnes of additional carbon emissions by 2040.

The nuclear industry recognizes the scale and immediacy of the challenge outlined in the Paris Agreement, and the important role that all low-carbon and carbon-free energy sources have to play. Led by the World Nuclear Association, the nuclear industry has a program and vision for the future of electricity supply called “Harmony”. The Harmony program sets a target for nuclear power to provide 25% of electricity by 2050 to help avoid the worst consequences of climate change. As members of the World Nuclear Association, and through participation in other industry organizations we fully support and are advocates of this initiative.

We believe that the reduction of carbon and greenhouse gas (GHG) emissions is important and necessary in Canada and around the world, and that nuclear power must be a central part of the solution to the world’s shift to a low-carbon, climate resilient economy. As one of the world’s largest producers of the uranium fuel needed to fuel nuclear reactors, we believe there is a significant opportunity for us to be part of the solution to combating climate change and that we are well positioned to deliver significant long-term business value, while actively working to reduce our emission profile.

We are proud that the high-grade uranium ores in Saskatchewan’s Athabasca Basin result in Canadian uranium having among the lowest life cycle greenhouse gas emission intensity internationally, despite the constraints related to our geographic location. In fact, the production of Saskatchewan uranium requires at least one hundred times less greenhouse gas (GHG) emissions than production of the cleanest Canadian natural gas to produce the same amount of electricity and, all of the nuclear power produced is GHG emission free. We have tracked and reported GHG emissions for more than two decades, despite any regulatory requirement to do so. We continue to be focused on improving energy management and the visibility of energy consumption within our organization, with the overall goal of improving the energy intensity of our operations to create business value.

The table below shows our most recent data on our greenhouse gas emissions. We follow the general guidelines outlined by the Intergovernmental Panel on Climate Change to quantify greenhouse gas emissions.

	2019	2018	2017
Greenhouse gas emissions[1] of kilotonnes of CO_2 equivalent (CO_2e)	277	295	415

Greenhouse gas emissions include carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs) expressed as a carbon equivalent (CO_2e).

Corporate greenhouse gas emissions have declined significantly since 2016 as a result of suspension of production at Rabbit Lake in 2016, curtailment of production at Cameco Resources in 2016, suspension of production at McArthur River and Key Lake in 2018, and change in ownership of JV Inkai in 2018. Emissions associated with JV Inkai were not included in our corporate emissions in 2018 and 2019 as we no longer have operational control over JV Inkai.

Stakeholder relations

Gaining the support of all our stakeholders is necessary to sustain our business.

We have a people policy that describes our commitment to developing and supporting a flexible, skilled, stable and diverse workforce. The policy is supported by multiple corporate human resource programs, standards and practices. We encourage you to review this policy at cameco.com/about/governance/policies-programs.

In addition, we strive to earn the support of the communities in which we operate, which is one of our key measures of success. We identify opportunities and initiatives that support and respect these communities and their cultures.

We recognize the substantial value in developing and maintaining long-term mutually beneficial relationships with Indigenous communities located within or near our operations and other activities.

Through 30 plus years of operation and partnership in northern Saskatchewan, we have developed a comprehensive strategy that applies to all our operations globally, and is aimed at ensuring the support of the communities with whom we work. The global strategy is flexible and is implemented locally to reflect the needs of the communities. The bulk of the strategy has evolved as a result of the commercial benefits we see from ensuring strong support among local communities wherever we operate and focuses on five key areas:

- *Workforce development*: designed to deliver programming that aims to build educational and skills capacity in local communities.
- *Business development*: designed to promote involvement of locally-owned businesses in contracting opportunities at our operations, to provide additional jobs, revenue streams and to build capacity at the local community level.
- *Community engagement*: designed to ensure that we secure support for our operations from local communities and satisfy the obligations placed on us by regulators and laws.
- *Community investment*: designed to help local communities with much-needed funding for community programming and infrastructure for initiatives focused on youth, education and literacy, health and wellness, and community development.
- *Environmental stewardship*: designed to support our overall environmental programming and give communities a voice in both the formal environmental assessment regulatory process, as well as ongoing monitoring activities.

We set standards for the measures we use to maintain ongoing and meaningful engagement with the communities where we operate.

How we are doing

We produce a sustainability report for our stakeholders to explain how we are performing against globally-recognized key indicators that measure our environmental, social, governance and financial impacts in the areas that we believe may have a significant impact on our ability to add long-term value for our stakeholders. We use the Global Reporting Initiative's Sustainability Framework (GRI), in addition to some corporate indicators that are unique to the company to measure and report our performance. This is our report card to our stakeholders. For our most recent performance results, we encourage you to review our sustainability report at cameco.com/about/sustainability.

Given the evolving nature of the ESG landscape, we have established a multi-disciplinary working group to review our current approach in this area, including how we report. The working group is chaired by our Senior Vice-President and Chief Corporate Officer and has been reporting to the nominating, corporate governance and risk committee of the board.

Governance: Sound governance is the foundation for strong performance

We believe that sound governance is the foundation for strong corporate performance. Our board of directors is responsible for overseeing management, and our strategy and business affairs and the integration of ESG principles throughout the company. The board's goal is to ensure we operate as a successful business, optimizing financial returns while effectively managing risk.

The board has formal governance guidelines that set out our approach to governance and the board's governance role and practices. The guidelines ensure we comply with all of the governance rules and legislation in Canada and the US that are applicable, conduct ourselves in the best interests of our stakeholders, and meet industry best practices. The guidelines are reviewed and updated regularly.

Risk and risk management

We have a mature enterprise risk management (ERM) framework that consists of processes and controls to ensure risks are being appropriately managed and mitigated.

Decisions to accept, mitigate, or transfer identified risks guide management's plans in our strategic planning and budgeting process. Employees throughout the company take ownership of the risks specific to their area, and are responsible for developing and implementing the controls to manage and re-assess risk, including ESG risks.

Our risk policy sets out a broad, systematic approach to identifying, assessing, reporting and managing the significant risks, including ESG risks, we face in our business and operations. The policy is reviewed annually to ensure that it continues to meet our needs.

See *Managing the risks* starting on page 56 of our 2019 MD&A, for a discussion of the risks, including ESG risks, that generally apply to all of our operations and advanced uranium projects, and that could have a material impact on business in the near term. We also recommend you review *Risks that can affect our business* starting at page 93 of this AIF, which includes a discussion of other material risks that could have an impact on our business.

The board is responsible for overseeing management's implementation of appropriate risk management processes and controls. Time is dedicated at board and committee meetings to risk identification, management, and reporting. In consultation with the board, management works on enhancing its enterprise risk oversight practices, processes and controls. While the board oversees the company's strategic risks, including ESG/climate-related risks, it also allocates oversight of other top-tier risks to specific board committees. The following is an overview of the responsibilities allocated to specific board committees.

Audit and finance – supports the board in fulfilling its oversight responsibilities regarding the integrity of our accounting and financial reporting, the adequacy and effectiveness of our internal controls and disclosure controls, legal, regulatory (excluding safety, health and the environment) and ethical compliance, the independence and performance of our external and internal auditors, oversight of specific material risks, and prevention and detection of fraudulent activities and financial oversight.

Human resources and compensation – supports the board in fulfilling its oversight responsibilities regarding human resource policies, employee and labour relations matters, executive compensation, executive succession and development, pension plan governance, and oversight of cyber-security risk.

Nominating, corporate governance and risk – supports the board in fulfilling its oversight responsibilities by developing and recommending a set of corporate governance principles, identifying and recommending qualified individuals as members of the board and its committees, assessing the effectiveness of the board and committees, and overseeing the risk program.

Reserves oversight – supports the board in fulfilling its oversight responsibilities regarding estimating and disclosing mineral reserves and resources.

Safety, health and environment – supports the board in fulfilling its oversight responsibilities regarding safety, health, environmental and climate-related matters, and supportive communities.

In addition, the safety, health and environment committee and the nominating, corporate governance and risk committees assist the board in fulfilling its oversight responsibility with respect to ESG matters.

More information about our shareholder commitment, our governance principles, how our board operates, its responsibilities, and the profiles of each of our directors can be found in our most recent management proxy circular and on our website at cameco.com/about/board-of-directors.

Targets and metrics: The link between ESG factors and executive pay

We recognize the importance of integrating certain ESG factors, such as safety performance, a clean environment and supportive communities, into our executive compensation strategy because success in these areas is critical to Cameco's long-term success. For more information on our compensable targets and our reported performance against those targets see the *Measuring our results* section in our 2019 MD&A and our most recent management proxy circular.

Environmental protection expenditures

In 2019, we invested:

- $73 million in environmental protection, monitoring and assessment programs, approximately 4% more than in 2018
- $18 million in health and safety programs, or 10% less than 2018

The increase in environmental expenditures in 2019 was largely due to expenditures related to the Vision in Motion projects, but also some spending on projects involving tailings and waste rock in northern Saskatchewan. The decrease in health and safety related expenditures were due to overall cost reductions across Cameco operations.

Spending on environmental and health and safety programs is expected to level off in 2020 as a result of the continued impacts of the decisions to transition Rabbit Lake into care and maintenance and to curtail production at the US operations, as well as the continued shutdown of the McArthur River and Key Lake operations for an indeterminate duration.

Nuclear waste management and decommissioning

Once we have permanently stopped mining and processing activities, we are required to decommission the operating sites. This includes reclaiming all waste rock, TMF and other areas of the site affected by our activities to the satisfaction of regulatory authorities.

Estimating decommissioning and reclamation costs

We develop conceptual decommissioning plans for our operating sites and use them to estimate our decommissioning costs. We also submit them to regulators to determine the amount of financial assurance we must provide to secure our decommissioning obligations. Our plans include reclamation techniques that we believe generate reasonable environmental and radiological performance. Regulators give “conceptual approval” to a decommissioning plan if they believe the concept is reasonable.

We started conducting reviews of our conceptual decommissioning plans for all Canadian sites in 1996. We typically review them every five years, or when we amend or renew an operating licence. We review our cost estimates for both accounting purposes and licence applications. For our US sites, they are reviewed annually. A preliminary decommissioning plan has been established for Inkai. The plan is updated every five years or as significant changes take place, which would affect the decommissioning estimate.

As properties approach or go into decommissioning, regulators review the detailed decommissioning plans. This can result in additional regulatory process, requirements, costs and financial assurances.

At the end of 2019, our estimate of total decommissioning and reclamation costs was $1.13 billion. This is the undiscounted value of the obligation and is based on our current operations. We had accounting provisions of $1.05 billion at the end of 2019 (the present value of the $1.13 billion). We expect to incur most of these expenditures at the end of the useful lives of the operations they relate to. Our estimated costs for decommissioning and reclamation for the next five years are about $255 million.

We provide financial assurances for decommissioning and reclamation such as letters of credit or surety bonds to regulatory authorities, as required. We had a total of about $994 million in financial assurances supporting our reclamation liabilities at the end of 2019. All of our North American operations have financial assurance in place in connection with our preliminary plans for decommissioning of the sites.

Please also see note 15 to our 2019 financial statements for our estimate of decommissioning and reclamation costs and related financial assurances.

Canada

Decommissioning estimates[1]

(100% basis)	
McArthur River	$42 million
Rabbit Lake	$213 million
Key Lake	$223 million
Cigar Lake	$62 million

[1] Under regulatory review other than McArthur River

As part of the licensing process in 2013 for McArthur River, Rabbit Lake, Key Lake and Cigar Lake, the preliminary

decommissioning plans for each facility were updated and submitted to the CNSC staff. Our Key Lake decommissioning estimate was further revised and submitted to the CNSC in 2014 and we received final approval of the decommissioning estimate from the CNSC in January 2015. Letters of credit for McArthur River, Key Lake, Rabbit Lake, and Cigar Lake are in place and reflect the most recently approved decommissioning cost estimate. We have submitted updates to all Saskatchewan operations' decommissioning estimates. We have received regulatory approval for McArthur River's decommissioning estimate. For the remainder, we await regulatory feedback and ultimately approval.

The reclamation and remediation activities associated with waste rock and tailings from processing Cigar Lake ore and uranium solution are covered in the plans and cost estimates for the facility that will be processing it.

Decommissioning estimates

(100% basis)	
Port Hope	$129 million
Blind River	$48 million
CFM	$21 million

We renewed our licence for Port Hope in 2017. As part of that process, an update to the Port Hope Conversion Facility preliminary decommissioning plan was finalized and accepted in February 2017. The letter of credit was updated in March 2017 and reflects the current decommissioning estimate. The decommissioning estimates for Blind River and CFM were revised and also accepted by the CNSC in 2017.

Recycling uranium byproducts

We have arrangements with two facilities for processing certain uranium-bearing byproducts from Blind River and Port Hope. An agreement has been in place with the White Mesa mill in Blanding, Utah for a number of years. Recycled byproduct material has been successfully processed at Key Lake since 2014.

United States

After mining has been completed, an ISR wellfield has to be restored according to regulatory requirements. This generally involves restoring the groundwater to its pre-mining state or equivalent class of water standard.

For wellfield restoration to be complete, regulatory approval is required. It is difficult for us to estimate the timing for wellfield restoration due to the uncertainty in timing for receiving final regulatory approval.

Crow Butte

Restoration of Crow Butte wellfields is regulated by the Nebraska Department of Environmental Quality and the Nuclear Regulatory Commission (NRC). There are five wellfields being restored at Crow Butte. The groundwater at mine unit #1 has been restored to pre mining quality standards, all wells are plugged and the piping removed.

Our estimated cost of decommissioning the property is $52 million (US). We have provided the state of Nebraska with $51 million (US) in financial assurances as security for decommissioning the property.

Smith Ranch-Highland

Restoration of Smith Ranch-Highland wellfields is regulated by the Wyoming Department of Environmental Quality (WDEQ). In 2018, the NRC transferred to the state of Wyoming its authority to regulate uranium ISR mining in the state. There are nine wellfields being restored at Smith Ranch-Highland, one wellfield in stability, and two wellfields (mine unit A and mine unit B) that have been fully restored.

Restoration of mine unit B was approved by the WDEQ in 2008, while NRC approval has not yet been attained. An Alternate Concentration Limit (ACL) request was submitted to the NRC in May 2013. The NRC subsequently requested additional information, and that additional sampling be conducted.

Our estimated cost of decommissioning the property is $219 million (US), including North Butte. We have provided the state of Wyoming with $220 million (US) in financial assurances as security for decommissioning the property.

Kazakhstan

JV Inkai is subject to decommissioning liabilities, largely defined by the terms of the resource use contract. JV Inkai is required to maintain a fund, which is capped at $500,000 (US), as security for meeting its decommissioning obligations.

Under the resource use contract, JV Inkai must submit a plan for decommissioning the property to the government six months before mining activities are complete. JV Inkai has established a preliminary plan and an estimate of total decommissioning costs of $11 million (US), which is under review. It updates the plan every five years, or when there is a significant change at the operation that could affect decommissioning estimates.

Groundwater is not actively restored post-mining in Kazakhstan. See page 89 for additional details.

The regulatory environment

This section discusses some of the more significant government controls and regulations that have a material effect on our business. A significant part of our economic value depends on our ability to comply with the extensive and complex laws and regulations that govern our activities. We are not aware of any proposed legislation or changes to existing legislation that could have a material effect on our business.

International treaty on the non-proliferation of nuclear weapons

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) is an international treaty that was established in 1970. It has three objectives:

- to prevent the spread of nuclear weapons and weapons technology
- to foster the peaceful uses of nuclear energy
- to further the goal of achieving general and complete disarmament

The NPT establishes a safeguards system under the responsibility of the IAEA. Almost all countries are signatories to the NPT, including Canada, the US, the United Kingdom and France. We are therefore subject to the NPT and comply with the IAEAs requirements.

Industry regulation and permits

Canada

Our Canadian operations have regulatory obligations to both the federal and provincial governments. There are four main regulatory agencies that issue licences and approvals:

- CNSC (federal)
- Fisheries and Oceans Canada (federal)
- SMOE
- Ontario Ministry of Environment.

Environment and Climate Change Canada (federal) is also a main regulatory agency, but does not issue licences and approvals.

Uranium industry regulation

The government of Canada recognizes the special importance of the uranium industry to Canada's national interest, and regulates the industry through legislation and regulations, and exerts additional control through government policy.

Federal legislation applies to any work or undertaking in Canada for the development, production or use of nuclear energy or for the mining, production, refinement, conversion, enrichment, processing, reprocessing, possession or use of a nuclear substance. Federal policy requires that any property or plant used for any of these purposes must be legally and beneficially owned by a company incorporated in Canada.

Mine ownership restrictions

The federal government has instituted a policy that restricts ownership of Canadian uranium mining properties to:

- a minimum of 51% ownership by residents
- a basic maximum limit of 49% ownership by non-residents of uranium properties at the first stage of production

The government may grant exceptions. For example, resident ownership may be less than 51% if the property is Canadian controlled. Exceptions will only be granted in cases where it is demonstrated that Canadian partners cannot be found, and it must receive Cabinet approval.

The government issued a letter to the Canadian uranium industry on December 23, 1987, outlining the details of this ownership policy. On March 3, 2010, the government announced its intention to liberalize the foreign investment restrictions on Canada's uranium mining sector to "ensure that unnecessary regulation does not inhibit the growth of Canada's uranium mining industry by unduly restricting foreign investment". After striking an expert panel to study the issue and soliciting feedback from various stakeholders, the federal government stated in October 2011 that it would not be changing the policy.

The Canada-EU Trade Agreement (CETA) was provisionally implemented in September 2017. The Non-resident Ownership Policy provisions for CETA countries are now in effect, which removes the requirement to seek a Canadian partner to hold the majority interest in a Canadian uranium mining property before applying for an exemption. An EU company is still required to apply for an exemption to hold a majority interest in a Canadian uranium mining property and the proposal will be evaluated by the government on its merits.

Cameco ownership restriction

We are subject to ownership restrictions under *the Eldorado Nuclear Limited Reorganization and Divestiture Act*, which restricts the issue, transfer and ownership, including joint ownership, of Cameco shares to prevent both residents and non-residents of Canada from owning or controlling more than a certain percentage of shares. See pages 115 and 116 for more information.

Industry governance

The *Nuclear Safety and Control Act* (NSCA) is the primary federal legislation governing the control of the mining, extraction, processing, use and export of uranium in Canada. It authorizes the CNSC to make regulations governing all aspects of the development and application of nuclear energy, including uranium mining, milling, conversion, fuel fabrication and transportation. It grants the CNSC licensing authority. A person may only possess or dispose of nuclear substances and build, operate and decommission its nuclear facilities according to the terms and conditions of a CNSC licence. Licensees must satisfy specific conditions of the licence in order to maintain the right to operate their nuclear facilities.

The NSCA emphasizes the importance of environmental as well as health and safety matters, and requires licence applicants and licensees to have adequate provisions for protection.

Regulations made under the NSCA include those dealing with the specific licence requirements of facilities, radiation protection, physical security for all nuclear facilities and the transport of radioactive materials. The CNSC has also issued regulatory documents to assist licensees in complying with regulatory requirements, such as decommissioning, emergency planning, and optimizing radiation protection measures.

All of our Canadian operations are governed primarily by licences granted by the CNSC and are subject to all federal statutes and regulations that apply to us, and all the laws that generally apply in the province where the operation is located, unless there is a conflict with the terms and conditions of the licence or the federal laws that apply to us.

Uranium export

We must secure export licences and export permits from the CNSC and Global Affairs Canada in order to export our uranium. These arrangements are governed by the bi-lateral and multi-lateral agreements that are in place between governments.

Land tenure

Most of our uranium reserves and resources are located in the province of Saskatchewan:

- a *mineral claim* from the province gives us the right to explore for minerals (other government approvals are required to carry out surface exploration)
- a *crown lease* with the province gives us the right to mine the minerals on the property

- a *surface lease* with the province gives us the right to use the land for surface facilities and mine shafts while mining and reclaiming the land

A mineral claim has a term of two years, with the right to renew for successive one-year periods. Generally, the holder has to spend a certain amount on exploration to keep the mineral claim in good standing. If we spend more than the amount required, the extra amount can be applied to future years.

A holder of a mineral claim in good standing has the right to convert it into a crown lease. A crown lease is for 10 years, with a right to renew for additional 10-year terms. The lessee must spend a certain amount on work during each year of the crown lease. The lease cannot be terminated unless the lessee defaults on any terms of the lease, or under any provisions of

The Crown Minerals Act (Saskatchewan) or regulations under it, including any prescribed environmental concerns. Crown leases can be amended unilaterally by the lessor by an amendment to *The Crown Minerals Act (Saskatchewan)* or *The Mineral Disposition Regulations,* 1986 *(Saskatchewan).*

A surface lease can be for up to 33 years, as necessary for operating the mine and reclaiming the land. The province also uses surface leases to specify other requirements relating to environmental and radiation protection as well as socioeconomic objectives.

United States

Uranium industry regulation

In the US, uranium recovery is regulated primarily by the NRC according to the *Atomic Energy Act of 1954*, as amended. Its primary function is to:

- ensure employees, the public and the environment are protected from radioactive materials
- regulate most aspects of the uranium recovery process

The NRC's regulations for uranium recovery facilities are codified in *Title 10 of the Code of Federal Regulations* (10 CFR). It issues Domestic Source Material Licences under 10 CFR, Part 40. *The National Environmental Policy Act* governs the review of licence applications, which is implemented through 10 CFR, Part 51.

At Smith Ranch-Highland and Crow Butte, safety is regulated by the federal Occupational Safety and Health Administration.

Other governmental agencies are also involved in the regulation of the uranium recovery industry.

The NRC also regulates the export of uranium from the US and the transport of nuclear materials within the US. It does not review or approve specific sales contracts. It also grants export licences to ship uranium outside the US.

Wyoming

The uranium recovery industry is also regulated by the WDEQ, the Land Quality Division (LQD) according to the *Wyoming Environmental Quality Act* (WEQA) and the *Land Quality Division Non Coal Rules and Regulations* under the WEQA. According to the state act, the WDEQ issues a permit to mine. The LQD administers the permit. As of September 30, 2018, the NRC has entered into an agreement with the state of Wyoming, transferring regulatory authority for licensing, rulemaking, inspection, and enforcement activities necessary to regulate uranium ISR mining. The WDEQ LQD Uranium Recovery Program (URP) has assumed this regulatory authority.

The state also administers a number of EPA programs under the *Clean Air Act* and the *Clean Water Act*. Some of the programs, like the *Underground Injection Control Regulations*, are incorporated in the *Land Quality Division Non-Coal Rules and Regulations*. Wyoming currently requires wellfield decommissioning to the standard of pre-mining use.

Nebraska

The uranium recovery industry is regulated by the NRC, and the Nebraska Department of Environmental Quality according to the *Nebraska Environmental Protection Act*. The Nebraska Department of Environmental Quality issues a permit to mine. The state requires wellfield groundwater be restored to the class of use water standard.

Land tenure

Our uranium resources in the US are held by subsidiaries that are located in Wyoming and Nebraska. The right to mine or develop minerals is acquired either by leases from the owners (private parties or the state) or mining claims located on property owned by the US federal government. Our subsidiaries acquire surface leases that allow them to conduct operations.

Kazakhstan

See *Kazakhstan government and legislation* starting on page 59.

Complying with environmental regulations

Our business is required to comply with laws and regulations that are designed to protect the environment and control the management of hazardous wastes and materials. Some laws and regulations focus on environmental issues in general, and others are specifically related to mining and the nuclear sector. They change often, with requirements increasing, and existing standards are being applied more stringently. While this dynamic promotes continuous improvement, it can increase expenses and capital expenditures, or limit or delay our activities.

Government legislation and regulation in various jurisdictions establish standards for system performance, standards, objectives and guidelines for air and water quality emissions, and other design or operational requirements for the various SHEQ components of our operations and the mines that we plan to develop. In addition, we must complete an environmental assessment before we begin developing a new mine or start processing activities, or make any significant change to our operations. Once we have permanently stopped mining and processing activities, we are required to decommission and reclaim the operating site to the satisfaction of the regulators, and we may be required to actively manage former mining properties for many years.

Canada

Not only is there ongoing regulatory oversight by the CNSC, the SMOE, the Ontario Ministry of the Environment, and Environment and Climate Change Canada, but there is also public scrutiny of the impact our operations have on the environment.

The CNSC, an independent regulatory authority established by the federal government under the NSCA, is our main federal regulator in Canada. Late in 2019, the federal government introduced the *Impact Assessment Act* along with changes to the *Fisheries Act* and introduced the *Canadian Navigable Waters Act*. The new assessment legislation broadens the scope of a federal assessment beyond strictly environment and the *Fisheries Act* introduces changes to the language that will take some time to fully understand and for the government to implement.

Plans to build new mines in Saskatchewan are subject to the provincial environmental assessment process. In certain cases, a review panel may be appointed and public hearings held.

Over the past few years, CNSC audits of our operations have focused on the following SHEQ programs:

- radiation protection
- environmental monitoring
- fire protection
- operational quality assurance
- organization and management systems effectiveness
- transportation systems
- geotechnical monitoring
- training
- ventilation systems

Improving our environmental performance is challenging and we have focused on maintaining our excellent water quality while maintaining production at our facilities.

Efforts like these often require additional environmental studies near the operations, and we will continue to undertake these as required.

It can take a significant amount of time for regulators to make requested changes to a licence or grant a requested approval because the activity may require an environmental assessment or an extensive review of supporting technical data, management programs and procedures. We are improving the quality of our proposals and submissions and have introduced a number of programs to ensure we continue to comply with regulatory requirements, but this has also increased our capital expenditures and our operating costs.

As our SHEQ management system matures, regulators continue to review our programs and recommend ways to improve our SHEQ performance. These recommendations are generally procedural and do not involve large capital costs, although systems applications can be significant and result in higher operating costs.

We believe that regulatory expectations of the CNSC and other federal and provincial regulators will continue to evolve, and lead to changes to both requirements and the regulatory framework. This will likely increase our costs.

United States

Our ISR operations in the US have to meet federal, state and local regulations governing air emissions, water discharges, handling and disposal of hazardous materials and site reclamation, among other things.

Mining activities have to meet comprehensive environmental regulations from the NRC, Bureau of Land Management, Environmental Protection Agency (EPA) and state environmental agencies. The process of obtaining mine permits and licences generally takes several years, and involves environmental assessment reports, public hearings and comments. We have the permits and licences required for our US ISR Operations for 2020

The ISR mining method at our US ISR Operations involves extracting uranium from underground non-potable aquifers by dissolving the uranium with a carbonate-based water solution and pumping it to a processing facility on the surface. After mining is complete, ISR wellfields have to be restored according to regulatory requirements. This generally involves restoring the groundwater to its pre-mining state or equivalent class of use water standard. Restoration of Crow Butte wellfields is regulated by the Nebraska Department of Environmental Quality and the NRC. Restoration of Smith Ranch Highland wellfields is regulated by the Wyoming Department of Environmental Quality.

See page 83 for the status of wellfield restoration and regulatory approvals.

Kazakhstan

In its resource use contract with the Kazakhstan government, JV Inkai committed to conducting its operations according to good international mining practices. It must comply with the environmental requirements of Kazakhstan legislation and regulations, and, as an industrial company, it must also reduce, control or eliminate various kinds of pollution and protect natural resources. JV Inkai is required to submit annual reports on pollution levels to the Kazakhstan environmental, tax and statistics authorities. The authorities conduct tests to validate JV Inkai's results.

Environmental protection legislation in Kazakhstan has evolved rapidly, especially in recent years. As the subsoil use sector has evolved, there has been a trend towards greater regulation, heightened enforcement and greater liability for non-compliance. The most significant development was the adoption of *the Ecological Code* in 2007. This code replaced the three main laws related to environmental protection.

JV Inkai is required to comply with environmental requirements during all stages of the project, and must develop an environmental impact assessment for examination by a state environmental expert before making any legal, organizational or economic decisions that could have an effect on the environment and public health.

Under *the Ecological Code*, JV Inkai needs an environmental permit to operate. The permit certifies the holder's right to discharge emissions into the environment, provided that it complies with the requirements of the permit and *the Ecological Code*. JV Inkai has a permit for environmental emissions and discharges for the operation that is valid until December 31, 2022. JV Inkai also holds the required permits under *the Water Code*.

Government authorities and the courts enforce compliance with these permits, and violations can result in the imposition of administrative, civil or criminal penalties, the suspension or stopping of operations, orders to pay compensation, orders to remedy the effects of violations and orders to take preventive steps against possible future violations. In certain situations, the issuing authority may suspend or revoke the permits.

The ISR mining method at Inkai uses an acid in the mining solution to extract uranium from underground non potable aquifers. The injection and recovery system is engineered to prevent the mining solution from migrating to the aquifer above the orebody, which has water with higher purity.

Kazakhstan does not require active restoration of post-mining groundwater. After a number of decommissioning steps are taken, natural attenuation of the residual acid in the mined out horizon, as a passive form of groundwater restoration, has been accepted. Attenuation is a combination of neutralization of the groundwater residual acid content by interaction with the host rock minerals and other chemical reactions which immobilize residual groundwater contaminants in the mined-out subsoil horizon. This approach is considered acceptable because it results in water quality similar to the pre-mining baseline status.

JV Inkai has environmental insurance, as required by *the Ecological Code* and the resource use contract.

Taxes and Royalties

Transfer pricing dispute

Tax Court decision

On September 26, 2018, the Tax Court ruled unequivocally in our favour in our case with the CRA for the 2003, 2005 and 2006 tax years.

The Tax Court ruled that our marketing and trading structure involving foreign subsidiaries and the related transfer pricing methodology used for certain intercompany uranium purchase and sale agreements were in full compliance with Canadian laws for the three tax years in question. While the decision applies only to the three tax years under dispute, we believe there is nothing in the decision that would warrant a materially different outcome for subsequent tax years.

The Tax Court has referred the matter back to the Minister of National Revenue in order to issue new reassessments for the 2003, 2005 and 2006 tax years in accordance with the Tax Court's decision. The total tax amount reassessed for those tax years was $11 million, and we remitted 50%. Therefore, we expect to receive refunds totaling about $5.5 million plus interest. The timing for the revised reassessments along with refunds plus interest may be delayed pending the outcome of the appeal. For further information regarding the appeal, see *Appeals process* below.

On April 30, 2019, we announced the decision of the Tax Court in our application to recover costs in the amount of about $38 million ($20.5 million for legal fees and $17.9 million in disbursements), which were incurred over the course of this case. The Tax Court awarded $10.25 million in legal fees incurred, plus an amount for disbursements, which is yet to be determined. The amount of the award for disbursements will be determined by an officer of the Tax Court. We are optimistic we will recover all, or substantially all, of the $17.9 million in disbursements. Timing of any payments under the cost award is uncertain. The CRA has asked for the cost award to be overturned and to recover its costs should it be successful in the appeals process.

Appeal process

On October 25, 2018, CRA filed a notice of appeal with the Federal Court of Appeal. In its notice of appeal, CRA did not appeal the Tax Court's finding that sham was not present, but did appeal the Tax Court's interpretation and application of the transfer pricing provisions in section 247 of *the Income Tax Act*. CRA filed its written submissions with the Federal Court of Appeal on May 31, 2019. In its written submission, CRA repeated its trial argument that the transactions should be recharacterized because arm's length persons would not have entered into the various agreements that underpin the marketing and trading structure. CRA's alternate argument was that the terms (focused on pricing) of these agreements would have been significantly different if these agreements had been made between arm's length persons. CRA argued that either approach should result in the disputed reassessments being upheld in their totality.

The Federal Court of Appeal hearing was held on March 4, 2020 and we anticipate that we will receive a decision in 2020. We believe there is nothing in the Tax Court's decision that would warrant a materially different outcome on appeal.

The decision of the Federal Court of Appeal can be appealed to the Supreme Court of Canada, but only if the Supreme Court of Canada agrees to hear the appeal. The request to appeal a decision of the Federal Court of Appeal to the Supreme Court of Canada must be made within 60 days of issuance of a Federal Court of Appeal decision.

In the event that either party appeals the Federal Court of Appeal decision, it would likely take about two years from the date the Federal Court of Appeal decision is issued to receive a decision from the Supreme Court of Canada should that court hear the appeal.

We expect to incur additional costs during the appeal process, and in connection with potential reassessments of subsequent years. There could also be costs incurred if a negotiated resolution with CRA is sought or achieved.

Potential exposure based on CRA appeal

Since 2008, CRA has disputed our marketing and trading structure and the related transfer pricing methodology we used for certain intercompany uranium sale and purchase agreements. To date, we have received notices of reassessment for our 2003 through 2013 tax years. While the Tax Court has ruled unequivocally in our favour for the 2003, 2005 and 2006 tax years, and we believe there is nothing in the decision that would warrant a materially different outcome on appeal, or for subsequent tax years we will continue to report on the potential exposure as we expect it will continue to tie up our financial capacity until the dispute is finally resolved for all years.

For the years 2003 to 2013, CRA has shifted Cameco Europe Limited's income (as recalculated by CRA) back to Canada and applied statutory tax rates, interest and instalment penalties, and, from 2007 to 2011, transfer pricing penalties. We understand CRA is currently considering whether to impose a transfer pricing penalty for 2012 and 2013. Taxes of approximately $326 million for the 2003 to 2019 years have already been paid to date in a jurisdiction outside Canada. If CRA is successful on appeal, we will consider our options under bilateral international tax treaties to limit double taxation of this income. There is a risk that we will not be successful in eliminating all potential double taxation. The income adjustments claimed by CRA in its reassessments are represented by the amounts described below.

The Canadian income tax rules include provisions that generally require larger companies like us to remit or otherwise secure 50% of the cash tax plus related interest and penalties at the time of reassessment. We received the 2013 reassessment late in 2019. CRA has advised the security remitted to date is sufficient to secure the tax debts they consider owing and as such, no further security is required at this time. To date, under these provisions, after applying elective deductions, we have paid or secured the amounts shown in the table below. Of these amounts, we expect to receive refunds totaling approximately $5.5 million plus interest based on the ruling of the Tax Court. The timing of the refund may be delayed pending the outcome of the appeal.

YEAR PAID ($ MILLIONS)	CASH TAXES	INTEREST AND INSTALMENT PENALTIES	TRANSFER PRICING PENALTIES	TOTAL	CASH REMITTANCE	SECURED BY LC
Prior to 2014	1	22	36	**59**	59	-
2014	106	47	-	**153**	153	-
2015	202	71	79	**352**	20	332
2016	51	38	31	**120**	32	88
2017	-	1	39	**40**	39	1
2018	17	40	-	**57**	-	57
2019	-	2	-	**2**	-	2
Total	**377**	**221**	**185**	**783**	**303**	**480**

While we expect the Tax Court's decision to be upheld on appeal and believe the decision should apply in principle to subsequent years, until such time as all appeals are exhausted, and a resolution is reached for all tax years in question, we will not be in a position to determine the definitive outcome of this dispute. We expect any further actions regarding the tax years 2007 through 2013 will be suspended until the three years covered under the decision are finally resolved, with the exception of the transfer pricing penalties noted above. The tax years 2014 and beyond have not yet been reassessed, and it is uncertain what approach CRA will take on audit. Despite the fact that we believe there is no basis to do so, and it is not our view of the likely outcome, CRA may continue to reassess us using the methodology it used to reassess the 2003 through 2013 tax years. In that scenario, and including the $5.7 billion already reassessed, we would expect to receive notices of reassessment for a total of approximately $8.7 billion of additional income taxable in Canada for the years 2003 through 2019, which would result in a related tax expense of approximately $2.6 billion. As well, CRA may continue to apply transfer pricing

penalties to taxation years subsequent to 2011. In that case, we estimate that cash taxes and transfer pricing penalties claimed by CRA for these years would be between $1.95 billion and $2.15 billion. In addition, CRA may seek to apply interest and instalment penalties that would be material to us. While in dispute, we may be required to remit or otherwise provide security for 50% of the cash taxes and transfer pricing penalties (between $970 million and $1.07 billion), plus related interest and instalment penalties assessed, which would be material to us. However, as noted previously, CRA has informed us that no further security is required for the tax debts it considers owing at this time. We have already paid or secured $562 million in cash taxes and transfer pricing penalties and $221 million in interest and instalment penalties.

Under the Canadian federal and provincial tax rules, any amount required to be paid or secured each year will depend on the amount of income reassessed in that year and the availability of elective deductions and tax loss carryovers. CRA has to date disallowed the use of any loss carry-backs for any transfer pricing adjustment, starting with the 2008 tax year. This does not impact the anticipated income tax expense for a particular year, but does impact the timing of any required security or payment. As noted above, for amounts reassessed after 2014, as an alternative to remitting cash, we used letters of credit to satisfy our obligations related to the reassessed income tax and related interest amounts. If required, we believe we will be able to continue to provide security in the form of letters of credit to satisfy these requirements. The amounts summarized in the table below reflect actual amounts paid or secured from 2003 through 2019 along with estimated post-2019 amounts if CRA were to continue to reassess based on the scenario outlined above, and include the expected timing adjustment for the inability to use any loss carry-backs starting with the 2008 tax year. The amounts have not been adjusted to reflect the refund of approximately $5.5 million plus interest we expect to receive for the years at issue in the Tax Court. The timing of such refund may be delayed pending the outcome of the appeal. We plan to update this table annually to include the estimated impact of reassessments expected for completed years subsequent to 2019.

$ MILLIONS	2003-2019	Post-2019	TOTAL
50% of cash taxes and transfer pricing penalties paid, secured or owing in the period			
Cash payments	226	185 – 235	410 - 460
Secured by letters of credit	336	225 – 275	560 - 610
Total paid[1]	**562**	**410 – 510**	**970 - 1070**

[1] These amounts do not include interest and instalment penalties, which totaled approximately $221 million to December 31, 2019.

In light of our view of the likely outcome of the appeal, and the dispute for subsequent years, based on the Tax Court's decision as described above, we expect to recover the amounts remitted, including the $783 million already paid or otherwise secured to date.

Caution about forward-looking information relating to our CRA tax dispute

This discussion of our expectations relating to our tax dispute with CRA and future tax reassessments by CRA is forward looking information that is based upon the assumptions and subject to the material risks discussed under the heading *Caution about forward-looking* information beginning on page 1 and also on the more specific assumptions and risks listed below. Actual outcomes may vary significantly.

Assumptions

- CRA will reassess us for the years 2014 through 2019 using a similar methodology as for the years 2003 through 2013, and the reassessments will be issued on the basis we expect
- we will be able to apply elective deductions and utilize letters of credit to the extent anticipated
- CRA will seek to impose transfer pricing penalties (in a manner consistent with penalties charged in the years 2007 through 2011) in addition to interest charges and instalment penalties
- we will be substantially successful in our dispute with CRA, including any appeals of the Tax Court's decision or any decisions regarding other tax years, and we will not incur any significant tax liability resulting from the outcome of the dispute or other costs, potentially including costs associated with a negotiated resolution with CRA
- a favourable determination by the officer of the Tax Court of the amount of our disbursements award

Material risks that could cause actual results to differ materially

- CRA reassesses us for years 2014 through 2019 using a different methodology than for years 2003 through 2013, or we are unable to utilize elective deductions or letters of credit to the extent anticipated, resulting in the required cash payments or security provided to CRA pending the outcome of the dispute being higher than expected
- the time lag for the reassessments for each year is different than we currently expect
- we are unsuccessful in an appeal of the Tax Court's decision or any tax decisions of the Tax Court for subsequent years, or appeals of those decisions, and the outcome of our dispute with CRA, potentially including costs associated with a negotiated resolution with CRA, results in significant costs, cash taxes, interest charges and penalties which could have a material adverse effect on our liquidity, financial position, results of operations and cash flows
- cash tax payable increases due to unanticipated adjustments by CRA not related to transfer pricing
- we are unable to effectively eliminate all double taxation
- an unfavourable determination of the officer of the Tax Court of the amount of our disbursements award

Canadian royalties

We pay royalties on the sale of all uranium extracted at our mines in the province of Saskatchewan.

Two types of royalties are paid:

- *Basic royalty*: This royalty is calculated as 5% of gross sales of uranium, less the Saskatchewan resource credit of 0.75%.
- *Profit royalty*: A 10% royalty is charged on profit up to and including $23.76/kg U_3O_8 ($10.78/lb) and a 15% royalty is charged on profit in excess of $23.76/kg U_3O_8. Profit is determined as revenue less certain operating, exploration, reclamation and capital costs. Both exploration and capital costs are deductible at the discretion of the producer.

As a resource corporation in Saskatchewan, we also pay a corporate resource surcharge of 3% of the value of resource sales.

Canadian income taxes

We are subject to federal income tax and provincial taxes in Saskatchewan and Ontario. Current income tax expense for 2019 was $7.97 million.

Our Ontario fuel services operations are eligible for a manufacturing and processing tax credit.

US taxes

Our subsidiaries in Wyoming and Nebraska pay severance taxes, property taxes and Ad Valorem taxes in those states. They incurred $1.12 million (US) in taxes in 2019.

Our US subsidiaries are subject to US federal and state income tax.

Kazakhstan taxes

Stability of the tax regime envisaged by a number of resource use contracts, including the resource use contract, was abolished with the entry into legal force of *the 2009 Tax Code* in 2009. Amendment No. 2 to the resource use contract, signed in 2009, by making applicable*the 2009 Tax Code*, eliminated the tax stabilization provision of the resource use contract.

A new tax code, effective as of January 1, 2018 (the 2018 Tax Code), provides that subsoil users pay all taxes and payments provided in the tax legislation effective as of the date of occurrence of tax obligations. Although under *the 2018 Tax Code* the

main principles of subsoil users' taxation remain the same (for example, the rate of corporate income tax, 20%, and the rate of mineral extraction tax on uranium, 18.5%, have not changed), there were several important changes relevant to special taxes and payments of subsoil users as briefly described below:

- *The 2018 Tax Code* provides for the exemption of dividends payable by a subsoil user to a foreign shareholder from income tax withholding at the source of payment. This exemption was first introduced in 2016 and is maintained in the 2018 Tax Code. To obtain this exemption, a subsoil user must comply with a number of conditions. We believe the dividends that will be paid to us by JV Inkai will qualify for this exemption.
- *The Excess Profits Tax* has been abolished with respect to several categories of subsoil use contracts, including, "contracts for exploration and (or) production of solid minerals, subsoil water and (or) therapeutic muds provided that such contracts do not envisage extraction of other categories of minerals." Based on the subsoil code, we believe that for the purposes of the 2018 Tax Code, the term solid minerals includes uranium. However, there is a risk that the tax authorities may hold the opposite view.
- The commercial discovery bonus has been abolished.
- The rates of payment for the use of land by subsoil users is now expressly provided for in *the 2018 Tax Code*.

Risks that can affect our business

There are risks in every business.

The nature of our business means we face many kinds of risks and hazards – some that relate to the nuclear energy industry in general, and others that apply to specific properties, operations or planned operations. These risks could have a significant impact on our business, earnings, cash flows, financial condition, results of operations or prospects.

The following section describes the risks that are most material to our business. This is not, however, a complete list of the potential risks we face – there may be others we are not aware of, or risks we feel are not material today that could become material in the future. Our risk policy and process involves a broad, systematic approach to identifying, assessing, reporting and managing the significant risks we face in our business and operations. However, there is no assurance that we will be successful in preventing the harm that any of these risks could cause.

Please also see the risk discussion in our 2019 MD&A.

Types of risk

- Operational
- Financial
- Political
- Regulatory
- Environmental
- Legal and other
- Industry

1 – Operational risks

General operating risks and hazards

We are subject to a number of operational risks and hazards, many of which are beyond our control.

These risks and hazards include:

- environmental damage (including hazardous emissions from our refinery and conversion facilities, such as a release of UF_6 or a leak of anhydrous hydrogen fluoride used in the UF_6 conversion process)
- industrial and transportation accidents, which may involve radioactive or other hazardous materials
- labour shortages, disputes or strikes
- equipment failures
- catastrophic accident
- fires
- blockades or other acts of social or political activism
- regulatory constraints and non-compliance with laws and licences

- cost increases for labour, contracted or purchased materials, supplies and services
- shortages of required equipment, materials and supplies (including anhydrous hydrofluoric acid at our conversion facilities)
- transportation disruptions
- interruptions in the supply of electricity, water, and other utilities
- natural phenomena, such as inclement weather conditions, floods and earthquakes
- unusual or unexpected geological or hydrological conditions
- underground floods
- ground movement or cave-ins
- tailings pipeline or dam failures
- adverse mining conditions
- technological failure of mining methods.
- unanticipated consequences of our cost reduction strategies

The operational changes we have made carry with them an increase in our operational risk.

There is no assurance that any of the above risks will not result in:

- damage to or destruction of our properties and facilities located on these properties
- personal injury or death
- environmental damage
- delays in, or interruptions of, our exploration or development activities or transportation and delivery of our products
- delays in, interruptions of, or decrease in production at our operations
- costs, expenses or monetary losses
- legal liability
- adverse government action

Any of these events could result in one or more of our operations becoming unprofitable, cause us not to receive an adequate return on invested capital, or have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

Insurance coverage

We buy insurance to cover losses or liabilities arising from some of the operating risks and hazards listed above, as well as other business risks. We do not buy property insurance for our Rabbit Lake operation.

We believe we have a reasonable amount of coverage for the risks we choose to insure against. There is no assurance, however, that this coverage will be adequate, that it will continue to be available, that premiums will be economically feasible, or that we will maintain this coverage. Like other nuclear energy and mining companies, we do not have insurance coverage for certain environmental losses or liabilities and other risks, either because it is not available, or because it cannot be purchased at a reasonable cost. We may also be required to increase the amount of our insurance coverage due to changes in the regulation of the nuclear industry.

We may suffer material losses from uninsurable or uninsured risks or insufficient insurance coverage, which could have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

Flooding at McArthur River and Cigar Lake

McArthur River and Cigar Lake have had water inflows.

McArthur River

The sandstone that overlays the deposit and metasedimentary basement rock is water-bearing and permeable, which results in significant water pressure at mining depths. Ground freezing at McArthur River generally prevents water from flowing into the area being mined and reduces, but does not fully eliminate, the risk of water inflows. There are technical challenges with the groundwater and rock properties.

We temporarily suspended production at our McArthur River mine in 2003 because increased water inflow from an area of collapsed rock in a new development area began to flood portions of the mine. This caused a major setback in the development of new mining zones. We also had a small water inflow in 2008 that did not impact production but did cause significant development delays.

Cigar Lake

The Cigar Lake deposit has hydro-geological characteristics and technical challenges that are similar to those at McArthur River. We have had three water inflows at Cigar Lake since 2006 (please see page 44 for details).

These water inflows have caused:

- a significant delay in development and production at the property
- a significant increase in capital costs
- the need to notify many of our customers of the interruption in planned uranium supply

There is no guarantee that there will not be water inflows at McArthur River or Cigar Lake in the future.

A water inflow could have a material and adverse effect on us, including:

- significant delays or interruptions in production or lower production
- significant delays or interruptions in mine development
- loss of mineral reserves
- a material increase in capital or operating costs

It could also have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects. The degree of impact depends on the magnitude, location and timing of the flood or water inflow. Floods and water inflows are generally not insurable.

Technical challenges at Cigar Lake and McArthur River

The unique nature of the deposits at Cigar Lake and McArthur River pose many technical challenges, including groundwater management, unstable rock properties, mine area transitioning, radiation protection, ore-handling and transport, and other mining-related challenges.

At Cigar Lake there may be some technical challenges which could affect our production plans, including, but not limited to, variable or unanticipated ground conditions, ground movement and cave-ins, water inflows, variable dilution and recovery values, chemical ore characteristics, performance of the water treatment system, mining productivity, and equipment reliability.

The areas being mined at Cigar Lake must meet specific ground freezing requirements before we begin jet boring. We have identified greater variation of the freeze rates of different geological formations encountered in the mine, based on information obtained through surface freeze drilling.

The Cigar Lake orebody contains elements of concern with respect to the water quality and the receiving environment. The distribution of elements such as arsenic, molybdenum, selenium and others is non-uniform throughout the ore body, and this can present challenges in attaining and maintaining the required effluent concentrations. There have been ongoing efforts to optimize the current water treatment process and water handling systems to ensure acceptable environmental performance, which is expected to avoid the need for additional capital upgrades and potential deferral of production.

Metallurgical test work has been used to design the McClean Lake mill circuits and associated modifications relevant to Cigar Lake ore. Samples used for metallurgical test work may not be representative of the deposit as a whole. There is a risk that elevated arsenic concentration in the mill feed may result in increased leaching circuit solution temperatures, potentially causing an increase in costs and reducing production.

If any of these technical challenges are not resolved, it could have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

Mine concentration risk

Cigar Lake is our only mine in production that we control and our share of 2020 forecast production is 9 million pounds. Cigar Lake production is milled at the McClean Lake mill operated by Orano. There is a risk to our Cigar Lake production plan if McClean Lake is unable to mill Cigar Lake production.

We own a 40% interest in JV Inkai and have the right to purchase production from its Inkai mine (in 2020 and 2021, purchases expected to be 4.9 million pounds per year due to an adjustment to the implementation agreement (see *2020 and 2021 Production* on page 58).

Any disruption in or reduction in production from one or more of these mines could have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

Since 2018 this risk has increased, with the suspension of uranium production at McArthur River for an indeterminate period.

McArthur River mine and Key Lake mill restart

The operational changes we have made, including the suspension of production in 2018 for an indeterminate duration and the accompanying workforce reduction, carry with them the risks of a delay in restarting operations and subsequent production disruption.

There is increased uncertainty regarding the timing of a successful restart of the operations and the associated costs the longer the mine and mill are on care and maintenance.

Information technology systems

We have become increasingly dependent on the availability and integrity of our electronic information and the reliability of our information technology systems and infrastructure. We rely on our information technology to process, transmit and store electronic information, including information we use to safely operate our assets.

Cyber attackers may use a range of techniques, from manipulating people to using sophisticated malicious software and hardware on a single or distributed basis. Often, advanced cyber attackers use a combination of techniques in their attempt to evade safeguards and delay discovery of a cyber-attack. We take measures to secure our infrastructure against potential cyber-attacks that may damage our infrastructure, systems and data. We have implemented a defense in depth security program to secure and protect our information and business operations including formalizing and implementing an information security policy, user awareness training, and introducing system security configuration standards and access control measures.

To reduce the risk of successful cyber-attacks and to reduce the impact of any successful cyber-attacks, we have implemented several layers of perimeter and endpoint security defense and response mechanisms, security event logging and monitoring of network activities, and developed a cyber incident response process.

Despite the measures put in place to protect our systems and data, there can be no assurance that these measures will be sufficient and that such security breaches will not occur or, if they do occur, that they will be adequately addressed in a timely manner.

Such a breach could result in unauthorized access to proprietary or sensitive information, destruction or corruption of data, disruption or delay in our business activities, and a negative effect on our reputation. Disruption of critical information technology services or breaches of information security could have a material and adverse effect on our earnings, cash flows, financial condition or results of operations.

Replacement of depleted reserves

Cigar Lake and Inkai mines are currently our main sources of mined uranium concentrates. Prior to the 2018 production suspension at McArthur River, this mine was also one of our main sources of mined uranium concentrates. We must replace mineral reserves depleted by production at these mines to maintain or increase our annual production levels over the long term. Reserves can be replaced by expanding known orebodies, locating new deposits or making acquisitions. Substantial expenditures are required to establish new mineral reserves. We may not be able to sustain or increase production if:

- we do not identify, discover or acquire other deposits
- we do not find extensions to existing ore bodies
- we do not convert resources to reserves at our mines or other projects

This could have a material and adverse effect on our ability to maintain production to or beyond currently contemplated mine lives, as well as could have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

Although we have successfully replenished reserves in the past through ongoing exploration, development and acquisition programs, there is no assurance that we will be successful in our current or future exploration, development or acquisition efforts.

Tailings management

Our Key Lake mill produces tailings. Managing these tailings is integral to uranium production.

If sloughing, regulatory, or other issues prevent us from maintaining or increasing the existing tailings management capacity at our Key Lake mill, or if these issues prevent Orano from maintaining or increasing tailing capacity at the McClean Lake mill, uranium production could be constrained and this could have a material and adverse effect on our earnings, cash flows, financial condition or results of operations.

Reliance on development and expansion projects to sustain production and fuel growth

Our ability to sustain and increase our uranium production depends in part on successfully developing new mines and/or expanding existing operations.

Several factors affect the economics and success of these projects:

- the attributes of the deposit, including its size and grade
- capital and operating costs
- metallurgical recoveries
- the accuracy of reserve estimates
- government regulations
- availability of appropriate infrastructure, particularly power and water
- future uranium prices
- the accuracy of feasibility studies
- acquiring surface or other land rights
- receiving necessary government permits

The effect of these factors, either alone or in combination, cannot be accurately predicted and their impact may result in our inability to extract uranium economically from any identified mineral resource.

Generally development projects have no operating history that can be used to estimate future cash flows. We have to invest a substantial amount of capital and time to develop a project and achieve commercial production. A change in costs or construction schedule can affect the economics of a project. Actual costs could increase significantly and economic returns could be materially different from our estimates. We could fail to obtain the necessary governmental approvals for construction or operation. In any of these situations, a project might not proceed according to its original timing, or at all.

It is not unusual in the nuclear energy or mining industries for new or expanded operations to experience unexpected problems during start-up or ramp-up, resulting in delays, higher capital expenditures than anticipated and reductions in planned production. Production may be insufficient to recover exploration, development, and production costs. Delays, additional costs or reduced or insufficient production could have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

There is no assurance we will be able to complete the development of new mines, or expand existing operations, economically or on a timely basis.

Aging facilities

Our Port Hope fuel services facilities, as well as our milling facilities in northern Saskatchewan are aging. This exposes us to a number of risks, including the potential for higher maintenance and operating costs, the need for significant capital expenditures to upgrade and refurbish these facilities, the potential for decreases or delays in, or interruption of, production, and the potential for environmental damage.

These risks could have a material and adverse effect on our earnings, cash flows, financial condition or results of operations.

Labour and employment

People are core to our business. We compete with other nuclear energy and mining companies for talented, quality people, and we may not always be able to fill positions on a timely basis. There is a limited pool of skilled people and competition is intense. We also experience employee turnover because of an aging workforce.

If we cannot attract and train qualified successors for our senior and operating positions, it could reduce the efficiency of our operations and have an adverse effect on our earnings, cash flows, financial condition or results of operations.

We have unionized employees and face the risk of strikes. At December 31, 2019, we had 1,885 employees (including employees of our subsidiaries). This includes 787 unionized employees at McArthur River, Key Lake, Port Hope and at CFM's facilities, who are members of four different locals of the United Steelworkers trade union.

Collective agreements

- A new collective agreement with the bargaining unit employees at our conversion facilities at Port Hope was reached in 2019. The new agreement expires on July 1, 2022.
- A new collective agreement with the bargaining unit employees at the McArthur River and Key Lake operations was reached in 2019. The new agreement expires on December 31, 2022.
- The collective agreement with the bargaining unit employees at CFM expires May 2021.

We cannot predict whether we will reach new collective agreements with these and other employees without a work stoppage or work interruptions while negotiations are underway.

From time to time, the mining or nuclear energy industry experiences a shortage of tradespeople and other skilled or experienced personnel globally, regionally or locally. We have a comprehensive strategy to attract and retain high caliber people, but there is no assurance this strategy will protect us from the effects of a labour shortage.

A lengthy work interruption or labour shortage could have an adverse effect on our earnings, cash flows, financial condition or results of operations.

Joint ventures

We participate in McArthur River, Key Lake, Cigar Lake, Inkai, Millennium, and GLE through joint ventures with third parties. Some of these joint ventures are unincorporated and some are incorporated (like JV Inkai and GLE). We have other joint ventures and may enter into more in the future.

There are risks associated with joint ventures, including:

- disagreement with a joint venture participant about how to develop, operate or finance a project
- a joint venture participant not complying with a joint venture agreement
- possible litigation between joint venture participants about joint venture matters
- the inability to exert control over decisions related to a joint venture we do not have a controlling interest in

The other owner of JV Inkai in Kazakhstan is majority owned by the state, so its actions and priorities could be dictated by government policies instead of commercial considerations.

These risks could result in legal liability, affect our ability to develop or operate a project under a joint venture, or have a material and adverse effect on our earnings, cash flows, financial condition or results of operations.

Supplies and contractors

Supplies

We buy reagents and other production inputs and supplies from suppliers around the world. If there is a shortage of any of these supplies, including parts and equipment, or their costs rise significantly, it could limit or interrupt production or increase production costs. It could also have an adverse effect on our ability to carry out operations or have a material and adverse effect on our earnings, cash flows, financial condition or results of operations. We examine our entire supply chain as necessary to identify areas to diversify or add inventory where we may be vulnerable, but there is no assurance that we will be able to mitigate the risk.

Contractors

In some cases we rely on a single contractor to provide us with reagents or other production inputs and supplies. Relying on a single contractor is a security supply risk because we may not receive quality service, timely service, or service that otherwise meets our needs. These risks could have a material and adverse effect on our earnings, cash flows, financial condition or results of operations.

Uranium exploration is highly speculative

Uranium exploration is highly speculative and involves many risks, and few properties that are explored are ultimately developed into producing mines.

Even if mineralization is discovered, it can take several years in the initial phases of drilling until a production decision is possible, and the economic feasibility of developing an exploration property may change over time. We are required to make a substantial investment to establish proven and probable mineral reserves, to determine the optimal metallurgical process to extract minerals from the ore, to construct mining and processing facilities (in the case of new properties) and to extract and process the ore. We might abandon an exploration project because of poor results or because we feel that we cannot economically mine the mineralization.

Given these uncertainties, there is no assurance that our exploration activities will be successful and result in new reserves to expand or replace our current mineral reserves to maintain or increase our production.

Infrastructure

Mining, processing, development and exploration can only be successful with adequate infrastructure. Reliable roads, bridges, power sources and water supply are important factors that affect capital and operating costs and the ability to deliver products on a timely basis.

Our activities could be negatively affected if unusual weather, interference from communities, government or others, aging, sabotage or other causes affect the quality or reliability of the infrastructure.

A lack of adequate infrastructure could have a material and adverse effect on our earnings, cash flows, financial condition or results of operations.

2 – Financial risks

Volatility and sensitivity to prices

We are concentrated in the nuclear fuel business, with our primary focus on uranium mining. As such, our earnings and cash flow are closely related to, and sensitive to, fluctuations in the long and short-term market prices of U_3O_8 and uranium conversion services.

Many factors beyond our control affect these prices, including the following, among others:

- demand for nuclear power and the rate of construction of nuclear power plants
- forward contracts of U_3O_8 supplies for nuclear power plants
- accidents in any part of the world affecting the nuclear industry in a specific region or in general, such as the March 11, 2011 accident at Fukushima Dai-ichi Nuclear Power Plant in Japan
- terrorist attacks on uranium mining, transport or production or on nuclear power plants
- political and economic conditions in countries producing and buying uranium
- government laws, policies and decisions, including trade restrictions
- reprocessing of used reactor fuel and the re-enrichment of depleted uranium tails
- uranium from underfeeding generated using excess enrichment capacity
- sales of excess civilian and military inventories of uranium by governments and industry participants
- levels of uranium production and production costs
- significant production interruptions or delays in expansion plans or new mines going into production
- actions of investment and hedge funds in the uranium market
- transactions by speculators and producers

- prices of alternate sources to nuclear power, including oil, natural gas, coal, hydroelectric, solar and wind.

We cannot predict the effect that any one or all of these factors will have on the prices of U_3O_8 and uranium conversion services.

Prices have fluctuated widely in the last several years, and there have been significant declines in U_3O_8 prices since 2011. We continue to experience difficult uranium markets, with prices being depressed, adversely impacting our financial condition and future prospects.

The table below shows the range in spot prices over the last five years.

Range of spot uranium prices $US/lb of U_3O_8					
	2015	**2016**	**2017**	**2018**	**2019**
High	$39.45	$34.70	$24.50	$29.10	$28.90
Low	34.23	18.00	19.60	21.00	24.05
Spot UF_6 conversion values $US/kg U					
High	$8.25	$6.88	$5.93	$13.50	$22.13
Low	6.88	5.93	4.50	6.13	13.75

The next table shows the range in term prices over the last five years.

Range of term uranium prices $US/lb of U_3O_8					
	2015	**2016**	**2017**	**2018**	**2019**
High	$49.50	$44.00	$33.00	$32.00	$32.50
Low	44.00	30.00	30.00	29.00	31.00
Term UF_6 conversion values $US/kg U					
High	$16.00	$12.75	$14.50	$16.00	$18.13
Low	16.00	13.50	12.25	13.00	15.50

Notes:

- Spot and term uranium prices are the average of prices published monthly by Ux Consulting and from The Nuexco Exchange Value, published by TradeTech.
- Spot and term UF_6 conversion values are the average of the North American prices published monthly by Ux Consulting and from The Nuexco Conversion Value, published by TradeTech.

If prices for U_3O_8 or uranium conversion services fall below our own production costs for a sustained period, continued production or conversion at our sites may cease to be profitable. This would have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects. In 2016, we suspended production at Rabbit Lake and curtailed production at our US mines and in 2018 we suspended production for an indeterminate period at our McArthur River and Key Lake operations.

Future declines in U_3O_8 prices could also delay or deter a decision to build a new mine or begin commercial production once constructed, or adversely affect our ability to finance our operations, as well necessitate a decision to cut production volumes further for an extended period of time. Any of these events could have an adverse effect on our future earnings, cash flows, financial condition, results of operations or prospects.

A sustained decline in U_3O_8 prices may require us to write down our mineral reserves and mineral resources, and any significant write downs may lead to material write downs of our investment in the mining properties affected, and an increase in charges for amortization, reclamation and closures.

In our uranium segment, we use a uranium marketing strategy as a way to reduce volatility in our future earnings and cash flow from exposure to fluctuations in uranium prices. It involves building a portfolio that consists of fixed-price contracts and market-related contracts with terms of 5 to 10 years (on average). This strategy can create opportunity losses because we

may not benefit fully if there is a significant increase in U_3O_8 prices. This strategy also creates currency risk since we receive payment under the majority of our sales contracts in US$. In addition, this strategy has provided us with a measure of protection for our business through low uranium prices experienced since 2011. The annual average sales commitments over the next five years in our uranium segment is 19 million pounds, with commitment levels in 2020 and 2021 higher than in 2022 through 2024. As a result, we may become more exposed to fluctuations in uranium prices and this could have an adverse effect on our future earnings, cash flows, financial condition, results of operations or prospects. There is no assurance that our contracting strategy will be successful.

We make purchases on the spot market and under long-term agreements so we can put material into higher priced contracts. There are, however, risks associated with these purchases, including the risk of losses, which could have an adverse effect on our earnings, cash flows, financial condition or results of operations.

Reserve, resource, production, capital and operating cost estimates

Reserve and resource estimates are not precise

Our mineral reserves and resources are the foundation of our uranium mining operations and are fundamental to our success. They dictate how much uranium concentrate we can produce, and for how many years.

The uranium mineral reserves and resources reported in this AIF are estimates, and are therefore subjective and subject to numerous inherent uncertainties. There is no assurance that the indicated tonnages or grades of uranium will be mined or milled or that we will receive the uranium price we used in estimating these reserves.

While we believe that the mineral reserve and resource estimates included in this AIF are well established and reflect management's best estimates, reserve and resource estimates, by their nature, are imprecise, do not reflect exact quantities and depend to a certain extent on statistical inferences that may ultimately prove unreliable. The tonnage and grade of reserves we actually recover, and rates of production from our current mineral reserves, may be less than the estimate of the reserves. Fluctuations in the market price of uranium and changing exchange rates and operating and capital costs, can make reserves uneconomic to mine in the future and ultimately cause us to reduce our reserves.

Short-term operating factors relating to mineral reserves, like the need for orderly development of orebodies or the processing of different ore grades, can also prompt us to modify reserve estimates or make reserves uneconomic to mine in the future, and can ultimately cause us to reduce our reserves. Reserves also may have to be re-estimated based on actual production experience.

Mineral resources may be upgraded to proven or probable mineral reserves if they demonstrate profitable recovery. Estimating reserves or resources is always affected by economic and technological factors, which can change over time, and experience in using a particular mining method. There is no assurance that any resource estimate will ultimately be upgraded to proven or probable reserves. If we do not obtain or maintain the necessary permits or government approvals, or there are changes to applicable legislation, it could cause us to reduce our reserves.

Mineral resource and reserve estimates can be uncertain because they are based on data from limited sampling and drilling and not from the entire orebody. As we gain more knowledge and understanding of an orebody, the resource and reserve estimate may change significantly, either positively or negatively.

The validity of resource and reserve estimates is highly dependent upon the accuracy of the assumptions upon which they are based and the quality of information available. These assumptions may prove to be inaccurate.

If our mineral reserve or resource estimates for our uranium properties are inaccurate or are reduced in the future, it could:

- require us to write down the value of a property
- result in lower uranium concentrate production than previously estimated
- result in lower revenue than previously estimated
- require us to incur increased capital or operating costs, or
- require us to operate mines or facilities unprofitably

This could have a material and adverse effect on our earnings, cash flows, financial condition or results of operations or prospects.

Production, capital and operating cost estimates may be inaccurate

We prepare estimates of future production, capital costs and operating costs for particular operations, but there is no assurance we will achieve these estimates. Estimates of expected future production, capital costs and operating costs are inherently uncertain, particularly beyond one year, and could change materially over time.

Production, capital cost and operating cost estimates for:

- McArthur River assume that development, mining and production plans proceed as expected
- Cigar Lake assume that development, mining and production plans proceed as expected
- Inkai assume that development, mining and production plans proceed as expected

Production estimates for uranium refining, conversion and fuel manufacturing assume there is no disruption or reduction in supply from us or third party sources, and that estimated rates and costs of processing are accurate, among other things.

Our actual production and costs may vary from estimates for a variety of reasons, including, among others:

- actual ore mined varying from estimated grade, tonnage, dilution, metallurgical and other characteristics
- mining and milling losses greater than planned
- short-term operating factors relating to the ore, such as the need for sequential development of orebodies and the processing of new or different ore grades
- risk and hazards associated with mining, milling, uranium refining, conversion and fuel manufacturing
- failure of mining methods and plans
- failure to obtain and maintain the necessary regulatory and participant approvals
- natural phenomena, such as inclement weather conditions or floods
- labour shortages or strikes
- development, mining or production plans for Cigar Lake are delayed or do not succeed for any reason
- difficulties in milling Cigar Lake ore at McClean Lake
- development, mining or production plans for Inkai are delayed or do not succeed for any reason
- delays, interruption or reduction in production or construction activities due to fires, failure or unavailability of critical equipment, shortage of supplies, underground floods, earthquakes, tailings dam failures, lack of tailings capacity, ground movements and cave-ins, unanticipated consequences of our cost reduction strategies, or other difficulties

Operating costs may also be affected by a variety of factors including: changing waste to ore ratios, ore grade metallurgy, labour costs, costs of supplies and services (for example, fuel and power), general inflationary pressures and currency exchange rates.

Failure to achieve production or cost estimates or a material increase in costs could have a material and adverse effect on our earnings, cash flows, financial condition or results of operations.

Currency fluctuations

Our earnings and cash flow may also be affected by fluctuations in the exchange rate between the Canadian and US dollar. Our sales of uranium and conversion services are mostly denominated in US dollars, while the production costs of both are denominated primarily in Canadian dollars. In addition, our purchases of uranium are primarily denominated in US dollars. Our consolidated financial statements are expressed in Canadian dollars.

Any fluctuations in the exchange rate between the US dollar and Canadian dollar can result in favourable and unfavourable foreign currency exposure, which can have a material effect on our future earnings, cash flows, financial condition or results of operations, as has been the case in the past. While we use a hedging program to limit any adverse effects of fluctuations in foreign exchange rates, there is no assurance that these hedges will eliminate the potential material negative impact of fluctuating exchange rates.

Customers

Our main business relates to the production and sale of uranium concentrates (our uranium segment) and providing uranium conversion services (our fuel services segment). We rely heavily on a small number of customers to purchase a significant portion of our uranium concentrates and conversion services.

From 2020 through 2022, we expect:

- in our uranium segment, our five largest customers to account for 47% of our contracted supply of U_3O_8
- in our fuel services segment, our five largest UF_6 conversion customers to account for 64% of our contracted supply of UF_6 conversion services

We are a supplier of UO_2 used by Canadian CANDU heavy water reactors. Our sales to our largest customer accounted for 38% of our UO_2 sales in 2019. In addition, revenues in 2019 from one customer of our uranium and conversion segments represented $205 million (10%) of our total revenues from those businesses.

Sales for the Bruce A and B reactors represent a substantial portion of our fuel manufacturing business.

If we lose any of our largest customers or if any of them curtails their purchases, it could have a material and adverse effect on our earnings, cash flows, financial condition or results of operations.

Counterparty and credit risk

Our business operations expose us to the risk of counterparties not meeting their contractual obligations, including:

- customers
- suppliers
- financial institutions and other counterparties to our derivative financial instruments and hedging arrangements relating to foreign currency exchange rates and interest rates
- financial institutions which hold our cash on deposit and through which we make short-term investments
- insurance providers

Credit risk is the risk that counterparties will not be able to pay for services provided under the terms of the contract. If a counterparty to any of our significant contracts defaults on a payment or other obligation or becomes insolvent, it could have a material and adverse effect on our cash flows, earnings, financial condition or results of operations.

Uranium products, conversion and fuel services

In our uranium and fuel services segments, we manage the credit risk of our customers for uranium products, conversion and fuel services by:

- monitoring their creditworthiness
- asking for pre-payment or another form of security if they pose an unacceptable level of credit risk

As of December 31, 2019, 95% of our forecast revenue under contract for the period 2020 to 2022 is with customers whose creditworthiness meets our standards for unsecured payment terms.

Other

We manage the credit risk on our derivative and hedging arrangements, cash deposits and insurance policies by dealing with financial institutions and insurers that meet our credit rating standards and by limiting our exposure to individual counterparties.

We diversify or increase inventory in our supply chain to limit our reliance on a single contractor, or limited number of contractors. We also monitor the creditworthiness of our suppliers to manage the risk of suppliers defaulting on delivery commitments.

There is no assurance, however, that we will be successful in our efforts to manage the risk of default or credit risk.

Liquidity and financing

Liquidity, or access to funds, is essential to our business.

Nuclear energy and mining are extremely capital intensive businesses, and companies need significant ongoing capital to maintain and improve existing operations, invest in large scale capital projects with long lead times, and manage uncertain development and permitting timelines and the volatility associated with fluctuating uranium and input prices.

We believe our current financial resources are sufficient to support the projects we have planned for 2020. We have a number of alternatives to fund future capital requirements, including using our operating cash flow, drawing on our existing credit facilities, entering new credit facilities, and raising additional capital through debt or equity financings.

There is no assurance that we will obtain the financing we need, when we need it. Volatile uranium markets, a claim against us, an adverse court or arbitration decision, a significant event disrupting our business or operations, or other factors, may make it difficult or impossible for us to obtain debt or equity financing on favourable terms, or at all.

A lack of liquidity could have a material and adverse effect on our cash flows, earnings, financial condition or results of operations or prospects.

Operating and capital plans

We establish our operating and capital plans based on the information we have at the time, including expert opinions. There is no assurance, however, that these plans will not change as new information becomes available or there is a change in expert opinion.

Studies we use may contain estimated capital and operating costs, production and economic returns and other estimates that may be significantly different than actual results.

Internal controls

We use internal controls over financial reporting to provide reasonable assurance that we authorize transactions, safeguard assets against improper or unauthorized use, and record and report transactions properly. This gives us reasonable assurance that our financial reporting is reliable, and prepared in accordance with IFRS.

It is impossible for any system to provide absolute assurance or guarantee reliability, regardless of how well it is designed or operated. We continue to evaluate our internal controls to identify areas for improvement and provide as much assurance as reasonably possible. We conduct an annual assessment of our internal controls over financial reporting and produce an attestation report of their effectiveness by our independent auditors to meet the requirement of Section 404 of the *Sarbanes-Oxley Act* of 2002.

If we do not satisfy the requirements for internal controls on an ongoing, timely basis, it could negatively affect investor confidence in our financial reporting, which could have an impact on our business and the trading price of our common shares. If a deficiency is identified and we do not introduce new or better controls, or have difficulty implementing them, it could harm our financial results or our ability to meet reporting obligations.

Carrying values of assets

We evaluate the carrying value of our assets to decide whether current events and circumstances indicate whether or not we can recover the carrying amount. This involves comparing the estimated fair value of our reporting units to their carrying values.

We base our fair value estimates on various assumptions, however, the actual fair values can be significantly different than the estimates. If we do not have any mitigating valuation factors or experience a decline in the fair value of our reporting units, it could ultimately result in an impairment charge.

3 – Political risks

Foreign investments and operations

We do business in countries and jurisdictions outside of Canada and the US, including the developing world. Doing business in these countries poses risks because they have different economic, cultural, regulatory and political environments. Future economic and political conditions could also cause the governments of these countries to change their policies on foreign investments, development and ownership of resources, or impose other restrictions, limitations or requirements that we may not foresee today.

Risks related to doing business in a foreign country can include:

- uncertain legal, political and economic environments
- strong governmental control and regulation
- lack of an independent judiciary
- war, terrorism and civil disturbances
- crime, corruption, making improper payments or providing benefits that may violate Canadian or US law or laws relating to foreign corrupt practices
- unexpected changes in governments and regulatory officials
- uncertainty or disputes as to the authority of regulatory officials
- changes in a country's laws or policies, including those related to mineral tenure, mining, imports, exports, tax, duties and currency
- cancellation or renegotiation of permits or contracts
- exposure to global public health issues (for example, an outbreak of illness)
- disruption in transportation between jurisdictions
- royalty and tax increases or other claims by government entities, including retroactive claims
- expropriation and nationalization
- delays in obtaining the necessary permits or the inability to obtain or maintain them
- currency fluctuations
- high inflation
- joint venture participants falling out of political favour
- restrictions on local operating companies selling their production offshore
- exchange or capital controls, including restrictions on local operating companies holding US dollars or other foreign currencies in offshore bank accounts
- import and export regulations, including restrictions on the export of uranium
- limitations on the repatriation of earnings
- exposure to different employment practices and labour laws
- increased financing costs

If one or more of these risks occur, it could have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

We also risk being at a competitive disadvantage to companies from countries that are not subject to Canadian or US law or laws relating to foreign corrupt practices.

We enter into joint venture arrangements with local participants from time to time to mitigate political risk. There is no assurance that these joint ventures will mitigate our political risk in a foreign jurisdiction.

We do not have political risk insurance for our foreign investments, including our investment in JV Inkai.

Kazakhstan

Kazakhstan declared itself independent in 1991 after the dissolution of the Soviet Union. Our investment in JV Inkai is subject to the greater risks associated with doing business in developing countries, which have significant potential for social, economic, political, legal and fiscal instability. Kazakhstan laws and regulations are complex and still developing and their application can be difficult to predict. The other owner of JV Inkai is KAP, an entity majority owned by the government of Kazakhstan. We have entered into agreements with JV Inkai and KAP intended to mitigate political risk. Among other things, this risk includes the imposition of governmental laws or policies that could restrict or hinder JV Inkai paying us dividends, or selling us our share of JV Inkai production, or that impose discriminatory taxes or currency controls on these transactions. The restructuring of JV Inkai, which took effect January 1, 2018, was undertaken with the objective to better align the interests of Cameco and KAP and includes a governance framework that provides for protection for us as a minority owner of JV Inkai. While we believe the political risk related to our investment in JV Inkai is manageable, there can be no assurance we be successful in managing this risk.

Complex legal regime

JV Inkai has a contract with the Kazakhstan government and was granted licences to conduct mining and exploration activities there. The licensing regime has long been abolished but licences issued before such abolishment remain valid. JV Inkai's ability to conduct these activities, however, depends on the regulator's view on whether its licences are still valid and other government approvals being granted.

To maintain and increase production at Inkai, JV Inkai needs ongoing support, agreement and co-operation from Kazatomprom and from the Kazakhstan government. Kazakhstan foreign investment, environmental and mining laws and regulations are complex and still developing, so it can be difficult to predict how they will be applied. JV Inkai's best efforts may

therefore not always reflect full compliance with the law, and non-compliance can lead to an outcome that is disproportionate to the nature of the breach.

Subsoil law

Amendments to the old subsoil law in 2007 allow the government to reopen resource use contracts in certain circumstances, and in 2009, the Kazakhstan government passed a resolution that classified 231 blocks, including Inkai's blocks, as strategic deposits. The Kazakhstan government re-approved this list in 2011 and in 2018 and Inkai's blocks remain on it. These actions may increase the government's ability to expropriate JV Inkai's properties in certain situations. In 2009, at the request of the Kazakhstan government, JV Inkai amended the resource use contract to adopt a new tax code, even though the government had agreed to tax stabilization provisions in the original contract.

The previous subsoil use law which went into effect in 2010 weakened the stabilization guarantee of the prior law and the current subsoil code contains significant number of provisions which apply retrospectively. These developments reflect increased political risk in Kazakhstan.

Nationalization

Industries like mineral production are regarded as nationally or strategically important, but there is no assurance they will not be expropriated or nationalized. Government policy can change to discourage foreign investment and nationalize mineral production, or the government can implement new limitations, restrictions or requirements.

There is no assurance that our investment in Kazakhstan will not be nationalized, taken over or confiscated by any authority or body, whether the action is legitimate or not. While there are provisions for compensation and reimbursement of losses to investors under these circumstances, there is no assurance that these provisions would restore the value of our original investment or fully compensate us for the investment loss. This could have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

Government regulations

Our investment in Kazakhstan may be affected in varying degrees by government regulations restricting production, price controls, export controls, currency controls, taxes and royalties, expropriation of property, environmental, mining and safety legislation, and annual fees to maintain mineral properties in good standing. Kazakhstan regulatory authorities exercise considerable discretion in the interpretation and enforcement of local laws and regulations. At times, authorities use this discretion to enforce rights in a manner that is inconsistent with relevant legislation, particularly with respect to licence issuance, renewal and compliance. Requirements imposed by regulatory authorities may be costly and time-consuming and may result in delays in the commencement, continuation or expansion of production operations. Regulatory authorities may impose more onerous requirements and obligations than those currently in effect.

There is no assurance that the laws in Kazakhstan which provide protection to investments, including foreign investments, will not be amended or abolished, or that these existing laws will be enforced or interpreted to provide adequate protection against any or all of the risks described above. There is also no assurance that the resource use contract can be enforced or will provide adequate protection against any or all of the risks described above.

See pages 59 to 62 for a more detailed discussion of the regulatory and political environment in Kazakhstan.

Presidential succession

The President of Kazakhstan, Nursultan Nazarbayev, was in office since Kazakhstan became an independent republic in 1991 until he resigned on March 20, 2019. He was succeeded by Kassym-Jomart Tokayev. As a consequence of this development, Kazakhstan's political situation and economy could become unstable and the investment climate deteriorate, which could have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

Australia

Western Australian Government's uranium policy

State governments in Australia have prohibited uranium mining or uranium exploration from time to time, and from 2002 to 2008, uranium mining was banned in Western Australia, where our Kintyre and Yeelirrie projects are located. A prohibition or

restriction on uranium exploration or mining in the future that interferes with the development of Kintyre or Yeelirrie could have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

4 – Regulatory risks

US trade restrictions and tariffs

For the year ended December 31, 2019, approximately 29% of our sales (by volume), were made to customers based in the US, and we expect to continue to market and sell our uranium products to the US.

On July 13, 2019, the US President decided not to implement new trade restrictions on uranium imports into the US following the investigation into the matter under Section 232 of the *US Trade Expansion Act of 1962*, as amended, finding that foreign uranium do not constitute a national security threat and that new restrictions on imports were not required. The US President also announced the establishment of the NFWG to further analyze the state of US nuclear fuel production. The NFWG has submitted its report to the President; however, details of the report have not been made public.

On February 10, 2020, the US government unveiled a 2021 budget request to purchase $150 million (US) of uranium from domestic suppliers to address the production challenges currently facing the US uranium mining industry and to ensure a backup supply of uranium in the event of a supply disruption. The imposition of tariffs, import quotas or other restrictions on sales of uranium in the US may affect our sales in the US, which could in turn have a material and adverse effect on our earnings, financial condition, cash flows, results of operations or prospects.

Government laws and regulation

Our business activities are subject to extensive and complex laws and regulations.

There are laws and regulations for uranium exploration, development, mining, milling, refining, conversion, fuel manufacturing, transport, exports, imports, taxes and royalties, labour standards, occupational health, waste disposal, protection and remediation of the environment, decommissioning and reclamation, safety, hazardous substances, emergency response, land use, water use and other matters.

Significant financial and management resources are required to comply with these laws and regulations, and this will likely continue as laws and government regulations become more and more strict. We are unable to predict the ultimate cost of compliance or its effect on our business because legal requirements change frequently, are subject to interpretation and may be enforced to varying degrees.

Some of our operations are regulated by government agencies that exercise discretionary powers conferred by statute. If these agencies do not apply their discretionary authority consistently, then we may not be able to predict the ultimate cost of complying with these requirements or their effect on operations.

Existing, new or changing laws, regulations and standards of regulatory enforcement could increase costs, lower, delay or interrupt production or affect decisions about whether to continue with existing operations or development projects. This could have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

If we do not comply with the laws and regulations that apply to our business, or it is alleged we do not comply then regulatory or judicial authorities could take any number of enforcement actions, including:

- corrective measures that require us to increase capital or operating expenditures or install additional equipment
- remedial actions that result in temporary or permanent shut-down or reduction of our operations
- requirements that we compensate communities that suffer loss or damage because of our activities
- civil or criminal fines or penalties

Legal and political circumstances are different outside North America, which can change the nature of regulatory risks in foreign jurisdictions when compared with regulatory risks associated with operations in North America.

Permitting and licensing

All mining projects and processing facilities around the world require government approvals, licences or permits, and operations and development projects in Canada, the US, Kazakhstan, and Australia are no exception. Depending on the location of the project, this can be a complex and time consuming process involving multiple government agencies.

Many approvals, licences and permits have to be obtained from the appropriate regulatory authorities and maintained, but there is no assurance that they will grant or renew them, approve any additional licences or permits for potential changes to operations in the future or in response to new legislation, or that they will process any of the applications on a timely basis. Stakeholders, like environmental groups, non-government organizations (NGOs) and Indigenous groups claiming rights to traditional lands, can raise legal challenges. A significant delay in obtaining or renewing the necessary approvals, licences or permits, or failure to receive the necessary approvals, licences or permits, could interrupt operations or prevent them from operating, which could have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

5 – Environmental risks

Complex legislation and environmental, health and safety risk

Our activities have an impact on the environment, so our operations are subject to extensive and complex laws and regulations relating to the protection of the environment, employee health and safety and waste management. We also face risks that are unique to uranium mining, processing and fuel manufacturing. Laws to protect the environment as well as employee health and safety are becoming more stringent for members of the nuclear energy industry.

Our facilities operate under various operating and environmental approvals, licences and permits that have conditions that we must meet as part of our regular business activities. In a number of instances, our right to continue operating these facilities depends on our compliance with these conditions.

Our ability to obtain approvals, licences and permits, maintain them, and successfully develop and operate our facilities may be adversely affected by the real or perceived impact of our activities on the environment and human health and safety at our development projects and operations and in the surrounding communities. The real or perceived impact of activities of other nuclear energy or mining companies can also have an adverse effect on our ability to secure and maintain approvals, licences and permits.

Our compliance with laws and regulations relating to the protection of the environment, employee health and safety, and waste management requires significant expenditures and can cause delays in production or project development. This has been the case in the past and may be so in the future. Failing to comply can lead to fines and penalties, temporary or permanent suspension of development and operational activities, clean-up costs, damages and the loss of, or the inability to obtain, key approvals, permits and licences. We are exposed to these potential liabilities for our current development projects and operations as well as operations that have been closed. There is no assurance that we have been or will be in full compliance with all of these laws and regulations, or with all the necessary approvals, permits and licences.

Laws and regulations on the environment, employee health and safety, and waste management continue to evolve and this can create significant uncertainty around the environmental, employee health and safety, and waste management costs we incur. If new legislation and regulations are introduced in the future, they could lead to additional capital and operating costs, restrictions and delays at existing operations or development projects, and the extent of any of these possible changes cannot be predicted in a meaningful way.

Environmental and regulatory review is a long and complex process that can delay the opening, modification or expansion of a mine, conversion facility or refining facility, or extend decommissioning activities at a closed mine or other facility.

Our ability to foster and maintain the support of local communities and governments for our development projects and operations is critical to the conduct and growth of our business, and we do this by engaging in dialogue and consulting with them about our activities and the social and economic benefits they will generate. There is no assurance, however, that this support can be fostered or maintained. There is an increasing level of public concern relating to the perceived effect that nuclear energy and mining activities have on the environment and communities affected by the activities. Some NGOs are vocal critics of the nuclear energy and mining industries, and oppose globalization, nuclear energy and resource development. Adverse publicity generated by these NGOs or others, related to the nuclear energy industry or the extractive industry in general, or our operations in particular, could have an adverse effect on our reputation or financial condition and may affect our relationship with the communities we operate in. While we are committed to operating in a socially responsible way, there is no guarantee that our efforts will mitigate this risk.

These risks could delay or interrupt our operations or project development activities, delay, interrupt or lower our production and have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

Changes in climate conditions and regulatory regime could adversely affect our business and operations

A number of government or governmental bodies have introduced or are contemplating regulatory changes in response to the potential impacts of climate change. Where legislation already exists, regulations relating to emissions levels and energy efficiency is becoming more stringent. The changes in legislation and regulation will likely increase our compliance costs.

In addition, the physical risks of climate change may also have an adverse effect at some of our operations. These may include extreme weather events such as floods, droughts, forest and bush fires, and extreme storms. These physical impacts could require us to suspend or reduce production or close operations and could prevent us from pursuing expansion opportunities. These effects may adversely impact the cost, production and financial performance of our operations.

We can provide no assurance that efforts to mitigate the risks of climate change will be effective and that physical risks of climate change will not have a material and adverse effect on our earnings, cash flows, financial condition or prospects.

Decommissioning and reclamation obligations

Environmental regulators are demanding more and more financial assurances so that the parties involved, and not the government, bear the cost of decommissioning and reclaiming sites. All of our North American operations have financial assurances in place in connection with our preliminary plans for decommissioning of the sites.

We have filed conceptual decommissioning plans for some of our properties with the regulators. We review these plans for Canadian facilities every five years, or at the time of an amendment or renewal of an operating licence. Plans for our US sites are reviewed every year. Regulators review our conceptual plans on a regular basis. As the sites approach or go into decommissioning, regulators review the detailed decommissioning plans, and this can lead to additional requirements, costs and financial assurances. It is not possible to predict what level of decommissioning and reclamation and financial assurances regulators may require in the future.

If we must comply with additional regulations, or the actual cost of decommissioning and reclamation in the future is significantly higher than our current estimates, this could have a material and adverse effect on our future earnings, cash flows, financial condition or results of operations.

6 – Legal and other risks

Litigation

We are currently subject to litigation or threats of litigation, and may be involved in disputes with other parties in the future that result in litigation. This litigation may involve joint venture participants, suppliers, customers, governments, regulators, tax authorities or other persons.

We cannot accurately predict the outcome of any litigation. The costs of defending or settling such litigation can be significant. If a dispute cannot be resolved favourably, it may have a material and adverse effect on our earnings, cash flows, financial condition, results of operations or prospects. See *Legal proceedings* on page 113 for more information.

We are currently involved in tax litigation with CRA and in 2017 settled a dispute with the IRS. See *Transfer pricing dispute* at pages 89 to 92. In addition, we are subject to the risk that CRA or the IRS may challenge or seek to reassess our income tax returns on a similar basis for other previously reported periods, and the risk that CRA, the IRS or other tax authorities in other countries may seek to challenge or reassess our income tax returns on a different basis for the same periods or other previously reported periods. Substantial success for CRA would be material, and other unfavourable outcomes of challenges or reassessments initiated by the IRS or tax authorities in other countries could be material, to our cash flows, financial condition, results of operations or prospects.

Public health issues and disease outbreaks

Our business and results of operations are subject to uncertainties arising out of public health issues. A local, regional, national or international outbreak of an illness or contagious disease, such as a pandemic like COVID-19, could result in a general or acute decline in economic activity in the regions where our customers reside, where we operate in or hold assets in,

production and transport delays and general business interruptions. In addition, these risks could result in an increase in the cost of supplies and equipment, delays from difficulties in obtaining export or import licenses, tariffs and other barriers and restrictions, a decrease in the willingness of the general population to travel, staff shortages, mobility restrictions and other quarantine measures, supply shortages, increased government regulation, and the quarantine or contamination of one or more of our work sites or buildings. Any such events could have a material impact on our business, financial condition and results of operations.

On March 23, 2020, we announced that we were temporarily suspending production at the Cigar Lake operation due to the Coronavirus (COVID-19) pandemic. We also advised that we are closely monitoring the operations of our Fuel Services Division in Ontario, and would continue to operate them for as long as it remains safe to do so in order to continue a reliable supply of fuel. For further information, please see our Material Change Report dated March 24, 2020 filed on SEDAR. This unplanned suspension of production at the Cigar Lake operation and any interruption of the operations of our Fuel Services division in Ontario may lead to variability in our 2020 outlook presented in our 2019 MD&A, and other information presented in this AIF which is based on information predating the March 23, 2020 announcement. We face a number of additional risks as a result of the temporary suspension of production at the Cigar Lake operation, and other potential implications of the COVID-19 pandemic, including: the possibility that the ramp down of the Cigar Lake operation may take longer than expected or that the operations may need to remain in care and maintenance for an extended period for any reason, including regulatory compliance or delays in the resumption of Cigar Lake production, or milling at the McClean Lake mill; the possibility that we may not be able to continue operating Cameco's Fuel Services Division in Ontario due to safety, regulatory or other concerns arising as a result of COVID-19; the possibility that we may be unable to manage the current uncertain environment resulting from COVID-19 and its related risks successfully, including the risk of significant disruption to our workforce, required supplies or services, ability to transport uranium, or our delivery schedule; the risk of safety incidents that may occur during the transition process at the Cigar Lake operation; the risk that the impact of COVID-19, including without limitation the suspension of production at the Cigar Lake operation, or any required suspension of the operations of Cameco's Fuel Services Division in Ontario, will have a materially adverse impact on our 2020 outlook or our business and operations generally, and that we may be unable to assess and report on the full extent of that impact in a timely manner.

Legal rights

If a dispute arises at our foreign operations, it may be under the exclusive jurisdiction of foreign courts, or we may not be successful in subjecting foreign persons to the jurisdiction of courts in Canada. We could also be hindered or prevented from enforcing our rights relating to a government entity or instrumentality because of the doctrine of sovereign immunity.

The dispute resolution provision of JV Inkai's resource use contract stipulates that any dispute between the parties is to be submitted to international arbitration. There is no assurance, however, that a particular government entity or instrumentality will either comply with the provisions of this or any other agreements, or voluntarily submit a dispute to arbitration. If we are unable to enforce our rights under these agreements, this could have a material and adverse effect on our earnings, cash flows, financial condition or results of operations.

Defects in title

We have investigated our rights to explore and exploit all of our material properties, and those rights are in good standing to the best of our knowledge. There is no assurance, however, that these rights will not be revoked or significantly altered to our detriment, or that our rights will not be challenged by third parties, including local governments and by Indigenous groups, such as First Nations and Métis in Canada.

Indigenous rights, title claims and consultation

Managing Indigenous rights, title claims and consultation is an integral part of our exploration, development and mining activities, and we are committed to managing them effectively. We have signed agreements with the communities closest to our operations to help mitigate the risks associated with potential Indigenous land or consultation claims that could impact our operations. These agreements provide substantial socioeconomic opportunities to these communities and also provide us with support for our operations from those communities. There is no assurance, however, that we will not face material adverse consequences because of the legal and factual uncertainties inherent with Indigenous rights, title claims and consultation.

Saskatchewan

Exploration, development, mining, milling and decommissioning activities at our various properties in Saskatchewan may be affected by claims by Indigenous groups, and related consultation issues.

We also face similar issues with our activities in other provinces and countries.

It is generally acknowledged that under historical treaties, First Nations in northern Saskatchewan ceded title to most traditional lands in the region in exchange for treaty benefits and reserve lands. Some First Nations in Saskatchewan, however, assert that their treaties are not an accurate record of their agreement with the Canadian government and that they did not cede title to the minerals when they ceded title to their traditional lands.

Fuel fabrication defects and product liability

We fabricate nuclear fuel bundles, other reactor components and monitoring equipment. These products are complex and may have defects that can be detected at any point in their product life cycle. Flaws in the products could materially and adversely affect our reputation, which could result in a significant cost to us and have a negative effect on our ability to sell our products in the future. We could also incur substantial costs to correct any product errors, which could have an adverse effect on our operating margins. While we have introduced significant automation to limit the potential for quality issues, there is no guarantee that we will detect all defects or errors in our products.

It is possible that some customers may demand compensation if we deliver defective products. If there are a significant number of product defects, it could have a significant impact on our operating results.

Agreements with some customers may include specific terms limiting our liability to customers. Even if there are limited liability provisions in place, existing or future laws, or unfavourable judicial decisions may make them ineffective. We have not experienced any material product liability claims to date, however, they could occur in the future because of the nature of nuclear fuel products. A successful product liability claim could result in significant monetary liability and could seriously disrupt our fuel manufacturing business and the company overall.

7 – Industry risks

Major nuclear incident risk

Due to their inherent materiality, major accidents in the nuclear industry, and most notably at nuclear power plants, such as the Chernobyl Nuclear Power Plant accident of 1986 in the Soviet Union and the more recent accident in 2011 at the Fukushima-Daiichi nuclear power plant in Japan, garner significant worldwide attention and spawn global public sentiment favouring more significant regulation for nuclear power generation. For example, following the accident at Fukushima, certain countries, including Germany, Switzerland, and Belgium, have announced their intention to phase out nuclear power. As of December 31, 2019, Germany has shut down eleven of its 17 nuclear reactors, and is implementing measures to close the remaining reactors by 2022. Prior to the accident in 2011 at Fukushima, Japan had 54 nuclear reactors, which represented 12% of global nuclear generating capacity. As of December 31, 2019 Japan has restarted nine reactors. The effect of the 2011 accident at the Fukushima-Daiichi nuclear power plant on the uranium market has had a material and adverse effect on our earnings, cash flows, financial condition, results of operations and prospects.

Any new major accident at a nuclear power plant, or a similar disaster related to the nuclear industry could, at a minimum, lead to more countries adopting increasingly stringent safety regulations in the nuclear industry, strengthen the public sentiment for phasing-out nuclear power and intensify the trend towards non-nuclear power. It may not be ruled out that the reaction to any such major accident would be significantly more severe, resulting in a rapid global abandonment of nuclear power generation as whole restrained principally by the actual local ability to migrate to a non-nuclear power source. Any such event may result in, among other things, in a significant reduction in the demand for uranium and the resulting decline in the price of uranium.

Any new major accident at a nuclear power plant, or a similar disaster related to the nuclear industry, would have a material and adverse effect on our earnings, cash flows, financial condition, results of operations and prospects.

Public acceptance of nuclear energy is uncertain

Maintaining the demand for uranium at current levels and achieving any growth in demand in the future will depend on society's acceptance of nuclear technology as a means of generating electricity. Because of unique political, technological,

and environmental factors affecting the nuclear industry, including reinvigorated public attention following the 2011 accident at Fukushima in Japan, the industry is subject to public opinion risks that could have a material adverse impact on the demand for nuclear power and increase the regulation of the nuclear power industry.

A major shift in public opinion, whether due to an accident at a nuclear power plant anywhere in the world or otherwise, could impact the continuing acceptance of nuclear energy and the future prospects for nuclear power generation, which could have a material adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

In addition, we may be impacted by changes in regulation and public perception of the safety of nuclear power plants, which could adversely affect the construction of new plants, the re-licensing of existing plants, the demand for uranium and the future prospects for nuclear generation. These events could have a material adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

Industry concentration risk

We are concentrated in the nuclear fuel business, with our primary focus on uranium mining. As such, we are sensitive to changes in, and our performance and future prospects, will depend to a greater extent on, the overall condition of the nuclear energy industry and the public acceptance of nuclear energy. We may be susceptible to increased risks, compared to diversified metals trading companies or diversified mining companies, as a result of the fact that our operations are concentrated in the nuclear fuel business.

Because we derive the majority of our revenues from sales of nuclear fuel, our results of operations and cash flows will fluctuate as the price of nuclear fuel increases or decreases. See "*Financial risks – Volatility and sensitivity to prices*." A sustained period of declining nuclear fuel prices would materially and adversely affect our results of operations and cash flows. Additionally, if the market price for nuclear fuel declines or remains at relatively low levels for a sustained period of time, we may have to revise our operating plans, including reducing operating costs and capital expenditures, terminating or suspending mining operations at one or more of our properties and discontinuing certain exploration and development plans. We have been impacted by the sustained period of low prices, implementing cost reduction measures, in 2016 suspending production at Rabbit Lake and curtailing production from our US ISR Operations, and in 2018 suspending production for an indeterminate period from our McArthur River and Key Lake operations, and reducing our dividend. In a sustained period of low prices, we may be unable to decrease our costs in an amount sufficient to offset reductions in revenues, and may incur losses.

Alternate sources of energy

Nuclear energy competes with other sources of energy like oil, natural gas, coal, hydroelectric, solar and wind. These sources are somewhat interchangeable with nuclear energy, particularly over the longer term and sustained lower prices for these energy sources may result in lower demand for nuclear energy and consequently reduction in demand for uranium and uranium prices.

A major shift in the power generation industry towards non-nuclear power or non-uranium based sources of nuclear energy, whether due to lower cost of power generation associated with such sources, government policy decisions, or otherwise, could have a material adverse effect on our earnings, cash flows, financial condition, results of operations or prospects.

Industry competition and international trade restrictions

The international uranium industry, which includes supplying uranium concentrates and providing uranium conversion services, is highly competitive. We directly compete with a relatively small number of uranium mining and enrichment companies in the world. Their supply may come from mining uranium, excess inventories, including inventories made available from decommissioning of nuclear weapons, reprocessed uranium and plutonium derived from used reactor fuel, and from using excess enrichment capacity to re-enrich depleted uranium tails and generate uranium from underfeeding. The number of potential end customers for our uranium products, being utility companies, is relatively scarce.

The supply of uranium is affected by a number of international trade agreements and government legislation and policies. These and any similar future agreements, governmental legislation, policies or trade restrictions are beyond our control and may affect the supply of uranium available in the US, Europe and Asia, the world's largest markets for uranium. See *Regulatory Risks – US trade restrictions and tariffs*"

For conversion services, we compete with a small number of primary commercial suppliers. In addition, we compete with the availability of additional supplies from excess inventories, including those from decommissioning nuclear weapons and using excess enrichment capacity to re-enrich depleted uranium tails.

Any political decisions about the uranium market can affect our future prospects. There is no assurance that the US or other governments will not enact legislation or take other actions that restricts who can buy or supply uranium, or facilitates a new supply of uranium.

Competition for sources of uranium

There is competition for mineral acquisition opportunities throughout the world, so we may not be able to acquire rights to explore additional attractive uranium mining properties on terms that we consider acceptable.

There is no assurance that we will acquire any interest in additional uranium properties, or buy additional uranium concentrates from the decommissioning of nuclear weapons or the release of excess government inventory, that will result in additional uranium concentrates we can sell. If we are not able to acquire these interests or rights, it could have a material and adverse effect on our future earnings, cash flows, financial condition or results of operations. Even if we do acquire these interests or rights, the resulting business arrangements may ultimately prove not to be beneficial.

Deregulation of the electrical utility industry

A significant part of our future prospects is directly linked to developments in the global electrical utility industry.

Deregulation of the utility industry, particularly in the US, Japan and Europe, could affect the market for nuclear and other fuels and could lead to the premature shutdown of some nuclear reactors.

Deregulation has resulted in utilities improving the performance of their reactors to record capacity, but there is no assurance this trend will continue.

Deregulation can have a material and adverse effect on our future earnings, cash flows, financial condition or results of operations.

Legal proceedings

We discuss any legal proceedings that we or our subsidiaries are a party, as at December 31, 2019, in note 21 to the 2019 financial statements.

We are currently involved in a dispute with CRA. See *Transfer pricing dispute* at page 89 for more details about this dispute.

Investor information

Share capital

Our authorized share capital consists of:

- first preferred shares
- second preferred shares
- common shares
- one class B share

Preferred shares

We do not currently have any preferred shares outstanding, but we can issue an unlimited number of first preferred or second preferred shares with no nominal or par value, in one or more series. The board must approve the number of shares, and the designation, rights, privileges, restrictions and conditions attached to each series of first or second preferred shares.

Preferred shares can carry voting rights, and they rank ahead of common shares and the class B share for receiving dividends and distributing assets if the company is liquidated, dissolved or wound up.

First preferred shares

Each series of first preferred shares ranks equally with the shares of other series of first preferred shares. First preferred shares rank ahead of second preferred shares, common shares and the class B share.

Second preferred shares

Each series of second preferred shares ranks equally with the shares of other series of second preferred shares. Second preferred shares rank after first preferred shares and ahead of common shares and the class B share.

Common shares

We can issue an unlimited number of common shares with no nominal or par value. Only holders of common shares have full voting rights in Cameco.

If you hold our common shares, you are entitled to vote on all matters that are to be voted on at any shareholder meeting, other than meetings that are only for holders of another class or series of shares. Each Cameco share you own represents one vote, except where noted below. As a holder of common shares, you are also entitled to receive any dividends that are declared by our board of directors.

Common shares rank after preferred shares with respect to the payment of dividends and the distribution of assets if the company is liquidated, dissolved or wound up, or any other distribution of our assets among our shareholders if we were to wind up our affairs.

Holders of our common shares have no pre-emptive, redemption, purchase or conversion rights for these shares. Except as described under *Ownership and voting restrictions*, non-residents of Canada who hold common shares have the same rights as shareholders who are residents of Canada.

As at December 31, 2019, we had 395,797,732 common shares outstanding. These were fully paid and non-assessable.

As of March 2, 2020, there were 8,593,567 stock options outstanding to acquire common shares of Cameco under the company's stock option plan with exercise prices ranging from $11.32 to $26.81.

In 2019, we granted the following stock options:

March 1, 2019 – 886,740 stock options to acquire common shares of Cameco at an exercise price of $15.27.

In 2020, no stock options were granted.

Our articles of incorporation have provisions that restrict the issue, transfer and ownership of voting securities of Cameco (see *Ownership and voting restrictions* below).

Class B shares

The province of Saskatchewan holds our one class B share outstanding. It is fully paid and non-assessable.

The one class B share entitles the province to receive notices of and attend all meetings of shareholders, for any class or series.

The class B shareholder can only vote at a meeting of class B shareholders, and only as a class if there is a proposal to:

- amend Part 1 of Schedule B of the articles, which states that:
- Cameco's registered office and head office operations must be in Saskatchewan
- the vice-chair of the board, chief executive officer (CEO), president, chief financial officer (CFO) and generally all of the senior officers (vice-presidents and above) must live in Saskatchewan
- all annual meetings of shareholders must be held in Saskatchewan
- amalgamate, if it would require an amendment to Part 1 of Schedule B of the articles, or
- amend the articles in a way that would change the rights of class B shareholders

The class B shareholder can request and receive information from us to determine whether or not we are complying with Part 1 of Schedule B of the articles.

The class B shareholder does not have the right to receive any dividends declared by Cameco. The class B share ranks after first and second preferred shares, but equally with common shareholders, with respect to the distribution of assets if the company is liquidated, dissolved or wound up. The class B shareholder has no pre-emptive, redemption, purchase or conversion rights with its class B share, and the share cannot be transferred.

Ownership and voting restrictions

The federal government established ownership restrictions when Cameco was formed so we would remain Canadian controlled. There are restrictions on issuing, transferring and owning Cameco common shares whether you own the shares as a registered shareholder, hold them beneficially or control your investment interest in Cameco directly or indirectly. These are described in the *Eldorado Nuclear Limited Reorganization and Divestiture Act (Canada)* (ENL Reorganization Act) and our company articles.

The following is a summary of the restrictions listed in our company articles.

Residents

A Canadian resident, either individually or together with associates, cannot hold, beneficially own or control shares or other Cameco securities, directly or indirectly, representing more than 25% of the votes that can be cast to elect directors.

Non-residents

A non-resident of Canada, either individually or together with associates, cannot hold, beneficially own or control shares or other Cameco securities, directly or indirectly, representing more than 15% of the total votes that can be cast to elect directors.

Voting restrictions

All votes cast at the meeting by non-residents, either beneficially or controlled directly or indirectly, will be counted and pro-rated collectively to limit the proportion of votes cast by non-residents to no more than 25% of the total shareholder votes cast at the meeting.

There have been instances in prior years when we have limited the counting of votes by non-residents of Canada at our annual meeting of shareholders to abide by this restriction. This has resulted in non-residents receiving less than one vote per share.

Enforcement

The company articles allow us to enforce the ownership and voting restrictions by:

- suspending voting rights
- forfeiting dividends and other distributions
- prohibiting the issue and transfer of Cameco shares
- requiring the sale or disposition of Cameco shares
- suspending all other shareholder rights.

To verify compliance with restrictions on ownership and voting of Cameco shares, we require existing shareholders, proposed transferees or other subscribers for voting shares to declare their residency, ownership of Cameco shares and other things relating to the restrictions. Nominees such as banks, trust companies, securities brokers or other financial institutions who hold the shares on behalf of beneficial shareholders need to make the declaration on their behalf.

We cannot issue or register a transfer of any voting shares if it would result in a contravention of the resident or non-resident ownership restrictions.

If we believe there is a contravention of our ownership restrictions based on any shareholder declarations filed with us, or our books and records or those of our registrar and transfer agent or otherwise, we can suspend all shareholder rights for the securities they hold, other than the right to transfer them. We can only do this after giving the shareholder 30 days' notice, unless he or she has disposed of the holdings and we have been advised of this.

Understanding the terms

Please see our articles for the exact definitions of associate, resident, non-resident, control, and beneficial ownership which are used for the restrictions described above.

Other restrictions

The *ENL Reorganization Act* imposes some additional restrictions on Cameco. We must maintain our registered office and our head office operations in Saskatchewan. We are also prohibited from:

- creating restricted shares (these are generally defined as a participating share with restrictive voting rights)
- applying for continuance in another jurisdiction
- enacting articles of incorporation or bylaws that have provisions that are inconsistent with the *ENL Reorganization Act*

We must maintain our registered office and head office operations in Saskatchewan under *the Saskatchewan Mining Development Corporation Reorganization Act*. This generally includes all executive, corporate planning, senior management, administrative and general management functions.

Credit ratings

Credit ratings provide an independent, professional assessment of a corporation's credit risk. They are not a comment on the market price of a security or suitability for an individual investor and are, therefore, not recommendations to buy, hold or sell our securities.

We provide rating agencies DBRS Limited (DBRS) and Standard & Poor's (S&P) with confidential information to support the credit rating process.

The credit ratings assigned to our securities by external ratings agencies are important to our ability to raise capital at competitive pricing to support our business operations.

We have three series of senior unsecured debentures outstanding:

- $400 million of debentures issued on November 14, 2012 that have an interest rate of 3.75% per year and mature on November 14, 2022
- $100 million of debentures issued on November 14, 2012 that have an interest rate of 5.09% per year and mature on November 14, 2042
- $500 million of debentures issued on June 24, 2014 that have an interest rate of 4.19% per year and mature on June 24, 2024

We have a commercial paper program which is supported by a $1 billion unsecured revolving credit facility that matures November 1, 2023. As of December 31, 2019, there were no amounts outstanding under the commercial paper facility.

The table below shows the current DBRS and S&P ratings and the rating trends/outlooks of our commercial paper and senior unsecured debentures:

Rating Agency	Rating	Rating Trend/Outlook
Commercial paper		
DBRS	**R-2 (middle)**	**Negative**
S&P	**A-3**	**Negative**
Senior Unsecured Debentures		
DBRS	**BBB**	**Negative**
S&P	**BBB-**	**Negative**

The rating agencies may revise or withdraw these ratings if they believe circumstances warrant. The rating trend/outlook represents the ratings agency's assessment of the likelihood and direction that the rating could change in the future.

A change in our credit ratings could affect our cost of funding and our access to capital through the capital markets.

DBRS downgraded Cameco on May 24, 2019 to BBB and maintained their negative trend. The downgrade was primarily due to the ongoing weakness in uranium prices and the cost impact of production curtailment on Cameco's credit metrics.

S&P changed their outlook for Cameco on March 11, 2020 to negative from stable. The outlook change was based on their view of continued market uncertainty in the rating window resulting in a revision to their uranium price assumptions and expected credit metrics.

Commercial paper

Rating scales for commercial paper are meant to indicate the risk that a borrower will not fulfill its near-term debt obligations in a timely manner.

The table below explains the credit ratings of our commercial paper in more detail:

	Rating	Ranking
DBRS **rates commercial paper by categories ranging from a high of *R-1* to a low of *D***	**R-2 (Middle)**	● middle of the R-2 category ● represents "adequate credit quality" ● fifth highest of 10 available credit rating categories
S&P **rates commercial paper by categories ranging from a high of *A-1 (high)* to a low of *D***	**A-3**	● represents "adequate protection parameters" ● third highest of six available credit rating categories

Senior unsecured debentures

Long-term debt rating scales are meant to indicate the risk that a borrower will not fulfill its full obligations, with respect to interest and principal, in a timely manner.

The table below explains the credit ratings of our senior unsecured debentures in more detail:

	Rating	Ranking
DBRS **rates senior unsecured debentures by categories ranging from a high of *AAA* to a low of *D***	**BBB**	● middle of the BBB category ● represents "adequate credit quality" ● fourth highest of eight available credit rating categories ● capacity for the payment of financial obligations is considered acceptable ● may be vulnerable to future events
S&P **rates senior unsecured debentures by categories ranging from a high of *AAA* to a low of *D***	**BBB-**	● the lower end of the BBB category ● exhibits "adequate protection parameters" ● fourth highest of 10 available credit rating categories ● adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity to meet financial commitments ● "negative" outlook means the rating may be lowered

Payments to credit rating agencies

Over the last two years, we paid $448,000 in connection with the credit ratings disclosed above.

Material contracts

Below is a list of material contracts entered into and still in effect, which have been filed on SEDAR in accordance with *National Instrument 51-102* Continuous Disclosure requirements:

Supplemental indentures

We entered into the *Fifth supplemental indenture* with CIBC Mellon on November 14, 2012, relating to the issue of $400 million in unsecured debentures at an interest rate of 3.75% per year and due in 2022.

We entered into the *Sixth supplemental indenture* with CIBC Mellon on November 14, 2012, relating to the issue of $100 million in unsecured debentures at an interest rate of 5.09% per year and due in 2042.

We entered into the *Seventh supplemental indenture* with CIBC Mellon on June 24, 2014, relating to the issue of $500 million in unsecured debentures at an interest rate of 4.19% per year and due in 2024.

See *Senior unsecured debentures*, above for more information about these debentures.

US trust indenture

We entered into an indenture with The Bank of New York Mellon on May 22, 2012 to set forth the general terms and provisions of debt securities. The terms of this indenture were fully described in our final short form base shelf prospectus dated December 9, 2014. We have not issued any debt securities under this indenture. The specific terms of any offering of debt securities under this indenture would be set forth in a shelf prospectus supplement.

Resource use contract

See page 58 at *Resource use contract* for information about this contract.

Market for our securities

Our common shares are listed and traded on the Toronto Stock Exchange (TSX) (under the symbol CCO) and the New York Stock Exchange (under the symbol CCJ).

We have a registrar and transfer agent in Canada and the US for our common shares:

Canada	AST Trust Company (Canada) P.O. Box 700, Station B Montreal, Quebec H3B 3K3	**US**	American Stock Transfer & Trust Company, LLC 6201 15th Avenue Brooklyn, New York United States of America 11219

Trading activity

The table below shows the high and low closing prices and trading volume for our common shares on the TSX in 2019.

2019	High ($)	Low ($)	Volume
January	16.53	14.92	23,386,857
February	17.12	15.15	20,152,736
March	16.79	15.10	19,756,546
April	16.15	14.66	16,278,438
May	14.91	13.40	18,840,790
June	14.27	13.42	16,282,725
July	14.60	11.85	19,287,435
August	12.12	10.70	18,049,755
September	13.01	11.51	17,399,592
October	12.85	11.60	11,680,832
November	13.25	11.46	11,967,042
December	13.04	11.32	16,977,182

Dividend

Starting in 2018, our board of directors reduced the planned dividend to $0.08 per common share to be paid annually. Our 2019 dividend was paid on December 13, 2019. The decision to declare an annual dividend by our board will be based on our cash flow, financial position, strategy and other relevant factors including appropriate alignment with the cyclical nature of our earnings.

The table below shows the dividends per common share for the last three fiscal years.

	2019	2018	2017
Cash dividends	$0.08	$0.08	$0.40
Total dividends paid (millions)	$32	$71	$158

Governance

Directors

Director	Board committees	Principal occupation or employment
Ian Bruce Calgary, Alberta, Canada Director since 2012	A member of all board committees	Corporate director as of 2010
Daniel Camus Westmount, Québec, Canada Director since 2011	Audit and finance (Chair) Human resources and compensation Nominating, corporate governance and risk	Corporate director as of 2011
Donald Deranger Prince Albert, Saskatchewan, Canada Director since 2009	Nominating, corporate governance and risk Reserves oversight Safety, health and environment	May 2013 to present – non-executive chair of the board of Points Athabasca Contracting LP, a civil, earthworks and industrial contracting company 1997 to present – Advisor to First Nations Communities
Catherine Gignac Mississauga, Ontario, Canada Director since 2014	Reserves oversight (Chair) Audit and finance Nominating, corporate governance and risk	Corporate director as of 2011
Tim Gitzel Saskatoon, Saskatchewan, Canada Director since 2011	None	July 2011 to present – President and Chief Executive Officer
Jim Gowans Surrey, British Columbia, Canada Director since 2009	Safety, health and environment (Chair) Audit and finance Reserves oversight	Corporate director as of 2018 August 2019 to present – Interim president, CEO and a director of Trilogy Metals Inc. January 2016 to 2018 – President and CEO of Arizona Mining Inc., an exploration and development company
Kate Jackson Pittsburgh, Pennsylvania, USA Director since 2017	Human resources and compensation Nominating, corporate governance and risk Safety, health and environment	Corporate director as of 2008
Don Kayne Delta, British Columbia, Canada Director since 2016	Human resources and compensation (Chair) Reserves oversight Safety, health and environment	September 2012 to present – Chief Executive Officer of Canfor Pulp Products Incorporated, an integrated forest products company May 2011 to present – President and CEO of Canfor Corporation
Anne McLellan Edmonton, Alberta, Canada Director since 2006	Nominating, corporate governance and risk (Chair) Human resources and compensation	May 2015 to present – Chancellor of Dalhousie University July 2006 to present – Senior Advisor at Bennett Jones LLP, a law firm

Each director is elected for a term of one year, and holds office until the next annual meeting unless he or she steps down, as required by corporate law.

Officers

Officer	Principal occupation or employment for past five years
Ian Bruce Chair of the Board Calgary, Alberta, Canada	Corporate director as of 2010
Tim Gitzel President and Chief Executive Officer Saskatoon, Saskatchewan, Canada	Assumed current position July 2011
Grant Isaac Senior Vice-President and Chief Financial Officer Saskatoon, Saskatchewan, Canada	Assumed current position July 2011
Sean Quinn Senior Vice-President, Chief Legal Officer and Corporate Secretary Saskatoon, Saskatchewan, Canada	Assumed current position April 2014
Brian Reilly Senior Vice-President and Chief Operating Officer Saskatoon, Saskatchewan, Canada	Assumed current position July 2017 March to June 2017 – Vice-President, Mining, Projects and Technology 2011 to February 2017 – Managing Director, Cameco Australia Pty. Ltd., a wholly-owned subsidiary
Alice Wong Senior Vice-President and Chief Corporate Officer Saskatoon, Saskatchewan, Canada	Assumed current position July 2011

To our knowledge, the total number of common shares that the directors and executive officers as a group either: (i) beneficially owned; or (ii) exercised direction or control over, directly or indirectly, was 630,983 as at March 18, 2020. This represents less than 1% of our outstanding common shares.

To the best of our knowledge, none of the directors, executive officers or shareholders that either: (i) beneficially owned; or (ii) exercised direction or control of, directly or indirectly, over 10% of any class of our outstanding securities, nor their associates or affiliates, have or have had within the three most recently completed financial years, any material interests in material transactions which have affected, or will materially affect, the company.

Other information about our directors and officers

None of our directors or officers, or a shareholder with significant holdings that could materially affect control of us, is or was a director or executive officer of another company in the past 10 years that:

- was the subject of a cease trade or similar order, or an order denying that company any exemption under securities legislation, for more than 30 consecutive days while the director or executive officer held that role with the company
- was involved in an event that resulted in the company being subject to one of the above orders after the director or executive officer no longer held that role with the company
- while acting in that capacity, or within a year of acting in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold the assets of that company, except for:
  -Ian Bruce was a director of Laricina Energy Limited (Laricina), a junior oilsands private company, from 2013 to December 2017. Laricina was under a *Companies' Creditors Arrangement Act (Canada)* (CCAA) protection order from March 26, 2015 to February 1, 2016; and
  -Jim Gowans was a director of Gedex Technologies Inc. (Gedex), an Ontario-based developer of airborne geological imaging technology, from 2015 to November, 2019. Gedex was under a CCAA protection from August 12 to December 5, 2019.

None of them in the past 10 years:

- became bankrupt

- made a proposal under any legislation relating to bankruptcy or insolvency
- has been subject to or launched any proceedings, arrangement or compromise with any creditors, or
- had a receiver, receiver manager or trustee appointed to hold any of their assets

None of them has ever been subject to:

- penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority, or
- any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision

About the audit and finance committee

Audit and finance committee charter

See appendix A for a copy of the audit and finance committee charter. You can also find a copy on our website (cameco.com/about/governance/board committees).

Composition of the audit and finance committee

The committee is made up of four members: Daniel Camus (chair), Ian Bruce, Catherine Gignac and Jim Gowans. Each member is independent and financially literate using criteria that meet the standards of the Canadian Securities Administrators as set out in *National Instrument 52-110*.

Relevant education and experience

Ian Bruce, a corporate director, is the former President and CEO of Peters & Co. Limited, an independent investment dealer. He was a past member of the Expert Panel on Securities Regulation for the Minister of Finance of Canada. Mr. Bruce was a board member and chair of the Investment Industry Association of Canada, and also served as a director of the public companies Cona Resources Ltd. from 2014 to 2018, Logan International Inc. from 2011 to 2016, Hardy Oil & Gas plc from 2008 to 2012 and Taylor Gas Liquids Ltd. from 1997 to 2008. He currently serves on the board of one other publicly-traded company and one private company. Mr. Bruce is a Fellow of the Chartered Professional Accountants (CPA) of Alberta, a recognized Specialist in Valuation under Canadian CPA rules and is a Chartered Business Valuator.

Daniel Camus is the former group chief financial officer and former head of strategy and international activities of Electricité de France SA (EDF), a France-based integrated energy operator active in the generation, distribution, transmission, supply and trading of electrical energy with international subsidiaries. He currently serves on the board of one other publicly-traded company, and serves as a member of its audit committee. He is the former Chief Financial Officer of the humanitarian finance organization, The Global Fund to Fight AIDS, Tuberculosis and Malaria. Mr. Camus received his PhD in Economics from Sorbonne University and an MBA in finance and economics from the Institute d'Études Politiques de Paris.

Catherine Gignac, a corporate director, is a former mining equity research analyst with leading global brokerage firms. She currently serves on the board of one other publicly-traded company and served on the board of the publicly-traded company, Corvus Gold Inc., for six years and as chair of its board for five years. She has more than 30 years' experience as a mining equity research analyst and geologist. She held senior positions with leading firms, including Merrill Lynch Canada, RBC Capital Markets, UBS Investment Bank and Dundee Capital Markets Inc. and Loewen Ondaatje McCutcheon Limited. Ms. Gignac was the principal of Catherine Gignac & Associates from 2011 to 2015.

Jim Gowans, a corporate director, is a former mining executive. He currently serves at interim President and CEO of Trilogy Metals Inc. and served as the president and CEO of Arizona Mining Inc. from 2016 to 2018, and at Barrick Gold Corporation in various senior executive positions throughout 2014 and 2015. He has over 20 years of experience as a senior mining executive and is the past chair of the Mining Association of Canada. Mr. Gowans is the newest member of the committee and currently serves on the board of three other publicly-traded companies. He received his applied science degree in mineral engineering from the University of British Columbia and attended the Banff School of Advanced Management.

Auditors' fees

The table below shows the fees billed by the external auditors for services in 2019 and 2018:

	2019 ($)	% of total fees	2018 ($)	% of total fees
Audit fees				
Cameco[1]	1,968,900	78.9	2,033,100	68.5
Subsidiaries[2]	221,800	8.9	709,800	23.9
Total audit fees	2,190,700	87.8	2,742,900	92.4
Audit-related fees				
Pensions	27,300	1.1	27,300	0.9
Total audit-related fees	27,300	1.1	27,300	0.9
Tax fees				
Compliance	37,900	1.5	94,800	3.2
Planning and advice[3]	200,800	8.1	102,300	3.5
Total tax fees	238,700	9.6	197,100	6.7
All other fees	38,300	1.5	-	0.0
Other non-audit fees[4]				
Total other non-audit fees	38,300	1.5	-	0.0
Total fees	2,495,000	100.0	2,967,300	100.0

[1] Includes amounts billed for the audit of Cameco's annual consolidated financial statements and the review of interim financial statements.

[2] Includes amounts billed for the audit of Cameco's subsidiary financial statements.

[3] Includes amounts billed for transfer pricing advisory.

[4] Includes amounts billed in 2019 related to Cameco's I-4 Membership.

Approving services

The audit and finance committee must pre-approve all services the external auditors will provide to make sure they remain independent. This is according to our audit and finance committee charter and consistent with our corporate governance practices. The audit and finance committee pre-approves services up to a specific limit. If we expect the fees to exceed the limit, or the external auditors to provide new audit or non-audit services that have not been pre-approved in the past, then this must be pre-approved separately.

Any service that is not generally pre-approved must be approved by the audit and finance committee before the work is carried out, or by the committee chair, or board chair in his or her absence, as long as the proposed service is presented to the full audit and finance committee at its next meeting.

The committee has adopted a written policy that describes the procedures for implementing these principles.

Interest of experts

Our auditor is KPMG LLP, independent chartered accountants, who have audited our 2019 financial statements.

KPMG LLP are the auditors of Cameco and have confirmed with respect to Cameco that they are independent within the meaning of the relevant rules and related interpretations prescribed by the relevant professional bodies in Canada and any applicable legislation or regulations and also that they are independent accountants with respect to Cameco under all relevant US professional and regulatory standards.

The individuals who are qualified persons for the purposes of NI 43-101 and employees of Cameco are listed under *Mineral reserves and resources* on page 73. As a group, they beneficially own, directly or indirectly, less than 1% of any class of the outstanding securities of Cameco and our associates and affiliates.

Appendix A

Audit and finance committee of the Board of Directors

Mandate

Purpose

The primary purpose of the audit and finance committee (the "committee") is to assist the board of directors (the "board") in fulfilling its oversight responsibilities for (a) the accounting and financial reporting processes, (b) the internal controls, (c) the external auditors, including performance, qualifications, independence, and their audit of the corporation's financial statements, (d) the performance of the corporation's internal audit function, (e) financial matters and risk management of financial risks, (f) the corporation's process for monitoring compliance with laws and regulations (other than environmental and safety laws) and its code of conduct and ethics, and (g) prevention and detection of fraudulent activities. The committee shall also prepare such reports as required to be prepared by it by applicable securities laws.

In addition, the committee provides an avenue for communication between each of the internal auditor, the external auditors, management, and the board. The committee shall have a clear understanding with the external auditors that they must maintain an open and transparent relationship with the committee and that the ultimate accountability of the external auditors is to the board and the committee, as representatives of the shareholders. The committee, in its capacity as a committee of the board, subject to the requirements of applicable law, is directly responsible for the appointment, compensation, retention, and oversight of the external auditors.

The committee has the authority to communicate directly with the external auditors and internal auditor.

The committee shall make regular reports to the board concerning its activities and in particular shall review with the board any issues that arise with respect to the quality or integrity of the corporation's financial statements, the performance and independence of the external auditors, the performance of the corporation's internal audit function, or the corporation's process for monitoring compliance with laws and regulations other than environmental and safety laws.

Composition

The board shall appoint annually, from among its members, a committee and its chair. The committee shall consist of at least three members and shall not include any director employed by the corporation.

Each committee member will be independent pursuant to the standards for independence adopted by the board.

Each committee member shall be financially literate with at least one member having accounting or related financial expertise, using the terms defined as follows:

"Financially literate" means the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the corporation's financial statements; and

"Accounting or related financial expertise" means the ability to analyse and interpret a full set of financial statements, including the notes attached thereto, in accordance with Canadian generally accepted accounting principles.

In addition, where possible, at least one member of the committee shall qualify as an "audit committee financial expert" within the meaning of applicable securities law.

Members of the committee may not serve on the audit and finance committees of more than three public companies (including Cameco's) without the approval of the board.

Meetings

The committee will meet at least four times annually and as many additional times as the committee considers necessary to carry out its duties effectively. The committee will hold separate closed sessions with the external auditors, the internal auditor and other members of management at each regularly scheduled meeting.

A majority of the members of the committee shall constitute a quorum. No business may be transacted by the committee except at a meeting of its members at which a quorum of the committee is present.

The committee may invite such officers, directors and employees of the corporation as it may see fit from time to time to attend at meetings of the committee and assist thereat in the discussion and consideration of any matter.

A meeting of the committee may be convened by the chair of the committee, a member of the committee, the external auditors, the internal auditor, the chief executive officer or the chief financial officer. The secretary, who shall be appointed by the committee, shall, upon direction of any of the foregoing, arrange a meeting of the committee. The committee shall report to the board in a timely manner with respect to each of its meetings.

Duties and responsibilities

To carry out its oversight responsibilities, the committee shall:

Financial reporting process

1. Review with management and the external auditors any items of concern, any proposed changes in the selection or application of major accounting policies and the reasons for the change, any identified risks and uncertainties, and any issues requiring management judgement, to the extent that the foregoing may be material to financial reporting.
2. Consider any matter required to be communicated to the committee by the external auditors under applicable generally accepted auditing standards, applicable law and listing standards, including the external auditors' report to the committee (and management's response thereto) on: (a) all critical accounting policies and practices used by the corporation; (b) all material alternative accounting treatments of financial information within generally accepted accounting principles that have been discussed with management, including the ramifications of the use of such alternative treatments and disclosures and the treatment preferred by the external auditors; and (c) any other material written communications between the external auditors and management.
3. Require the external auditors to present and discuss with the committee their views about the quality, not just the acceptability, of the implementation of generally accepted accounting principles with particular focus on accounting estimates and judgements made by management and their selection of accounting principles.
4. Discuss with management and the external auditors (a) any accounting adjustments that were noted or proposed (i.e. immaterial or otherwise) by the external auditors but were not reflected in the financial statements, (b) any material correcting adjustments that were identified by the external auditors in accordance with generally accepted accounting principles or applicable law, (c) any communication reflecting a difference of opinion between the audit team and the external auditors' national office on material auditing or accounting issues raised by the engagement, and (d) any "management" or "internal control" letter issued, or proposed to be issued, by the external auditors to the corporation.
5. Discuss with management and the external auditors any significant financial reporting issues considered during the fiscal period and the method of resolution. Resolve disagreements between management and the external auditors regarding financial reporting.
6. Review with management and the external auditors (a) any off-balance sheet financing mechanisms being used by the corporation and their effect on the corporation's financial statements and (b) the effect of regulatory and accounting initiatives on the corporation's financial statements, including the potential impact of proposed initiatives.
7. Review with management and the external auditors and legal counsel, if necessary, any litigation, claim or other contingency, including tax assessments, that could have a material effect on the financial position or operating results of the corporation, and the manner in which these matters have been disclosed or reflected in the financial statements.
8. Review with the external auditors any audit problems or difficulties experienced by the external auditors in performing the audit, including any restrictions or limitations imposed by management, and management's response. Resolve any disagreements between management and the external auditors regarding these matters.
9. Review the results of the external auditors' audit work including findings and recommendations, management's response, and any resulting changes in accounting practices or policies and the impact such changes may have on the financial statements.

10. Review and discuss with management and the external auditors the audited annual financial statements and related management discussion and analysis, make recommendations to the board with respect to approval thereof, before being released to the public, and obtain an explanation from management of all significant variances between comparable reporting periods.
11. Review and discuss with management and the external auditors all interim unaudited financial statements and related interim management discussion and analysis and make recommendations to the board with respect to the approval thereof, before being released to the public.
12. Obtain confirmation from the chief executive officer and the chief financial officer (and considering the external auditors' comments, if any, thereon) to their knowledge:
    (a) that the audited financial statements, together with any financial information included in the annual MD&A and annual information form, fairly present in all material respects the corporation's financial condition, cash flow and results of operation, as of the date and for the periods presented in such filings; and
    (b) that the interim financial statements, together with any financial information included in the interim MD&A, fairly present in all material respects the corporation's financial condition, cash flow and results of operation, as of the date and for the periods presented in such filings.
13. Review news releases to be issued in connection with the audited annual financial statements and related management discussion and analysis and the interim unaudited financial statements and related interim management discussion and analysis, before being released to the public. Discuss the type and presentation of information to be included in news releases (paying particular attention to any use of "pro-forma" or "adjusted" non-GAAP, information).
14. Review any news release, before being released to the public, containing earnings guidance or financial information based upon the corporation's financial statements prior to the release of such statements.
15. Review the appointment of the chief financial officer and have the chief financial officer report to the committee on the qualifications of new key financial executives involved in the financial reporting process.
16. Consult with the human resources and compensation committee on the succession plan for the chief financial officer and controller. Review the succession plans in respect of the chief financial officer and controller.

Internal controls

1. Receive from management a statement of the corporation's system of internal controls over accounting and financial reporting.
2. Consider and review with management, the internal auditor and the external auditors, the adequacy and effectiveness of internal controls over accounting and financial reporting within the corporation and any proposed significant changes in them.
3. Consider and discuss the scope of the internal auditors' and external auditors' review of the corporation's internal controls, and obtain reports on significant findings and recommendations, together with management responses.
4. Discuss, as appropriate, with management, the external auditors and the internal auditor, any major issues as to the adequacy of the corporation's internal controls and any special audit steps in light of material internal control deficiencies.
5. Review annually the disclosure controls and procedures, including (a) the certification timetable and related process and (b) the procedures that are in place for the review of the corporation's disclosure of financial information extracted from the corporation's financial statements and the adequacy of such procedures. Receive confirmation from the chief executive officer and the chief financial officer of the effectiveness of disclosure controls and procedures, and whether there are any significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the corporation's ability to record, process, summarize and report financial information or any fraud, whether or not material, that involves management or other employees who have a significant role in the corporation's internal control over financial reporting. In addition, receive confirmation from

the chief executive officer and the chief financial officer that they are prepared to sign the annual and quarterly certificates required by applicable securities law.

6. Review management's annual report and the external auditors' report on the assessment of the effectiveness of the corporation's internal control over financial reporting.
7. Receive a report, at least annually, from the reserves oversight committee of the board on the corporation's mineral reserves.

External auditors

(i) External Auditors' Qualifications and Selection

1. Subject to the requirements of applicable law, be solely responsible to select, retain, compensate, oversee, evaluate and, where appropriate, replace the external auditors, who must be registered with agencies mandated by applicable law. The committee shall be entitled to adequate funding from the corporation for the purpose of compensating the external auditors for completing an audit and audit report.
2. Instruct the external auditors that:
   (a) they are ultimately accountable to the board and the committee, as representatives of shareholders; and
   (b) they must report directly to the committee.
3. Ensure that the external auditors have direct and open communication with the committee and that the external auditors meet regularly with the committee without the presence of management to discuss any matters that the committee or the external auditors believe should be discussed privately.
4. Evaluate the external auditors' qualifications, performance, and independence. As part of that evaluation:
   (a) at least annually, request and review a formal report by the external auditors describing: the firm's internal quality-control procedures; any material issues raised by the most recent internal quality-control review, or peer review, of the firm, or by any inquiry or investigation by governmental or professional authorities, within the preceding five years, respecting one or more independent audits carried out by the firm, and any steps taken to deal with any such issues; and (to assess the auditors' independence) all relationships between the external auditors and the corporation, including the amount of fees received by the external auditors for the audit services and for various types of non-audit services for the periods prescribed by applicable law; and
   (b) annually review and confirm with management and the external auditors the independence of the external auditors, including the extent of non-audit services and fees, the extent to which the compensation of the audit partners of the external auditors is based upon selling non-audit services, the timing and process for implementing the rotation of the lead audit partner, reviewing partner and other partners providing audit services for the corporation, whether there should be a regular rotation of the audit firm itself, and whether there has been a "cooling off" period of one year for any former employees of the external auditors who are now employees with a financial oversight role, in order to assure compliance with applicable law on such matters; and
   (c) annually review and evaluate senior members of the external audit team, including their expertise and qualifications. In making this evaluation, the audit and finance committee should consider the opinions of management and the internal auditor.

Conclusions on the independence of the external auditors should be reported to the board.

5. Review and approve the corporation's policies for the corporation's hiring of employees and former employees of the external auditors. Such policies shall include, at minimum, a one-year hiring "cooling off" period.

(ii) Other Matters

6. Meet with the external auditors to review and approve the annual audit plan of the corporation's financial statements prior to the annual audit being undertaken by the external auditors, including reviewing the year-to-year co-ordination of the audit plan and the planning, staffing and extent of the scope of the annual audit. This review should include an explanation from the external auditors of the factors considered by the external auditors in determining their audit scope,

including major risk factors. The external auditors shall report to the committee all significant changes to the approved audit plan.

7. Review and approve the basis and amount of the external auditors' fees with respect to the annual audit in light of all relevant matters.
8. Review and pre-approve all audit and non-audit service engagement fees and terms in accordance with applicable law, including those provided to the subsidiaries of the corporation by the external auditors or any other person in its capacity as external auditors of such subsidiary. Between scheduled committee meetings, the chair of the committee, on behalf of the committee, is authorised to pre-approve any audit or non-audit service engagement fees and terms. At the next committee meeting, the chair shall report to the committee any such pre-approval given. Establish and adopt procedures for such matters.

Internal auditor

1. Review and approve the appointment or removal of the internal auditor.
2. Review and discuss with the external auditors, management, and internal auditor the responsibilities, budget and staffing of the corporation's internal audit function.
3. Review and approve the mandate for the internal auditor and the scope of annual work planned by the internal auditor, receive summary reports of internal audit findings, management's response thereto, and reports on any subsequent follow-up to any identified weakness.
4. Ensure that the internal auditor has direct and open communication with the committee and that the internal auditor meets regularly with the committee without the presence of management to discuss any matters that the committee or the internal auditor believe should be discussed privately, such as problems or difficulties which were encountered in the course of internal audit work, including restrictions on the scope of activities or access to required information, and any disagreements with management.
5. Review and discuss with the internal auditor and management the internal auditor's ongoing assessments of the corporation's business processes and system of internal controls.
6. Review the effectiveness of the internal audit function, including staffing, organizational structure and qualifications of the internal auditor and staff.

Compliance

1. Monitor compliance by the corporation with all payments and remittances required to be made in accordance with applicable law, where the failure to make such payments could render the directors of the corporation personally liable.
2. The receipt of regular updates from management regarding compliance with laws and regulations and the process in place to monitor such compliance, excluding, however, legal compliance matters subject to the oversight of the safety, health and environment committee of the board. Review the findings of any examination by regulatory authorities and any external auditors' observations relating to such matters.
3. Establish and oversee the procedures in the code of conduct and ethics policy to address:

   (a) the receipt, retention and treatment of complaints received by the corporation regarding accounting, internal accounting or auditing matters; and

   (b) confidential, anonymous submissions by employees of concerns regarding questionable accounting and auditing matters.

   Receive periodically a summary report from the senior vice-president, chief legal officer and corporate secretary on such matters as required by the code of conduct and ethics.
4. Review and recommend to the board for approval a code of conduct and ethics for employees, officers and directors of the corporation. Monitor management's implementation of the code of conduct and ethics and the global anti-corruption program and review compliance therewith by, among other things, obtaining an annual report summarizing statements of compliance by employees pursuant to such policies and reviewing the findings of any investigations of non-compliance.

Periodically review the adequacy and appropriateness of such policies and programs and make recommendations to the board thereon.

5. Monitor management's implementation of the anti-fraud policy; and review compliance therewith by, among other things, receiving reports from management on:
   (a) any investigations of fraudulent activity;
   (b) monitoring activities in relation to fraud risks and controls; and
   (c) assessments of fraud risk.

   Periodically review the adequacy and appropriateness of the anti-fraud policy and make recommendations to the board thereon.
6. Review all proposed related party transactions and situations involving a director's, senior officer's or an affiliate's potential or actual conflict of interest that are not required to be dealt with by an "independent committee" pursuant to securities law rules, other than routine transactions and situations arising in the ordinary course of business, consistent with past practice. Between scheduled committee meetings, the chair of the committee, on behalf of the committee, is authorized to review all such transactions and situations. At the next committee meeting, the chair shall report the results of such review.
7. Monitor management of hedging, debt and credit, make recommendations to the board respecting policies for management of such risks, and review the corporation's compliance therewith.
8. Approve the review and approval process for the expenses submitted for reimbursement by the chief executive officer.
9. Oversee management's mitigation of material risks within the committee's mandate and as otherwise assigned.
10. Undertake such other tasks as may be directed to it from time to time by the board.

Financial oversight

1. Assist the board in its consideration and ongoing oversight of matters pertaining to:
   (a) capital structure and funding including finance and cash flow planning;
   (b) capital management planning and initiatives;
   (c) property and corporate acquisitions and divestitures including proposals which may have a material impact on the corporation's capital position;
   (d) the corporation's annual budget and business plan;
   (e) the corporation's insurance program;
   (f) directors' and officers' liability insurance and indemnity agreements;
   (g) the annual approval to elect the end-user exception under Dodd Frank; and
   (h) matters the board may refer to the committee from time to time in connection with the corporation's capital position.

Organizational matters

1. The procedures governing the committee shall, except as otherwise provided for herein, be those applicable to the board committees as set forth in Part 7 of the General Bylaws of the corporation.
2. The members and the chair of the committee shall be entitled to receive remuneration for acting in such capacity as the board may from time to time determine.
3. The committee shall have the resources and authority appropriate to discharge its duties and responsibilities, including the authority to:
   (a) select, retain, terminate, set and approve the fees and other retention terms of special or independent counsel, accountants or other experts, as it considers appropriate; and

(b) obtain appropriate funding to pay, or approve the payment of, such approved fees;

without seeking approval of the board or management.

4. Any member of the committee may be removed or replaced at any time by the board and shall cease to be a member of the committee upon ceasing to be a director. The board may fill vacancies on the committee by appointment from among its members. If and whenever a vacancy shall exist on the committee, the remaining members may exercise all its powers so long as a quorum remains in office. Subject to the foregoing, each member of the committee shall remain as such until the next annual meeting of shareholders after that member's election.
5. The committee shall annually review and assess the adequacy of its mandate and recommend any proposed changes to the nominating, corporate governance and risk committee for recommendation to the board for approval.
6. The committee shall participate in an annual performance evaluation, the results of which will be reviewed by the board.
7. The committee shall perform any other activities consistent with this mandate, the corporation's governing laws and the regulations of stock exchanges, as the committee or the board considers necessary or appropriate.
8. A standing invitation will be issued to all non-executive directors to attend the financial oversight portion of each committee meeting.

EXHIBIT 99.2

Cameco Corporation

2019 Consolidated Audited Financial Statements

February 6, 2020



Cameco Corporation
2019 consolidated financial statements

February 6, 2020

Report of management's accountability

The accompanying consolidated financial statements have been prepared by management in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. Management is responsible for ensuring that these statements, which include amounts based upon estimates and judgments, are consistent with other information and operating data contained in the annual financial review and reflect the corporation's business transactions and financial position.

Management is also responsible for the information disclosed in the management's discussion and analysis including responsibility for the existence of appropriate information systems, procedures and controls to ensure that the information used internally by management and disclosed externally is complete and reliable in all material respects.

In addition, management is responsible for establishing and maintaining an adequate system of internal control over financial reporting. The internal control system includes an internal audit function and a code of conduct and ethics, which is communicated to all levels in the organization and requires all employees to maintain high standards in their conduct of the Company's affairs. Such systems are designed to provide reasonable assurance that the financial information is relevant, reliable and accurate and that the Company's assets are appropriately accounted for and adequately safeguarded. Management conducted an evaluation of the effectiveness of the system of internal control over financial reporting based on the criteria established in "Internal Control – Integrated Framework (2013)" issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that the Company's system of internal control over financial reporting was effective as at December 31, 2019.

KPMG LLP has audited the consolidated financial statements in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States).

The board of directors annually appoints an audit and finance committee comprised of directors who are not employees of the corporation. This committee meets regularly with management, the internal auditor and the shareholders' auditors to review significant accounting, reporting and internal control matters. Both the internal and shareholders' auditors have unrestricted access to the audit and finance committee. The audit and finance committee reviews the consolidated financial statements, the report of the shareholders' auditors, and management's discussion and analysis and submits its report to the board of directors for formal approval.

Original signed by Tim S. Gitzel
President and Chief Executive Officer
February 6, 2020

Original signed by Grant E. Isaac
Senior Vice-President and Chief Financial Officer
February 6, 2020

Report of independent registered public accounting firm

To the Shareholders and Board of Directors of Cameco Corporation:

Opinion on the consolidated financial statements

We have audited the accompanying consolidated statements of financial position of Cameco Corporation (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of earnings, comprehensive income, changes in equity, and cash flows for each of the years then ended, and the related notes (collectively, the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for the years then ended, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2019, based on the criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 6, 2020 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit and finance committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which they relate.

Assessment of recoverability of deferred tax assets

As discussed in note 21 to the consolidated financial statements, as at December 31, 2019 the Company recorded deferred tax assets of $956,376,000 relating to tax losses incurred in certain jurisdictions and temporary differences. The assessment of the recoverability of these deferred tax assets is dependent on the generation of future taxable income. Significant judgment and estimation is required to assess the sufficiency of future taxable income to utilize the recognized deferred tax assets. The Company uses projections of future taxable income in order to assess the probability that the deferred tax assets will be realized. Predicting future taxable income is dependent on assumptions and judgments regarding future market conditions, production rates, and intercompany sales. The Company determined that the realization of these deferred tax assets is probable.

We identified the assessment of the recoverability of deferred tax assets as a critical audit matter due to the high degree of judgment required in assessing the significant assumptions and judgments that are reflected in the projections of future taxable income.

The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over the Company's assessment of the recoverability of the deferred tax asset, including controls over the assumptions and judgments used in the projections of future taxable income. To assess the Company's ability to estimate future taxable income, we compared the Company's previous forecasts to actual results. To assess the Company's estimate of future taxable income, we evaluated key assumptions in the model by comparing (1) forecast uranium sales prices to published views of independent market participants, (2) foreign exchange rates to external analyst estimates, (3) forecast sales to historical trends, board approved budgets and committed sales volumes, including to a sample of committed sales contracts, and (4) forecast production volumes to historical data, board approved budgets and life of mine plans. We performed a sensitivity analysis over the key assumptions to assess their impact on the Company's determination that the deferred tax assets were realizable. We involved income tax professionals with specialized skills and knowledge in assessing the Company's application of the tax regulations in relevant jurisdictions.

Original signed by KPMG LLP

Chartered Professional Accountants

We have served as the Company's auditor since 1988.

Saskatoon, Canada
February 6, 2020

Consolidated statements of earnings

For the years ended December 31 ($Cdn thousands, except per share amounts)	Note	2019	2018
Revenue from products and services	17	$1,862,925	$2,091,661
Cost of products and services sold		1,345,551	1,467,940
Depreciation and amortization		275,749	327,973
Cost of sales		1,621,300	1,795,913
Gross profit		241,625	295,748
Administration		124,869	141,552
Exploration		13,686	20,283
Research and development		6,058	1,757
Other operating expense	15	2,732	59,616
Loss on disposal of assets		1,869	2,303
Earnings from operations		92,411	70,237
Finance costs	19	(98,622)	(111,779)
Gain (loss) on derivatives	26	32,269	(81,081)
Finance income		29,760	22,071
Share of earnings from equity-accounted investee	11	45,360	32,321
Other income	20	33,840	108,160
Earnings before income taxes		135,018	39,929
Income tax expense (recovery)	21	61,077	(126,306)
Net earnings		**$ 73,941**	**$ 166,235**
Net earnings (loss) attributable to:			
Equity holders		74,000	166,323
Non-controlling interest		(59)	(88)
Net earnings		**$ 73,941**	**$ 166,235**
Earnings per common share attributable to equity holders:			
Basic	22	**$ 0.19**	**$ 0.42**
Diluted	22	**$ 0.19**	**$ 0.42**

See accompanying notes to consolidated financial statements.

Consolidated statements of comprehensive income

For the years ended December 31 ($Cdn thousands)	Note	2019	2018
Net earnings		**$ 73,941**	**$166,235**
Other comprehensive income (loss), net of taxes:			
Items that will not be reclassified to net earnings:			
Remeasurements of defined benefit liability [1]	25	(8,112)	6,226
Equity investments at FVOCI - net change in fair value [2]		(4,044)	(9,728)
Equity investments at FVOCI - net change in fair value -equity-accounted investee		(709)	—
Items that are or may be reclassified to net earnings:			
Exchange differences on translation of foreign operations		(27,888)	(1,875)
Reclassification of foreign currency translation reserve to net earnings	20	—	(5,450)
Other comprehensive loss, net of taxes		**(40,753)**	**(10,827)**
Total comprehensive income		**$ 33,188**	**$155,408**
Other comprehensive income (loss) attributable to:			
Equity holders		$(40,740)	$ (10,854)
Non-controlling interest		(13)	27
Other comprehensive loss for the year		**$(40,753)**	**$ (10,827)**
Total comprehensive income (loss) attributable to:			
Equity holders		$ 33,260	$155,469
Non-controlling interest		(72)	(61)
Total comprehensive income for the year		**$ 33,188**	**$155,408**

1 Net of tax (2019 - $2,301; 2018 - $(2,200))
2 Net of tax (2019 - $453; 2018 - $1,349)

See accompanying notes to consolidated financial statements.

Consolidated statements of financial position

As at December 31 ($Cdn thousands)	Note	2019	2018
Assets			
Current assets			
Cash and cash equivalents		$1,062,431	$ 711,528
Short-term investments		—	391,025
Accounts receivable	6	328,044	402,350
Current tax assets		3,667	6,996
Inventories	7	320,770	467,795
Supplies and prepaid expenses		85,502	89,206
Current portion of long-term receivables, investments and other	10	6,564	13,826
Total current assets		1,806,978	2,082,726
Property, plant and equipment	8	3,720,672	3,881,926
Intangible assets	9	60,410	65,602
Long-term receivables, investments and other	10	630,131	751,868
Investment in equity-accounted investee	11	252,681	230,502
Deferred tax assets	21	956,376	1,006,012
Total non-current assets		5,620,270	5,935,910
Total assets		**$7,427,248**	**$8,018,636**
Liabilities and shareholders' equity			
Current liabilities			
Accounts payable and accrued liabilities	12	$ 181,799	$ 224,754
Current tax liabilities		6,290	19,633
Current portion of long-term debt	13	—	499,599
Current portion of other liabilities	14	33,073	79,573
Current portion of provisions	15	56,248	52,316
Total current liabilities		277,410	875,875
Long-term debt	13	996,718	996,072
Other liabilities	14	153,927	142,061
Provisions	15	1,004,230	1,011,036
Total non-current liabilities		2,154,875	2,149,169
Shareholders' equity			
Share capital		1,862,749	1,862,652
Contributed surplus		234,681	234,982
Retained earnings		2,825,596	2,791,321
Other components of equity		71,699	104,327
Total shareholders' equity attributable to equity holders		4,994,725	4,993,282
Non-controlling interest		238	310
Total shareholders' equity		4,994,963	4,993,592
Total liabilities and shareholders' equity		**$7,427,248**	**$8,018,636**

Commitments and contingencies [notes 8, 15, 21]

See accompanying notes to consolidated financial statements.

Consolidated statements of changes in equity

($Cdn thousands)	Attributable to equity holders						Non-controlling interest	Total equity
	Share capital	Contributed surplus	Retained earnings	Foreign currency translation	Equity investments at FVOCI	Total		
Balance at January 1, 2019	$1,862,652	$ 234,982	$2,791,321	$104,989	$ (662)	$4,993,282	$ 310	$4,993,592
Net earnings (loss)	—	—	74,000	—	—	74,000	(59)	73,941
Other comprehensive loss	—	—	(8,112)	(27,875)	(4,753)	(40,740)	(13)	(40,753)
Total comprehensive income (loss)	—	—	65,888	(27,875)	(4,753)	33,260	(72)	33,188
Share-based compensation	—	14,342	—	—	—	14,342	—	14,342
Stock options exercised	97	(16)	—	—	—	81	—	81
Restricted and performance share units released	—	(6,258)	—	—	—	(6,258)	—	(6,258)
Modification of share-based arrangement [note 24]	—	(8,369)	—	—	—	(8,369)	—	(8,369)
Dividends	—	—	(31,613)	—	—	(31,613)	—	(31,613)
Balance at December 31, 2019	$1,862,749	$ 234,681	$2,825,596	$ 77,114	$ (5,415)	$4,994,725	$ 238	$4,994,963
Balance at January 1, 2018	$1,862,652	$ 224,812	$2,650,417	$112,341	$ 9,066	$4,859,288	$ 371	$4,859,659
Net earnings (loss)	—	—	166,323	—	—	166,323	(88)	166,235
Other comprehensive income (loss)	—	—	6,226	(7,352)	(9,728)	(10,854)	27	(10,827)
Total comprehensive income (loss)	—	—	172,549	(7,352)	(9,728)	155,469	(61)	155,408
Share-based compensation	—	14,976	—	—	—	14,976	—	14,976
Restricted and performance share units released	—	(4,806)	—	—	—	(4,806)	—	(4,806)
Dividends	—	—	(31,645)	—	—	(31,645)	—	(31,645)
Balance at December 31, 2018	$1,862,652	$ 234,982	$2,791,321	$104,989	$ (662)	$4,993,282	$ 310	$4,993,592

See accompanying notes to consolidated financial statements.

Consolidated statements of cash flows

For the years ended December 31 ($Cdn thousands)	Note	2019	2018
Operating activities			
Net earnings		$ 73,941	$ 166,235
Adjustments for:			
Depreciation and amortization		275,749	327,973
Deferred charges		(13,013)	10,683
Unrealized loss (gain) on derivatives		(55,048)	74,295
Share-based compensation	24	14,342	14,976
Loss on disposal of assets		1,869	2,303
Finance costs	19	98,622	111,779
Finance income		(29,760)	(22,071)
Share of earnings from equity-accounted investee	11	(45,360)	(32,321)
Other expense (income)	20	18,961	(100,310)
Other operating expense	15	2,732	59,616
Income tax expense (recovery)	21	61,077	(126,306)
Interest received		30,944	18,311
Income taxes paid		(18,589)	(20,709)
Dividends from equity-accounted investee	31	14,079	—
Other operating items	23	96,478	183,062
Net cash provided by operations		**527,024**	**667,516**
Investing activities			
Additions to property, plant and equipment		(75,211)	(55,362)
Decrease (increase) in short-term investments		391,025	(391,025)
Decrease in long-term receivables, investments and other		120,913	33,508
Proceeds from sale of property, plant and equipment		679	1,249
Net cash provided by (used in) investing		**437,406**	**(411,630)**
Financing activities			
Decrease in long-term debt		(500,000)	—
Interest paid		(72,484)	(72,976)
Proceeds from issuance of shares, stock option plan		81	—
Lease principal payments		(2,904)	—
Dividends paid		(31,613)	(71,224)
Net cash used in financing		**(606,920)**	**(144,200)**
Increase in cash and cash equivalents, during the year		357,510	111,686
Exchange rate changes on foreign currency cash balances		(6,607)	8,222
Cash and cash equivalents, beginning of year		711,528	591,620
Cash and cash equivalents, end of year		**$1,062,431**	**$ 711,528**
Cash and cash equivalents is comprised of:			
Cash		$ 427,986	$ 317,296
Cash equivalents		634,445	394,232
Cash and cash equivalents		**$1,062,431**	**$ 711,528**

See accompanying notes to consolidated financial statements.

1. Cameco Corporation

Cameco Corporation is incorporated under the Canada Business Corporations Act. The address of its registered office is 2121 11th Street West, Saskatoon, Saskatchewan, S7M 1J3. The consolidated financial statements as at and for the year ended December 31, 2019 comprise Cameco Corporation and its subsidiaries (collectively, the Company or Cameco) and the Company's interests in associates and joint arrangements.

Cameco is one of the world's largest providers of the uranium needed to generate clean, reliable baseload electricity around the globe. The Company currently has one mine operating in northern Saskatchewan, Cigar Lake, as well as a 40% interest in Joint Venture Inkai LLP (JV Inkai), a joint arrangement with Joint Stock Company National Atomic Company Kazatomprom (Kazatomprom), located in Kazakhstan. JV Inkai is accounted for on an equity basis (see note 11).

It also has two operations in Northern Saskatchewan which are in care and maintenance. Rabbit Lake was placed in care and maintenance in the second quarter of 2016 while operations at McArthur River/Key Lake were suspended indefinitely in the third quarter of 2018 (see note 28 for financial statement impact). Cameco's operations in the United States, Crow Butte and Smith Ranch-Highland, are also not currently producing as the decision was made in 2016 to curtail production and defer all wellfield development.

The Company is also a leading provider of nuclear fuel processing services, supplying much of the world's reactor fleet with the fuel to generate one of the cleanest sources of electricity available today. It operates the world's largest commercial refinery in Blind River, Ontario, controls about 25% of the world UF_6 primary conversion capacity in Port Hope, Ontario and is a leading manufacturer of fuel assemblies and reactor components for CANDU reactors at facilities in Port Hope and Cobourg, Ontario.

2. Significant accounting policies

A. Statement of compliance

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

These consolidated financial statements were authorized for issuance by the Company's board of directors on February 6, 2020.

B. Basis of presentation

These consolidated financial statements are presented in Canadian dollars, which is the Company's functional currency. All financial information is presented in Canadian dollars, unless otherwise noted. Amounts presented in tabular format have been rounded to the nearest thousand except per share amounts and where otherwise noted.

The consolidated financial statements have been prepared on the historical cost basis except for the following material items which are measured on an alternative basis at each reporting date:

Derivative financial instruments	Fair value through profit or loss (FVTPL)
Equity investments	Fair value through other comprehensive income (FVOCI)
Liabilities for cash-settled share-based payment arrangements	FVTPL
Net defined benefit liability	Fair value of plan assets less the present value of the defined benefit obligation

The preparation of the consolidated financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, revenue and expenses. Actual results may vary from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in note 5.

This summary of significant accounting policies is a description of the accounting methods and practices that have been used in the preparation of these consolidated financial statements and is presented to assist the reader in interpreting the statements contained herein. These accounting policies have been applied consistently to all entities within the consolidated group.

C. Consolidation principles

i. Business combinations

The acquisition method of accounting is used to account for the acquisition of subsidiaries by the Company. The Company measures goodwill at the acquisition date as the fair value of the consideration transferred, including the recognized amount of any non-controlling interests in the acquiree, less the net recognized amount (generally fair value) of the identifiable assets acquired and liabilities assumed, all measured as of the acquisition date. When the excess is negative, a bargain purchase gain is recognized immediately in earnings. In a business combination achieved in stages, the acquisition date fair value of the Company's previously held equity interest in the acquiree is also considered in computing goodwill.

Consideration transferred includes the fair values of the assets transferred, liabilities incurred and equity interests issued by the Company. Consideration also includes the fair value of any contingent consideration and share-based compensation awards that are replaced mandatorily in a business combination.

The Company elects on a transaction-by-transaction basis whether to measure any non-controlling interest at fair value, or at their proportionate share of the recognized amount of the identifiable net assets of the acquiree, at the acquisition date.

Acquisition-related costs are expensed as incurred, except for those costs related to the issue of debt or equity instruments.

ii. Subsidiaries

The consolidated financial statements include the accounts of Cameco and its subsidiaries. Subsidiaries are entities over which the Company has control. Subsidiaries are fully consolidated from the date on which control is acquired by the Company and are deconsolidated from the date that control ceases.

iii. Investments in equity-accounted investees

Cameco's investments in equity-accounted investees include investments in associates.

Associates are those entities over which the Company has significant influence, but not control or joint control, over the financial and operating policies. Significant influence is presumed to exist when the Company holds between 20% and 50% of the voting power of another entity, but can also arise where the Company holds less than 20% if it has the power to be actively involved and influential in policy decisions affecting the entity.

Investments in associates are accounted for using the equity method. The equity method involves the recording of the initial investment at cost and the subsequent adjusting of the carrying value of the investment for Cameco's proportionate share of the earnings or loss and any other changes in the associates' net assets, such as dividends. The cost of the investment includes transaction costs.

Adjustments are made to align the accounting policies of the associate with those of the Company before applying the equity method. When the Company's share of losses exceeds its interest in an equity-accounted investee, the carrying amount of that interest is reduced to zero, and the recognition of further losses is discontinued except to the extent that the Company has incurred legal or constructive obligations or made payments on behalf of the associate. If the associate subsequently reports profits, Cameco resumes recognizing its share of those profits only after its share of the profits equals the share of losses not recognized.

iv. Joint arrangements

A joint arrangement can take the form of a joint operation or joint venture. All joint arrangements involve a contractual arrangement that establishes joint control.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. A joint operation may or may not be structured through a separate vehicle. These arrangements involve joint control of one or more of the assets acquired or contributed for the purpose of the joint operation. The consolidated financial statements of the Company include its share of the assets in such joint operations, together with its share of the liabilities, revenues and expenses arising jointly or otherwise from those operations. All such amounts are measured in accordance with the terms of each arrangement.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. A joint venture is always structured through a separate vehicle. It operates in the same way as other entities, controlling the assets of the joint venture, earning its own revenue and incurring its own liabilities and expenses. Interests in joint ventures are accounted for using the equity method of accounting, whereby the Company's proportionate interest in the assets, liabilities, revenues and expenses of jointly controlled entities are recognized on a single line in the consolidated statements of financial position and consolidated statements of earnings. The share of joint ventures results is recognized in the Company's consolidated financial statements from the date that joint control commences until the date at which it ceases.

v. Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Unrealized gains arising from transactions with equity-accounted investees are eliminated against the investment to the extent of the Company's interest in the investee. Unrealized losses are eliminated in the same manner as unrealized gains, but only to the extent that there is no evidence of impairment.

D. Foreign currency translation

Items included in the financial statements of each of Cameco's subsidiaries, associates and joint arrangements are measured using their functional currency, which is the currency of the primary economic environment in which the entity operates. The consolidated financial statements are presented in Canadian dollars, which is Cameco's functional and presentation currency.

i. Foreign currency transactions

Foreign currency transactions are translated into the respective functional currency of the Company and its entities using the exchange rates prevailing at the dates of the transactions. At the reporting date, monetary assets and liabilities denominated in foreign currencies are translated to the functional currency at the exchange rate at that date. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction. The applicable exchange gains and losses arising on these transactions are reflected in earnings with the exception of foreign exchange gains or losses on provisions for decommissioning and reclamation activities that are in a foreign currency, which are capitalized in property, plant and equipment.

ii. Foreign operations

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on acquisition, are translated to Canadian dollars at exchange rates at the reporting dates. The revenues and expenses of foreign operations are translated to Canadian dollars at exchange rates at the dates of the transactions.

Foreign currency differences are recognized in other comprehensive income. When a foreign operation is disposed of, in whole, the relevant amount in the foreign currency translation account is transferred to earnings as part of the gain or loss on disposal.

When the settlement of a monetary item receivable from or payable to a foreign operation is neither planned nor likely in the foreseeable future, foreign exchange gains and losses arising from such a monetary item are considered to form part of the net investment in a foreign operation, and are recognized in other comprehensive income and presented within equity in the foreign currency translation account.

E. Cash and cash equivalents

Cash and cash equivalents consists of balances with financial institutions and investments in money market instruments, which have a term to maturity of three months or less at the time of purchase and are classified as at amortized cost.

F. Short-term investments

Short-term investments are comprised of money market instruments with terms to maturity between three and 12 months and are classified as at amortized cost.

G. Inventories

Inventories of broken ore, uranium concentrates, and refined and converted products are measured at the lower of cost and net realizable value.

Cost includes direct materials, direct labour, operational overhead expenses and depreciation. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses.

Consumable supplies and spares are valued at the lower of cost or replacement value.

H. Property, plant and equipment

i. Buildings, plant and equipment and other

Items of property, plant and equipment are measured at cost less accumulated depreciation and impairment charges. The cost of self-constructed assets includes the cost of materials and direct labour, borrowing costs and any other costs directly attributable to bringing the assets to the location and condition necessary for them to be capable of operating in the manner intended by management, including the initial estimate of the cost of dismantling and removing the items and restoring the site on which they are located.

When components of an item of property, plant and equipment have different useful lives, they are accounted for as separate items of property, plant and equipment and depreciated separately.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment, and are recognized in earnings.

ii. Mineral properties and mine development costs

The decision to develop a mine property within a project area is based on an assessment of the commercial viability of the property, the availability of financing and the existence of markets for the product. Once the decision to proceed to development is made, development and other expenditures relating to the project area are deferred as part of assets under construction and disclosed as a component of property, plant and equipment with the intention that these will be depreciated by charges against earnings from future mining operations. No depreciation is charged against the property until the production stage commences. After a mine property has been brought into the production stage, costs of any additional work on that property are expensed as incurred, except for large development programs, which will be deferred and depreciated over the remaining life of the related assets.

The production stage is reached when a mine property is in the condition necessary for it to be capable of operating in the manner intended by management. The criteria used to assess the start date of the production stage are determined based on the nature of each mine construction project, including the complexity of a mine site. A range of factors is considered when determining whether the production stage has been reached, which includes, but is not limited to, the demonstration of sustainable production at or near the level intended (such as the demonstration of continuous throughput levels at or above a target percentage of the design capacity).

iii. Depreciation

Depreciation is calculated over the depreciable amount, which is the cost of the asset less its residual value. Assets which are unrelated to production are depreciated according to the straight-line method based on estimated useful lives as follows:

Land	Not depreciated
Buildings	15 - 25 years
Plant and equipment	3 - 15 years
Furniture and fixtures	3 - 10 years
Other	3 - 5 years

Mining properties and certain mining and conversion assets for which the economic benefits from the asset are consumed in a pattern which is linked to the production level are depreciated according to the unit-of-production method. For conversion assets, the amount of depreciation is measured by the portion of the facilities' total estimated lifetime production that is produced in that period. For mining assets and properties, the amount of depreciation or depletion is measured by the portion of the mines' proven and probable mineral reserves recovered during the period.

Depreciation methods, useful lives and residual values are reviewed at each reporting period and are adjusted if appropriate.

iv. Borrowing costs

Borrowing costs on funds directly attributable to finance the acquisition, production or construction of a qualifying asset are capitalized until such time as substantially all the activities necessary to prepare the qualifying asset for its intended use are complete. A qualifying asset is one that takes a substantial period of time to prepare for its intended use. Capitalization is discontinued when the asset enters the production stage or development ceases. Where the funds used to finance a project form part of general borrowings, interest is capitalized based on the weighted average interest rate applicable to the general borrowings outstanding during the period of construction.

v. Repairs and maintenance

The cost of replacing a component of property, plant and equipment is capitalized if it is probable that future economic benefits embodied within the component will flow to the Company. The carrying amount of the replaced component is derecognized. Costs of routine maintenance and repair are charged to products and services sold.

I. Goodwill and intangible assets

Goodwill arising from the acquisition of subsidiaries is initially recognized at cost, measured as the excess of the fair value of the consideration paid over the fair value of the identifiable net assets acquired. At the date of acquisition, goodwill is allocated to the cash generating unit (CGU), or group of CGUs that is expected to receive the economic benefits of the business combination. Goodwill is subsequently measured at cost, less accumulated impairment losses.

Intangible assets acquired individually or as part of a group of assets are initially recognized at cost and measured subsequently at cost less accumulated amortization and impairment losses. Subsequent expenditure is capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. The cost of a group of intangible assets acquired in a transaction, including those acquired in a business combination that meet the specified criteria for recognition apart from goodwill, is allocated to the individual assets acquired based on their relative fair values.

Intangible assets that have finite useful lives are amortized over their estimated remaining useful lives. Amortization methods and useful lives are reviewed at each reporting period and are adjusted if appropriate.

J. Leases

Commencing in 2019 (see note 8), Cameco recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which is the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred, less any lease incentives received, and subsequently at cost less any accumulated depreciation and impairment losses. The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term, unless the cost of the right-of-use asset reflects that the Company will exercise a purchase option, in which case the right-of-use asset will be depreciated on the same basis as that of property, plant and equipment.

The lease liability is measured at amortized cost using the effective interest method. It is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease, or, if that rate cannot be readily determined, the Company's incremental borrowing rate. Generally, Cameco uses its incremental borrowing rate as the discount rate. Current borrowing rates available for classes of leased assets are compared with the rates of Cameco's existing debt facilities to ensure that use of the Company's incremental borrowing rate is reasonable.

The lease liability is subsequently increased by the interest cost on the lease liability and decreased by lease payments made. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, a change in the estimate of the amount expected to be payable under a residual value guarantee, or as appropriate, changes in the assessment of whether a purchase or extension option is reasonably certain to be exercised or a termination option is reasonably certain not to be exercised.

Cameco uses judgement in determining the lease term for some lease contracts that include renewal options. The assessment of whether the Company is reasonably certain to exercise such options impacts the lease term, which affects the amount of lease liabilities and right-of-use assets recognized.

The Company has elected not to recognize right-of-use assets and lease liabilities for leases of low-value assets and short-term leases that have a lease term of 12 months or less. The lease payments associated with these leases are recognized as an expense on a straight-line basis over the lease term.

K. Finance income and finance costs

Finance income comprises interest income on funds invested. Interest income and interest expense are recognized in earnings as they accrue, using the effective interest method. Finance costs comprise interest and fees on borrowings, unwinding of the discount on provisions and costs incurred on redemption of debentures.

Borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset are expensed in the period incurred.

L. Research and development costs

Expenditures on research are charged against earnings when incurred. Development costs are recognized as assets when the Company can demonstrate technical feasibility and that the asset will generate probable future economic benefits.

M. Impairment

i. Non-derivative financial assets

Cameco recognizes loss allowances for expected credit losses (ECLs) on financial assets measured at amortized cost, debt investments measured at FVOCI, and contract assets. It measures loss allowances at an amount equal to lifetime ECLs, except for debt securities that are determined to have low credit risk at the reporting date and other debt securities, loans advanced and bank balances for which credit risk has not increased significantly since initial recognition. For these, loss allowances are measured equal to 12-month ECLs.

Lifetime ECLs are the ECLs that result from all possible default events over the expected life of a financial instrument while 12-month ECLs are the portion of ECLs that result from default events that are possible within the 12 months after the reporting date (or a shorter period if the expected life of the instrument is less than 12 months). The maximum period considered when estimating ECLs is the maximum contractual period over which the Company is exposed to credit risk.

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Company expects to receive. ECLs are discounted at the effective interest rate of the financial asset.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, the Company considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Company's historical experience and informed credit assessment and including forward-looking information.

The Company considers a financial asset to be in default when the borrower is unlikely to pay its credit obligations in full, without recourse by Cameco to actions such as realizing security (if any is held).

The Company considers a debt security to have low credit risk when it is at least an A (low) DBRS or A- S&P rating.

Financial assets carried at amortized cost and debt securities at FVOCI are assessed at each reporting date to determine whether they are 'credit-impaired'. A financial asset is 'credit-impaired' when one or more events that have a detrimental effect on the estimated future cash flows of the financial asset have occurred. Evidence can include significant financial difficulty of the borrower or issuer, a breach of contract, restructuring of an amount due to the Company on terms that the Company would not consider otherwise, indications that a debtor or issuer will enter bankruptcy or other financial reorganization, or the disappearance of an active market for a security.

Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets. For debt securities at FVOCI, the loss allowance is charged to earnings and is recognized in OCI. The gross carrying amount of a financial asset is written off when the Company has no reasonable expectations of recovering a financial asset in its entirety or a portion thereof.

ii. Non-financial assets

The carrying amounts of Cameco's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill is tested annually for impairment.

For impairment testing, assets are grouped together into CGUs which are the smallest group of assets that generate cash inflows from continuing use that are largely independent of the cash inflows of other assets or CGUs. Goodwill arising from a business combination is allocated to CGUs or groups of CGUs that are expected to benefit from the synergies of the combination.

The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell. Value in use is based on the estimated future cash flows, discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or CGU. Fair value is determined as the amount that would be obtained from the sale of the asset or CGU in an arm's-length transaction between knowledgeable and willing parties. For exploration properties, fair value is based on the implied fair value of the resources in place using comparable market transaction metrics.

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its recoverable amount. Impairment losses are recognized in earnings. Impairment losses recognized in respect of CGUs are allocated first to reduce the carrying amount of any goodwill allocated to the CGU, and then to reduce the carrying amounts of the other assets in the CGU on a pro rata basis.

Impairment losses recognized in prior periods are assessed at each reporting date whenever events or changes in circumstances indicate that the impairment may have reversed. If the impairment has reversed, the carrying amount of the asset is increased to its recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized. A reversal of an impairment loss is recognized immediately in earnings. An impairment loss in respect of goodwill is not reversed.

N. Exploration and evaluation expenditures

Exploration and evaluation expenditures are those expenditures incurred by the Company in connection with the exploration for and evaluation of mineral resources before the technical feasibility and commercial viability of extracting a mineral resource are demonstrable. These expenditures include researching and analyzing existing exploration data, conducting geological studies, exploratory drilling and sampling, and compiling prefeasibility and feasibility studies. Exploration and evaluation expenditures are charged against earnings as incurred, except when there is a high degree of confidence in the viability of the project and it is probable that these costs will be recovered through future development and exploitation.

The technical feasibility and commercial viability of extracting a resource is considered to be determinable based on several factors, including the existence of proven and probable reserves and the demonstration that future economic benefits are probable. When an area is determined to be technically feasible and commercially viable, the exploration and evaluation assets attributable to that area are first tested for impairment and then transferred to property, plant and equipment.

Exploration and evaluation costs that have been acquired in a business combination or asset acquisition are capitalized under the scope of IFRS 6, *Exploration for and Evaluation of Mineral Resources* , and are reported as part of property, plant and equipment.

O. Provisions

A provision is recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the risk-adjusted expected future cash flows at a pre-tax risk-free rate that reflects current market assessments of the time value of money. The unwinding of the discount is recognized as a finance cost.

i. Environmental restoration

The mining, extraction and processing activities of the Company normally give rise to obligations for site closure and environmental restoration. Closure and restoration can include facility decommissioning and dismantling, removal or treatment of waste materials, as well as site and land restoration. The Company provides for the closure, reclamation and decommissioning of its operating sites in the financial period when the related environmental disturbance occurs, based on the estimated future costs using information available at the reporting date. Costs included in the provision comprise all closure and restoration activity expected to occur gradually over the life of the operation and at the time of closure. Routine operating costs that may impact the ultimate closure and restoration activities, such as waste material handling conducted as a normal part of a mining or production process, are not included in the provision.

The timing of the actual closure and restoration expenditure is dependent upon a number of factors such as the life and nature of the asset, the operating licence conditions and the environment in which the mine operates. Closure and restoration provisions are measured at the expected value of future cash flows, discounted to their present value using a current pre-tax risk-free rate. Significant judgments and estimates are involved in deriving the expectations of future activities and the amount and timing of the associated cash flows.

At the time a provision is initially recognized, to the extent that it is probable that future economic benefits associated with the reclamation, decommissioning and restoration expenditure will flow to the Company, the corresponding cost is capitalized as an asset. The capitalized cost of closure and restoration activities is recognized in property, plant and equipment and depreciated on a unit-of-production basis. The value of the provision is gradually increased over time as the effect of discounting unwinds. The unwinding of the discount is an expense recognized in finance costs.

Closure and rehabilitation provisions are also adjusted for changes in estimates. The provision is reviewed at each reporting date for changes to obligations, legislation or discount rates that effect change in cost estimates or life of operations. The cost of the related asset is adjusted for changes in the provision resulting from changes in estimated cash flows or discount rates, and the adjusted cost of the asset is depreciated prospectively.

ii. Waste disposal

The refining, conversion and manufacturing processes generate certain uranium-contaminated waste. The Company has established strict procedures to ensure this waste is disposed of safely. A provision for waste disposal costs in respect of these materials is recognized when they are generated. Costs associated with the disposal, the timing of cash flows and discount rates are estimated both at initial recognition and subsequent measurement.

P. Employee future benefits

i. Pension obligations

The Company accrues its obligations under employee benefit plans. The Company has both defined benefit and defined contribution plans. A defined contribution plan is a pension plan under which the Company pays fixed contributions into a separate entity. The Company has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. A defined benefit plan is a pension plan other than a defined contribution plan. Typically, defined benefit plans define an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as age, years of service and compensation.

The liability recognized in the consolidated statements of financial position in respect of defined benefit pension plans is the present value of the defined benefit obligation at the reporting date less the fair value of plan assets. The defined benefit obligation is calculated annually, by qualified independent actuaries using the projected unit credit method prorated on service and management's best estimate of expected plan investment performance, salary escalation, retirement ages of employees and expected health care costs. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related pension liability.

The Company recognizes all actuarial gains and losses arising from defined benefit plans in other comprehensive income, and reports them in retained earnings. When the benefits of a plan are improved, the portion of the increased benefit relating to past service by employees is recognized immediately in earnings.

For defined contribution plans, the contributions are recognized as employee benefit expense in earnings in the periods during which services are rendered by employees. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available.

ii. Other post-retirement benefit plans

The Company provides certain post-retirement health care benefits to its retirees. The entitlement to these benefits is usually conditional on the employee remaining in service up to retirement age and the completion of a minimum service period. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans. Actuarial gains and losses are recognized in other comprehensive income in the period in which they arise. These obligations are valued annually by independent qualified actuaries.

iii. Short-term employee benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided. A liability is recognized for the amount expected to be paid under short-term cash bonus plans if the Company has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee, and the obligation can be measured reliably.

iv. Termination benefits

Termination benefits are payable when employment is terminated by the Company before the normal retirement date, or whenever an employee accepts an entity's offer of benefits in exchange for termination of employment. Cameco recognizes termination benefits as an expense at the earlier of when the Company can no longer withdraw the offer of those benefits and when the Company recognizes costs for a restructuring. If benefits are payable more than 12 months after the reporting period, they are discounted to their present value.

v. Share-based compensation

For equity-settled plans, the grant date fair value of share-based compensation awards granted to employees is recognized as an employee benefit expense, with a corresponding increase in equity, over the period that the employees unconditionally become entitled to the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service and vesting conditions are expected to be met, such that the amount ultimately recognized as an expense is based on the number of awards that meet the related service and non-market performance conditions at the vesting date.

For cash-settled plans, the fair value of the amount payable to employees is recognized as an expense, with a corresponding increase in liabilities, over the period that the employees unconditionally become entitled to payment. The liability is re-measured at each reporting date and at settlement date. Any changes in the fair value of the liability are recognized as employee benefit expense in earnings.

When the terms and conditions of equity-settled plans at the time they were granted are subsequently modified, the fair value of the share-based payment under the original terms and conditions and under the modified terms and conditions are both determined at the date of the modification. Any excess of the modified fair value over the original fair value is recognised over the remaining vesting period in addition to the grant date fair value of the original share-based payment. The share-based payment expense is not adjusted if the modified fair value is less than the original fair value.

Cameco's contributions under the employee share ownership plan are expensed during the year of contribution. Shares purchased with Company contributions and with dividends paid on such shares become unrestricted on January 1 of the second plan year following the date on which such shares were purchased.

Q. Revenue recognition

Cameco supplies uranium concentrates, uranium conversion services, fabrication services and other services. Revenue is measured based on the consideration specified in a contract with a customer. The Company recognizes revenue when it transfers control, as described below, over a good or service to a customer. Customers do not have the right to return products.

Cameco's sales arrangements with its customers are pursuant to enforceable contracts that indicate the nature and timing of satisfaction of performance obligations, including significant payment terms, where payment is usually due in 30 days. Each delivery is considered a separate performance obligation under the contract.

Uranium supply

In a uranium supply arrangement, Cameco is contractually obligated to provide uranium concentrates to its customers. Cameco-owned uranium may be physically delivered to either the customer or to conversion facilities (Converters).

For deliveries to customers, terms in the sales contract specify the location of delivery. Revenue is recognized when the uranium has been delivered and accepted by the customer at that location.

When uranium is delivered to Converters, the Converter will credit Cameco's account for the volume of accepted uranium. Based on delivery terms in the sales contract with its customer, Cameco instructs the Converter to transfer title of a contractually specified quantity of uranium to the customer's account at the Converter's facility. At this point, control has been transferred and Cameco recognizes revenue for the uranium supply.

Toll conversion services

In a toll conversion arrangement, Cameco is contractually obligated to convert customer-owned uranium to a chemical state suitable for enrichment. Based on delivery terms in a sales contract with its customer, Cameco either (i) physically delivers converted uranium to enrichment facilities (Enrichers) where it instructs the Enricher to transfer title of a contractually specified quantity of converted uranium to the customer's account at the Enricher's facility, or (ii) transfers title of a contractually specified quantity of converted uranium to either an Enricher's account or the customer's account at Cameco's Port Hope conversion facility. At this point, the customer obtains control and Cameco recognizes revenue for the toll conversion services.

Conversion supply

A conversion supply arrangement is a combination of uranium supply and toll conversion services. Cameco is contractually obligated to provide converted uranium to its customers. Based on delivery terms in the sales contract, Cameco either (i) physically delivers converted uranium to the Enricher where it instructs the Enricher to transfer title of a contractually specified quantity of converted uranium to the customer's account at the Enricher's facility, or (ii) transfers title of a contractually specified quantity of converted uranium to either an Enricher's account or a customer's account at Cameco's Port Hope conversion facility. At this point, the customer obtains control and Cameco recognizes revenue for both the uranium supplied and the conversion service provided.

Fabrication services

In a fabrication services arrangement, Cameco is contractually obligated to provide fuel bundles or reactor components to its customers. In a contract for fuel bundles, the bundles are inspected and accepted by the customer at Cameco's Port Hope fabrication facility or another location based on delivery terms in the sales contract. At this point, the customer obtains control and Cameco recognizes revenue for the fabrication services.

In some contracts for reactor components, the components are made to a customer's specification and if a contract is terminated by the customer, Cameco is entitled to reimbursement of the costs incurred to date, including a reasonable margin. Since the customer controls all of the work in progress as the products are being manufactured, revenue and associated costs are recognized over time, before the goods are delivered to the customer's premises. Revenue is recognized on the basis of units produced as the contracts reflect a per unit basis. Revenue from these contracts represents an insignificant portion of Cameco's total revenue. In other contracts where the reactor components are not made to a specific customer's specification, when the components are delivered to the location specified in the contract, the customer obtains control and Cameco recognizes revenue for the services.

Other services

Uranium concentrates and converted uranium are regulated products and can only be stored at regulated facilities. In a storage arrangement, Cameco is contractually obligated to store uranium products at its facilities on behalf of the customer. Cameco invoices the customer in accordance with the contract terms and recognizes revenue on a monthly basis.

Cameco also provides customers with transportation of its uranium products. In the contractual arrangements where Cameco is acting as the principal, revenue is recognized as the product is delivered.

R. Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another.

Trade receivables and debt securities are initially recognized when they are originated. All other financial assets and liabilities are initially recognized when the company becomes a party to the contractual provisions of the instrument. A financial asset (unless it is a trade receivable without a significant financing component) or financial liability is initially measured at fair value plus, for an item not at fair value through profit or loss, transaction costs that are directly attributable to its acquisition or issue. A trade receivable without a significant financing component is initially measured at the transaction price.

i. Financial assets

On initial recognition, financial assets are classified as measured at: amortized cost, fair value through other comprehensive income, or fair value through profit or loss based on the Company's business model for managing its financial assets and their cash flow characteristics. Classifications are not changed subsequent to initial recognition unless the Company changes its business model for managing its financial assets, in which case all affected financial assets are reclassified on the first day of the first reporting period following the change in business model.

Amortized cost

A financial asset is measured at amortized cost if it is not designated as at fair value through profit or loss, is held within a business model whose objective is to hold assets to collect contractual cash flows and its contractual terms give rise to cash flows on specified dates that are solely payments of principal and interest on the principal amount outstanding. Assets in this category are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognized in profit or loss, as is any gain or loss on derecognition.

Fair value through other comprehensive income (FVOCI)

A debt investment is measured at FVOCI if it is not designated as at fair value through profit or loss, is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets and its contractual terms give rise to cash flows on specified dates that are solely payments of principal and interest on the principal amount outstanding. These assets are subsequently measured at fair value. Interest income calculated using the effective interest method, foreign exchange gains and losses and impairment are recognized in profit or loss. Other net gains and losses are recognized in other comprehensive income (OCI). On derecognition, gains and losses accumulated in OCI are reclassified to profit or loss.

On initial recognition of an equity investment that is not held for trading, Cameco may irrevocably elect to present subsequent changes in the investments fair value in OCI. This election is made on an investment by investment basis. These assets are subsequently measured at fair value. Dividends are recognized as income in profit or loss unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognized in OCI and are never reclassified to profit or loss.

Fair value through profit or loss (FVTPL)

All financial assets not classified as measured at amortized cost or FVOCI are measured at FVTPL. This includes all derivative financial assets. On initial recognition, the Company may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortized cost or at FVOCI as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise. These assets are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognized in profit or loss.

Derecognition of financial assets

Cameco derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which it neither transfers or retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

If the Company enters into a transaction whereby it transfers assets recognized in its statement of financial position, but retains either all or substantially all of the risks and rewards of the transferred assets, the transferred assets would not be derecognized.

ii. Financial liabilities

On initial recognition, financial liabilities are classified as measured at amortized cost or FVTPL. A financial liability is classified as FVTPL if it is classified as held-for-trading, is a derivative or is designated as such on initial recognition. Financial liabilities at FVTPL are measured at fair value and net gains and losses, including any interest expense, are recognized in profit or loss. Other financial liabilities are subsequently measured at amortized cost using the effective interest method. Interest expense and foreign exchange gains and losses are recognized in profit or loss as is any gain or loss on derecognition.

A financial liability is derecognized when its contractual obligations are discharged or cancelled, or expire. The Company also derecognizes a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognized at fair value. On derecognition of a financial liability, the difference between the carrying amount extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

iii. Derivative financial instruments

The Company holds derivative financial instruments to reduce exposure to fluctuations in foreign currency exchange rates and interest rates. Embedded derivatives are separated from the host contract and accounted for separately if the host contract is not a financial asset and certain criteria are met.

Derivative financial instruments are initially measured at fair value in the consolidated statements of financial position, with any directly attributable transaction costs recognized in profit or loss as incurred. Subsequent to initial recognition, derivatives are measured at fair value, and changes in fair value are recognized in profit or loss.

The purpose of hedging transactions is to modify the Company's exposure to one or more risks by creating an offset between changes in the fair value of, or the cash flows attributable to, the hedged item and the hedging item. When hedge accounting is appropriate, the hedging relationship is designated as a fair value hedge, a cash flow hedge, or a foreign currency risk hedge related to a net investment in a foreign operation. The Company does not have any instruments that have been designated as hedge transactions at December 31, 2019 and 2018.

S. Income tax

Income tax expense is comprised of current and deferred taxes. Current tax and deferred tax are recognized in earnings except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantially enacted at the reporting date, and any adjustments to tax payable in respect of previous years. Current tax assets and liabilities are measured at the amount expected to be paid or recovered from the taxation authorities.

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. In addition, deferred tax is not recognized for taxable temporary differences arising on the initial recognition of goodwill. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realized simultaneously.

A deferred tax asset is recognized for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable income will be available against which they can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

The Company's exposure to uncertain tax positions is evaluated and a provision is made where it is probable that this exposure will materialize.

T. Share capital

Common shares are classified as equity. Incremental costs directly attributable to the issue of common shares are recognized as a reduction of equity, net of any tax effects.

U. Earnings per share

The Company presents basic and diluted earnings per share data for its common shares. Earnings per share is calculated by dividing the net earnings attributable to equity holders of the Company by the weighted average number of common shares outstanding.

Diluted earnings per share is determined by adjusting the net earnings attributable to equity holders of the Company and the weighted average number of common shares outstanding, for the effects of all dilutive potential common shares. The calculation of diluted earnings per share assumes that outstanding options which are dilutive to earnings per share are exercised and the proceeds are used to repurchase shares of the Company at the average market price of the shares for the period. The effect is to increase the number of shares used to calculate diluted earnings per share.

V. Segment reporting

An operating segment is a component of the Company that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with any of the Company's other segments. To be classified as a segment, discrete financial information must be available and operating results must be regularly reviewed by the Company's executive team.

Segment capital expenditure is the total cost incurred during the period to acquire property, plant and equipment, and intangible assets other than goodwill.

3. Accounting standards

A. Changes in accounting policy

On January 1, 2019, Cameco adopted the new standard, IFRS 16, Leases (IFRS 16) and the interpretation, IFRIC 23, Uncertainty over Income Tax Treatments (IFRIC 23) as issued by the IASB.

i. Leases

IFRS 16 eliminates the dual model for lessees, which distinguishes between on-balance sheet finance leases and off-balance sheet operating leases. Instead, there is a single, on-balance sheet accounting model that is similar to finance lease accounting under IAS 17. Cameco adopted IFRS 16 using the modified retrospective approach which does not require comparative information to be restated. The following practical expedients were used during initial application:

- No reassessment of whether a contract is, or contains, a lease at the date of initial application. Contracts that were not identified as leases under IAS 17 and IFRIC 4 were not reassessed for whether there is a lease under IFRS 16;
- Reliance on an assessment under IAS 37 for onerous contracts as an alternative to performing an impairment review;
- No recognition of right-of-use assets and liabilities for leases for which the lease term ends within 12 months of the date of initial application or for leases of low value assets; and
- Use of hindsight when determining the lease terms.

When measuring lease liabilities for leases that were classified as operating, lease payments were discounted using Cameco's incremental borrowing rate at January 1, 2019, which was 4.65%. Adoption of the standard did not have a material impact on the consolidated financial statements. See notes 8, 14 and 26.

ii. Income tax

IFRIC 23 provides guidance on the accounting for current and deferred tax liabilities and assets in circumstances in which there is uncertainty over income tax treatments. The adoption of the standard did not have a material impact on the financial statements:

4. Determination of fair values

A number of the Company's accounting policies and disclosures require the measurement of fair value, for both financial and non-financial assets and liabilities.

The fair value of an asset or liability is generally estimated as the amount that would be received on sale of an asset, or paid to transfer a liability in an orderly transaction between market participants at the reporting date. Fair values of assets and liabilities traded in an active market are determined by reference to last quoted prices, in the principal market for the asset or liability. In the absence of an active market for an asset or liability, fair values are determined based on market quotes for assets or liabilities with similar characteristics and risk profiles, or through other valuation techniques. Fair values determined using valuation techniques require the use of inputs, which are obtained from external, readily observable market data when available. In some circumstances, inputs that are not based on observable data must be used. In these cases, the estimated fair values may be adjusted in order to account for valuation uncertainty, or to reflect the assumptions that market participants would use in pricing the asset or liability.

All fair value measurements are categorized into one of three hierarchy levels, described below, for disclosure purposes. Each level is based on the transparency of the inputs used to measure the fair values of assets and liabilities:

Level 1 – Values based on unadjusted quoted prices in active markets that are accessible at the reporting date for identical assets or liabilities.

Level 2 – Values based on quoted prices in markets that are not active or model inputs that are observable either directly or indirectly for substantially the full term of the asset or liability.

Level 3 – Values based on prices or valuation techniques that require inputs that are both unobservable and significant to the overall fair value measurement.

When the inputs used to measure fair value fall within more than one level of the hierarchy, the level within which the fair value measurement is categorized is based on the lowest level input that is significant to the fair value measurement in its entirety.

Transfers between levels of the fair value hierarchy are recognized at the end of the reporting period during which the transfer occurred. There were no transfers between level 1, level 2, or level 3 during the period. Cameco does not have any recurring fair value measurements that are categorized as level 3 as of the reporting date.

Further information about the techniques and assumptions used to measure fair values is included in the following notes:

Note 24 - Share-based compensation plans

Note 26 - Financial instruments and risk management

5. Use of estimates and judgments

The preparation of the consolidated financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, revenues and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future period affected.

Information about critical judgments in applying the accounting policies that have the most significant effect on the amounts recognized in the consolidated financial statements is discussed below. Further details of the nature of these judgments, estimates and assumptions may be found in the relevant notes to the consolidated financial statements.

A. Recoverability of long-lived and intangible assets

Cameco assesses the carrying values of property, plant and equipment, and intangible assets when there is an indication of possible impairment. Goodwill and intangible assets not yet available for use or with indefinite useful lives are tested for impairment annually. If it is determined that carrying values of assets or goodwill cannot be recovered, the unrecoverable amounts are charged against current earnings. Recoverability is dependent upon assumptions and judgments regarding market conditions, costs of production, sustaining capital requirements and mineral reserves. Other assumptions used in the calculation of recoverable amounts are discount rates, future cash flows and profit margins. A material change in assumptions may significantly impact the potential impairment of these assets.

B. Cash generating units

In performing impairment assessments of long-lived assets, assets that cannot be assessed individually are grouped together into the smallest group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. Management is required to exercise judgment in identifying these CGUs.

C. Provisions for decommissioning and reclamation of assets

Significant decommissioning and reclamation activities are often not undertaken until near the end of the useful lives of the productive assets. Regulatory requirements and alternatives with respect to these activities are subject to change over time. A significant change to either the estimated costs, timing of the cash flows or mineral reserves may result in a material change in the amount charged to earnings.

D. Income taxes

Cameco operates in a number of tax jurisdictions and is, therefore, required to estimate its income taxes in each of these tax jurisdictions in preparing its consolidated financial statements. In calculating income taxes, consideration is given to factors such as tax rates in the different jurisdictions, non-deductible expenses, changes in tax law and management's expectations of future operating results. Cameco estimates deferred income taxes based on temporary differences between the income and losses reported in its consolidated financial statements and its taxable income and losses as determined under the applicable tax laws. The tax effect of these temporary differences is recorded as deferred tax assets or liabilities in the consolidated financial statements. The calculation of income taxes requires the use of judgment and estimates. The determination of the recoverability of deferred tax assets is dependent on assumptions and judgments regarding future market conditions, production rates and intercompany sales, which can materially impact estimated future taxable income. If these judgments and estimates prove to be inaccurate, future earnings may be materially impacted.

E. Mineral reserves

Depreciation on property, plant and equipment is primarily calculated using the unit-of-production method. This method allocates the cost of an asset to each period based on current period production as a portion of total lifetime production or a portion of estimated mineral reserves. Estimates of life-of-mine and amounts of mineral reserves are updated annually and are subject to judgment and significant change over time. If actual mineral reserves prove to be significantly different than the estimates, there could be a material impact on the amounts of depreciation charged to earnings.

F. Gain on restructuring

The gain recorded on the restructuring of JV Inkai was calculated based on the fair value of the asset being given up. The determination of fair value requires Cameco to make assumptions, estimates and judgments, some of which are inherently subjective.

6. Accounts receivable

	2019	2018
Trade receivables	**$321,638**	$392,865
GST/VAT receivables	**4,614**	3,711
Other receivables	**1,792**	5,774
Total	**$328,044**	$402,350

The Company's exposure to credit and currency risks as well as credit losses related to trade and other receivables, excluding goods and services tax (GST)/value added tax (VAT) receivables, is disclosed in note 26.

7. Inventories

	2019	2018
Uranium		
Concentrate	**$204,123**	$335,276
Broken ore	**51,094**	51,545
	255,217	386,821
Fuel services	**62,701**	75,541
Other	**2,852**	5,433
Total	**$320,770**	$467,795

Cameco expensed $1,398,000,000 of inventory as cost of sales during 2019 (2018 - $1,501,000,000). Included in cost of sales for the year ended December 31, 2018 is a $29,296,000 net write-down to reflect net realizable value. No write-down was recorded in the current year.

8. Property, plant and equipment

At December 31, 2019

	Land and buildings	Plant and equipment	Furniture and fixtures	Under construction	Exploration and evaluation	Total
Cost						
Beginning of year	$5,089,908	$2,654,944	$80,083	$ 63,465	$1,121,061	$9,009,461
Additions	2,327	7,179	158	65,482	65	75,211
Transfers	17,157	28,453	951	(46,561)	—	—
Change in reclamation provision [note 15]	24,883	—	—	—	—	24,883
Disposals	(923)	(3,486)	(142)	(507)	(693)	(5,751)
Effect of movements in exchange rates	(32,642)	(8,925)	(181)	(17)	(48,593)	(90,358)
End of year	**5,100,710**	**2,678,165**	**80,869**	**81,862**	**1,071,840**	**9,013,446**
Accumulated depreciation and impairment						
Beginning of year	2,835,037	1,697,178	74,860	36,799	483,661	5,127,535
Depreciation charge	128,579	105,700	2,057	—	—	236,336
Change in reclamation provision [note 15]	2,732	—	—	—	—	2,732
Disposals	(225)	(2,194)	(139)	—	(639)	(3,197)
Effect of movements in exchange rates	(30,035)	(7,635)	(177)	—	(24,636)	(62,483)
End of year	**2,936,088**	**1,793,049**	**76,601**	**36,799**	**458,386**	**5,300,923**
Right-of-use assets						
Beginning of year	—	—	—	—	—	—
Additions	3,517	5,768	851	—	—	10,136
Disposals	—	(9)	—	—	—	(9)
Depreciation charge	(871)	(675)	(432)	—	—	(1,978)
End of year	**2,646**	**5,084**	**419**	**—**	**—**	**8,149**
Net book value at December 31, 2019	**$2,167,268**	**$ 890,200**	**$ 4,687**	**$ 45,063**	**$ 613,454**	**$3,720,672**

At December 31, 2018

	Land and buildings	Plant and equipment	Furniture and fixtures	Under construction	Exploration and evaluation	Total
Cost						
Beginning of year	$5,045,112	$2,729,635	$90,817	$ 154,731	$1,120,280	$9,140,575
Additions	1,944	7,274	—	45,516	628	55,362
Transfers	104,760	20,044	288	(129,436)	4,344	—
Change in reclamation provision	132,317	—	—	—	—	132,317
Disposals	(186)	(7,355)	(4,714)	(1,663)	(414)	(14,332)
JV Inkai restructuring[(a)]	(245,882)	(109,748)	(6,624)	(5,739)	—	(367,993)
Effect of movements in exchange rates	51,843	15,094	316	56	(3,777)	63,532
End of year	**5,089,908**	**2,654,944**	**80,083**	**63,465**	**1,121,061**	**9,009,461**
Accumulated depreciation and impairment						
Beginning of year	2,717,249	1,611,460	80,752	55,832	483,390	4,948,683
Depreciation charge	120,754	111,465	3,217	—	—	235,436
Transfers	13,036	6,333	(322)	(19,047)	—	—
Change in reclamation provision	59,616	—	—	—	—	59,616
Disposals	(185)	(5,853)	(4,647)	—	—	(10,685)
JV Inkai restructuring[(a)]	(123,919)	(38,783)	(4,441)	—	—	(167,143)
Effect of movements in exchange rates	48,486	12,556	301	14	271	61,628
End of year	**2,835,037**	**1,697,178**	**74,860**	**36,799**	**483,661**	**5,127,535**
Net book value at December 31, 2018	**$2,254,871**	**$ 957,766**	**$ 5,223**	**$ 26,666**	**$ 637,400**	**$3,881,926**

Cameco has contractual capital commitments of approximately $38,000,000 at December 31, 2019. Certain of the contractual commitments may contain cancellation clauses, however the Company discloses the commitments based on management's intent to fulfill the contract. The majority of this amount is expected to be incurred in 2020.

(a) Effective January 1, 2018, Cameco's ownership interest in JV Inkai was reduced to 40% resulting in JV Inkai being accounted for on an equity basis instead of proportionate consolidation (see note 11).

9. Intangible assets

A. Reconciliation of carrying amount

At December 31, 2019

	Contracts	Intellectual property	Total
Cost			
Beginning of year	$119,371	$ 118,819	$238,190
Effect of movements in exchange rates	(5,664)	—	(5,664)
End of year	**113,707**	**118,819**	**232,526**
Accumulated amortization and impairment			
Beginning of year	115,434	57,154	172,588
Amortization charge	1,181	3,868	5,049
Effect of movements in exchange rates	(5,521)	—	(5,521)
End of year	**111,094**	**61,022**	**172,116**
Net book value at December 31, 2019	**$ 2,613**	**$ 57,797**	**$ 60,410**

At December 31, 2018

	Contracts	Intellectual property	Total
Cost			
Beginning of year	$109,812	$ 118,819	$228,631
Effect of movements in exchange rates	9,559	—	9,559
End of year	**119,371**	**118,819**	**238,190**
Accumulated amortization and impairment			
Beginning of year	104,939	53,680	158,619
Amortization charge	1,325	3,474	4,799
Effect of movements in exchange rates	9,170	—	9,170
End of year	**115,434**	**57,154**	**172,588**
Net book value at December 31, 2018	**$ 3,937**	**$ 61,665**	**$ 65,602**

B. Amortization

The intangible asset values relate to intellectual property acquired with Cameco Fuel Manufacturing Inc. (CFM) and purchase and sales contracts acquired with NUKEM. The CFM intellectual property is being amortized on a unit-of-production basis over its remaining life. Amortization is allocated to the cost of inventory and is recognized in cost of products and services sold as inventory is sold. The NUKEM purchase and sales contracts will be amortized to earnings over the remaining terms of the underlying contracts, which extend to 2022. Amortization of the purchase contracts is allocated to the cost of inventory and is included in cost of products and services sold as inventory is sold. Sales contracts are amortized to revenue.

10. Long-term receivables, investments and other

	2019	2018
Investments in equity securities [note 26] [(a)]	**$ 24,408**	$ 28,916
Derivatives [note 26]	**10,504**	3,881
Advances receivable from JV Inkai [note 31]	**—**	124,533
Investment tax credits	**95,474**	95,246
Amounts receivable related to tax dispute [note 21]	**303,222**	303,222
Product loan [(b)]	**176,904**	176,904
Other	**26,183**	32,992
	636,695	765,694
Less current portion	**(6,564)**	(13,826)
Net	**$630,131**	$751,868

(a) At January 1, 2018, Cameco designated the investments shown below as equity securities at FVOCI because these equity securities represent investments that the Company intends to hold for the long term for strategic purposes. There were no dividends recognized on any of these investments during the year.

	2019	2018
Investment in Denison Mines Corp.	**$13,292**	$15,507
Investment in UEX Corporation	**7,253**	8,754
Investment in ISO Energy Ltd.	**1,481**	1,777
Investment in GoviEx	**2,000**	2,313
Other	**382**	565
	$24,408	$28,916

(b) During 2018, as a result of the decision to temporarily suspend production at the McArthur River mine, Cameco loaned 5,400,000 pounds of uranium concentrate to its joint venture partner, Orano Canada Inc., (Orano). Orano is obligated to repay us in kind with uranium concentrate no later than December 31, 2023. The loan was recorded at Cameco's weighted average cost of inventory.

11. Equity-accounted investee

JV Inkai is the operator of the Inkai uranium deposit located in Kazakhstan. Cameco holds a 40% interest and Kazatomprom holds a 60% interest in JV Inkai. Cameco does not have joint control over the joint venture and as a result, Cameco accounts for JV Inkai on an equity basis.

JV Inkai is a uranium mining and milling operation that utilizes in-situ recovery (ISR) technology to extract uranium. The participants in JV Inkai purchase uranium from Inkai and, in turn, derive revenue directly from the sale of such product to third-party customers.

The following tables summarize the financial information of JV Inkai (100%):

	2019	2018
Cash and cash equivalents	**$ 16,699**	$ 41,717
Other current assets	**139,324**	160,784
Non-current assets	**398,721**	407,816
Current liabilities	**(71,162)**	(151,728)
Non-current liabilities	**(41,508)**	(41,746)
Net assets	**$442,074**	$ 416,843

	2019	2018
Revenue from products and services	**$261,860**	$ 203,359
Cost of products and services sold	**(64,199)**	(52,172)
Depreciation and amortization	**(27,740)**	(27,504)
Finance income	**651**	160
Finance costs	**(2,939)**	(6,251)
Other expense	**(23,767)**	(30,419)
Income tax expense	**(30,999)**	(20,860)
Net earnings	**112,867**	66,313
Other comprehensive loss	**(1,773)**	—
Total comprehensive income	**$111,094**	$ 66,313

The following table reconciles the summarized financial information to the carrying amount of Cameco's interest in JV Inkai:

	2019	2018
Opening net assets	**$416,843**	$374,650
Total comprehensive income[(a)]	**111,094**	66,313
Dividends declared	**(66,369)**	—
Impact of foreign exchange	**(19,494)**	(24,120)
Closing net assets	**442,074**	416,843
Cameco's share of net assets	**176,830**	166,737
Consolidating adjustments[(b)]	**(30,633)**	(33,978)
Fair value increment[(c)]	**91,697**	94,633
Dividends declared but not received	**13,859**	—
Impact of foreign exchange	**928**	3,110
Carrying amount in the statement of financial position at December 31, 2019	**$252,681**	$230,502

(a) Cameco's share of earnings from equity-accounted investee as reported on the statement of earnings will not equal its share of JV Inkai's other comprehensive income when Cameco receives dividends from JV Inkai that are not in proportion to its 40% ownership interest.

(b) In addition to its proportionate share of earnings from JV Inkai, Cameco records certain consolidating adjustments to eliminate unrealized profit and amortize historical differences in accounting policies. This amount is amortized to earnings over units of production.

(c) Following the restructuring, in addition to the adjustments noted in (b), Cameco also amortizes the fair values assigned to assets and liabilities at the time of the restructuring over units of production.

12. Accounts payable and accrued liabilities

	2019	2018
Trade payables	**$100,407**	$123,219
Non-trade payables	**66,815**	92,183
Payables due to related parties	**14,577**	9,352
Total	**$181,799**	$224,754

The Company's exposure to currency and liquidity risk related to trade and other payables is disclosed in note 26.

13. Long-term debt

	2019	2018
Unsecured debentures		
Series D - 5.67% debentures due September 2, 2019	**$ —**	$ 499,599
Series E - 3.75% debentures due November 14, 2022	**399,152**	398,873
Series F - 5.09% debentures due November 14, 2042	**99,302**	99,286
Series G - 4.19% debentures due June 24, 2024	**498,264**	497,913
	996,718	1,495,671
Less current portion	**—**	(499,599)
Total	**$996,718**	$ 996,072

Cameco has a $1,000,000,000 unsecured revolving credit facility that is available until November 1, 2023. Upon mutual agreement, the facility can be extended for an additional year on the anniversary date. In addition to direct borrowings under the facility, up to $100,000,000 can be used for the issuance of letters of credit and, to the extent necessary, it may be used to provide liquidity support for the Company's commercial paper program. The agreement also provides the ability to increase the revolving credit facility above $1,000,000,000 by increments no less than $50,000,000, to a total of $1,250,000,000. The facility ranks equally with all of Cameco's other senior debt. As of December 31, 2019 and 2018, there were no amounts outstanding under this facility.

Cameco has $1,719,120,000 (2018 - $1,716,473,000) in letter of credit facilities. Outstanding and committed letters of credit at December 31, 2019 amounted to $1,528,603,000 (2018 - $1,572,984,000), the majority of which relate to future decommissioning and reclamation liabilities (note 15).

Cameco is bound by a covenant in its revolving credit facility. The covenant requires a funded debt to tangible net worth ratio equal to or less than 1:1. Non-compliance with this covenant could result in accelerated payment and termination of the revolving credit facility. At December 31, 2019, Cameco was in compliance with the covenant and does not expect its operating and investing activities in 2020 to be constrained by it.

The Company has arranged for standby product loan facilities with three different counterparties. The arrangements allow it to borrow up to 1.2 million kgU of UF_6 conversion services over the period 2020 to 2022 with repayment in kind up to March 31, 2023. Under the loan facilities, standby fees of up to 1% are payable based on the market value of the facilities and interest is payable on the market value of any amounts drawn at rates ranging from 0.5% to 2.0%.

The table below represents currently scheduled maturities of long-term debt:

2020	2021	2022	2023	2024	Thereafter	Total
$ —	—	399,152	—	498,264	99,302	**$ 996,718**

14. Other liabilities

	2019	2018
Deferred sales [note 17]	**$ 17,418**	$ 30,727
Derivatives [note 26]	**12,524**	61,387
Accrued pension and post-retirement benefit liability [note 25]	**80,737**	68,255
Lease obligation	**12,869**	—
Other	**63,452**	61,265
	187,000	221,634
Less: current portion	**(33,073)**	(79,573)
Net	**$153,927**	$142,061

Expenses related to short-term leases and leases of low-value assets were insignificant during 2019.

15. Provisions

	Reclamation	Waste disposal	Total
Beginning of year	$1,053,892	$ 9,460	$1,063,352
Changes in estimates and discount rates [note 8]			
Capitalized in property, plant and equipment	22,151	—	22,151
Recognized in earnings	2,732	645	3,377
Provisions used during the period	(31,933)	(457)	(32,390)
Unwinding of discount [note 19]	20,634	155	20,789
Effect of movements in exchange rates	(16,801)	—	(16,801)
End of period	**$1,050,675**	**$ 9,803**	**$1,060,478**
Current	$ 54,806	$ 1,442	$ 56,248
Non-current	995,869	8,361	1,004,230
	$1,050,675	**$ 9,803**	**$1,060,478**

A. Reclamation provision

Cameco's estimates of future decommissioning obligations are based on reclamation standards that satisfy regulatory requirements. Elements of uncertainty in estimating these amounts include potential changes in regulatory requirements, decommissioning and reclamation alternatives and amounts to be recovered from other parties.

Cameco estimates total undiscounted future decommissioning and reclamation costs for its existing operating assets to be $1,127,487,000 (2018 - $1,157,208,000). The expected timing of these outflows is based on life-of-mine plans with the majority of expenditures expected to occur after 2024. These estimates are reviewed by Cameco technical personnel as required by regulatory agencies or more frequently as circumstances warrant. In connection with future decommissioning and reclamation costs, Cameco has provided financial assurances of $994,129,000 (2018 - $1,050,546,000) in the form of letters of credit to satisfy current regulatory requirements.

The reclamation provision relates to the following segments:

	2019	2018
Uranium	**$ 831,352**	$ 828,781
Fuel services	**219,323**	225,111
Total	**$1,050,675**	$1,053,892

B. Waste disposal

The fuel services segment consists of the Blind River refinery, Port Hope conversion facility and Cameco Fuel Manufacturing Inc.. The refining, conversion and manufacturing processes generate certain uranium contaminated waste. These include contaminated combustible material (paper, rags, gloves, etc.) and contaminated non-combustible material (metal parts, soil from excavations, building and roofing materials, spent uranium concentrate drums, etc.). These materials can in some instances be recycled or reprocessed. A provision for waste disposal costs in respect of these materials is recognized when they are generated.

Cameco estimates total undiscounted future costs related to existing waste disposal to be $8,451,000 (2018 - $9,617,000). The majority of these expenditures are expected to occur within the next five years.

16. Share capital

Authorized share capital:

- Unlimited number of first preferred shares
- Unlimited number of second preferred shares
- Unlimited number of voting common shares, no stated par value, not convertible or redeemable, and
- One Class B share

A. Common Shares

Number issued (number of shares)	2019	2018
Beginning of year	**395,792,732**	395,792,732
Issued:		
Stock option plan [note 24]	**5,000**	—
End of year	**395,797,732**	395,792,732

All issued shares are fully paid. Holders of the common shares are entitled to exercise one vote per share at meetings of shareholders, are entitled to receive dividends if, as and when declared by our Board of Directors and are entitled to participate in any distribution of remaining assets following a liquidation.

The shares of Cameco are widely held and no shareholder, resident in Canada, is allowed to own more than 25% of the Company's outstanding common shares, either individually or together with associates. A non-resident of Canada is not allowed to own more than 15%. In addition, no more than 25% of total shareholder votes cast may be cast by non-resident shareholders.

B. Class B share

One Class B share issued during 1988 and assigned $1 of share capital entitles the shareholder to vote separately as a class in respect of any proposal to locate the head office of Cameco to a place not in the province of Saskatchewan.

C. Dividends

Dividends on Cameco Corporation common shares are declared in Canadian dollars. For the year ended December 31, 2019, the dividend declared per share was $0.08 (December 31, 2018 - $0.08).

17. Revenue

Cameco's sales contracts with customers contain both fixed and market-related pricing. Fixed-price contracts are typically based on a term-price indicator at the time the contract is accepted and escalated over the term of the contract. Market-related contracts are based on either the spot price or long-term price, and the price is quoted at the time of delivery rather than at the time the contract is accepted. These contracts often include a floor and/or ceiling prices, which are usually escalated over the term of the contract. Escalation is generally based on a consumer price index. The Company's contracts contain either one of these pricing mechanisms or a combination of the two. There is no variable consideration in the contracts and therefore no revenue is considered constrained at the time of delivery. Cameco expenses the incremental costs of obtaining a contract as incurred as the amortization period is less than a year.

The following table summarizes Cameco's sales disaggregated by geographical region and contract type and includes a reconciliation to the Company's reportable segments (note 28):

For the year ended December 31, 2019

	Uranium	Fuel services	Other	Total
Customer geographical region				
Americas	$ 569,535	$ 206,226	$59,300	$ 835,061
Europe	288,134	79,629	3,587	371,350
Asia	556,140	84,422	15,952	656,514
	$1,413,809	**$ 370,277**	**$78,839**	**$1,862,925**
Contract type				
Fixed-price	$ 349,021	$ 305,383	$69,703	$ 724,107
Market-related	1,064,788	64,894	9,136	1,138,818
	$1,413,809	**$ 370,277**	**$78,839**	**$1,862,925**

For the year ended December 31, 2018

	Uranium	Fuel services	Other	Total
Customer geographical region				
Americas	$ 695,678	$ 191,791	$69,012	$ 956,481
Europe	275,096	50,000	10,693	335,789
Asia	713,282	72,198	13,911	799,391
	$1,684,056	**$ 313,989**	**$93,616**	**$2,091,661**
Contract type				
Fixed-price	$ 577,143	$ 293,400	$83,706	$ 954,249
Market-related	1,106,913	20,589	9,910	1,137,412
	$1,684,056	**$ 313,989**	**$93,616**	**$2,091,661**

Deferred sales

The following table provides information about contract liabilities (note 14) from contracts with customers:

	2019	2018
Beginning of year	**$ 30,727**	$ 29,148
Additions	**9,783**	25,695
Recognized in revenue	**(23,067)**	(24,025)
Effect of movements in exchange rates	**(25)**	(91)
End of year	**$ 17,418**	$ 30,727

Deferred sales primarily relates to advance consideration received from customers for future conversion deliveries and fuel fabrication services as well as revenue related to the storage of uranium and converted uranium held at Cameco facilities. The revenue related to the fuel fabrication services and storage is recognized over time while the revenue related to future conversion deliveries is expected to be recognized between 2020 and 2025.

Cameco recognized $78,000 of revenue (2018 - $5,468,000 reduction of revenue) during 2019 from performance obligations satisfied (or partially satisfied) in previous periods. This is due to the difference between actual pricing indices and the estimates at the time of invoicing.

Future sales commitments

Cameco's sales portfolio consists of short and long-term sales commitments. The contracts can be executed well in advance of a delivery and include both fixed and market-related pricing. The following table summarizes the expected future revenue, by segment, related to only fixed-price contracts with remaining future deliveries as follows:

	2020	2021	2022	2023	2024	Thereafter	Total
Uranium	$271,642	$183,422	$145,920	$169,234	$166,015	$ 532,429	$1,468,662
Fuel services	274,755	265,126	212,562	150,266	150,773	593,612	1,647,094
Other	4,030	4,212	—	—	—	—	8,242
Total	**$550,427**	**$452,760**	**$358,482**	**$319,500**	**$316,788**	**$1,126,041**	**$3,123,998**

The sales contracts are denominated largely in US dollars and converted from US to Canadian dollars at a rate of $1.30.

The amounts in the table represent the consideration the Company will be entitled to receive when it satisfies the remaining performance obligations in the contracts. The amounts include assumptions about volumes for contracts that have volume flexibility. Cameco's total revenue that will be earned will also include revenue from contracts with market-related pricing. The Company has elected to exclude these amounts from the table as the transaction price will not be known until the time of delivery. Contracts with an original duration of one year or less have been included in the table.

18. Employee benefit expense

The following employee benefit expenses are included in cost of products and services sold, administration, exploration, research and development and property, plant and equipment:

	2019	2018
Wages and salaries	**$238,000**	$305,367
Statutory and company benefits	**41,972**	50,477
Expenses related to defined benefit plans [note 25]	**4,790**	3,527
Expenses related to defined contribution plans [note 25]	**11,767**	13,431
Equity-settled share-based compensation [note 24]	**17,469**	18,821
Cash-settled share-based compensation [note 24]	**(1,437)**	3,597
Total	**$312,561**	$395,220

19. Finance costs

	2019	2018
Interest on long-term debt	**$63,136**	$ 73,039
Unwinding of discount on provisions [note 15]	**20,789**	23,681
Other charges	**14,697**	15,059
Total	**$98,622**	$111,779

No borrowing costs were determined to be eligible for capitalization during the year.

20. Other income (expense)

	2019	2018
Arbitration award[(a)]	**$ 52,801**	$ —
Foreign exchange gains	**(18,961)**	26,205
Gain on restructuring of JV Inkai[(b)]	**—**	48,570
Sale of exploration interests [(c)]	**—**	25,027
Contract restructuring	**—**	6,201
Other	**—**	2,157
Total	**$ 33,840**	$108,160

(a) In the third quarter of 2019, Cameco received an award from the tribunal of international arbitrators (Tribunal) with respect to its contract dispute with Tokyo Electric Power Company Holdings, Inc. (TEPCO). The Tribunal rejected TEPCO's assertion that it had the right to terminate its uranium supply agreement and awarded damages of $40,300,000 (US). Damages were based on the Tribunal's interpretation of losses under this supply agreement.

(b) Effective January 1, 2018, Cameco's ownership interest in JV Inkai was reduced from 60% to 40% based on an implementation agreement with Kazatomprom. Cameco recognized a gain on the change in ownership interests of $48,570,000. Included in this gain is $5,450,000 which has been reclassified from the foreign currency translation reserve to net earnings.

(c) In 2018, Cameco sold its interest in the Wheeler River Joint Venture to Denison Mines Corp. in exchange for 24,615,000 common shares (note 10). Cameco recorded a gain of $17,231,000 on the transaction.

21. Income taxes

A. Significant components of deferred tax assets and liabilities

	Recognized in earnings		As at December 31	
	2019	2018	2019	2018
Assets				
Property, plant and equipment	**$ 74,039**	$119,132	**$319,185**	$ 245,206
Provision for reclamation	**2,325**	(36,622)	**193,514**	191,189
Inventories	**(2,163)**	1,137	**—**	2,163
Foreign exploration and development	**(14)**	(14)	**5,267**	5,281
Income tax losses (gains)	**(108,839)**	39,289	**390,341**	499,180
Defined benefit plan actuarial losses	**—**	—	**7,947**	5,646
Long-term investments and other	**(17,377)**	24,169	**40,423**	57,347
Deferred tax assets	**(52,029)**	147,091	**956,677**	1,006,012
Liabilities				
Inventories	**301**	—	**301**	—
Deferred tax liabilities	**301**	—	**301**	—
Net deferred tax asset (liability	**$ (52,330)**	$147,091	**$956,376**	$1,006,012

Deferred tax allocated as	2019	2018
Deferred tax assets	**$956,376**	$1,006,012
Deferred tax liabilities	**—**	—
Net deferred tax asset	**$956,376**	$1,006,012

Cameco has recorded a deferred tax asset of $956,376,000 (December 31, 2018 - $1,006,012,000). The realization of this deferred tax asset is dependent upon the generation of future taxable income in certain jurisdictions during the periods in which the Company's deferred tax assets are available. The Company considers whether it is probable that all or a portion of the deferred tax assets will not be realized. In making this assessment, management considers all available evidence, including recent financial operations, projected future taxable income and tax planning strategies. Based on projections of future taxable income over the periods in which the deferred tax assets are available, realization of these deferred tax assets is probable and consequently the deferred tax assets have been recorded.

B. Movement in net deferred tax assets and liabilities

	2019	2018
Deferred tax asset at beginning of year	**$1,006,012**	$ 848,704
Recovery (expense) for the year in net earnings	**(52,330)**	147,091
Recovery (expense) for the year in other comprehensive income	**2,754**	(851)
Change to equity accounting - JV Inkai	**—**	10,849
Effect of movements in exchange rates	**(60)**	219
End of year	**$ 956,376**	$1,006,012

C. Significant components of unrecognized deferred tax assets

	2019	2018
Income tax losses	**$280,330**	$270,154
Property, plant and equipment	**2,321**	2,344
Provision for reclamation	**75,082**	88,036
Long-term investments and other	**70,380**	72,500
Total	**$428,113**	$433,034

D. Tax rate reconciliation

The provision for income taxes differs from the amount computed by applying the combined expected federal and provincial income tax rate to earnings before income taxes. The reasons for these differences are as follows:

	2019	2018
Earnings before income taxes and non-controlling interest	**$135,018**	$ 39,929
Combined federal and provincial tax rate	**26.9%**	26.9%
Computed income tax expense	**36,320**	10,741
Increase (decrease) in taxes resulting from:		
Difference between Canadian rates and rates applicable to subsidiaries in other countries	**5,558**	(78,138)
Change in unrecognized deferred tax assets	**19,646**	18,027
Share-based compensation plans	**1,146**	1,292
Change in tax provision related to transfer pricing	**—**	(61,000)
Non-deductible (non-taxable) capital amounts	**—**	(13,249)
Income in equity-accounted investee	**(12,074)**	—
Change in uncertain tax positions	**2,572**	(3,517)
Other permanent differences	**7,909**	(462)
Income tax expense (recovery)	**$ 61,077**	$(126,306)

E. Earnings and income taxes by jurisdiction

	2019	2018
Earnings (loss) before income taxes		
Canada	**$229,429**	$(257,291)
Foreign	**(94,411)**	297,220
	$135,018	$ 39,929
Current income taxes		
Canada	**$ 7,969**	$ 5,913
Foreign	**778**	14,872
	$ 8,747	$ 20,785
Deferred income taxes (recovery)		
Canada	**$ 60,010**	$(149,284)
Foreign	**(7,680)**	2,193
	$ 52,330	$(147,091)
Income tax expense (recovery)	**$ 61,077**	$(126,306)

F. Reassessments

Canada

In 2008, as part of the ongoing annual audits of Cameco's Canadian tax returns, Canada Revenue Agency (CRA) disputed the transfer pricing structure and methodology used by Cameco and its wholly owned Swiss subsidiary, Cameco Europe Ltd., in respect of sale and purchase agreements for uranium products. From December 2008 to date, CRA issued notices of reassessment for the taxation years 2003 through 2013, which in aggregate have increased Cameco's income for Canadian tax purposes by approximately $5,700,000,000. CRA has also issued notices of reassessment for transfer pricing penalties for the years 2007 through 2011 in the amount of $371,000,000. It is uncertain whether CRA will reassess Cameco's tax returns for subsequent years on a similar basis and if these will require Cameco to make future remittances or provide security on receipt of the reassessments.

On September 26, 2018, the Tax Court of Canada (Tax Court) ruled in our favour in our case with the Canada Revenue Agency (CRA) for the 2003, 2005 and 2006 tax years.

The Tax Court ruled that our marketing and trading structure involving foreign subsidiaries and the related transfer pricing methodology used for certain intercompany uranium purchase and sale agreements were in full compliance with Canadian laws for the three tax years in question. While the decision applies only to the three tax years in question, we believe there is nothing in the decision that would warrant a materially different outcome for subsequent tax years. We expect to recover any amounts remitted or secured as a result of the reassessments.

On October 25, 2018, CRA filed a notice of appeal with the Federal Court of Appeal. We anticipate that it will take about two years from the start of the appeal process to receive a decision from the Federal Court of Appeal.

We expect the Tax Court's decision to be upheld on appeal. We expect any further actions regarding the tax years 2007 through 2013 will be suspended until the three years covered in the decision are finally resolved. Despite the fact that we believe there is no basis to do so, and it is not our view of the likely outcome, CRA may continue to reassess us using the methodology it used to reassess the 2003 through 2013 tax years. In that scenario, and including the $5,700,000,000 already reassessed, we expect to receive notices of reassessment for a total of approximately $8,700,000,000 for the years 2003 through 2019, which would increase Cameco's income for Canadian tax purposes and result in a related tax expense of approximately $2,600,000,000. In addition to penalties already imposed, CRA may continue to apply penalties to taxation years subsequent to 2011. As a result, we estimate that cash taxes and transfer pricing penalties would be between $1,950,000,000 and $2,150,000,000. In addition, we estimate there would be interest and instalment penalties applied that would be material to Cameco. While in dispute, we would be responsible for remitting or otherwise securing 50% of the cash taxes and transfer pricing penalties (between $970,000,000 and $1,070,000,000), plus related interest and instalment penalties assessed, which would be material to Cameco.

Under Canadian federal and provincial tax rules, the amount required to be remitted each year will depend on the amount of income reassessed in that year and the availability of elective deductions. CRA disallowed the use of any loss carry-backs to be applied to any transfer pricing adjustment, starting with the 2008 tax year. In light of our view of the likely outcome of the case, we expect to recover the amounts remitted to CRA, including cash taxes, interest and penalties totalling $303,222,000 already paid as at December 31, 2019 (December 31, 2018 - $303,222,000) (note 10). In addition to the cash remitted, we have provided $480,000,000 in letters of credit to secure 50% of the cash taxes and related interest.

Management believes that the ultimate resolution will not be material to Cameco's financial position, results of operations or liquidity in the year(s) of resolution. Resolution of this matter as stipulated by CRA would be material to Cameco's financial position, results of operations or liquidity in the year(s) of resolution and other unfavourable outcomes for the years 2003 to date could be material to Cameco's financial position, results of operations and cash flows in the year(s) of resolution.

G. Income tax losses

At December 31, 2019, income tax losses carried forward of $2,509,669,000 (2018 - $2,809,926,000) are available to reduce taxable income. These losses expire as follows:

Date of expiry	Canada	US	Other	Total
2026	$ —	$ —	$ 80,000	$ 80,000
2030	47	—	—	47
2031	—	20,859	—	20,859
2032	272	22,464	—	22,736
2033	173,691	38,296	—	211,987
2034	322,359	21,125	—	343,484
2035	372,558	14,699	—	387,257
2036	209,265	44,674	—	253,939
2037	143	33,462	—	33,605
2038	5,581	51,896	—	57,477
2039	6,524	40,559	—	47,083
No expiry	—	—	1,051,195	1,051,195
	$1,090,440	**$288,034**	**$1,131,195**	**$2,509,669**

Included in the table above is $1,048,264,000 (2018 - $987,639,000) of temporary differences related to loss carry forwards where no future benefit has been recognized.

22. Per share amounts

Per share amounts have been calculated based on the weighted average number of common shares outstanding during the period. The weighted average number of paid shares outstanding in 2019 was 395,796,677 (2018 - 395,792,732).

	2019	2018
Basic earnings per share computation		
Net earnings attributable to equity holders	**$ 74,000**	$166,323
Weighted average common shares outstanding	**395,797**	395,793
Basic earnings per common share	**$ 0.19**	$ 0.42
Diluted earnings per share computation		
Net earnings attributable to equity holders	**$ 74,000**	$166,323
Weighted average common shares outstanding	**395,797**	395,793
Dilutive effect of stock options	**258**	257
Weighted average common shares outstanding, assuming dilution	**396,055**	396,050
Diluted earnings per common share	**$ 0.19**	$ 0.42

23. Supplemental cash flow information

Other operating items included in the statements of cash flows are as follows:

	2019	2018
Changes in non-cash working capital:		
Accounts receivable	**$ 58,488**	$ (44,353)
Inventories	**113,388**	241,496
Supplies and prepaid expenses	**3,612**	52,192
Accounts payable and accrued liabilities	**(62,250)**	(39,616)
Reclamation payments	**(32,390)**	(31,311)
Other	**15,630**	4,654
Total	**$ 96,478**	$183,062

The changes arising from financing activities were as follows:

	Long-term debt[(a)]	Interest payable	Dividends payable	Share capital	Total
Balance at January 1, 2019	$1,495,671	$ 13,539	$ —	$1,862,652	$3,371,862
Changes from financing cash flows:					
Dividends paid	—	—	(31,613)	—	(31,613)
Interest paid	—	(72,484)	—	—	(72,484)
Shares issued, stock option plan	—	—	—	81	81
Repayment of long-term debt	(500,000)	—	—	—	(500,000)
Total cash changes	**(500,000)**	**(72,484)**	**(31,613)**	**81**	**(604,016)**
Non-cash changes:					
Amorization of issue costs	1,047	—	—	—	1,047
Dividends declared	—	—	31,613	—	31,613
Interest expense	—	61,780	—	—	61,780
Lease interest expense	—	309	—	—	309
Shares issued, stock option plan	—	—	—	16	16
Foreign exchange	—	(114)	—	—	(114)
Total non-cash changes	**1,047**	**61,975**	**31,613**	**16**	**94,651**
Balance at December 31, 2019	**$ 996,718**	**$ 3,030**	**$ —**	**$1,862,749**	**$2,862,497**

(a) Includes current portion of long-term debt

24. Share-based compensation plans

The Company has the following equity-settled plans:

A. Stock option plan

The Company has established a stock option plan under which options to purchase common shares may be granted to employees of Cameco. Options granted under the stock option plan have an exercise price of not less than the closing price quoted on the Toronto Stock Exchange (TSX) for the common shares of Cameco on the trading day prior to the date on which the option is granted. The options carry vesting periods of one to three years, and expire eight years from the date granted.

The aggregate number of common shares that may be issued pursuant to the Cameco stock option plan shall not exceed 43,017,198 of which 27,875,289 shares have been issued.

Stock option transactions for the respective years were as follows:

(Number of options)	2019	2018
Beginning of year	**8,820,805**	8,324,666
Options granted	**886,740**	1,473,430
Options forfeited	**(270,025)**	(315,340)
Options expired	**(815,423)**	(661,951)
Options exercised [note 16]	**(5,000)**	—
End of year	**8,617,097**	8,820,805
Exercisable	**6,290,380**	6,007,557

Weighted average exercise prices were as follows:

	2019	2018
Beginning of year	**$19.75**	$22.19
Options granted	**15.27**	11.32
Options forfeited	**22.59**	25.43
Options expired	**38.43**	28.90
Options exercised	**16.38**	—
End of year	**$17.44**	$19.75
Exercisable	**$18.90**	$22.83

Total options outstanding and exercisable at December 31, 2019 were as follows:

	Options outstanding			Options exercisable	
Option price per share	Number	Weighted average remaining life	Weighted average exercisable price	Number	Weighted average exercisable price
$11.32 - 15.83	3,733,210	5.7	$ 13.50	1,406,493	$ 13.52
$15.84 - 26.81	4,883,887	1.9	$ 20.45	4,883,887	$ 20.45
	8,617,097			**6,290,380**	

The foregoing options have expiry dates ranging from May 14, 2020 to February 28, 2027.

B. Restricted share unit (RSU)

The Company has established an RSU plan whereby it provides each plan participant an annual grant of RSUs in an amount determined by the board. Each RSU represents one phantom common share that entitles the participant to a payment of one Cameco common share purchased on the open market, or cash with an equivalent market value, at the board's discretion. The RSUs carry vesting periods of one to three years, and the final value of the units will be based on the value of Cameco common shares at the end of the vesting periods. During the vesting period, dividend equivalents accrue to the participants in the form of additional share units as of each normal cash dividend payment date of Cameco's common shares. As of December 31, 2019, the total number of RSUs held by the participants was 443,274, (2018 - 456,704).

C. Employee share ownership plan

Cameco also has an employee share ownership plan, whereby both employee and Company contributions are used to purchase shares on the open market for employees. The Company's contributions are expensed during the year of contribution. Under the plan, employees have the opportunity to participate in the program to a maximum of 6% of eligible earnings each year with Cameco matching the first 3% of employee-paid shares by 50%. Cameco contributes $1,000 of shares annually to each employee that is enrolled in the plan. Shares purchased with Company contributions and with dividends paid on such shares become unrestricted 12 months from the date on which such shares were purchased. At December 31, 2019, there were 2,253 participants in the plan (2018 - 2,317). The total number of shares purchased in 2019 with Company contributions was 235,915 (2018 - 304,147). In 2019, the Company's contributions totaled $3,127,000 (2018 - $3,845,000).

Cameco records compensation expense under its equity-settled plans with an offsetting credit to contributed surplus, to reflect the estimated fair value of units granted to employees. During the year, the Company recognized the following expenses under these plans:

	2019	2018
Stock option plan	**$ 4,418**	$ 4,744
Performance share unit plan[(a)]	**7,245**	7,690
Restricted share unit plan	**2,679**	2,542
Employee share ownership plan	**3,127**	3,845
Total	**$17,469**	$18,821

(a) In the fourth quarter, the performance share unit plan was amended to allow eligible participants to elect payout of their grants in cash or shares, provided they have met their share ownership requirements. As a result, this plan is now considered cash-settled. This amount represents the expense recorded prior to the plan modification.

Fair value measurement of equity-settled plans

The fair value of the units granted through the performance share unit plan was determined based on Monte Carlo simulation and the fair value of options granted under the stock option plan was measured based on the Black-Scholes option-pricing model. The fair value of RSUs granted was determined based on their intrinsic value on the date of grant. Expected volatility was estimated by considering historic average share price volatility.

The inputs used in the measurement of the fair values at grant date of the equity-settled share-based payment plans were as follows:

	Stock option plan	PSU	RSU
Number of options granted	886,740	477,250	212,496
Expected vesting	—	106%	—
Average strike price	$ 15.27	—	$ 15.33
Expected dividend	$ 0.08	—	—
Expected volatility	36%	38%	—
Risk-free interest rate	1.8%	1.8%	—
Expected life of option	4.9 years	3.0 years	—
Expected forfeitures	7%	12%	15%
Weighted average grant date fair values	$ 4.92	$ 15.33	$ 15.33

The Company has the following cash-settled plans:

A. Deferred share unit (DSU)

Cameco offers a DSU plan to non-employee directors. A DSU is a notional unit that reflects the market value of a single common share of Cameco. 60% of each director's annual retainer is paid in DSUs. In addition, on an annual basis, directors can elect to receive 25%, 50%, 75% or 100% of the remaining 40% of their annual retainer and any additional fees in the form of DSUs. If a director meets their ownership requirements, the director may elect to take 25%, 50%, 75% or 100% of their annual retainer and any fees in cash, with the balance, if any, to be paid in DSUs. Each DSU fully vests upon award. Dividend equivalents accrue to the participants in the form of additional share units as of each normal cash dividend payment date of Cameco's common shares. The DSUs will be redeemed for cash upon a director leaving the board. The redemption amount will be based upon the weighted average of the closing prices of the common shares of Cameco on the TSX for the last 20 trading days prior to the redemption date multiplied by the number of DSUs held by the director. As of December 31, 2019, the total number of DSUs held by participating directors was 474,266 (2018 - 528,483).

B. Executive performance share unit (PSU)

The Company has established a PSU plan whereby it provides each plan participant an annual grant of PSUs in an amount determined by the board. Each PSU represents one phantom common share that entitles the participant to a payment of one Cameco common share purchased on the open market, or cash with an equivalent market value, at the participant's discretion, at the end of each three-year period if certain performance and vesting criteria have been met. The final value of the PSUs will be based on the value of Cameco common shares at the end of the three-year period and the number of PSUs that ultimately vest. During the vesting period, dividend equivalents accrue to the participants in the form of additional share units as of each normal cash dividend payment date of Cameco's common shares. Vesting of PSUs at the end of the three-year period will be based on total shareholder return over the three years, Cameco's ability to meet its annual operating targets and whether the participating executive remains employed by Cameco at the end of the three-year vesting period. If the participant elects a cash payout, the redemption amount will be based on the volume-weighted average trading price of Cameco's common shares on March 1 or, if March 1 is not a trading day, on the first trading day following March 1. As of December 31, 2019, the total number of PSUs held by the participants, after adjusting for forfeitures on retirement, was 1,465,618 (2018 - 1,343,971).

C. Phantom stock option

Cameco makes annual grants of bonuses to eligible non-North American employees in the form of phantom stock options. Employees receive the equivalent value of shares in cash when exercised. Options granted under the phantom stock option plan have an award value equal to the closing price quoted on the TSX for the common shares of Cameco on the trading day prior to the date on which the option is granted. The options vest over three years and expire eight years from the date granted. As of December 31, 2019, the number of options held by participating employees was 406,270 (2018 - 353,580) with exercise prices ranging from $11.32 to $26.81 per share (2018 - $11.32 to $39.53) and a weighted average exercise price of $16.48 (2018 - $17.74).

Cameco has recognized the following expenses (recoveries) under its cash-settled plans:

	2019	2018
Deferred share unit plan	**$(1,001)**	$2,922
Performance share unit plan[(a)]	**—**	—
Phantom stock option plan	**(436)**	675
Total	**$(1,437)**	$3,597

(a) The modification to the PSU plan resulted in a reclassification, at the date of modification, of $8,369,000 from equity to liabilities. The liability recognized on the date of the modification was less than the amount previously recognized as an increase in equity. Since the plan modification did not change the performance and vesting criteria, no incremental fair value was granted.

At December 31, 2019, a liability of $14,577,000 (2018 - $9,352,000) was included in the consolidated statements of financial position to recognize accrued but unpaid expenses for cash-settled plans.

Fair value measurement of cash-settled plans

The fair value of the units granted through the PSU plan was determined based on Monte Carlo simulation and the fair value of the phantom stock option plan was measured based on the Black-Scholes option-pricing model. Expected volatility is estimated by considering historic average share price volatility.

The inputs used in the measurement of the fair values of the cash-settled share-based payment plans at the grant and reporting dates were as follows:

	PSUs		Phantom stock options	
	Grant date Mar 1, 2019	Reporting date Dec 31, 2019	Grant date Mar 1, 2019	Reporting date Dec 31, 2019
Number of units	477,250	1,465,618	68,890	406,720
Expected vesting	106%	80%	—	—
Average strike price	—	—	$ 15.27	$ 16.48
Expected dividend	—	—	$ 0.08	$ 0.08
Expected volatility	38%	31%	37%	35%
Risk-free interest rate	1.8%	1.7%	1.5%	1.7%
Expected life of option	3.0 years	1.4 years	4.5 years	4.0 years
Expected forfeitures	12%	10%	8%	8%
Weighted average measurement date fair values	$ 15.33	$ 10.07	$ 5.07	$ 2.14

In addition to these inputs, other features of the PSU grant were incorporated into the measurement of fair value. The market condition based on total shareholder return was incorporated by utilizing a Monte Carlo simulation. The non-market criteria relating to realized selling prices and operating targets have been incorporated into the valuation at both grant and reporting date by reviewing prior history and corporate budgets.

25. Pension and other post-retirement benefits

Cameco maintains both defined benefit and defined contribution plans providing pension benefits to substantially all of its employees. All regular and temporary employees participate in a registered defined contribution plan. This plan is registered under the Pension Benefits Standard Act, 1985. In addition, all Canadian-based executives participate in a non-registered supplemental executive pension plan which is a defined benefit plan.

Under the supplemental executive pension plan (SEPP), Cameco provides a lump sum benefit equal to the present value of a lifetime pension benefit based on the executive's length of service and final average earnings. The plan provides for unreduced benefits to be paid at the normal retirement age of 65, however unreduced benefits could be paid if the executive was at least 60 years of age and had 20 years of service at retirement. This program provides for a benefit determined by a formula based on earnings and service, reduced by the benefits payable under the registered base plan. Security is provided for the SEPP benefits through a letter of credit held by the plan's trustee. The face amount of the letter of credit is determined each year based on the wind-up liabilities of the supplemental plan, less any plan assets currently held with the trustee. A valuation is required annually to determine the letter of credit amount. Benefits will continue to be paid from plan assets until the fund is exhausted, at which time Cameco will begin paying benefits from corporate assets.

Cameco also maintains non-pension post-retirement plans ("other benefit plans") which are defined benefit plans that cover such benefits as group life insurance and supplemental health and dental coverage to eligible employees and their dependents. The costs related to these plans are charged to earnings in the period during which the employment services are rendered. These plans are funded by Cameco as benefit claims are made.

The board of directors of Cameco has final responsibility and accountability for the Cameco retirement programs. The board is ultimately responsible for managing the programs to comply with applicable legislation, providing oversight over the general functions and setting certain policies.

Cameco expects to pay $1,106,000 in contributions and letter of credit fees to its defined benefit plans in 2020.

The post-retirement plans expose Cameco to actuarial risks, such as longevity risk, market risk, interest rate risk, liquidity risk and foreign currency risk. The other benefit plans expose Cameco to risks of higher supplemental health and dental utilization than expected. However, the other benefit plans have limits on Cameco's annual benefits payable.

The effective date of the most recent valuation for funding purposes on the registered defined benefit pension plans is January 1, 2018. The next planned effective date for valuations is January 1, 2021.

Cameco has more than one defined benefit plan and has generally provided aggregated disclosures in respect of these plans, on the basis that these plans are not exposed to materially different risks. Information relating to Cameco's defined benefit plans is shown in the following table:

	Pension benefit plans		Other benefit plans	
	2019	2018	2019	2018
Fair value of plan assets, beginning of year	**$ 7,177**	$ 8,061	**$ —**	$ —
Interest income on plan assets	**262**	259	**—**	—
Return on assets excluding interest income	**280**	(292)	**—**	—
Employer contributions	**—**	61	**—**	—
Benefits paid	**(912)**	(910)	**—**	—
Administrative costs paid	**(1)**	(2)	**—**	—
Fair value of plan assets, end of year	**$ 6,806**	$ 7,177	**$ —**	$ —
Defined benefit obligation, beginning of year	**$ 54,271**	$ 55,972	**$ 21,161**	$ 26,893
Current service cost	**1,586**	1,670	**817**	1,429
Interest cost	**1,807**	1,668	**841**	946
Actuarial loss (gain) arising from:				
- demographic assumptions	**—**	—	**—**	(192)
- financial assumptions	**6,925**	(3,776)	**2,877**	(1,887)
- experience adjustment	**777**	56	**114**	(2,919)
Past service cost	**—**	—	**—**	(1,929)
Benefits paid	**(1,705)**	(2,028)	**(855)**	(1,180)
Foreign exchange	**(1,073)**	709	**—**	—
Defined benefit obligation, end of year	**$ 62,588**	$ 54,271	**$ 24,955**	$ 21,161
Defined benefit liability [note 14]	**$(55,782)**	$(47,094)	**$(24,955)**	$(21,161)

The percentages of the total fair value of assets in the pension plans for each asset category at December 31 were as follows:

	Pension benefit plans	
	2019	2018
Asset category[a]		
Canadian equity securities	**9%**	9%
U.S. equity securities	**12%**	0%
Global equity securities	**9%**	21%
Canadian fixed income	**30%**	29%
Other[b]	**40%**	41%
Total	**100%**	100%

(a) The defined benefit plan assets contain no material amounts of related party assets at December 31, 2019 and 2018 respectively.
(b) Relates to the value of the refundable tax account held by the Canada Revenue Agency. The refundable total is approximately equal to half of the sum of the realized investment income plus employer contributions less half of the benefits paid by the plan.

The following represents the components of net pension and other benefit expense included primarily as part of administration:

	Pension benefit plans		Other benefit plans	
	2019	2018	2019	2018
Current service cost	**$ 1,586**	$ 1,670	**$ 817**	$ 1,429
Net interest cost	**1,545**	1,409	**841**	946
Past service cost	**—**	—	**—**	(1,929)
Administration cost	**1**	2	**—**	—
Defined benefit expense [note 18]	**3,132**	3,081	**1,658**	446
Defined contribution pension expense [note 18]	**11,767**	13,431	**—**	—
Net pension and other benefit expense	**$ 14,899**	$ 16,512	**$ 1,658**	$ 446

The total amount of actuarial losses (gains) recognized in other comprehensive income is:

	Pension benefit plans		Other benefit plans	
	2019	2018	2019	2018
Actuarial loss (gain)	**$ 7,702**	$ (3,720)	**$ 2,991**	$ (4,998)
Return on plan assets excluding interest income	**(280)**	292	**—**	—
	$ 7,422	$ (3,428)	**$ 2,991**	$ (4,998)

The assumptions used to determine the Company's defined benefit obligation and net pension and other benefit expense were as follows at December 31 (expressed as weighted averages):

	Pension benefit plans		Other benefit plans	
	2019	2018	2019	2018
Discount rate - obligation	**3.0%**	3.7%	**3.1%**	3.9%
Discount rate - expense	**3.7%**	3.4%	**3.9%**	3.4%
Rate of compensation increase	**3.0%**	3.0%	**—**	—
Initial health care cost trend rate	**—**	—	**6.0%**	6.0%
Cost trend rate declines to	**—**	—	**5.0%**	5.0%
Year the rate reaches its final level	**—**	—	**2022**	2022
Dental care cost trend rate	**—**	—	**5.0%**	5.0%

At December 31, 2019, the weighted average duration of the defined benefit obligation for the pension plans was 20.0 years (2018 - 19.4 years) and for the other benefit plans was 15.2 years (2018 - 14.3 years).

A 1% change at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the following:

	Pension benefit plans		Other benefit plans	
	Increase	Decrease	Increase	Decrease
Discount rate	**$(8,141)**	$ 10,595	**$(3,284)**	$ 4,133
Rate of compensation increase	**2,832**	(2,608)	**n/a**	n/a

A 1% change in any of the other assumptions would not have a significant impact on the defined benefit obligation.

The methods and assumptions used in preparing the sensitivity analyses are the same as the methods and assumptions used in determining the financial position of Cameco's plans as at December 31, 2019. The sensitivity analyses are determined by varying the sensitivity assumption and leaving all other assumptions unchanged. Therefore, the sensitivity analyses do not recognize any interdependence in the assumptions. The methods and assumptions used in determining the above sensitivity are consistent with the methods and assumptions used in the previous year.

In addition, an increase of one year in the expected lifetime of plan participants in the pension benefit plans would increase the defined benefit obligation by $1,621,000.

To measure the longevity risk for these plans, the mortality rates were reduced such that the average life expectancy for all members increased by one year. The reduced mortality rates were subsequently used to re-measure the defined benefit obligation of the entire plan.

26. Financial instruments and related risk management

Cameco is exposed in varying degrees to a variety of risks from its use of financial instruments. Management and the board of directors, both separately and together, discuss the principal risks of our businesses. The board sets policies for the implementation of systems to manage, monitor and mitigate identifiable risks. Cameco's risk management objective in relation to these instruments is to protect and minimize volatility in cash flow. The types of risks Cameco is exposed to, the source of risk exposure and how each is managed is outlined below.

Market risk

Market risk is the risk that changes in market prices, such as commodity prices, foreign currency exchange rates and interest rates, will affect the Company's earnings or the fair value of its financial instruments. Cameco engages in various business activities which expose the Company to market risk. As part of its overall risk management strategy, Cameco uses derivatives to manage some of its exposures to market risk that result from these activities.

Derivative instruments may include financial and physical forward contracts. Such contracts may be used to establish a fixed price for a commodity, an interest-bearing obligation or a cash flow denominated in a foreign currency. Market risks are monitored regularly against defined risk limits and tolerances.

Cameco's actual exposure to these market risks is constantly changing as the Company's portfolios of foreign currency, interest rate and commodity contracts change.

The types of market risk exposure and the way in which such exposure is managed are as follows:

A. Commodity price risk

As a significant producer and supplier of uranium and nuclear fuel processing services, Cameco bears significant exposure to changes in prices for these products. A substantial change in prices will affect the Company's net earnings and operating cash flows. Prices for Cameco's products are volatile and are influenced by numerous factors beyond the Company's control, such as supply and demand fundamentals and geopolitical events.

Cameco's sales contracting strategy focuses on reducing the volatility in future earnings and cash flow, while providing both protection against decreases in market price and retention of exposure to future market price increases. To mitigate the risks associated with the fluctuations in the market price for uranium products, Cameco seeks to maintain a portfolio of uranium product sales contracts with a variety of delivery dates and pricing mechanisms that provide a degree of protection from pricing volatility.

B. Foreign exchange risk

The relationship between the Canadian and US dollar affects financial results of the uranium business as well as the fuel services business. Sales of uranium product, conversion and fuel manufacturing services are routinely denominated in US dollars while production costs are largely denominated in Canadian dollars.

Cameco attempts to provide some protection against exchange rate fluctuations by planned hedging activity designed to smooth volatility. To mitigate risks associated with foreign currency, Cameco enters into forward sales and option contracts to establish a price for future delivery of the foreign currency. These foreign currency contracts are not designated as hedges and are recorded at fair value with changes in fair value recognized in earnings. Cameco also has a natural hedge against US currency fluctuations because a portion of its annual cash outlays, including purchases of uranium and conversion services, is denominated in US dollars.

Cameco holds a number of financial instruments denominated in foreign currencies that expose the Company to foreign exchange risk. Cameco measures its exposure to foreign exchange risk on financial instruments as the change in carrying values that would occur as a result of reasonably possible changes in foreign exchange rates, holding all other variables constant. As of the reporting date, the Company has determined its pre-tax exposure to foreign currency exchange risk on financial instruments to be as follows based on a 5% weakening of the Canadian dollar:

	Currency	Carrying value (Cdn)	Gain (loss)
Cash and cash equivalents	USD	$ 120,675	$ 6,034
Accounts receivable	USD	280,877	14,044
Net foreign currency derivatives	USD	(4,333)	(30,851)

A 5% strengthening of the Canadian dollar against the currencies above at December 31, 2019 would have had an equal but opposite effect on the amounts shown above, assuming all other variables remained constant.

C. Interest rate risk

The Company has a strategy of minimizing its exposure to interest rate risk by maintaining target levels of fixed and variable rate borrowings. The proportions of outstanding debt carrying fixed and variable interest rates are reviewed by senior management to ensure that these levels are within approved policy limits. At December 31, 2019, the proportion of Cameco's outstanding debt that carries fixed interest rates is 85% (2018 - 67%).

Cameco is exposed to interest rate risk through its interest rate swap contracts whereby fixed rate payments on a notional amount of $150,000,000 of the Series E senior unsecured debentures were swapped for variable rate payments. The Series E swaps terminate on November 14, 2022. Under the terms of the swaps, Cameco makes interest payments based on the three-month Canada Dealer Offered Rate plus an average margin of 1.2% and receives fixed interest payments of 3.75%. The Series D swaps terminated on September 2, 2019. At December 31, 2019, the fair value of Cameco's interest rate swap net asset was $2,313,000 (2018 - $856,000).

Cameco measures its exposure to interest rate risk as the change in cash flows that would occur as a result of reasonably possible changes in interest rates, holding all other variables constant. As of the reporting date, the Company has determined the impact on earnings of a 1% increase in interest rate on its interest rate contracts to be a loss of $1,524,000.

Counterparty credit risk

Counterparty credit risk is associated with the ability of counterparties to satisfy their contractual obligations to Cameco, including both payment and performance. The maximum exposure to credit risk, as represented by the carrying amount of the financial assets, at December 31 was:

	2019	2018
Cash and cash equivalents	**$1,062,431**	$711,528
Short-term investments	**—**	391,025
Accounts receivable [note 6]	**323,430**	398,639
Advances receivable from JV Inkai [note 31]	**—**	124,533
Derivative assets [note 10]	**10,504**	3,881

Cash and cash equivalents

Cameco held cash and cash equivalents of $1,062,000,000 at December 31, 2019 (2018 - $712,000,000). Cameco mitigates its credit risk by ensuring that balances are held with counterparties with high credit ratings. The Company monitors the credit rating of its counterparties on a monthly basis and has controls in place to ensure prescribed exposure limits with each counterparty are adhered to.

Impairment on cash and cash equivalents has been measured on a 12-month ECL basis and reflects the short maturities of the exposures. The Company considers that its cash and cash equivalents have low credit risk based on the external credit ratings of the counterparties. Cameco has assessed its counterparty credit risk on cash and cash equivalents by applying historic global default rates to outstanding cash balances based on S&P rating. The conclusion of this assessment is that the loss allowance is insignificant.

Accounts receivable

Cameco's sales of uranium product, conversion and fuel manufacturing services expose the Company to the risk of non-payment. Cameco manages the risk of non-payment by monitoring the credit-worthiness of its customers and seeking pre-payment or other forms of payment security from customers with an unacceptable level of credit risk.

A summary of the Company's exposure to credit risk for trade receivables is as follows:

	Carrying value
Investment grade credit rating	$244,315
Non-investment grade credit rating	77,323
Total gross carrying amount	**$321,638**
Loss allowance	—
Net	**$321,638**

At December 31, 2019, there were no significant concentrations of credit risk and no amounts were held as collateral. Historically, Cameco has experienced minimal customer defaults and, as a result, considers the credit quality of its accounts receivable to be high.

Cameco uses customer credit rating data, historic default rates and aged receivable analysis to measure the ECLs of trade receivables from corporate customers, which comprise a small number of large balances. Since the Company has not experienced customer defaults in the past, applying historic default rates in calculating ECLs, as well as considering forward-looking information, resulted in an insignificant allowance for losses.

The following table provides information about Cameco's aged trade receivables as at December 31, 2019:

	Corporate customers	Other customers	Total
Current (not past due)	$274,249	$ 5,306	**279,555**
1-30 days past due	39,690	1,221	**40,911**
More than 30 days past due	301	871	**1,172**
Total	$314,240	$ 7,398	**321,638**

Liquidity risk

Financial liquidity represents Cameco's ability to fund future operating activities and investments. Cameco ensures that there is sufficient capital in order to meet short-term business requirements, after taking into account cash flows from operations and the Company's holdings of cash and cash equivalents. The Company believes that these sources will be sufficient to cover the likely short-term and long-term cash requirements.

The table below outlines the Company's available debt facilities at December 31, 2019:

	Total amount	Outstanding and committed	Amount available
Unsecured revolving credit facility	$ 1,000,000	$ —	$ 1,000,000
Letter of credit facilities [note 13]	1,719,120	1,528,603	190,517

The tables below present a maturity analysis of Cameco's financial liabilities, including principal and interest, based on the expected cash flows from the reporting date to the contractual maturity date:

	Carrying amount	Contractual cash flows	Due in less than 1 year	Due in 1-3 years	Due in 3-5 years	Due after 5 years
Accounts payable and accrued liabilities	$ 181,799	$ 181,799	$181,799	$ —	$ —	$ —
Long-term debt	996,718	1,000,000	—	400,000	500,000	100,000
Foreign currency contracts	4,333	4,333	4,168	165	—	—
Lease obligation [note 14]	12,869	14,004	3,967	8,031	2,006	—
Total contractual repayments	**$1,195,719**	**$1,200,136**	**$189,934**	**$408,196**	**$502,006**	**$ 100,000**

	Total	Due in less than 1 year	Due in 1-3 years	Due in 3-5 years	Due after 5 years
Total interest payments on long-term debt	**$ 266,820**	$ 41,040	$ 82,080	$ 52,080	$ 91,620

Measurement of fair values

A. Accounting classifications and fair values

The following tables summarize the carrying amounts and accounting classifications of Cameco's financial instruments at the reporting date:

At December 31, 2019

	FVTPL	Amortized cost	FVOCI - designated	Total
Financial assets				
Cash and cash equivalents	$ —	$1,062,431	$ —	$1,062,431
Accounts receivable [note 6]	—	328,044	—	328,044
Derivative assets [note 10]				
Foreign currency contracts	8,191	—	—	8,191
Interest rate contracts	2,313	—	—	2,313
Investments in equity securities [note 10]	—	—	24,408	24,408
	$10,504	**$1,390,475**	**$ 24,408**	**$1,425,387**
Financial liabilities				
Accounts payable and accrued liabilities [note 12]	$ —	$ 181,799	$ —	$ 181,799
Lease obligation [note 14]	—	12,869	—	12,869
Derivative liabilities [note 14]				
Foreign currency contracts	12,524	—	—	12,524
Long-term debt [note 13]	—	996,718	—	996,718
	12,524	**1,191,386**	**—**	**1,203,910**
Net	**$ (2,020)**	**$ 199,089**	**$ 24,408**	**$ 221,477**

At December 31, 2018

	FVTPL	Amortized cost	FVOCI - designated	Total
Financial assets				
Cash and cash equivalents	$ —	$ 711,528	$ —	$ 711,528
Short-term investments	—	391,025	—	391,025
Accounts receivable [note 6]	—	402,350	—	402,350
Derivative assets [note 10]				
Foreign currency contracts	2,201	—	—	2,201
Interest rate contracts	1,680	—	—	1,680
Investments in equity securities [note 10]	—	—	28,916	28,916
Advances receivable from Inkai [note 31]	—	124,533	—	124,533
	$ 3,881	**$1,629,436**	**$ 28,916**	**$1,662,233**
Financial liabilities				
Accounts payable and accrued liabilities [note 12]	$ —	$ 224,754	$ —	$ 224,754
Current portion of long-term debt [note 13]	—	499,599	—	499,599
Derivative liabilities [note 14]				
Foreign currency contracts	54,866	—	—	54,866
Interest rate contracts	823	—	—	823
Uranium contracts	5,698	—	—	5,698
Long-term debt [note 13]	—	996,072	—	996,072
	61,387	**1,720,425**	**—**	**1,781,812**
Net	**$(57,506)**	**$ (90,989)**	**$ 28,916**	**$ (119,579)**

Cameco has pledged $195,729,000 of cash as security against certain of its letter of credit facilities. This cash is being used as collateral for an interest rate reduction on the letter of credit facilities. The collateral account has a term of five years effective July 1, 2018. Cameco retains full access to this cash.

The investments in equity securities represent investments that Cameco intends to hold for the long-term for strategic purposes. As permitted by IFRS 9, these investments have been designated at the date of initial application as measured at FVOCI. The accumulated fair value reserve related to these investments will never be reclassified to profit or loss.

Cameco has not irrevocably designated a financial asset that would otherwise meet the requirements to be measured at amortized cost at FVOCI or FVTPL to eliminate or significantly reduce an accounting mismatch that would otherwise arise.

The following tables summarize the carrying amounts and fair values of Cameco's financial instruments, including their levels in the fair value hierarchy:

As at December 31, 2019

		Fair value		
	Carrying value	Level 1	Level 2	Total
Derivative assets [note 10]				
Foreign currency contracts	**$ 8,191**	$ —	$ 8,191	$ 8,191
Interest rate contracts	**2,313**	—	2,313	2,313
Investments in equity securities [note 10]	**24,408**	24,408	—	24,408
Derivative liabilities [note 14]				
Foreign currency contracts	**(12,524)**	—	(12,524)	(12,524)
Long-term debt [note 13]	**(996,718)**	—	(1,111,923)	(1,111,923)
Net	**$ (974,330)**	**$24,408**	**$(1,113,943)**	**$(1,089,535)**

As at December 31, 2018

		Fair value		
	Carrying value	Level 1	Level 2	Total
Derivative assets [note 10]				
Foreign currency contracts	**$ 2,201**	$ —	$ 2,201	$ 2,201
Interest rate contracts	**1,680**	—	1,680	1,680
Investments in equity securities [note 10]	**28,916**	28,916	—	28,916
Current portion of long-term debt [note 13]	**(499,599)**	—	(511,210)	(511,210)
Derivative liabilities [note 14]				
Foreign currency contracts	**(54,866)**	—	(54,866)	(54,866)
Interest rate contracts	**(823)**	—	(823)	(823)
Uranium contracts	**(5,698)**	—	(5,698)	(5,698)
Long-term debt [note 13]	**(996,072)**	—	(1,111,782)	(1,111,782)
Net	**$ (1,524,261)**	**$28,916**	**$(1,680,498)**	**$(1,651,582)**

The preceding tables exclude fair value information for financial instruments whose carrying amounts are a reasonable approximation of fair value. The carrying value of Cameco's cash and cash equivalents, short-term investments, accounts receivable, and accounts payable and accrued liabilities approximates its fair value as a result of the short-term nature of the instruments.

There were no transfers between level 1 and level 2 during the period. Cameco does not have any financial instruments that are classified as level 3 as of the reporting date.

B. Financial instruments measured at fair value

Cameco measures its derivative financial instruments, material investments in equity securities, current portion of long-term debt and long-term debt at fair value. Investments in publicly held equity securities are classified as a recurring level 1 fair value measurement while derivative financial instruments and long-term debt are classified as a recurring level 2 fair value measurement.

The fair value of investments in equity securities is determined using quoted share prices observed in the principal market for the securities as of the reporting date. The fair value of Cameco's long-term debt is determined using quoted market yields as of the reporting date, which ranged from 1.7% to 1.8% (2018 - 1.9% to 2.2%).

Foreign currency derivatives consist of foreign currency forward contracts, options and swaps. The fair value of foreign currency options is measured based on the Black Scholes option-pricing model. The fair value of foreign currency forward contracts and swaps is measured using a market approach, based on the difference between contracted foreign exchange rates and quoted forward exchange rates as of the reporting date.

Interest rate derivatives consist of interest rate swap contracts. The fair value of interest rate swaps is determined by discounting expected future cash flows from the contracts. The future cash flows are determined by measuring the difference between fixed interest payments to be received and floating interest payments to be made to the counterparty based on Canada Dealer Offer Rate forward interest rate curves.

Uranium contract derivatives consist of price swaps. The fair value of uranium price swaps is determined by discounting expected future cash flows from the contracts. The future cash flows are determined by measuring the difference between fixed purchases or sales under contracted prices, and floating purchases or sales based on Numerco forward uranium price curves. The swaps were settled during the year so there were none outstanding at the reporting date.

Where applicable, the fair value of the derivatives reflects the credit risk of the instrument and includes adjustments to take into account the credit risk of the Company and counterparty. These adjustments are based on credit ratings and yield curves observed in active markets at the reporting date.

Derivatives

The following table summarizes the fair value of derivatives and classification on the consolidated statements of financial position:

	2019	2018
Non-hedge derivatives:		
Foreign currency contracts	**$(4,333)**	$(52,665)
Interest rate contracts	**2,313**	857
Uranium contracts	**—**	(5,698)
Net	**$(2,020)**	$(57,506)
Classification:		
Current portion of long-term receivables, investments and other [note 10]	**$ 4,144**	$ 1,028
Long-term receivables, investments and other [note 10]	**6,360**	2,853
Current portion of other liabilities [note 14]	**(7,505)**	(35,534)
Other liabilities [note 14]	**(5,019)**	(25,853)
Net	**$(2,020)**	$(57,506)

The following table summarizes the different components of the gains (losses) on derivatives included in net earnings:

	2019	2018
Non-hedge derivatives:		
Foreign currency contracts	**$31,863**	$(85,967)
Interest rate contracts	**2,068**	2,032
Uranium contracts	**(1,662)**	2,854
Net	**$32,269**	**$(81,081)**

27. Capital management

Cameco's management considers its capital structure to consist of bank overdrafts, long-term debt, short-term debt (net of cash and cash equivalents and short-term investments), non-controlling interest and shareholders' equity.

Cameco's capital structure reflects its strategy and the environment in which it operates. Delivering returns to long-term shareholders is a top priority. The Company's objective is to maximize cash flow while maintaining its investment grade rating through close capital management of our balance sheet metrics. Capital resources are managed to allow it to support achievement of its goals while managing financial risks such as the continued weakness in the market, litigation risk and refinancing risk. The overall objectives for managing capital in 2019 reflect the environment that the Company is operating in, similar to the prior comparative period.

The capital structure at December 31 was as follows:

	2019	2018
Current portion of long-term debt [note 13]	**$ —**	$ 499,599
Long-term debt [note 13]	**996,718**	996,072
Cash and cash equivalents	**(1,062,431)**	(711,528)
Short-term investments	**—**	(391,025)
Net debt	**(65,713)**	393,118
Non-controlling interest	**238**	310
Shareholders' equity	**4,994,725**	4,993,282
Total equity	**4,994,963**	4,993,592
Total capital	**$ 4,929,250**	$5,386,710

Cameco is bound by certain covenants in its general credit facilities. These covenants place restrictions on total debt, including guarantees and set minimum levels for net worth. As of December 31, 2019, Cameco met these requirements.

28. Segmented information

Cameco has two reportable segments: uranium and fuel services. Cameco's reportable segments are strategic business units with different products, processes and marketing strategies. The uranium segment involves the exploration for, mining, milling, purchase and sale of uranium concentrate. The fuel services segment involves the refining, conversion and fabrication of uranium concentrate and the purchase and sale of conversion services.

Cost of sales in the uranium segment includes care and maintenance costs for our operations that currently have production suspensions. Cameco expensed $153,924,000 (2018 - $212,511,000) of care and maintenance costs during the year, including $260,000 (2018 - $32,111,000) of severance costs. This had a negative impact on gross profit in the uranium segment.

Accounting policies used in each segment are consistent with the policies outlined in the summary of significant accounting policies. Segment revenues, expenses and results include transactions between segments incurred in the ordinary course of business. These transactions are priced on an arm's length basis, are eliminated on consolidation and are reflected in the "other" column.

A. Business segments - 2019

For the year ended December 31, 2019

	Uranium	Fuel services	Other	Total
Revenue	$1,413,809	$370,277	$ 78,839	$1,862,925
Expenses				
Cost of products and services sold	1,041,922	234,423	69,206	1,345,551
Depreciation and amortization	218,832	45,856	11,061	275,749
Cost of sales	1,260,754	280,279	80,267	1,621,300
Gross profit (loss)	**153,055**	**89,998**	**(1,428)**	**241,625**
Administration	—	—	124,869	124,869
Exploration	13,686	—	—	13,686
Research and development	—	—	6,058	6,058
Other operating expense	2,732	—	—	2,732
Loss on disposal of assets	1,869	—	—	1,869
Finance costs	—	—	98,622	98,622
Gain on derivatives	—	—	(32,269)	(32,269)
Finance income	—	—	(29,760)	(29,760)
Share of earnings from equity-accounted investee	(45,360)	—	—	(45,360)
Other expense (income)	(52,801)	—	18,961	(33,840)
Earnings (loss) before income taxes	**232,929**	**89,998**	**(187,909)**	**135,018**
Income tax expense				61,077
Net earnings				**73,941**
Capital expenditures for the year	**$ 48,092**	**$ 27,117**	**$ 2**	**$ 75,211**

For the year ended December 31, 2018

	Uranium	Fuel services	Other	Total
Revenue	$1,684,056	$313,989	$ 93,616	$2,091,661
Expenses				
Cost of products and services sold	1,138,940	219,240	109,760	1,467,940
Depreciation and amortization	277,171	35,977	14,825	327,973
Cost of sales	**1,416,111**	**255,217**	**124,585**	**1,795,913**
Gross profit (loss)	**267,945**	**58,772**	**(30,969)**	**295,748**
Administration	—	—	141,552	141,552
Exploration	20,283	—	—	20,283
Research and development	—	—	1,757	1,757
Other operating expense	59,616	—	—	59,616
Loss on disposal of assets	1,008	1,264	31	2,303
Finance costs	—	—	111,779	111,779
Loss on derivatives	—	—	81,081	81,081
Finance income	—	—	(22,071)	(22,071)
Share of earnings from equity-accounted investee	(32,321)	—	—	(32,321)
Other income	(81,955)	—	(26,205)	(108,160)
Earnings (loss) before income taxes	**301,314**	**57,508**	**(318,893)**	**39,929**
Income tax recovery				(126,306)
Net earnings				**166,235**
Capital expenditures for the year	**$ 44,114**	**$ 11,226**	**$ 22**	**$ 55,362**

B. Geographic segments

Revenue is attributed to the geographic location based on the location of the entity providing the services. The Company's revenue from external customers is as follows:

	2019	2018
United States	**$1,295,195**	$1,660,727
Canada	**567,730**	424,079
Switzerland	**—**	4,038
Germany	**—**	2,817
	$1,862,925	$2,091,661

The Company's non-current assets, excluding deferred tax assets and financial instruments, by geographic location are as follows:

	2019	2018
Canada	**$3,267,376**	$3,401,828
Australia	**392,500**	414,084
United States	**121,102**	131,526
Kazakhstan	**80**	49
Germany	**24**	41
	$3,781,082	$3,947,528

C. Major customers

Cameco relies on a small number of customers to purchase a significant portion of its uranium concentrates and uranium conversion services. During 2019, revenues from two customers of Cameco's uranium and fuel services segments represented approximately $422,740,000 (2018 - $204,594,000), approximately 24% (2018 - 10%) of Cameco's total revenues from these segments. As customers are relatively few in number, accounts receivable from any individual customer may periodically exceed 10% of accounts receivable depending on delivery schedule.

29. Group entities

The following are the principal subsidiaries and associates of the Company:

	Principal place of business	Ownership interest 2019	2018
Subsidiaries:			
Cameco Fuel Manufacturing Inc.	Canada	100%	100%
Cameco Marketing Inc.	Canada	100%	100%
Cameco Inc.	US	100%	100%
Power Resources, Inc.	US	100%	100%
Crow Butte Resources, Inc.	US	100%	100%
NUKEM, Inc.	US	100%	100%
Cameco Australia Pty. Ltd.	Australia	100%	100%
Cameco Europe Ltd.	Switzerland	100%	100%
Associates:			
JV Inkai	Kazakhstan	40%	40%

30. Joint operations

Cameco conducts a portion of its exploration, development, mining and milling activities through joint operations located around the world. Operations are governed by agreements that provide for joint control of the strategic operating, investing and financing activities among the partners. These agreements were considered in the determination of joint control. Cameco's significant Canadian uranium joint operation interests are McArthur River, Key Lake and Cigar Lake. The Canadian uranium joint operations allocate uranium production to each joint operation participant and the joint operation participant derives revenue directly from the sale of such product. Mining and milling expenses incurred by joint operations are included in the cost of inventory.

Cameco reflects its proportionate interest in these assets and liabilities as follows:

	Principal place of business	Ownership	2019	2018
Total assets				
McArthur River	Canada	69.81%	**$1,046,556**	$1,065,562
Key Lake	Canada	83.33%	**524,324**	537,233
Cigar Lake	Canada	50.03%	**1,354,399**	1,503,863
			$2,925,279	$3,106,658
Total liabilities				
McArthur River		69.81%	**$ 32,132**	$ 32,829
Key Lake		83.33%	**227,562**	222,369
Cigar Lake		50.03%	**47,396**	38,478
			$ 307,090	$ 293,676

31. Related parties

A. Transactions with key management personnel

Key management personnel are those persons that have the authority and responsibility for planning, directing and controlling the activities of the Company, directly or indirectly. Key management personnel of the Company include executive officers, vice-presidents, other senior managers and members of the board of directors.

In addition to their salaries, Cameco also provides non-cash benefits to executive officers and vice-presidents and contributes to pension plans on their behalf (note 25). Senior management and directors also participate in the Company's share-based compensation plans (note 24).

Executive officers are subject to terms of notice ranging from three to six months. Upon resignation at the Company's request, they are entitled to termination benefits of up to the lesser of 18 to 24 months or the period remaining until age 65. The termination benefits include gross salary plus the target short-term incentive bonus for the year in which termination occurs.

Compensation for key management personnel was comprised of:

	2019	2018
Short-term employee benefits	**$21,225**	$24,821
Share-based compensation[(a)]	**12,034**	12,796
Post-employment benefits	**5,542**	4,323
Termination benefits	**272**	860
Total	**$39,073**	$42,800

(a) Excludes deferred share units held by directors (see note 24).

B. Other related party transactions

Cameco funded JV Inkai's project development costs through an unsecured shareholder loan. The limit of the loan facility is $175,000,000 (US) and advances under the facility bear interest at a rate of LIBOR plus 2%. At December 31, 2019, there was no balance outstanding as the loan was fully repaid in the third quarter (2018 - $124,533,000 ($91,320,000 (US)) (notes 10 and 30). For the year ended December 31, 2019, Cameco recorded interest income of $1,878,000 relating to this balance (2018 - $5,603,000).

Cameco purchases uranium concentrates from JV Inkai. For the year ended December 31, 2019, Cameco had purchases of $112,861,000 ($84,827,000 (US)) (2018 - $94,063,000 ($72,007,000 (US))). Cameco received a cash dividend from JV Inkai of $14,079,000 ($10,635,000 (US)) (2018 - nil).

32. Comparative Figures

Certain prior year balances have been reclassified to conform to the current financial statement presentation.

EXHIBIT 99.3

Cameco Corporation

2019 Management's Discussion and Analysis

February 7, 2020

Management's discussion and analysis

February 7, 2020

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This management's discussion and analysis (MD&A) includes information that will help you understand management's perspective of our audited consolidated financial statements (financial statements) and notes for the year ended December 31, 2019. The information is based on what we knew as of February 6, 2020.

We encourage you to read our audited consolidated financial statements and notes as you review this MD&A. You can find more information about Cameco, including our financial statements and our most recent annual information form, on our website at cameco.com, on SEDAR at sedar.com or on EDGAR at sec.gov. You should also read our annual information form before making an investment decision about our securities.

The financial information in this MD&A and in our financial statements and notes are prepared according to International Financial Reporting Standards (IFRS), unless otherwise indicated.

Unless we have specified otherwise, all dollar amounts are in Canadian dollars.

Throughout this document, the terms we, us, our, the Company and Cameco mean Cameco Corporation and its subsidiaries, unless otherwise indicated.

Caution about forward-looking information

Our MD&A 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 MD&A as *forward-looking information*.

Key things to understand about the forward-looking information in this MD&A:

- It typically includes words and phrases about the future, such as: anticipate, believe, estimate, expect, plan, will, intend, goal, target, forecast, project, strategy and outlook (see examples below).
- It represents our current views, and can change significantly.
- It is based on a number of *material assumptions*, including those we have listed on page 3, 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 pages 2 and 3. 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 near and longer term prospects, and it may not be appropriate for other purposes. We will not necessarily update this information unless we are required to by securities laws.

Examples of forward-looking information in this MD&A

- on the financial front, we are well-positioned to execute on our strategy and self-manage risk
- we will continue to take the necessary actions to maintain the strength of our balance sheet so we can self-manage risk, and that we expect will reward shareholders for their continued patience and support of our strategy to build long-term value
- our expectations about 2020 and future global uranium supply, consumption, contracting volumes and demand, including the discussion under the heading *Market overview and developments*
- the discussion under the heading *Our strategy*
- our expectations for uranium purchases
- our expectations for uranium sales and deliveries
- the discussion of our expectations relating to our Canada Revenue Agency (CRA) transfer pricing dispute, including that the Tax Court of Canada's (Tax Court) ruling will be upheld on appeal, the timing of an appeal decision, the Tax Court ruling diminishes our tax risk relating to our CRA dispute, and our estimate of the amount and timing of expected cash taxes and transfer pricing penalties and the amount of the disbursements award
- the discussion under the heading *Outlook for 2020*, including our 2020 financial outlook, expectations for 2020 gross profit and cash balances, and our price sensitivity analysis for our uranium segment
- the outlook for our uranium and fuel services segments for 2020
- our expectations for future tax payments and rates, including effective tax rates
- our expectation that our cash balances and operating cash flows will meet our anticipated 2020 capital requirements
- our expectations for 2020, 2021 and 2022 capital expenditures
- our expectation that in 2020 we will be able to comply with all the covenants in our unsecured revolving credit facility
- production and life of mine operating cost estimates for the Cigar Lake and Inkai operations
- future plans and expectations for uranium properties, advanced uranium projects, and fuel services operating sites
- our expectations related to care and maintenance costs, including incurring between $150 million and $170 million in 2020
- our mineral reserve and resource estimates
- our decommissioning estimates

Material risks

- actual sales volumes or market prices for any of our products or services are lower than we expect for any reason, including changes in market prices, loss of market share to a competitor or trade restrictions
- we are adversely affected by changes in currency exchange rates, interest rates, royalty rates, or tax rates
- our production costs are higher than planned, or our cost reduction strategies are unsuccessful, or necessary supplies are not available, or not available on commercially reasonable terms
- our strategies may change, be unsuccessful or have unanticipated consequences
- our estimates and forecasts prove to be inaccurate, including production, purchases, deliveries, cash flow, revenue, costs, decommissioning, reclamation expenses, our tax expense, or receipt of future dividends from JV Inkai
- we are unable to enforce our legal rights under our existing agreements, permits or licences
- we are subject to litigation or arbitration that has an adverse outcome, including lack of success in our dispute with CRA
- we are unsuccessful in our dispute with CRA and this results in significantly higher cash taxes, interest charges and penalties that could have a material adverse effect on us
- we are unable to utilize letters of credit to the extent anticipated in our dispute with CRA
- there are defects in, or challenges to, title to our properties

- our mineral reserve and resource estimates are not reliable, or there are unexpected or challenging geological, hydrological or mining conditions
- we are affected by environmental, safety and regulatory risks, including increased regulatory burdens or delays
- necessary permits or approvals from government authorities cannot be obtained or maintained
- we are affected by political risks
- we are affected by terrorism, sabotage, blockades, civil unrest, social or political activism, accident or a deterioration in political support for, or demand for, nuclear energy
- a major accident at a nuclear power plant
- we are impacted by changes in the regulation or public perception of the safety of nuclear power plants, which adversely affect the construction of new plants, the relicensing of existing plants and the demand for uranium
- government laws, regulations, policies or decisions that adversely affect us, including tax and trade laws
- our uranium suppliers fail to fulfil delivery commitments or our uranium purchasers fail to fulfil purchase commitments
- our Cigar Lake development, mining or production plants are delayed or do not succeed for any reason
- any difficulties in milling of Cigar Lake ore at the McClean Lake mill
- water quality and environmental concerns could result in a potential deferral of production and additional capital and operating expenses for the Cigar Lake operation
- JV Inkai's development, mining or production plans are delayed or do not succeed for any reason
- our expectations relating to care and maintenance costs prove to be inaccurate
- we are affected by natural phenomena, including inclement weather, fire, flood and earthquakes
- our operations are disrupted due to problems with our own or our suppliers' or customers' facilities, the unavailability of reagents, equipment, operating parts and supplies critical to production, equipment failure, lack of tailings capacity, labour shortages, labour relations issues, strikes or lockouts, underground floods, cave-ins, ground movements, tailings dam failures, transportation disruptions or accidents, unanticipated consequences of our cost reduction strategies, or other development and operating risks

Material assumptions

- our expectations regarding sales and purchase volumes and prices for uranium and fuel services, trade restrictions, and that counterparties to our sales and purchase agreements will honour their commitments
- our expectations regarding the demand for and supply of uranium
- our expectations regarding spot prices and realized prices for uranium, and other factors discussed under the heading *Price sensitivity analysis: uranium segment*
- that the construction of new nuclear power plants and the relicensing of existing nuclear power plants not being more adversely affected than expected by changes in regulation or in the public perception of the safety of nuclear power plants
- our ability to continue to supply our products and services in the expected quantities and at the expected times
- our expected production levels for uranium and conversion services
- our cost expectations, including production costs, purchase costs, operating costs, capital costs, and the success of our cost reduction strategies
- our expectations regarding tax rates and payments, royalty rates, currency exchange rates and interest rates
- our expectations about the outcome of our dispute with CRA, including that the Tax Court ruling will be upheld on appeal
- we are able to utilize letters of credit to the extent anticipated in our dispute with CRA
- our decommissioning and reclamation estimates, including the assumptions upon which they are based, are reliable
- our mineral reserve and resource estimates, and the assumptions upon which they are based, are reliable
- our understanding of the geological, hydrological and other conditions at our uranium properties
- our Cigar Lake development, mining and production plans succeed
- the McClean Lake mill is able to process Cigar Lake ore as expected
- JV Inkai's development, mining and production plans succeed
- the ability of JV Inkai to pay dividends
- that care and maintenance costs will be as expected
- our 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 operations are not significantly disrupted as a result of political instability, nationalization, terrorism, sabotage, blockades, civil unrest, breakdown, natural disasters, governmental or political actions, litigation or arbitration proceedings, the unavailability of reagents, equipment, operating parts and supplies critical to production, labour shortages, labour relations issues, strikes or lockouts, underground floods, cave-ins, ground movements, tailings dam failure, lack of tailings capacity, transportation disruptions or accidents, unanticipated consequences of our cost reduction strategies, or other development or operating risks

Our business

Our vision is to energize a clean-air world. We are a pure-play nuclear fuel investment with a proven track record and the strengths to take advantage of the world's rising demand for safe, reliable, affordable and carbon-free energy. Nuclear energy plants around the world use our uranium products to generate one of the cleanest sources of electricity available today.

Our operations and investments span the nuclear fuel cycle, from exploration to fuel manufacturing. Our head office is in Saskatoon, Saskatchewan.



URANIUM

Operations

Our uranium production capacity is among the world's largest. However, in 2019, with many of our operations in care and maintenance, we accounted for 9% of world production. We have controlling ownership of the world's largest high-grade reserves.

Advanced Uranium Projects

We use a stage gate process to evaluate our uranium projects and will advance them at a pace aligned with market opportunities, in order to respond when the market signals a need for more uranium.

Uranium Exploration (grey shaded)

Our exploration program is directed at replacing mineral reserves as they are depleted by our production. Our land holdings total about 0.8 million hectares (1.9 million acres). In northern Saskatchewan alone, we have direct interests in about 0.7 million hectares (1.7 million acres) of land covering many of the most prospective exploration areas of the Athabasca Basin. Our active exploration programs are focused on Canada.

FUEL SERVICES

We are an integrated uranium fuel supplier, offering refining, conversion and fuel manufacturing services. We have about 25% of world primary conversion capacity.

MARKETING

We sell uranium and fuel services to nuclear utilities in 12 countries, with sales commitments to supply about 130 million pounds of U_3O_8 and over 36 million kilograms of UF_6 conversion services.

OTHER FUEL CYCLE INVESTMENTS

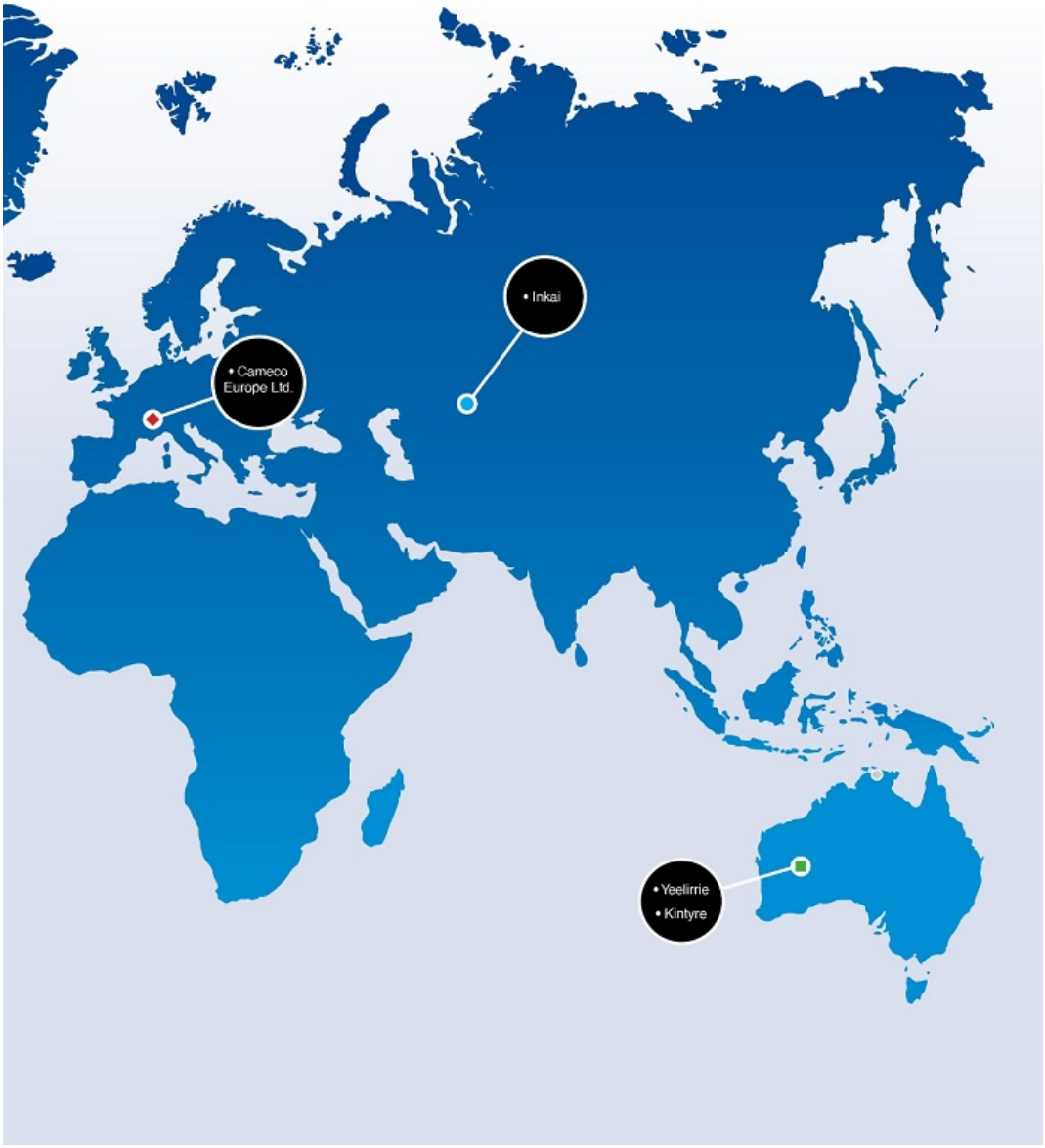
ENRICHMENT

In 2019, we signed a binding agreement to increase our interest in Global Laser Enrichment (GLE) from 24% to 49%. GLE is testing a third-generation enrichment technology that, if successful, will use lasers to commercially enrich uranium. Closing of the agreement is conditional upon further regulatory and other approvals.

* Operation suspended/curtailed due to current market conditions

Advantages

With our extraordinary assets, long-term contract portfolio, employee expertise, comprehensive industry knowledge and strong balance sheet, we are confident in our ability to increase long-term shareholder value.



2019 performance highlights

Throughout 2019 we continued to do what we said we would do, executing on all strategic fronts; operational, marketing and financial. On the operational front, Cigar Lake and our Fuel Services segment are performing very well. With the McArthur River/Key Lake operation still on care and maintenance, production in our uranium segment remained well below our committed sales. As a result, we were actively purchasing material on the spot market. On the financial front, we are well-positioned to execute on our strategy and self-manage risk. Our balance sheet is strong, we are starting 2020 with $1.1 billion in cash and $1 billion in long-term debt with maturities in 2022, 2024 and 2042. In addition, the Federal Court of Appeal hearing of our September 2018 unequivocal Tax Court of Canada (Tax Court) win has been scheduled to be held on March 4, 2020 and we anticipate we could receive a decision in 2020. We believe the Tax Court ruling diminishes the risk related to our tax case with Canada Revenue Agency (CRA) and believe the decision of the Tax Court will be upheld on appeal.

In 2019, the spot market underperformed our expectations, due to the delay of end-user demand caused by uncertainty largely related to market acess and trade policy issues. However, we were pleased by our performance in the term market. The interest in long-term contracting and our off-market conversations with some of our best and largest customers continues. We have not seen the current level of prospective business in our pipeline since before 2011. Since the beginning of 2019, we added just over 36 million pounds of deliveries to our contract portfolio, more than replacing the volumes delivered in 2019, while maintaining leverage to higher future uranium prices. Our customers recognize that, from a security of supply perspective, diversification is important, and in some cases their risk management departments require it. They want access to long-lived, tier-one productive capacity from commercial suppliers who have a proven operating track record. Increasingly, many customers are also required to ensure their suppliers adhere to more stringent environmental, social, and governance performance standards. In addition, in light of the market access and trade policy issues affecting our market, they recognize the potential for trade policy distortions to regionalize supply, and ultimately, along with low prices, make the availability of future supply less certain and less predictable.

In September, the World Nuclear Association released its nuclear fuel report, which highlighted the fact that the demand cycle is on an upswing while the production cycle has swung down. The report outlined three scenarios for uranium demand and supply for the years 2019 through 2040. Demand was up in all three scenarios considered: the low case, the base case, and the high case. Under all three scenarios the report shows that the industry needs to at least double projected primary uranium production by 2040 to satisfy forecasted demand. To achieve this, the WNA report recognized that the market will require the appropriate signals to ensure current levels of production continue, the return of idled capacity, the completion of projects under development, the pursuit of brownfield expansion projects, and the development of currently planned and prospective greenfield projects. Finally, the report recognized that even when inventories are high, mobility can be low. For us, the report reinforced our belief that the uranium market needs to transition, similar to what has happened in the conversion market and is beginning to occur in the enrichment market.

However, until we see that transition occur, we will continue to take the necessary actions to maintain the strength of our balance sheet so we can self-manage risk, and that we expect will reward shareholders for their continued patience and support of our strategy to build long-term value.

Financial performance

HIGHLIGHTS DECEMBER 31 ($ MILLIONS EXCEPT WHERE INDICATED)	2019	2018	CHANGE
Revenue	**1,863**	2,092	(11)%
Gross profit	**242**	296	(18)%
Net earnings attributable to equity holders	**74**	166	(55)%
$ per common share (diluted)	**0.19**	0.42	(56)%
Adjusted net earnings (non-IFRS, see page 28)	**41**	211	(81)%
$ per common share (adjusted and diluted)	**0.10**	0.53	(81)%
Cash provided by operations (after working capital changes)	**527**	668	(21)%

Net earnings attributable to equity holders (net earnings) and adjusted net earnings were lower in 2019 compared to 2018, in-line with the outlook we provided. See 2019 consolidated financial results beginning on page 27 for more information. Key highlights:

- generated $527 million in cash from operations
- retired one-third, $500 million, of our outstanding debt
- extended the maturity date of our revolving credit facility to November 2023, and reduced it by $250 million to $1 billion
- Tax Court awarded $10.25 million in legal fees incurred, plus an amount for disbursements of up to $17.9 million in our dispute with CRA. Timing of any payments under the cost award is uncertain.
- tribunal of international arbitrators ruled in favour of Cameco Inc. in its dispute with Tokyo Electric Power Company Holdings, Inc. (TEPCO), awarding damages of $40.3 million (US), which we received in the third quarter
- received $92.6 million (US) from JV Inkai, representing repayment, in full, of its outstanding loan. In addition, received dividends of $10.6 million (US) in December 2019.

Our segment updates

In our uranium segment, annual production was in-line with expectations. Key highlights:

- continued the production suspension at McArthur River/Key Lake, removing 18 million pounds per year (100% basis) from the market
- annual production of 9.0 million pounds—in-line with the 2019 outlook provided
- purchased 19.0 million pounds of uranium, including our spot purchases, committed purchase volumes, JV Inkai purchases and the purchase of NUKEM's excess inventory
- reached a new collective agreement with unionized employees at our McArthur River/Key Lake operation, which expires December 31, 2022

Production in 2019 from our fuel services segment was 27% higher than in 2018, as a result of an increase in UF_6 production given the increase in demand in the market. We reached a new collective agreement with unionized employees at our Port Hope conversion facility, which expires July 1, 2022.

See *Our operations and projects* beginning on page 55 for more information.

HIGHLIGHTS			2019	2018	CHANGE
Uranium	Production volume (million lbs)		**9.0**	**9.2**	(2)%
	Sales volume (million lbs)		**31.5**	**35.1**	(10)%
	Average realized price	($US/lb)	**33.77**	**37.01**	(9)%
		($Cdn/lb)	**44.85**	**47.96**	(6)%
	Revenue ($ millions)		**1,414**	**1,684**	(16)%
	Gross profit ($ millions)		**153**	**268**	(43)%
Fuel services	Production volume (million kgU)		**13.3**	**10.5**	27%
	Sales volume (million kgU)		**14.1**	**11.6**	22%
	Average realized price	($Cdn/kgU)	**26.21**	**26.78**	(2)%
	Revenue ($ millions)		**370**	**313**	18%
	Gross profit ($ millions)		**90**	**59**	53%

Industry prices

	2019	2018	CHANGE
Uranium ($US/lb U_3O_8)[1]			
Average annual spot market price	**25.64**	24.59	4%
Average annual long-term price	**31.75**	30.38	5%
Fuel services ($US/kgU as UF_6)[1]			
Average annual spot market price			
North America	**18.27**	9.98	83%
Europe	**18.12**	10.32	76%
Average annual long-term price			
North America	**16.73**	14.33	17%
Europe	**16.63**	14.44	15%

Note: the industry does not publish UO_2 prices.

1 Average of prices reported by TradeTech and UxC, LLC (UxC)

On the spot market, where purchases call for delivery within one year, the volume reported by UxC for 2019 was approximately 63.3 million pounds, compared to 88.7 million pounds in 2018. The majority of the activity in the spot market has been churn, the same material changing hands many times. There has been a lack of end-user demand primarily caused by the delay of purchasing decisions. Uncertainty due to changing market dynamics, including ongoing market access and trade policy issues continued to keep some utilities on the sidelines. At the end of 2019, the average reported spot price was $24.93 (US) per pound, down $2.82 (US) per pound from the end of 2018. During the year, the uranium spot price ranged from a high of $28.90 (US) per pound to a low of $24.05 (US) per pound, averaging $25.64 (US) for the year.

Long-term contracts usually call for deliveries to begin more than two years after the contract is finalized, and use a number of pricing formulas, including fixed prices escalated over the term of the contract, and market referenced prices (spot and long-term indicators) quoted near the time of delivery. The volume of long-term contracting reported by UxC for 2019 was about 95.8 million pounds compared to about 91.5 million pounds in 2018. While higher than the same period last year, newly contracted volumes continued to be less than the quantities consumed. Uncertainty regarding the future of some reactor fleets and complacency due to low uranium prices continued to impact contracting volumes. The average reported long-term price at the end of the year was $32.50 (US) per pound, up $0.50 (US) from 2018.

With the uncertainty created by market access and trade policy issues facing the nuclear industry, we expect contracting in 2020 could remain largely discretionary.

Spot UF_6 conversion prices increased to record levels in both the North American and European markets. For North American delivery, the average reported spot price at the end of 2019 was $22.13 (US) per kilogram uranium as UF_6 (US/kgU as UF_6), up $8.63 (US) from the end of 2018. Long-term UF_6 conversion prices finished 2019 at $18.13 (US/kgU as UF_6), up $2.13 (US) from the end of 2018.



SHARES AND STOCK OPTIONS OUTSTANDING

At February 5, 2020, we had:

- 395,797,732 common shares and one Class B share outstanding
- 8,594,527 stock options outstanding, with exercise prices ranging from $11.32 to $26.81

DIVIDEND

In 2019, our board of directors declared a dividend of $0.08 per common share, which was paid December 13, 2019. The decision to declare an annual dividend by our board will be based on our cash flow, financial position, strategy and other relevant factors including appropriate alignment with the cyclical nature of our earnings.

Market overview and developments

Growing confidence

Market access and trade policy issues were at the top of the list of factors affecting the market in 2019. These issues created uncertainty and consumed a significant amount of time and focus from our customers and contributed to the delay of end-user demand in the spot market. Despite the significant demand created by the reduction in primary supply this year, at least half of the activity in the spot market has been churn, the same material changing hands many times. In contrast, interest in long-term contracting increased compared to 2018. While the volume of uranium executed under long-term contracts is still below annual consumption levels, it reached its highest level since 2012 and there continues to be significant interest. We believe that underlying this interest is the recognition that the demand cycle is on an upswing while the production cycle has swung down and the market needs to transition to one where price reflects an economic return on primary production. This gives us confidence that the uranium market will undergo the same transition we have seen in the conversion market and that is beginning to occur in the enrichment market.

Supply is not guaranteed

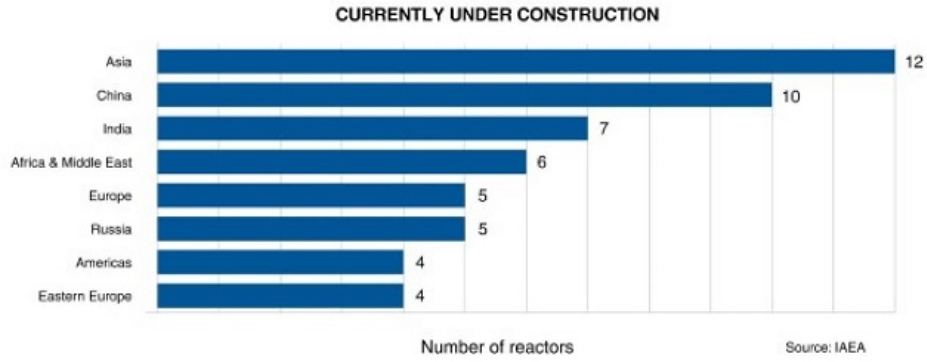
Economic realities and government-driven trade policies continue to have an impact on the security of supply in our industry. Not only does it not make sense to invest in future primary supply, even the lowest-cost producers are deciding to preserve long-term value by leaving uranium in the ground. Adding to security of supply concerns today is the role of commercial and state-owned entities in the uranium market, and the disconnect between where uranium is produced and where it is consumed. Nearly 80% of primary production is in the hands of state-owned enterprises, after taking into account the cuts to primary production that have occurred over the last several years. Furthermore, almost 90% of primary production comes from countries that consume little-to-no uranium, and 90% of uranium consumption occurs in countries that have little-to-no primary production. As a result, government-driven trade policies can be particularly disruptive for the uranium market. Some of the more significant supply developments are:

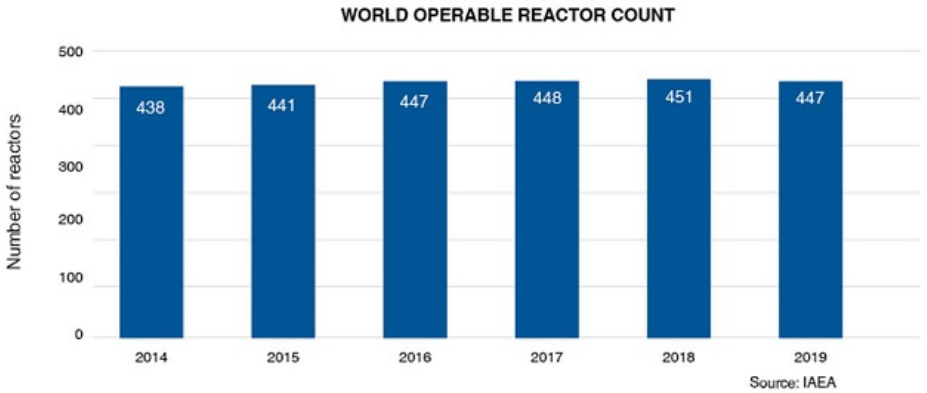
- In the US, which has the largest fleet of nuclear reactors in the world, the US Nuclear Fuel Working Group (NFWG) was established to further analyze the state of nuclear fuel production in the US. This action followed the determination by the President of the United States under Section 232 of the Trade Expansion Act that imports of foreign uranium do not constitute a national security threat, and that new restrictions on imports were not required. The NFWG has submitted its report to the President, however, the details of the report have not been made public and the President has not made any determinations.
- The concern regarding expanded sanctions on Iran that could extend to countries providing nuclear fuel products and services to Iran (i.e. Russia, China, and some European nations), and therefore disrupt Russian nuclear fuel imports into the US. Compounding this concern is the continued uncertainty regarding Russian sanctions and whether existing quotas on imports of Russian uranium into the US, under the Russian Suspension Agreement, will be extended or amended prior to its expiry in 2020.
- Trade tensions with China continue. On August 14, 2019, the US issued sanctions that involved China General Nuclear Power Group and three of its subsidiaries, effectively banning US companies from supplying these groups with specific nuclear-related commercial or dual-use goods. This has not impacted uranium sales.
- Kazatomprom (KAP) announced that, given current market conditions, it intends to extend its current production limits (20% reduction from planned production volumes) across all its production assets through 2021. Combined with reductions from prior years, KAP indicated its cutbacks are equivalent to stopping all production in Kazakhstan for about one year. They have also indicated that a return to full production will not occur until there is a sustained market recovery. In addition, during the third quarter KAP offered a secondary placement of its shares, increasing its publicly-traded share capital from 15% to 18.8%.
- Energy Resources of Australia Ltd. reconfirmed that it is required to discontinue mining and processing activities at the Ranger uranium mine in the Northern Territory of Australia by January 2021.
- The board of directors of Orano's Cominak mine announced that the mine will shut down in March 2021 due to depletion of reserves.

Demand has recovered and is growing

The demand gap left by forced and premature nuclear reactor shut-downs since March of 2011 has been filled. According to the International Atomic Energy Agency (IAEA) five new reactors began commercial operation in 2019, and 53 reactors are under construction. With a number of reactor construction projects recently approved, and many more planned, the demand for uranium is growing. This growth is largely occurring in Asia and the Middle East. Some of this growth is tempered by early reactor retirements, plans for reduced reliance on nuclear, or phase-out policies in other regions. However, there is growing recognition of the role nuclear power must play in providing safe, reliable, affordable carbon-free baseload electricity and achieving a low-carbon future. Some of the more significant demand developments are:

- The World Nuclear Association's 2019 Nuclear Fuel Report shows demand is forecast to be higher in all scenarios examined over the period 2019 through 2040. In addition, the report shows that under all demand scenarios, the industry needs to at least double projected primary uranium production by 2040, which will require the appropriate market signals to ensure current levels of production continue, the return of idled production capacity, completion of projects under development, and development of currently planned and prospective projects.
- In its latest uranium market outlook report, UxC increased its annual demand outlook by 8 million pounds per year and moved its assumed structural deficit from 2026 to 2022.
- In May 2019, the International Energy Agency released its first nuclear report in 20 years, "Nuclear Power in a Clean Energy System". The report highlights that a steep decline in nuclear power would threaten energy security and climate change goals and result in billions of tonnes of additional carbon emissions by 2040.
- In October 2019, the IAEA held its first ever conference recognizing the critical role for nuclear power in combating climate change, "International Conference on Climate Change and the Role of Nuclear Power". The IAEA advocates that it will be difficult to achieve the goal of reducing greenhouse gas emissions without a significant increase in nuclear power.
- In November 2019, the European Parliament adopted a resolution recognizing the role of nuclear energy in achieving its 2050 climate plan calling for net zero emissions.
- This year, China National Nuclear Company received the first new construction approval in China in about three years for units 1 and 2 at Zhangzhou, and construction began at unit 1 in October 2019.
- NextEra Energy's Turkey Point 3 and 4 in Florida received the first ever subsequent license renewal, allowing them to operate for 80 years.
- Duke Energy announced it is seeking to renew the operating licences to 80 years for the 11 reactors it operates in North and South Carolina to support carbon reduction plans. Tennessee Valley Authority also announced plans to extend the licences for its six reactors in Tennessee and Alabama to 80 years.
- Three Mile Island nuclear power plant was retired from service by Exelon after 45 years of operation in Pennsylvania.
- In Ohio, a bill was passed providing funding to support the ongoing operation of the Perry and Davis-Besse nuclear power plants, similar to incentives enacted by other states including Illinois, New Jersey, New York, Connecticut, and pending legislation in Pennsylvania.
- There were reports that Kyushu Electric Power Co. and other utilities in Japan expect to temporarily close their currently operating units over the coming years to complete the implementation of the antiterrorism measures required by the nuclear regulators. Some of these units are expected to shut down starting in 2020 before returning to service within a year.
- Brazil announced the possible construction of six more nuclear reactors by 2050, in addition to completion of Angra unit 3, which is currently under construction. Brazil also plans to restart domestic uranium mining in 2019 for the first time in five years, and is open to private sector investment.

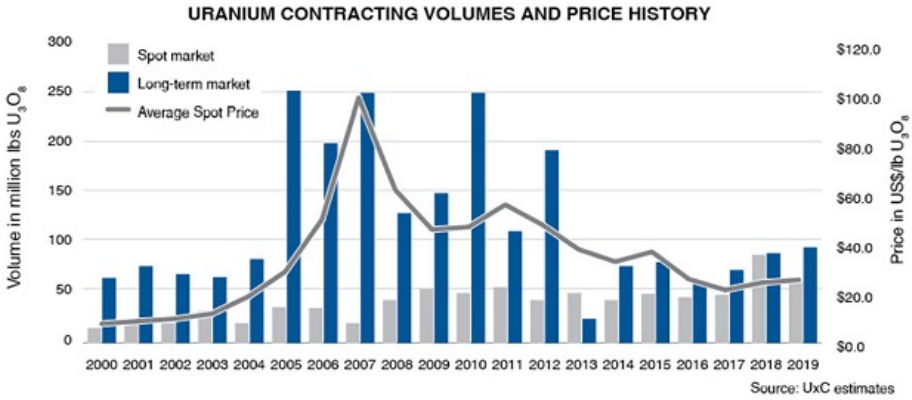




OPPORTUNITIES FOR THOSE WHO CAN WAIT

UxC reports that over the last five years only 396 million pounds have been locked-up in the long-term market, while over 831 million pounds have been consumed in reactors. We remain confident that utilities have a growing gap to fill.

Like other commodities, the uranium industry is cyclical. History demonstrates that in general, when prices are rising and high, uranium is perceived as scarce, and a lot of contracting activity takes place. The heavy contracting that takes place during price runs, drives investment in higher-cost sources of production. Once that production is in the market, it tends to stay in the market longer than is economically rational, creating the perception that uranium is abundant and always will be, and prices decline. When prices are declining and low, like we have seen over the past eight years, there is no perceived urgency to contract, and contracting activity and investment in new supply drops off. After years of low investment in supply, as has been the case since 2011, security of supply tends to overtake price concerns at some point, and utilities re-enter the long-term market to ensure they have the reliable supply of uranium they need to run their reactors.



We believe the current backlog of long-term contracting presents a substantial opportunity for commercially motivated suppliers like us that can weather the low-price part of the cycle. As a low-cost producer, we manage our operations with these price cycles in mind.

In our industry, customers do not come to the market right before they need to load uranium into their reactors. To operate a reactor that could run for more than 60 years, natural uranium and the downstream services have to be purchased years in advance, allowing time for a number of processing steps before it arrives at the power plant as a finished fuel bundle. At present, we believe there is a significant amount of uranium that needs to be contracted to keep reactors running into the next decade.

UxC estimates that cumulative uncovered requirements are about 1.5 billion pounds to the end of 2035. The longer the recovery of the long-term market is delayed, the less certainty there will be about the availability of future supply to fill growing demand. In fact, recent data from the US Energy Information Administration shows that utility inventories are starting to decline and are approaching levels that could put security of supply at risk. Ultimately, we expect the current market uncertainty to give way to increasing concerns about the security of future supply.

As utilities' uncovered requirements grow, annual supply declines, demand for uranium from producers and financial players increases, and with trade policy potentially restricting access to some markets, we believe the pounds available in the spot market will not be adequate to satisfy the growing backlog of long-term demand. As a result, we expect there will be increased competition to secure uranium under long-term contracts on terms that will ensure the availability of reliable primary supply to meet growing demand.

Global population is on the rise, and with the world's need for safe, clean, reliable baseload energy, nuclear remains an important part of the energy mix. We remain confident in the future of the nuclear industry. With demand coming on in the form of restarts and new reactors, and supply becoming less certain as a result of low prices, production curtailments, lack of investment, and market access and trade policy issues, we're continuing to expect a market transition. While the timing of a market transition remains uncertain, we will continue to take the actions we believe are necessary to position the company for long-term success. Therefore, we will undertake contracting activity which aligns with the uncertain timing of a market recovery and is intended to ensure we have adequate protection and will benefit from higher prices under our contract portfolio, while maintaining exposure to the rewards that come from having uncommitted, low-cost supply to deliver into a strengthening market.

Our strategy

Our strategy is set within the context of a challenging market environment, which we expect to give way to strong long-term fundamentals driven by increasing populations, and the impact of growing electricity demand on the world's climate. Nuclear energy must 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 power needed, not only reliably, but also safely and affordably, and in a way that will help avoid some of the worst consequences of climate change.

Tier-one focus

We are a pure-play nuclear fuel investment, focused on providing a clean source of energy, and taking advantage of the long-term growth we see coming in our industry. Our strategy is to focus on our tier-one assets and profitably produce at a pace aligned with market signals in order to preserve the value of those assets and increase long-term shareholder value, and to do that with an emphasis on safety, people and the environment.

URANIUM

Uranium production is central to our strategy, as it is the biggest value driver of the nuclear fuel cycle and our business. In accordance with market conditions, and to mitigate risk, we will evaluate the optimal mix of our production, inventory and purchases in order to satisfy our contractual commitments and in order to return the best value possible. We will not produce from our tier-one assets to sell into an oversupplied spot market. During a prolonged period of uncertainty, this could mean leaving our uranium in the ground. As conditions improve, we expect to meet rising demand with production from our best margin operations.

In light of today's lingering uncertainty as to how long the weak market conditions will persist, we are focused on preserving the value of our lowest cost assets, on maintaining a strong balance sheet, on protecting and extending the value of our contract portfolio and on efficiently managing the company in a low price environment. We have undertaken a number of deliberate and disciplined actions. In 2019, these actions resulted in:

- generation of $527 million in cash from operations
- retirement of one-third, $500 million, of our outstanding debt
- a year-end balance of $1.1 billion in cash on our balance sheet

Consistent with our actions, our McArthur River/Key Lake operation remains on care and maintenance for an indeterminate duration, removing 18 million pounds of uranium annually from the market. Some of our actions have a cost in the short term, and we must weigh these costs against the value we expect they will generate over the long term. Accordingly, we will adjust our actions based on market signals with the intent of being able to self-manage risk, and to ensure our tier-one assets are available to us in a market that values them appropriately.

FUEL SERVICES

Our fuel services division is a source of profit and supports our uranium segment while allowing us to vertically integrate across the fuel cycle.

The UF_6 conversion market has gone through a transition that has seen the industry average North American spot price increase by more than 280% and the industry average North American term price increase by almost 40% since the end of 2017. In this environment, with our Port Hope facility the only UF_6 plant currently operating in North America, we are focused on securing new long-term contracts that reflect today's prices and that will allow us to continue to consistently support the long-term needs of our customers.

In addition, we are pursuing non-traditional markets for our UO_2 and fuel fabrication business and have been actively securing new contracts for reactor components to support refurbishment of Canadian reactors.

Our focus will continue to be on maintaining and optimizing the profitability of this segment of our business.

OTHER FUEL CYCLE INVESTMENTS

We continue to explore other opportunities within the nuclear fuel cycle. In particular, we are interested in the second largest value driver of the fuel cycle, enrichment. Having operational control of uranium production, conversion, and enrichment facilities would offer operational synergies that could enhance profit margins.

In 2019, we signed a binding agreement to increase our interest in Global Laser Enrichment (GLE) from 24% to 49%. GLE is testing a third-generation enrichment technology that, if successful, will use lasers to commercially enrich uranium. Closing of the agreement is conditional upon receipt of US regulatory approval and GLE's contract with the US Department of Energy (DOE) regarding DOE's inventory of depleted tails remaining in full force and effect.

Capital allocation – focus on value

Delivering returns to our long-term shareholders is a top priority. We continually evaluate our investment options to ensure we allocate our capital in a way that we believe will:

- create the greatest long-term value for our shareholders
- allow us to navigate by our investment-grade rating and mitigate risk
- allow us to execute on our dividend while ensuring it is appropriately aligned with the cyclical nature of our earnings

To deliver value, free cash flow must be productively reinvested in the business or returned to shareholders, which requires good execution and disciplined allocation. Our decisions are based on the run rate of our business, not one-time events. Cash on our balance sheet that exceeds value-adding growth opportunities and/or is not needed to self-manage risk should be returned to shareholders.

We have a multidisciplinary capital allocation team that evaluates all possible uses of investable capital.

We start by determining how much cash we have to invest (investable capital), which is based on our expected cash flow from operations minus expenses we consider to be a higher priority, such as dividends and financing costs, and could include others. This investable capital can be reinvested in the company or returned to shareholders.

Our capital allocation decisions will continue to pivot on what the market is providing. With the continued market uncertainty we are facing, and our ongoing dispute with CRA, the objective of our capital allocation is to maximize cash flow, while navigating by our investment-grade rating through close management of our balance sheet metrics.

With the metrics that inform an investment-grade rating in mind, and in this period of low uranium prices, we have taken steps to improve margin and cash flow by:

- responsibly managing our sources of supply thereby preserving the value of our tier-one assets
- restructuring our activities to reduce our operating, capital, and general and administrative spending
- reducing our annual dividend from $0.40 per share to $0.08 per share in 2018
- implementing an initiative intended to provide a greater focus on technology and its applications to improve efficiency and reduce costs across the organization, with a particular focus on innovation and accelerating the adoption of advanced digital and automation technologies

As a result, we are well positioned to self-manage risk.

REINVESTMENT

If a decision is made to reinvest capital in sustaining, capacity replacement, or growth, all opportunities are ranked and only those that meet the required risk-adjusted return criteria are considered for investment. We also must identify, at the corporate level, the expected impact on cash flow, earnings, and the balance sheet. All project risks must be identified, including the risks of not investing. Allocation of capital only occurs once an investment has cleared these hurdles.

This may result in some opportunities being held back in favour of higher return investments, and should allow us to generate the best return on investment decisions when faced with multiple prospects, while also controlling our costs. If there are not enough good investment prospects internally or externally, this may result in residual investable capital, which we would then consider returning directly to shareholders.

We have not yet seen the market transition needed to restart our idled production capacity. Therefore, until we see that transition, our capital expenditures for 2020 through 2022 will be focused primarily on sustaining and capacity replacement capital, and demonstrating our continued commitment to a clean environment through ongoing investment in the Vision in Motion project in Port Hope. In addition, we will focus on improving operational effectiveness across our operations, including the use of digital and automation technologies with a particular goal of substantially reducing operating costs and increasing operational flexibility when it comes time to restart the McArthur River/Key Lake operation. Any opportunities will be rigorously assessed before an investment decision is made. If we get clarity on our CRA dispute prior to a market transition, which generates a one-time cash infusion, we will focus on the debt portion of our ratings metrics. This may mean an even greater emphasis on reducing the debt on our balance sheet. However, if the market does begin to transition and higher uranium prices are beginning to flow through our contract portfolio, and we are able to increase our portfolio of acceptable long-term contracts, the earnings portion of our rating metrics are expected to improve. In that scenario, reducing debt would not be the priority. Our priority would be to invest in restarting our idled tier-one assets, and if warranted, turn to value-adding growth opportunities.

RETURN

We believe in returning cash to shareholders, but are also focused on protecting the company and rewarding those shareholders who understand and support our strategy to build long-term value. If we have excess cash and determine the best use is to return it to shareholders, we can do that through a share repurchase or dividend—an annual dividend, one-time supplemental dividend or a progressive dividend. When deciding between these options, we consider a number of factors, including the nature of the excess cash (one time or cash generated by our business operations), growth prospects for the company, and growth prospects for the industry.

Share buyback: If we were generating excess cash while there were few or no growth prospects for the company or the industry, then a share buyback might make sense. However, our current view is that the long-term fundamentals for Cameco and the industry remain strong.

Dividend: The amount and type of dividend paid, annual, progressive or one-time supplemental is evaluated by our board of directors with careful consideration of our cash flow, financial position, strategy, and other relevant factors including appropriate alignment with the cyclical nature of our earnings.

Marketing framework – balanced contract portfolio

As with our corporate strategy and approach to capital allocation, the purpose of our marketing framework is to deliver value. Our approach is to secure a solid base of earnings and cash flow by maintaining a balanced contract portfolio that optimizes our realized price.

We evaluate our strategy in the context of our market environment and continue to adjust our actions in accordance with our marketing framework:

- First, we will not produce from our tier-one assets to sell into an oversupplied spot market. We will not produce from these assets unless we can deliver our tier-one pounds under long-term contracts that provide an acceptable rate of return on these assets for our owners.
- Second, we do not intend to build up an inventory of excess uranium. Excess inventory serves to contribute to the sense that uranium is abundant and creates an overhang on the market, and it ties up working capital on our balance sheet.
- Third, in addition to our committed sales, we will capture demand in the market where we think we can obtain value. We will take advantage of opportunities the market provides, where it makes sense from an economic, logistical and strategic point of view. Those opportunities may come in the form of spot, mid-term or long-term demand, and will be additive to our current committed sales.
- Fourth, once we capture demand, we will decide how to best source material to satisfy that demand. Depending on the timing and volume of our production, purchase commitments, and our inventory volumes, this means we will be active buyers in the market in order to meet our demand obligations.
- And finally, in general, if we choose to source material to meet demand by purchasing it, we expect the price of that material will be more than offset by the leverage to market prices in our sales portfolio over a rolling 12-month period.

In addition to this framework, our contracting decisions always factor in who the customer is, our desire for regional diversification, the product form, and logistical factors.

Ultimately, our goal is to protect and extend the value of our contract portfolio on terms that recognize the value of our assets and provide adequate protection when prices go down and allow us to benefit when prices rise. We believe using this framework will allow us to create long-term value for our shareholders. Our focus will continue to be on maximizing cash flow, so we can execute on our strategy and self-manage risk.

LONG-TERM CONTRACTING

Uranium is not traded in meaningful quantities on a commodity exchange. Utilities have historically bought the majority of their uranium and fuel services products under long-term contracts with suppliers, and have met the rest of their needs on the spot market. We sell uranium and fuel services directly to nuclear utilities around the world as uranium concentrates, UO_2 and UF_6, conversion services, or fuel fabrication. We have a solid portfolio of long-term sales contracts that reflect the long-term, trusting relationships we have with our customers.

In general, we are always active in the market, buying and selling uranium when it is beneficial for us and in support of our long-term contract portfolio. We undertake activity in the spot and term markets prudently, looking at the prices and other business factors to decide whether it is appropriate to purchase or sell into the spot or term market. Not only is this activity a source of profit, it gives us insight into underlying market fundamentals.

We deliver large volumes of uranium every year, therefore our net earnings and operating cash flows are affected by changes in the uranium price. Market prices are influenced by the fundamentals of supply and demand, market access and trade policy issues, geopolitical events, disruptions in planned supply and demand, and other market factors.

The objectives of our contracting strategy are to:

- maximize realized price while reducing volatility of our future earnings and cash flow
- focus on meeting the nuclear industry's growing annual uncovered requirements with our future uncommitted supply while ensuring adequate regional diversity
- establish and grow market share with strategic customers

We target a ratio of 40% fixed-pricing and 60% market-related pricing in our portfolio of long-term contracts, including mechanisms to protect us when the market price is declining and allow us to benefit when market prices go up. This is a balanced and flexible approach that allows us to adapt to market conditions and put a floor on our average realized price, and deliver the best value to shareholders over the long term.

This approach has allowed us to realize prices higher than the market prices during periods of weak uranium demand, and we expect it will enable us to realize increases linked to higher market prices in the future.

Fixed-price contracts for uranium: are typically based on a term-price indicator at the time the contract is accepted and escalated over the term of the contract.

Market-related contracts for uranium: are different from fixed-price contracts in that they may be based on either the spot price or the long-term price, and that price is as quoted at the time of delivery rather than at the time the contract is accepted. These contracts sometimes provide for discounts, and often include floor prices and/or ceiling prices, which are usually escalated over the term of the contract.

Fuel services contracts: the majority of our fuel services contracts are at a fixed price per kgU, escalated over the term of the contract, and reflect the market at the time the contract is accepted.

OPTIMIZING THE CONTRACT PORTFOLIO

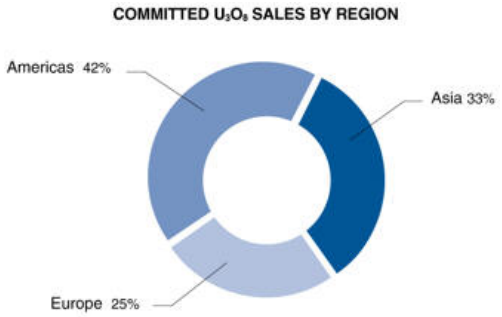
We work with our customers to optimize the value of our existing contract portfolio. In cases where a customer is seeking relief due to a challenging policy, operating, or economic environment, we evaluate their specific circumstances and assess their long-term sustainability. Where we deem the customer's long-term demand to be at risk, we may consider options that allow us to benefit from converting that uncertain future value into certain present value. In contrast, where the customer is considered to have a more certain and predictable future, we may offer relief. For example, in a low price environment, we may blend in more market-related volumes in the near term, but only where the customer is willing to extend the terms and conditions of that contract out into the future, and only where it is beneficial to us.

CONTRACT PORTFOLIO STATUS

We have commitments to sell over 130 million pounds of U_3O_8 with 31 customers worldwide in our uranium segment, and over 36 million kilograms as UF_6 conversion with 28 customers worldwide in our fuel services segment. The annual average sales commitments over the next five years in our uranium segment is around 19 million pounds, with commitment levels in 2020 and 2021 higher than in 2022 through 2024.

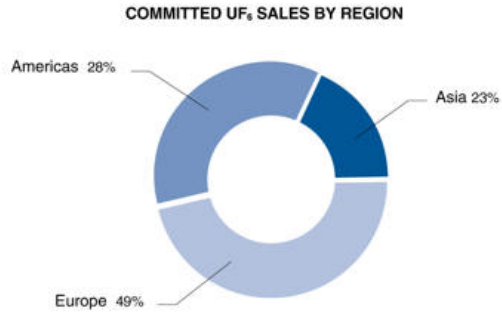
Customers – U_3O_8:

Five largest customers account for 60% of commitments



Customers – UF_6 conversion:

Five largest customers account for 60% of commitments



MANAGING OUR CONTRACT COMMITMENTS

To meet our delivery commitments, we use our uranium supply, which includes uranium obtained from:

- our existing production
- purchases under our JV Inkai agreement, from NUKEM, under long-term agreements and in the spot market
- our existing inventory

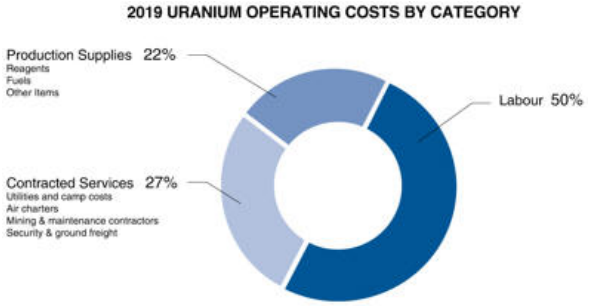
We allow sales volumes to vary year-to-year depending on:

- the level of sales commitments in our long-term contract portfolio
- our production volumes
- purchases under existing and/or new arrangements
- discretionary use of inventories
- market opportunities

Managing our costs

PRODUCTION COSTS

In order to operate efficiently and cost-effectively, we manage operating costs and improve plant reliability by prudently investing in production infrastructure, new technology, and business process improvements. Like all mining companies, our uranium segment is affected by the cost of inputs such as labour and fuel.



Given the current market dynamics, in 2020, our only operating property will be Cigar Lake. Our McArthur River/Key Lake, Rabbit Lake, and US operations are currently on care and maintenance. While we have these operations on standby, our annual cash production costs will reflect the operating cost of mining and milling our share of Cigar Lake mineral reserves, which is estimated to be between $15 and $16 per pound over the entire life-of-mine.

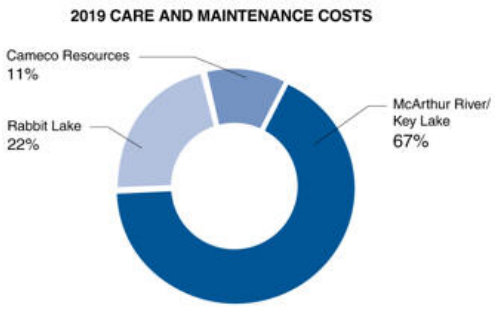
Operating costs in our fuel services segment are mainly fixed. In 2019, labour accounted for about 44% of the total. The largest variable operating cost is for zirconium, followed by anhydrous hydrogen fluoride, and energy (natural gas and electricity).

CARE AND MAINTENANCE COSTS

In 2020, we expect to incur between $150 million and $170 million in care and maintenance costs related to the suspension of production at our McArthur River/Key Lake mine and mill, Rabbit Lake mine and mill, and US operations. The largest proportion of these costs will be incurred at McArthur River/Key Lake.

Our expected care and maintenance costs have increased compared to 2019 due to planned expenditures that will allow us to fully assess our operating processes at McArthur River/Key Lake. Consistent with our tier-one strategy, we expect that production at McArthur River/Key Lake will be the first of our operations to restart once we see the appropriate market signals. Therefore, we are focused on improving operational effectiveness, including the use of digital and automation technologies with a particular goal of substantially reducing operating costs and increasing operational flexibility when it comes time to restart these operations. As a result, care and maintenance costs are expected to be higher compared to Rabbit Lake and in the US. Our Rabbit Lake and US operations are higher-cost, and with plenty of idle tier-one capacity and tier-one expansion capacity globally that can come back on line relatively quickly, the restart horizon is less certain.

While Rabbit Lake and our US operations are in standby, we will continue to evaluate our options in order to minimize costs.



PURCHASES AND INVENTORY COSTS

Our costs are also affected by the purchases of uranium and conversion services we make under long-term contracts and on the spot market.

To meet our delivery commitments, we make use of our mined production, inventories, purchases under long-term contracts, and purchases we make on the spot market. In 2020, the price for the majority of our purchases will be quoted at the time of delivery.

The cost of purchased material may be higher or lower than our other sources of supply, depending on market conditions. The cost of purchased material affects our cost of sales, which is determined by calculating the average of all of our sources of supply, including opening inventory, production, and purchases, and adding royalties, selling costs, and care and maintenance costs. If market prices exceed our cost of produced material including royalties, we expect the cost of sales to increase accordingly.

FINANCIAL IMPACT

As greater certainty returns to the uranium market, our view is that the market needs to transition to one where uranium prices reflect the cost of bringing on new primary production to meet growing demand.

We have taken a number of deliberate and disciplined actions to reduce supply and streamline operations. Some of these actions come with a cost in the near term, like care and maintenance costs, but we expect the benefit over the long term will far outweigh those costs.

We believe our actions will help shield the company from the nearer term risks we face and will reward shareholders for their continued patience and support of our strategy to build long-term value.

Committed to our values

Our values are at the core of everything we do and define who we are as a company.

SAFETY AND ENVIRONMENT

The safety of people and protection of the environment are the foundations of everything we do, locally and globally.

PEOPLE

We value the contribution of every employee and demonstrate respect for individual dignity, creativity and cultural diversity.

INTEGRITY

We lead by example, earn trust, honour our commitments and conduct our business ethically.

EXCELLENCE

Through leadership, collaboration and innovation, we strive to achieve our full potential and inspire others to reach theirs.

Our approach to ESG matters

Our uranium is used around the world in the generation of safe, carbon-free, affordable, base-load nuclear energy. As we seek to bring the benefits of carbon-free nuclear energy to the world, we will do so in a manner that reflects our values. We are committed to identifying and addressing the environmental, social and governance (ESG) risks and opportunities that we believe may have a significant impact on our ability to add long-term value for our stakeholders.

SUSTAINABILITY: A KEY PART OF OUR STRATEGY, REFLECTING OUR VALUES

We view sustainability as an integrated approach to conducting business. We integrate sustainability principles and practices into all stages of our activities, from exploration to decommissioning, including factoring them into our objectives and approach to compensation, our overall corporate strategy, and our day-to-day operations. We adopt established and recognized management system frameworks to guide our integrated approach, which is embedded within ethical business practices and our robust and transparent governance framework. We seek to be transparent with our stakeholders, keeping them updated on the risks and opportunities that we believe may have a significant impact on our ability to add long-term value.

We have a sustainability policy that describes our commitments in this regard. We encourage you to review our sustainability policy at cameco.com/about/governance/policies-programs.

Safety and the Environment

We employ an integrated Safety, Health, Environment and Quality (SHEQ) management system that applies to all phases and aspects of our business. The system is governed by one integrated SHEQ policy that recognizes that the safety and health of our workers and the public, protection of the environment, and quality of our processes are the highest priority during all stages of our activities. The policy is supported by multiple corporate SHEQ management programs. We maintain ISO 14001 certification at a corporate level. We encourage you to review our SHEQ policy at cameco.com/about/governance/policies-programs.

Climate change: Nuclear power is part of the solution

There is growing recognition that uranium is the cleanest energy fuel in the world and of the role nuclear power must play in ensuring safe, reliable and affordable carbon-free electricity generation from key global agencies, such as the United Nations Economic Commission for Europe, the United Nations Intergovernmental Panel on Climate Change, and the Union of Concerned Scientists. Indeed, for the first time in nearly two decades, the International Energy Agency released a report on nuclear energy in the hopes of bringing it back into the global energy debate. The report highlighted that a steep decline in nuclear power would threaten energy security and climate change goals and result in four billion tonnes of additional carbon emissions by 2040.

The nuclear industry recognizes the scale and immediacy of the challenge outlined in the Paris Agreement, and the important role that all low-carbon and carbon-free energy sources have to play. Led by the World Nuclear Association, the nuclear industry has a program and vision for the future of electricity supply called “Harmony”. The Harmony program sets a target for nuclear power to provide 25% of electricity by 2050 to help avoid the worst consequences of climate change. As members of the World Nuclear Association, and through participation in other industry organizations we fully support and are advocates of this initiative.

We believe that the reduction of carbon and greenhouse gas (GHG) emissions is important and necessary in Canada and around the world, and that nuclear power must be a central part of the solution to the world’s shift to a low-carbon, climate resilient economy. As one of the world’s largest producers of the uranium fuel needed to fuel nuclear reactors, we believe there is a significant opportunity for us to be part of the solution to combating climate change and that we are well positioned to deliver significant long-term business value, while actively working to reduce our emission profile.

We are proud that our the high-grade uranium ores in Saskatchewan’s Athabasca Basin result in our Canadian uranium having among the lowest life cycle greenhouse gas emission intensity internationally, despite the constraints related to our geographic location. In fact, the production of Saskatchewan uranium requires at least one hundred times less greenhouse gas (GHG) emissions than production of the cleanest Canadian natural gas to produce the same amount of electricity and, all of the nuclear power produced is GHG emission free. We have tracked and reported GHG emissions for more than two decades, despite any regulatory requirement to do so. We continue to be focused on improving energy management and the visibility of energy consumption within our organization, with the overall goal of improving the energy intensity of our operations to create business value.

Stakeholder relations

Gaining the support of all our stakeholders is necessary to sustain our business.

We have a people policy that describes our commitment to developing and supporting a flexible, skilled, stable and diverse workforce. The policy is supported by multiple corporate human resource programs, standards and practices. We encourage you to review this policy at cameco.com/about/governance/policies-programs.

In addition, we strive to earn the support of the communities in which we operate, which is one of our key measures of success. We identify opportunities and initiatives that support and respect these communities and their cultures.

We recognize the substantial value in developing and maintaining long-term mutually beneficial relationships with Indigenous communities located within or near our operations and other activities.

Over more than 30 years of operation and partnership in northern Saskatchewan, we have developed a comprehensive strategy that applies to all our operations globally, and is aimed at ensuring the support of the communities with whom we work. The global strategy is flexible and is implemented locally to reflect the needs of the communities. The bulk of the strategy has evolved as a result of the commercial benefits we see from ensuring strong support among local communities wherever we operate and focuses on five key areas:

- *Workforce development*: designed to deliver programming that aims to build educational and skills capacity in local communities.
- *Business development*: designed to promote involvement of locally-owned businesses in contracting opportunities at our operations, to provide additional jobs, revenue streams and capacity building at the local community level.
- *Community engagement*: designed with the objective to ensure that we secure support for our operations from local communities and satisfy the obligations placed on us by regulators and laws.
- *Community investment*: designed to help local communities with much-needed funding for community programming and infrastructure for initiatives focused on youth, education and literacy, health and wellness, and community development.
- *Environmental stewardship*: designed to support our overall environmental programming and give communities a voice in both the formal environmental assessment regulatory process, as well as ongoing monitoring activities.

We set standards for the measures that we will conform to in maintaining ongoing and meaningful engagement within the communities where we operate.

HOW WE ARE DOING

We produce a sustainability report for our stakeholders to tell them how we are performing against globally recognized key indicators that measure our environmental, social, governance and financial impacts in the areas that we believe may have a significant impact on our ability to add long-term value for our stakeholders. We use the Global Reporting Initiative's Sustainability Framework (GRI), in addition to some corporate indicators that are unique to the company to measure and report our performance. This is our report card to our stakeholders. For our most recent performance results, we encourage you to review our sustainability report at cameco.com/about/sustainability.

Given the evolving nature of the ESG landscape, we have established a multi-disciplinary working group to review of our current approach in this area, including how we report. The working group is chaired by our Senior Vice-President and Chief Corporate Officer and will report to the relevant committees of the board.

GOVERNANCE: SOUND GOVERNANCE IS THE FOUNDATION FOR STRONG PERFORMANCE

We believe that sound governance is the foundation for strong corporate performance. Our board of directors is responsible for overseeing management, and our strategy and business affairs and the integration of ESG principles throughout the company. The board's goal is to ensure we operate as a successful business, optimizing financial returns while effectively managing risk.

The board has formal governance guidelines that set out our approach to governance and the board's governance role and practices. The guidelines ensure we comply with all of the governance rules and legislation in Canada and the United States that are applicable, conduct ourselves in the best interests of our stakeholders, and meet industry best practices. The guidelines are reviewed and updated regularly.

Risk and Risk Management

We have a mature enterprise risk management (ERM) framework that consists of processes and controls to ensure risks are being appropriately managed and mitigated.

Decisions to accept, mitigate, or transfer identified risks guide management's plans in our strategic planning and budgeting process. Employees throughout the company take ownership of the risks specific to their area, and are responsible for developing and implementing the controls to manage and re-assess risk, including ESG risks.

Our risk policy sets out a broad, systematic approach to identifying, assessing, reporting and managing the significant risks, including ESG risks, we face in our business and operations. The policy is reviewed annually to ensure that it continues to meet our needs.

See *Managing the risks*, starting on page 56, for a discussion of the risks, including ESG risks, that generally apply to all of our operations and advanced uranium projects, and that could have a material impact on business in the near term. We also recommend you review our most recent annual information form, which includes a discussion of other material risks that could have an impact on our business.

The board is responsible for overseeing management's implementation of appropriate risk management processes and controls. Time is dedicated at board and committee meetings to risk identification, management, and reporting. In consultation with the board, management works on enhancing its enterprise risk oversight practices, processes and controls. While the board oversees the company's strategic risks, including ESG/climate-related risks, it also allocates oversight of other top-tier risks to specific board committees. Set out below is an overview of the responsibilities allocated to specific board committees.

Audit and finance – supports the board in fulfilling its oversight responsibilities regarding the integrity of our accounting and financial reporting, the adequacy and effectiveness of our internal controls and disclosure controls, legal, regulatory (excluding safety, health and the environment) and ethical compliance, the independence and performance of our external and internal auditors, oversight of specific material risks, and prevention and detection of fraudulent activities and financial oversight.

Human resources – supports the board in fulfilling its oversight responsibilities regarding human resource policies, employee and labour relations matters, executive compensation, executive succession and development, pension plan governance, and oversight of material risks assigned to the committee.

Nominating, corporate governance and risk – supports the board in fulfilling its oversight responsibilities by developing and recommending a set of corporate governance principles, identifying and recommending qualified individuals as members of the board and its committees, assessing the effectiveness of the board and committees, and overseeing the risk program.

Reserves oversight - supports the board in fulfilling its oversight responsibilities regarding estimating and disclosing mineral reserves and resources.

Safety, health and environment – supports the board in fulfilling its oversight responsibilities regarding safety, health, environmental and climate-related matters, and supportive communities.

In addition, the safety, health and environment committee and the nominating, corporate governance and risk committees assist the board in fulfilling its oversight responsibility with respect to ESG matters.

More information about our shareholder commitment, our governance principles, how our board operates, its responsibilities, and the profiles of each of our directors can be found in our most recent management proxy circular and on our website at cameco.com/about/board-of-directors.

TARGETS AND METRICS: THE LINK BETWEEN ESG FACTORS AND EXECUTIVE PAY

We recognize the importance of integrating certain ESG factors, such as safety performance, a clean environment and supportive communities, into our executive compensation strategy as we see success in these areas as critical to the long term success of the company. For more information on our compensable targets and our reported performance against those targets see the *Measuring our results* section that follows and our most recent management proxy circular.

Measuring our results

Each year, we set corporate objectives that are aligned with our strategic plan. These objectives fall under our four measures of success, and performance against specific targets under these objectives forms the foundation for a portion of annual employee and executive compensation. See our most recent management proxy circular for more information on how executive compensation is determined.

2019 OBJECTIVES[1]	TARGET	RESULTS
OUTSTANDING FINANCIAL PERFORMANCE		
Earnings measure	Achieve targeted adjusted net earnings.	• adjusted net earnings was above the maximum target
Cash flow measure	Achieve cash flow from operations (after working capital changes).	• cash flow from operations was above the maximum target
SAFE, HEALTHY AND REWARDING WORKPLACE		
Workplace safety measure	Strive for no injuries at all Cameco-operated sites. Maintain a long-term downward trend in combined employee and contractor injury frequency and severity, and radiation doses.	• best safety performance in the history of the company, however TRIR did not meet the 2019 improvement target • completion of corrective actions and job task observations exceeded the target • average radiation doses remained low and stable
CLEAN ENVIRONMENT		
Environmental performance measures	Achieve divisional environmental aspect improvement targets.	• performance was within the targeted range • there were no significant environmental incidents in 2019
SUPPORTIVE COMMUNITIES		
Stakeholder support measure	Implement Collaboration Agreements by supporting northern business development opportunities and build corporate reputation.	• of our two targets involving sourcing of services from preferred northern Saskatchewan suppliers, one did not meet the minimum target and the other was above the maximum target

1 Detailed results for our 2019 corporate objectives and the related targets will be provided in our 2020 management proxy circular prior to our Annual Meeting of Shareholders on April 30, 2020.

2020 objectives

OUTSTANDING FINANCIAL PERFORMANCE

- Achieve targeted financial measures focused on controlling costs and generating cash.

SAFE, HEALTHY AND REWARDING WORKPLACE

- Improve workplace safety performance at all sites.

CLEAN ENVIRONMENT

- Improve environmental performance at all sites.

SUPPORTIVE COMMUNITIES

- Build and sustain strong stakeholder support for our activities.

Financial results

This section of our MD&A discusses our performance, financial condition and outlook for the future.

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2019 consolidated financial results

This section of our MD&A discusses our performance, financial condition and outlook for the future.

As of January 1, 2018, due to restructuring and a change in our ownership interest, we began accounting for JV Inkai on an equity basis, with no restatement of prior periods.

HIGHLIGHTS DECEMBER 31 ($ MILLIONS EXCEPT WHERE INDICATED)	2019	2018	2017	CHANGE FROM 2018 TO 2019
Revenue	**1,863**	2,092	2,157	(11)%
Gross profit	**242**	296	436	(18)%
Net earnings (loss) attributable to equity holders	**74**	166	(205)	(55)%
$ per common share (basic)	**0.19**	0.42	(0.52)	(56)%
$ per common share (diluted)	**0.19**	0.42	(0.52)	(56)%
Adjusted net earnings (non-IFRS, see page 28)	**41**	211	59	(81)%
$ per common share (adjusted and diluted)	**0.10**	0.53	0.15	(81)%
Cash provided by operations (after working capital changes)	**527**	668	596	(21)%

Net earnings

Our net earnings normally trend with revenue, but, in 2017, were significantly influenced by impairment charges due to the weakness in the uranium market.

The following table shows what contributed to the change in net earnings in 2019 compared to 2018 and 2017.

($ MILLIONS)		2019	2018	2017
Net earnings (losses) - previous year		**166**	**(205)**	**(62)**
Change in gross profit by segment				
(we calculate gross profit by deducting from revenue the cost of products and services sold, and depreciation and amortization (D&A), net of hedging benefits)				
Uranium	Higher (lower) sales volume	(27)	18	29
	Higher (lower) realized prices ($US)	(133)	40	(222)
	Foreign exchange impact on realized prices	35	1	(36)
	Lower (higher) costs	10	(186)	180
	change – uranium	(115)	(127)	(49)
Fuel services	Higher (lower) sales volume	13	1	(5)
	Higher (lower) realized prices ($Cdn)	(11)	(5)	21
	Lower (higher) costs	29	(1)	(15)
	change – fuel services	31	(5)	1
Other changes				
Lower administration expenditures		17	21	44
Lower impairment charges		—	358	4
Lower exploration expenditures		6	10	13
Change in reclamation provisions		57	(60)	(34)
Lower loss on disposal of assets		—	5	16
Change in gains or losses on derivatives		113	(137)	22
Change in foreign exchange gains or losses		(45)	49	(17)
Change in earnings from equity-accounted investments		13	32	—
Arbitration award in 2019 related to TEPCO contract		52	—	—
Gain on sale of interest in Wheeler River Joint Venture in 2018		(17)	17	—
Gain on restructuring of JV Inkai in 2018		(49)	49	—
Gain on customer contract restructuring in 2018		(6)	6	—
Sale of exploration properties in 2018		(7)	7	—
Gain on customer contract settlements in 2016		—	—	(59)
Reversal of tax provision in 2018 related to CRA dispute		(61)	61	—
Change in income tax recovery or expense		(126)	62	(91)
Other		45	23	7
Net earnings (losses) - current year		**74**	**166**	**(205)**

Impairment charges

In the third quarter of 2017, we made changes to the way our global marketing activities were organized. The changes significantly impacted the marketing activities historically performed by NUKEM. As a result, we recognized an impairment charge for the full carrying value of goodwill of $111 million.

During the fourth quarter of 2017, we announced our plan to temporarily suspend production at the McArthur River/Key Lake operation in 2018. As a result, we re-evaluated the project to complete the new calciner at Key Lake, which was undertaken to allow for increased production. Given the production suspension, market conditions, and that we determined the existing calciner had sufficient capacity to reliably meet our ongoing production requirements, it was determined that no further investment would be made to complete the project. As a result, we recognized an impairment charge related to the new calciner of $55 million.

Also during the fourth quarter of 2017, we recorded a $184 million write down of our US assets. Due to the continued weakening of the uranium market and the reduction in mineral reserves, we concluded that it was appropriate to recognize an impairment charge for these assets.

Non-IFRS measures

ADJUSTED NET EARNINGS

Adjusted net earnings is a measure that does not have a standardized meaning or a consistent basis of calculation under IFRS (non-IFRS measure). We use this measure as a more meaningful way to compare our financial performance from period to period. We believe that, in addition to conventional measures prepared in accordance with IFRS, certain investors use this information to evaluate our performance. Adjusted net earnings is our net earnings attributable to equity holders, adjusted to better reflect the underlying financial performance for the reporting period. The adjusted earnings measure reflects the matching of the net benefits of our hedging program with the inflows of foreign currencies in the applicable reporting period, and is adjusted for impairment charges, reclamation provisions for our Rabbit Lake and US operations, which have been impaired, the gain on restructuring of JV Inkai, and income taxes on adjustments.

Adjusted net earnings is non-standard supplemental information and should not be considered in isolation or as a substitute for financial information prepared according to accounting standards. Other companies may calculate this measure differently, so you may not be able to make a direct comparison to similar measures presented by other companies.

To facilitate a better understanding of these measures, the table below reconciles adjusted net earnings with our net earnings for the years ended 2019, 2018 and 2017.

($ MILLIONS)	2019	2018	2017
Net earnings (loss) attributable to equity holders	**74**	166	(205)
Adjustments			
Adjustments on derivatives	**(49)**	65	(108)
Impairment charges	**—**	—	358
Reclamation provision adjustments	**3**	60	—
Gain on restructuring of JV Inkai	**—**	(49)	—
Income taxes on adjustments	**13**	(31)	14
Adjusted net earnings	**41**	211	59

Every quarter we are required to update the reclamation provisions for all operations based on new cash flow estimates, discount and inflation rates. This normally results in an adjustment to an asset retirement obligation asset in addition to the provision balance. When the assets of an operation have been written off due to an impairment, as is the case with our Rabbit Lake and US ISR operations, the adjustment is recorded directly to the statement of earnings as “other operating expense (income)”. See note 15 of our annual financial statements for more information. This amount has been excluded from our adjusted net earnings measure.

The following table shows what contributed to the change in adjusted net earnings (non-IFRS measure, see above) in 2019 compared to the same period in 2018 and 2017.

($ MILLIONS)		2019	2018	2017
Adjusted net earnings - previous year		**211**	**59**	**143**
Change in gross profit by segment (we calculate gross profit by deducting from revenue the cost of products and services sold, and depreciation and amortization (D&A), net of hedging benefits)				
Uranium	Higher (lower) sales volume	(27)	18	29
	Higher (lower) realized prices ($US)	(133)	40	(222)
	Foreign exchange impact on realized prices	35	1	(36)
	Lower (higher) costs	10	(186)	180
	change – uranium	(115)	(127)	(49)
Fuel services	Higher (lower) sales volume	13	1	(5)
	Higher (lower) realized prices ($Cdn)	(11)	(5)	21
	Lower (higher) costs	29	(1)	(15)
	change – fuel services	31	(5)	1
Other changes				
Lower administration expenditures		17	21	44
Lower (higher) exploration expenditures		6	10	13
Lower loss on disposal of assets		—	5	16
Change in gains or losses on derivatives		(1)	36	44
Change in foreign exchange gains or losses		(45)	49	(17)
Change in earnings from equity-accounted investments		13	32	—
Arbitration award in 2019 related to TEPCO contract		52	—	—
Gain on sale of interest in Wheeler River Joint Venture in 2018		(17)	17	—
Gain on customer contract restructuring in 2018		(6)	6	—
Sale of exploration properties in 2018		(7)	7	—
Gain on customer contract settlements in 2016		—	—	(59)
Reversal of tax provision in 2018 related to CRA dispute		(61)	61	—
Change in income tax recovery or expense		(82)	17	(90)
Other		45	23	13
Adjusted net earnings - current year		**41**	**211**	**59**

Average realized prices

		2019	2018	2017	CHANGE FROM 2018 TO 2019
Uranium[1]	$US/lb	**33.77**	37.01	36.13	(9)%
	$Cdn/lb	**44.85**	47.96	46.80	(6)%
Fuel services	$Cdn/kgU	**26.21**	26.78	27.20	(2)%

1 Average realized foreign exchange rate ($US/$Cdn): 2019 – 1.33, 2018 – 1.30 and 2017 – 1.30.

Revenue

The following table shows what contributed to the change in revenue for 2019.

($ MILLIONS)	
Revenue – 2018	**2,092**
Uranium	
Lower sales volume	(172)
Lower realized prices ($Cdn)	(98)
Fuel services	
Higher sales volume	64
Lower realized prices ($Cdn)	(8)
Other	(15)
Revenue – 2019	**1,863**

See 2019 *Financial results by segment* on page 46 for more detailed discussion.

THREE-YEAR TREND

In 2018, revenue decreased by 3% compared to 2017 due to a decrease in sales volumes from NUKEM due to the restructuring of our marketing activities in 2017. This was partially offset by an increase in sales volumes and average realized price in our uranium segment.

In 2019, revenue decreased by 11% compared to 2018 due to a decrease in sales volume in the uranium segment and a decrease in the Canadian dollar average realized price despite an increase in the uranium spot price. This decrease in the uranium segment was partially offset by an increase in sales volumes in our fuel services segment.

REVENUE OUTLOOK FOR 2020

We expect consolidated revenue to be between $1,480 million and $1,630 million, lower than in 2019 due to a decrease in average realized prices in our uranium segment as a result of lower expected prices under our contract portfolio and a decrease in committed sales volumes. We will continue to be active buying and selling uranium in the spot market if it makes sense for us. If we make additional sales with deliveries in 2020, we would expect our revenue outlook to increase.

In our uranium and fuel services segments, our customers choose when in the year to receive deliveries. As a result, our quarterly delivery patterns and, therefore, our sales volumes and revenue can vary significantly. We expect the quarterly distribution of uranium deliveries in 2020 to be weighted to the last three quarters of the year as shown below. However, not all delivery notices have been received to date and the expected delivery pattern could change. Typically, we receive notices six months in advance of the requested delivery date.



Corporate expenses

ADMINISTRATION

($ MILLIONS)	2019	2018	CHANGE
Direct administration	**113**	112	1%
Severance costs	**1**	14	(93)%
Stock-based compensation	**11**	16	(31)%
Total administration	**125**	142	(12)%

Direct administration costs in 2019 were $1 million higher than 2018.

We recorded $11 million in stock-based compensation expenses in 2019 under our stock option, restricted share unit, deferred share unit, performance share unit and phantom stock option plans, $5 million lower than in 2018 due to the decrease in our share price compared to the same period in 2018. See note 24 to the financial statements.

Administration outlook for 2020

We expect direct administration costs to be between $110 million to $120 million, similar to 2019.

EXPLORATION

Our 2019 exploration activities were focused primarily on Canada. Our spending decreased from $20 million in 2018 to $14 million in 2019 due to a planned reduction in expenditures.

Exploration outlook for 2020

We expect exploration expenses to be about $13 million in 2020. The focus for 2020 will be on our core projects in Saskatchewan.

FINANCE COSTS

Finance costs were $99 million, a decrease from $112 million in 2018 due to a reduction in our outstanding debt as we retired our $500 million debenture that matured in September. See note 19 to the financial statements.

FINANCE INCOME

Finance income was $30 million compared to $22 million in 2018 due to higher cash balances throughout the year.

GAINS AND LOSSES ON DERIVATIVES

In 2019, we recorded $32 million in gains on our derivatives compared to $81 million in losses in 2018. The increase reflects the strength in the Canadian dollar compared to the US dollar at the end of 2019 compared to 2018. See *Foreign exchange* on page 36 and note 26 to the financial statements.

INCOME TAXES

We recorded an income tax expense of $61 million in 2019 compared to a recovery of $126 million in 2018. The increase in expense was primarily due to a change in the distribution of earnings among jurisdictions as well as the reversal in 2018 of the provision related to our CRA dispute in the amount of $61 million (see *Tax Court of Canada decision* below for more details). See note 21 to the financial statements.

In 2019, we recorded earnings of $229 million in Canada compared to losses of $257 million in 2018, while in foreign jurisdictions, we recorded a loss of $94 million compared to earnings of $297 million in 2018. The tax rate in Canada is higher than the average of the rates in the foreign jurisdictions in which our subsidiaries operate.

On an adjusted earnings basis, we recognized a tax expense of $48 million in 2019 compared to a recovery of $95 million in 2018. The table below presents our adjusted earnings and adjusted income tax expenses attributable to Canadian and foreign jurisdictions.

($ MILLIONS)	2019	2018
Pre-tax adjusted earnings[1]		
Canada	**183**	(181)
Foreign	**(94)**	297
Total pre-tax adjusted earnings	**89**	116
Adjusted income taxes[1]		
Canada	**55**	(112)
Foreign	**(7)**	17
Adjusted income tax expense (recovery)	**48**	(95)

1 Pre-tax adjusted earnings and adjusted income taxes are non-IFRS measures. Our IFRS-based measures have been adjusted by the amounts reflected in the table in adjusted net earnings (non-IFRS measures on page 28).

TRANSFER PRICING DISPUTE

Tax Court of Canada decision

On September 26, 2018, the Tax Court of Canada (Tax Court) ruled unequivocally in our favour in our case with the Canada Revenue Agency (CRA) for the 2003, 2005 and 2006 tax years.

The Tax Court ruled that our marketing and trading structure involving foreign subsidiaries and the related transfer pricing methodology used for certain intercompany uranium purchase and sale agreements were in full compliance with Canadian laws for the three tax years in question. While the decision applies only to the three tax years under dispute, we believe there is nothing in the decision that would warrant a materially different outcome for subsequent tax years.

The Tax Court has referred the matter back to the Minister of National Revenue in order to issue new reassessments for the 2003, 2005 and 2006 tax years in accordance with the Tax Court's decision. The total tax amount reassessed for those tax years was $11 million, and we remitted 50%. Therefore, we expect to receive refunds totaling about $5.5 million plus interest. The timing for the revised reassessments along with refunds plus interest may be delayed pending the outcome of the appeal. For further information regarding the appeal, see below.

On April 30, 2019, we announced the decision of the Tax Court in our application to recover costs in the amount of about $38 million ($20.5 million for legal fees and $17.9 million in disbursements), which were incurred over the course of this case. The Tax Court awarded $10.25 million in legal fees incurred, plus an amount for disbursements, which is yet to be determined. The amount of the award for disbursements will be determined by an officer of the Tax Court. We are optimistic we will recover all, or substantially all, of the $17.9 million in disbursements. Timing of any payments under the cost award is uncertain. The CRA has asked for the cost award to be overturned should it be successful in the appeals process.

Appeal process

On October 25, 2018, CRA filed a notice of appeal with the Federal Court of Appeal. In its notice of appeal, CRA is not appealing the Tax Court's finding that sham was not present, but is appealing the Tax Court's interpretation and application of the transfer pricing provisions in section 247 of the Income Tax Act. CRA filed its written submissions with the Federal Court of Appeal on May 31, 2019. In its written submission, CRA repeated its trial argument that the transactions should be recharacterized because arm's length persons would not have entered into the various agreements that underpin the marketing and trading structure. CRA's alternate argument is that the terms (focused on pricing) of these agreements would have been significantly different if these agreements had been made between arm's length persons. CRA argues that either approach should result in the disputed reassessments being upheld in their totality.

The Federal Court of Appeal hearing is scheduled to be held on March 4, 2020, and we anticipate that we could receive a decision in 2020. We believe there is nothing in the Tax Court's decision that would warrant a materially different outcome on appeal.

The decision of the Federal Court of Appeal can be appealed to the Supreme Court of Canada, but only if the Supreme Court of Canada agrees to hear the appeal. The request to appeal a decision of the Federal Court of Appeal to the Supreme Court of Canada must be made within 60 days of issuance of a Federal Court of Appeal decision.

In the event that either party appeals the Federal Court of Appeal decision, it would likely take about two years from the date the Federal Court of Appeal decision is issued to receive a decision from the Supreme Court of Canada should that court hear the appeal.

We expect to incur additional costs during the appeal process, and in connection with potential reassessments of subsequent years. There could also be costs incurred if a negotiated resolution with CRA is sought or achieved.

Potential exposure based on CRA appeal

Since 2008, CRA has disputed our marketing and trading structure and the related transfer pricing methodology we used for certain intercompany uranium sale and purchase agreements. To date, we have received notices of reassessment for our 2003 through 2013 tax years. While the Tax Court has ruled unequivocally in our favour for the 2003, 2005 and 2006 tax years, and we believe there is nothing in the decision that would warrant a materially different outcome on appeal, or for subsequent tax years we will continue to report on the potential exposure as we expect it will continue to tie up our financial capacity until the dispute is finally resolved for all years.

For the years 2003 to 2013, CRA has shifted Cameco Europe Limited's income (as recalculated by CRA) back to Canada and applied statutory tax rates, interest and instalment penalties, and, from 2007 to 2011, transfer pricing penalties. We understand CRA is currently considering whether to impose a transfer pricing penalty for 2012 and 2013. Taxes of approximately $326 million for the 2003 to 2019 years have already been paid to date in a jurisdiction outside Canada. If CRA is successful on appeal, we will consider our options under bilateral international tax treaties to limit double taxation of this income. There is a risk that we will not be successful in eliminating all potential double taxation. The income adjustments claimed by CRA in its reassessments are represented by the amounts described below.

The Canadian income tax rules include provisions that generally require larger companies like us to remit or otherwise secure 50% of the cash tax plus related interest and penalties at the time of reassessment. We received the 2013 reassessment late in 2019. The CRA has advised that security remitted to date is sufficient to secure the tax debts they consider owing and as such, no further security is required at this time. To date, under these provisions, after applying elective deductions, we have paid or secured the amounts shown in the table below. Of these amounts, we expect to receive refunds totaling approximately $5.5 million plus interest for the years at issue in the Tax Court. The timing of the refund may be delayed pending the outcome of the appeal.

YEAR PAID ($ MILLIONS)	CASH TAXES	INTEREST AND INSTALMENT PENALTIES	TRANSFER PRICING PENALTIES	TOTAL	CASH REMITTANCE	SECURED BY LC
Prior to 2014	1	22	36	59	59	—
2014	106	47	—	153	153	—
2015	202	71	79	352	20	332
2016	51	38	31	120	32	88
2017	—	1	39	40	39	1
2018	17	40	—	57	—	57
2019	—	2	—	2	—	2
Total	**377**	**221**	**185**	**783**	**303**	**480**

While we expect the Tax Court's decision to be upheld on appeal and believe the decision should apply in principle to subsequent years, until such time as all appeals are exhausted, and a resolution is reached for all tax years in question, we will not be in a position to determine the definitive outcome of this dispute. We expect any further actions regarding the tax years 2007 through 2013 will be suspended until the three years covered under the decision are finally resolved, with the exception of the transfer pricing penalties noted above. The tax years 2014 and beyond have not yet been reassessed, and it is uncertain what approach CRA will take on audit. Despite the fact that we believe there is no basis to do so, and it is not our view of the likely outcome, CRA may continue to reassess us using the methodology it used to reassess the 2003 through 2013 tax years. In that scenario, and including the $5.7 billion already reassessed, we would expect to receive notices of reassessment for a total of approximately $8.7 billion of additional income taxable in Canada for the years 2003 through 2019, which would result in a related tax expense of approximately $2.6 billion. As well, CRA may continue to apply transfer pricing penalties to taxation years subsequent to 2011. In that case, we estimate that cash taxes and transfer pricing penalties claimed by CRA for these years would be between $1.95 billion and $2.15 billion. In addition, CRA may seek to apply interest and instalment penalties that would be material to us. While in dispute, we may be required to remit or otherwise provide security for 50% of the cash taxes and transfer pricing penalties (between $970 million and $1.07 billion), plus related interest and instalment penalties assessed, which would be material to us. However, as noted previously, CRA has informed us that no further security is required for the tax debts it considers owing at this time. We have already paid or secured $562 million in cash taxes and transfer pricing penalties and $221 million in interest and instalment penalties.

Under the Canadian federal and provincial tax rules, any amount required to be paid or secured each year will depend on the amount of income reassessed in that year and the availability of elective deductions and tax loss carryovers. CRA has to date disallowed the use of any loss carry-backs for any transfer pricing adjustment, starting with the 2008 tax year. This does not impact the anticipated income tax expense for a particular year, but does impact the timing of any required security or payment. As noted above, for amounts reassessed after 2014, as an alternative to remitting cash, we used letters of credit to satisfy our obligations related to the reassessed income tax and related interest amounts. If required, we believe we will be able to continue to provide security in the form of letters of credit to satisfy these requirements. The amounts summarized in the table below reflect actual amounts paid or secured from 2003 through 2019 along with estimated post-2019 amounts if CRA were to continue to reassess based on the scenario outlined above, and include the expected timing adjustment for the inability to use any loss carry-backs starting with the 2008 tax year. The amounts have not been adjusted to reflect the refund of approximately $5.5 million plus interest we expect to receive based on the ruling of the Tax Court. The timing of such refund may be delayed pending the outcome of the appeal. We plan to update this table annually to include the estimated impact of reassessments expected for completed years subsequent to 2019.

$ MILLIONS	2003-2019	Post-2019	TOTAL
50% of cash taxes and transfer pricing penalties paid, secured or potentially owing in the period			
Cash payments	226	185 - 235	410 - 460
Secured by letters of credit	336	225 - 275	560 - 610
Total paid or potentially owing [1]	**562**	**410 - 510**	**970 - 1070**

1 These amounts do not include interest and instalment penalties, which totaled approximately $221 million to December 31, 2019.

In light of our view of the likely outcome of the appeal, and the dispute for subsequent years, based on the Tax Court's decision as described above, we expect to recover the amounts remitted, including the $783 million already paid or otherwise secured to date.

Caution about forward-looking information relating to our CRA tax dispute

This discussion of our expectations relating to our tax dispute with CRA and future tax reassessments by CRA is forward-looking information that is based upon the assumptions and subject to the material risks discussed under the heading Caution about forward-looking information beginning on page 2 and also on the more specific assumptions and risks listed below. Actual outcomes may vary significantly.

Assumptions

- CRA will reassess us for the years 2014 through 2019 using a similar methodology as for the years 2003 through 2013, and the reassessments will be issued on the basis we expect
- we will be able to apply elective deductions and utilize letters of credit to the extent anticipated
- CRA will seek to impose transfer pricing penalties (in a manner consistent with penalties charged in the years 2007 through 2011) in addition to interest charges and instalment penalties
- we will be substantially successful in our dispute with CRA, including any appeals of the Tax Court's decision or any decisions regarding other tax years, and we will not incur any significant tax liability resulting from the outcome of the dispute or other costs, potentially including costs associated with a negotiated resolution with CRA
- a favourable determination by the officer of the Tax Court of the amount of our disbursements award

Material risks that could cause actual results to differ materially

- CRA reassesses us for years 2014 through 2019 using a different methodology than for years 2003 through 2013, or we are unable to utilize elective deductions or letters of credit to the extent anticipated, resulting in the required cash payments or security provided to CRA pending the outcome of the dispute being higher than expected
- the time lag for the reassessments for each year is different than we currently expect
- we are unsuccessful in an appeal of the Tax Court's decision or any tax decisions of the Tax Court for subsequent years, or appeals of those decisions, and the outcome of our dispute with CRA, potentially including costs associated with a negotiated resolution with CRA, results in significant costs, cash taxes, interest charges and penalties which could have a material adverse effect on our liquidity, financial position, results of operations and cash flows
- cash tax payable increases due to unanticipated adjustments by CRA not related to transfer pricing
- we are unable to effectively eliminate all double taxation
- an unfavourable determination of the officer of the Tax Court of the amount of our disbursements award

Tax outlook for 2020

On an adjusted net earnings basis, we expect a tax expense of between $20 million and $30 million in 2020.

Our consolidated tax rate is a blend of the statutory rates applicable to taxable income earned or tax losses incurred in Canada and in our foreign subsidiaries. We have a global customer base and we have established a marketing and trading structure involving foreign subsidiaries, which entered into various intercompany purchase and sale arrangements, as well as uranium purchase and sale agreements with third parties. Cameco and its subsidiaries made reasonable efforts to put arm's-length transfer pricing arrangements in place, and these arrangements expose the parties to the risks and rewards accruing to them under these contracts. The intercompany contract prices are generally comparable to those established in comparable contracts between arm's-length parties entered into at that time. In 2017, we changed our global marketing organization to consolidate our international activities in Canada in order to achieve efficiencies. The existing purchase and sale arrangements will continue to be in place until they expire. As the existing contracts expire, we anticipate that more income will be earned in Canada.

We continue to expect our consolidated tax rate will trend toward the Canadian statutory rate in the longer term. The actual effective tax rate will vary from year-to-year, primarily due to the actual distribution of earnings among jurisdictions and the market conditions at the time transactions occur under both our intercompany and third-party purchase and sale arrangements.

FOREIGN EXCHANGE

The exchange rate between the Canadian dollar and US dollar affects the financial results of our uranium and fuel services segments.

We sell the majority of our uranium and fuel services products under long-term sales contracts, which are routinely denominated in US dollars. Our product purchases are denominated in US dollars while our production costs are largely denominated in Canadian dollars. To provide cash flow predictability we hedge a portion of our net US/Cdn exposure (e.g. total US dollar sales less US dollar expenditures and product purchases) to manage shorter term exchange rate volatility.

Our risk management policy is based on a 60-month period and permits us to hedge 35% to 100% of our expected net exposure in the first 12 month period. Our normal practice is to layer in hedge contracts over a three- to four-year period with the hedge percentage being highest in the first 12 months and decreasing hedge percentages in subsequent years. The portion of our net exposure that remains unhedged is subject to prevailing market exchange rates for the period. Therefore, our results are affected by the movements in the exchange rate on our hedge portfolio (explained below), and on the unhedged portion of our net exposure. A weakening Canadian dollar would have a positive effect on the unhedged exposure, and a strengthening Canadian dollar would have a negative effect. See *Revenue, adjusted net earnings, and cash flow sensitivity analysis* on page 40 for more information on how a change in the exchange rate will impact our revenue, cash flow, adjusted net earnings (ANE), and gains and losses on derivatives, presented on an ANE basis.

Impact of hedging on IFRS earnings

We do not use hedge accounting under IFRS and, therefore, we are required to report gains and losses on all hedging activity, both for contracts that close in the period and those that remain outstanding at the end of the period. For the contracts that remain outstanding, we must treat them as though they were settled at the end of the reporting period (mark-to-market).

However, we do not believe the gains and losses that we are required to report under IFRS appropriately reflect the intent of our hedging activities, so we make adjustments in calculating our ANE to better reflect the impact of our hedging program in the applicable reporting period.

Impact of hedging on ANE

We designate contracts for use in particular periods, based on our expected net exposure in that period. Hedge contracts are layered in over time based on this expected net exposure. The result is that our current hedge portfolio is made up of a number of contracts which are currently designated to net exposures we expect in 2020 and future years and we will recognize the gains or losses in ANE in those periods.

For the purposes of ANE, gains and losses on derivatives are reported based on the difference between the effective hedge rate of the contracts designated for use in the particular period and the exchange rate at the time of settlement. This results in an adjustment to current period IFRS earnings to effectively remove reported gains or losses on derivatives that arise from contracts put in place for use in future periods. The effective hedge rate will lag the market in periods of rapid currency movement. See *Non-IFRS measures* on page 28.

The table below provides a summary of our hedge portfolio at December 31, 2019. You can use this information to estimate the expected gains or losses on derivatives for 2020 on an ANE basis. However, if we add contracts to the portfolio that are designated for use in 2020 or if there are changes in the US/Cdn exchange rates in the year, those expected gains or losses could change.

HEDGE PORTFOLIO SUMMARY

DECEMBER 31, 2019 ($ MILLIONS)		2020	AFTER 2020	TOTAL
US dollar forward contracts	($ millions)	190	140	330
Average contract rate [1]	(US/Cdn dollar)	1.27	1.30	1.28
US dollar option contracts	($ millions)	170	175	345
Average contract rate range[1]	(US/Cdn dollar)	1.29 to 1.33	1.29 to 1.33	1.29 to 1.33
Total US dollar hedge contracts	**($ millions)**	**360**	**315**	**675**
Effective hedge rate range[2]	**(US/Cdn dollar)**	**1.28 to 1.30**	**1.29 to 1.32**	**1.29 to 1.31**
Hedge ratio[3]		**44%**	**8%**	**14%**

1 The average contract rate is the weighted average of the rates stipulated in the outstanding contracts.
2 The effective hedge rate is the exchange rate on the original hedge contract at the time it was established and designated for use. Therefore the effective hedge rate range shown reflects an average of contract exchange rates at the time of designation.
3 Hedge ratio is calculated by dividing the amount (in foreign currency) of outstanding derivative contracts by estimated future net exposures.

At December 31, 2019:

- The value of the US dollar relative to the Canadian dollar was $1.00 (US) for $1.30 (Cdn), down from $1.00 (US) for $1.36 (Cdn) at December 31, 2018. The exchange rate averaged $1.00 (US) for $1.33 (Cdn) over the year.
- The mark-to-market position on all foreign exchange contracts was a $4 million loss compared to a $53 million loss at December 31, 2018.

We manage counterparty risk associated with hedging by dealing with highly rated counterparties and limiting our exposure. At December 31, 2019, all of our hedging counterparties had a Standard & Poor's (S&P) credit rating of A or better.

For information on the impact of foreign exchange on our intercompany balances, see note 26 to the financial statements.

Outlook for 2020

Our strategy is to focus on our tier-one assets and profitably produce at a pace aligned with market signals, in order to preserve the value of those assets and increase long-term shareholder value, and to do that with a focus on safety, people and the environment.

Our outlook for 2020 reflects the expenditures necessary to help us achieve our strategy. We have made significant progress in reducing our administration, exploration and operating costs, as well as our capital expenditures. We have also made a number of strategic decisions that come with significant costs in the near term, costs we factored into our decisions. As a result, and based on what we know today, including committed delivery volumes, from a gross profit point of view, 2020 is expected to be a weaker year for us. The lower delivery commitments and changing pricing terms under our existing contract portfolio are expected to adversely impact our revenue and average realized price in 2020 relative to 2019. In addition, our outlook for the average unit cost of sales in 2020 continues to be impacted by the proportion of purchased material compared to produced material making up our uranium supply and care and maintenance costs, which are expected to be between $150 million and $170 million. Despite the impact on our expected results, we continue to believe these are the right decisions to create long-term shareholder value.

In contrast, from a cash perspective, we expect to continue to maintain a significant cash balance. We expect to continue to generate cash from operations however, the amount of cash generated will be dependent on the timing and magnitude of our purchasing activity and therefore, cash balances may fluctuate throughout the year.

We report our results and outlook based on a calendar-year view, at a point in time. However, under our marketing framework, we plan on a rolling 12-month basis, which means our production, sales, inventory and purchases are all variables. Therefore, in accordance with market opportunities and as the year unfolds, we expect our actual production, sales, purchases and inventory may vary from what we are reporting in the 2020 *Financial Outlook* table.

In addition, there are a number of moving pieces both internally and externally, that could have a significant impact on the market and on our results, and it is important to keep them in mind. Some of the more significant items are:

- the decision by the President of the United States to implement any of the recommendations contained in the NFWG report, and the impact, if any, on the uranium market and uranium prices
- whether the Russian Suspension Agreement gets amended or extended prior to its expiry at the end of 2020
- the impact if sanctions on Iran are expanded and extend to countries providing nuclear fuel products and services to Iran, and therefore disrupt Russian nuclear fuel imports into the US
- a potential decision from the Federal Court of Appeal in our tax dispute with CRA

See *2019 Financial results by segment* on page 46 for details.

2019 outlook compared to actual results

Our actual results were largely in-line with the outlook provided in our third quarter MD&A. However, our total purchases for the year were 19 million pounds compared to our outlook of 21 million to 23 million pounds. Based on what we were seeing in the market, we decided to reduce our spot purchases in 2019 and to draw our inventory down. With the expected delivery pattern in 2020 heavily weighted to the last three quarters of the year and the timing of our 2020 purchase commitments, we are confident in our ability to meet our delivery commitments.

2020 FINANCIAL OUTLOOK

	CONSOLIDATED	URANIUM	FUEL SERVICES
EXPECTED CONTRIBUTION TO GROSS PROFIT	100%	36%	64%
Production (owned and operated properties)	—	9.0 million lbs	13 to 14 million kgU
Purchases	—	20 to 22 million lbs	—
Sales/delivery volume	—	28 to 30 million lbs	12 to 13 million kgU
Revenue	$1,480-1,630 million	$1,120-1,210 million	$ 340-370 million
Average realized price	—	$ 40.90/lb	—
Average unit cost of sales (including D&A)	—	$ 38.50-40.50/lb	$ 19.70-20.70/kgU
Direct administration costs	$ 110-120 million	—	—
Exploration costs	—	$ 13 million	—
Expected loss on derivatives - ANE basis	$ 0-10 million	—	—
Tax expense - ANE basis	$ 20-30 million	—	—
Capital expenditures	$ 120 million	—	—

We do not provide an outlook for the items in the table that are marked with a dash.

The following assumptions were used to prepare the outlook in the table above:

- Purchases – are based on the volumes we currently have commitments to acquire under contract in 2020, including our JV Inkai purchases and the purchase of NUKEM's excess inventory, and it includes the additional volumes we are required to purchase in order to meet the sales/delivery commitments we have under contract in 2020 and maintain our desired working inventory.
- Our 2020 outlook for sales/delivery volume and revenue does not include sales between our uranium and fuel services segments.
- Sales/delivery volume is based on the volumes we currently have commitments to deliver under contract in 2020.
- Uranium revenue and average realized price are based on a uranium spot price of $24.35 (US) per pound (the UxC spot price as of January 27, 2020), a long-term price indicator of $32.00 (US) per pound (the UxC long-term indicator on January 27, 2020) and an exchange rate of $1.00 (US) for $1.30 (Cdn).
- Uranium average unit cost of sales (including D&A) is based on the expected unit cost of sales for produced material, the planned purchases noted in the outlook at an anticipated average purchase price of $31.40 per pound, and includes care and maintenance costs of between $150 million and $170 million. If purchase volumes and/or uranium spot prices vary in 2020, then we expect the overall unit cost of sales may be affected.
- Direct administration costs do not include stock-based compensation expenses. See page 31 for more information.
- Our outlook for the tax expense is based on adjusted net earnings and the other assumptions listed in the table. The outlook does not include our share of taxes on JV Inkai profits as the income from JV Inkai is net of taxes. If other assumptions change then the expected expense may be affected.

Our 2020 financial outlook is presented on the basis of equity accounting for our minority ownership interest in JV Inkai. Under equity accounting, our share of the profits earned by JV Inkai on the sale of its production will be included in "income from equity-accounted investees" on our consolidated statement of earnings. Our share of production will be purchased at a discount to the spot price and included at this value in inventory. In addition, JV Inkai capital is not included in our outlook for capital expenditures. Please see *Inkai Planning for the future* on page 70 and *Capital spending* on page 42 for more details.

For more information on how changes in the exchange rate or uranium prices can impact our outlook see *Revenue, adjusted net earnings, and cash flow sensitivity analysis* below, and *Foreign exchange* on page 36.

REVENUE, ADJUSTED NET EARNINGS, AND CASH FLOW SENSITIVITY ANALYSIS

FOR 2020 ($ MILLIONS)	CHANGE	IMPACT ON: REVENUE	ANE	CASH FLOW
Uranium spot and term price [1]	**$5(US)/lb increase**	78	12	(10)
	$5(US)/lb decrease	(74)	(9)	14
Value of Canadian dollar vs US dollar	**One cent decrease in CAD**	10	3	2
	One cent increase in CAD	(10)	(3)	(2)

1 Assuming change in both UxC spot price ($24.35 (US) per pound on January 27, 2020) and the UxC long-term price indicator ($32.00 (US) per pound on January 27, 2020).

In 2020, our cash flow is expected to move in the opposite direction from price. Cash inflows from revenue are expected to be relatively less sensitive to an increase in the spot price than cash outflows from purchases due the volume of planned deliveries at prices that have been fixed compared to the volume of spot purchases remaining based on our outlook.

PRICE SENSITIVITY ANALYSIS: URANIUM SEGMENT

The following table is not a forecast of prices we expect to receive. The prices we actually realize will be different from the prices shown in the table. It is designed to indicate how the portfolio of long-term contracts we had in place on December 31, 2019 would respond to different spot prices. In other words, we would realize these prices only if the contract portfolio remained the same as it was on December 31, 2019, and none of the assumptions we list below change.

We intend to update this table each quarter in our MD&A to reflect deliveries made and changes to our contract portfolio. As a result, we expect the table to change from quarter to quarter.

Expected realized uranium price sensitivity under various spot price assumptions

(rounded to the nearest $1.00)

SPOT PRICES ($US/lb U_3O_8)	$20	$40	$60	$80	$100	$120	$140
2021	27	40	53	60	65	69	73
2022	27	40	54	62	66	69	71
2023	28	40	54	62	66	69	72
2024	30	41	53	60	62	63	63

The table illustrates the mix of long-term contracts in our December 31, 2019 portfolio, and is consistent with our marketing strategy. It has been updated to reflect contracts entered into up to December 31, 2019.

Our portfolio includes a mix of fixed-price and market-related contracts, which we target at a 40:60 ratio. Those that are fixed at lower prices or have low ceiling prices will yield prices that are lower than current market prices.

Our portfolio is affected by more than just the spot price. We made the following assumptions (which are not forecasts) to create the table:

Sales

- sales volumes on average of 19 million pounds per year, with commitment levels in 2020 and 2021 higher than in 2022 through 2024
- excludes sales between our segments

Deliveries

- deliveries include best estimates of requirements contracts and contracts with volume flex provisions

Annual inflation

- is 2% in the US

Prices

- the average long-term price indicator is the same as the average spot price for the entire year (a simplified approach for this purpose only). Since 1996, the long-term price indicator has averaged 21% higher than the spot price. This differential has varied significantly. Assuming the long-term price is at a premium to spot, the prices in the table will be higher.

Liquidity and capital resources

Our financial objective is to ensure we have the cash and debt capacity to fund our operating activities, investments and other financial obligations.

At the end of 2019, we had cash and short-term investments of $1.1 billion, while our total debt amounted to $1 billion.

We have large, creditworthy customers that continue to need uranium even during weak economic conditions, and we expect the uranium contract portfolio we have built to continue to provide a solid revenue stream. From 2020 through 2024, we have commitments to deliver an average of 19 million pounds per year, with commitment levels in 2020 and 2021 higher than in 2022 through 2024.

In the currently weak uranium price environment, our focus is on preserving the value of our tier-one assets and reducing our operating, capital and general and administrative spending. We have a number of alternatives to fund future capital requirements, including using our operating cash flow, drawing on our existing credit facilities, entering new credit facilities, and raising additional capital through debt or equity financings. We are always considering our financing options so we can take advantage of favourable market conditions when they arise. In addition, due to the deliberate cost reduction measures implemented over the past five years, the reduction in our dividend, and the drawdown of inventory in 2018 as a result of the suspension of production at our McArthur River/Key Lake operation, we have significant cash balances. We expect to continue to generate cash from operations however, the amount of cash generated will be dependent on the timing and magnitude of our purchasing activity and therefore, cash balances may fluctuate throughout the year. We expect our cash balances and operating cash flows to meet our capital requirements during 2020.

We received a favourable ruling in our case with CRA for the 2003, 2005 and 2006 tax years. We expect the ruling to be upheld on appeal, and we believe the ruling should apply in principle to subsequent tax years. However, until such time as all appeals are exhausted, and a resolution is reached for all tax years in question, in accordance with Canadian income tax rules we may be required to remit or otherwise secure 50% of any cash taxes plus related interest and penalties CRA may continue to reassess, even though we believe there is no basis for them to do so. See page 32 for more information. In the above scenario, the table on page 34 provides the amount and timing of the cash taxes and transfer pricing penalties paid or secured to date. In addition, it provides an estimate of the amounts we may potentially have to pay or secure upfront if CRA continues to reassess us using the same methodology it reassessed the 2003 to 2013 tax years. The timing of these amounts is uncertain.

FINANCIAL CONDITION

	2019	2018
Cash position ($ millions) (cash and cash equivalents and short-term investments)	**1,062**	1,103
Cash provided by operations ($ millions) (net cash flow generated by our operating activities after changes in working capital)	**527**	668
Cash provided by operations/net debt[1] (net debt is total consolidated debt, less cash position)	**n/a**	170%
Net debt/total capitalization[1] (total capitalization is net debt and equity)	**n/a**	7%

1 As at December 31, 2019, Cameco's net debt is negative due to its strong cash position.

CREDIT RATINGS

The credit ratings assigned to our securities by external ratings agencies are important to our ability to raise capital at competitive pricing to support our business operations. We navigate by our investment-grade credit rating.

Third-party ratings for our commercial paper and senior debt as of February 6, 2020:

SECURITY	DBRS	S&P
Commercial paper	R-2 (middle)[1]	A-3[2]
Senior unsecured debentures	BBB[1]	BBB-[2]
Rating trend / rating outlook	Negative	Stable[2]

1 On May 24, 2019, DBRS lowered its long term corporate credit rating from BBB (high) to BBB and commercial paper to R-2 (middle).
2 On March 1, 2019 S&P lowered its long term corporate credit rating from BBB to BBB-, commercial paper to A-3 and changed Cameco's rating outlook to stable from negative.

The rating agencies may revise or withdraw these ratings if they believe circumstances warrant. The rating trend/outlook represents the rating agency's assessment of the likelihood and direction that the rating could change in the future.

A change in our credit ratings could affect our cost of funding and our access to capital through the capital markets.

Liquidity

($ MILLIONS)	2019	2018
Cash and cash equivalents at beginning of year	**1,103**	592
Cash from operations	**527**	668
Investment activities		
Additions to property, plant and equipment and acquisitions	**(75)**	(55)
Other investing activities	**121**	34
Financing activities		
Change in debt	**(500)**	—
Interest paid	**(72)**	(73)
Other financing activities	**(3)**	—
Dividends	**(32)**	(71)
Exchange rate on changes on foreign currency cash balances	**(7)**	8
Cash and cash equivalents and short-term investments at end of year	**1,062**	1,103

CASH FROM OPERATIONS

Cash from operations was 21% lower than in 2018 due largely to the drawdown of inventory in 2018 in accordance with our strategy. Working capital provided $87 million less in 2019. Not including working capital requirements, our operating cash flows in the year were down $54 million. See note 23 to the financial statements.

INVESTING ACTIVITIES

Cash used in investing includes acquisitions and capital spending.

Capital spending

We classify capital spending as sustaining, capacity replacement or growth. As a mining company, sustaining capital is the money we spend to keep our facilities running in their present state, which would follow a gradually decreasing production curve, while capacity replacement capital is spent to maintain current production levels at those operations. Growth capital is money we invest to generate incremental production, and for business development.

CAMECO'S SHARE ($ MILLIONS)	2019 PLAN	2019 ACTUAL	2020 PLAN
Sustaining capital			
McArthur River/Key Lake	5	2	**10**
Cigar Lake	15	9	**15**
Fuel services	30	28	**45**
Other	—	1	**—**
Total sustaining capital	50	**40**	**70**
Capacity replacement capital			
Cigar Lake	45	35	**50**
Total capacity replacement capital	45	**35**	**50**
Total uranium & fuel services	**95**	**75**	**120**

Total capital expenditures for 2019 were lower than our outlook of $95 million as a result of the rescheduling of some expenditures at Cigar Lake to 2020.

Outlook for investing activities

CAMECO'S SHARE ($ MILLIONS)	2021 PLAN	2022 PLAN
Total uranium & fuel services	**75-125**	**50-100**
Sustaining capital	60-85	35-60
Capacity replacement capital	15-40	15-40
Growth capital	—	—

We expect total 2020 capital expenditures for uranium and fuel services to be about 58% higher than in 2019 due to ongoing investment in the Vision in Motion project at fuel services, increased mine development activity at Cigar Lake, and the rescheduling of some expenditures planned at Cigar Lake in 2019 to 2020.

Capital expenditures for JV Inkai are expected to be covered by JV Inkai cash flows in 2020, and are included in our overall equity investment.

Major sustaining and capacity replacement expenditures in 2020 include:

- Fuel services – continuation of work on our Vision in Motion project
- Cigar Lake – underground development and necessary ground freezing infrastructure to meet production targets

Our 2020, 2021 and 2022 capital spending estimates assume that market conditions remain such that McArthur River and Key Lake remain in a state of ongoing care and maintenance. Capital spending could increase if we identify and approve investment in projects we expect will reduce costs and improve operational effectiveness and efficiency.

This information regarding currently expected capital expenditures for future periods is forward-looking information, and is based upon the assumptions and subject to the material risks discussed on pages 2 and 3. Our actual capital expenditures for future periods may be significantly different.

FINANCING ACTIVITIES

Cash from financing includes borrowing and repaying debt, and other financial transactions including paying dividends and providing financial assurance.

Long-term contractual obligations

DECEMBER 31 ($ MILLIONS)	2020	2021 AND 2022	2023 AND 2024	2025 AND BEYOND	TOTAL
Long-term debt	—	400	500	100	1,000
Interest on long-term debt	41	82	52	92	267
Provision for reclamation	55	53	98	921	1,127
Provision for waste disposal	1	3	3	1	8
Other liabilities	5	10	4	75	94
Capital commitments	38	—	—	—	38
Total	**140**	**548**	**657**	**1,189**	**2,534**

We have contractual capital commitments of approximately $38 million at December 31, 2019. Certain of the contractual commitments may contain cancellation clauses; however, we disclose the commitments based on management's intent to fulfil the contracts.

We have unsecured lines of credit of about $2.5 billion, which include the following:

- A $1.0 billion unsecured revolving credit facility that matures November 1, 2023. Each year on the anniversary date, and upon mutual agreement, the facility can be extended for an additional year. In addition to borrowing directly from this facility, we can use up to $100 million of it to issue letters of credit. We may increase the revolving credit facility above $1.0 billion, by increments of no less than $50 million, up to a total of $1.25 billion. The facility ranks equally with all of our other senior debt. At December 31, 2019, there were no amounts outstanding under this facility.
- At December 31, 2019, we had approximately $1.5 billion outstanding in financial assurances provided by various financial institutions. We use these facilities mainly to provide financial assurance for future decommissioning and reclamation of our operating sites, for our obligations relating to the CRA dispute, and as overdraft protection.

In total we have $1.0 billion in senior unsecured debentures outstanding:

- $400 million bearing interest at 3.75% per year, maturing on November 14, 2022
- $500 million bearing interest at 4.19% per year, maturing on June 24, 2024
- $100 million bearing interest at 5.09% per year, maturing on November 14, 2042

Debt covenants

Our revolving credit facility includes the following financial covenants:

- our funded debt to tangible net worth ratio must be 1:1 or less
- other customary covenants and events of default

Funded debt is total consolidated debt less non-recourse debt, $100 million in letters of credit, cash and short-term investments.

Not complying with any of these covenants could result in accelerated payment and termination of our revolving credit facility. At December 31, 2019, we complied with all covenants, and we expect to continue to comply in 2020.

OFF-BALANCE SHEET ARRANGEMENTS

We had three kinds of off-balance sheet arrangements at the end of 2019:

- purchase commitments
- financial assurances
- other arrangements

Purchase commitments

We make purchases under long-term contracts where it is beneficial for us to do so and in order to support our long-term contract portfolio. The following table is based on our purchase commitments in our uranium and fuel services segments, as well as commitments previously contracted by NUKEM, at December 31, 2019[2] but does not include purchases of our share of Inkai production. These commitments include a mix of fixed-price and market-related contracts. Actual payments will be different as a result of changes to our purchase commitments and, in the case of contracts with market-related pricing, the market prices in effect at the time of delivery. We will update this table as required in our MD&A to reflect material changes to our purchase commitments and changes in the prices used to estimate our commitments under market-related contracts.

DECEMBER 31, 2019 ($ MILLIONS)	2020	2021 AND 2022	2023 AND 2024	2025 AND BEYOND	TOTAL
Purchase commitments[1,2]	216	180	126	251	773

1 Denominated in US dollars and Japanese yen, converted from US dollars to Canadian dollars at the rate of 1.30 and from Japanese yen to Canadian dollars at the rate of $0.01.

2 These amounts have been adjusted for any additional purchase commitments that we have entered into since December 31, 2019, but does not include deliveries taken under contract since December 31, 2019.

We have commitments of $773 million (Cdn) for the following:

- approximately 18 million pounds of U_3O_8 equivalent from 2020 to 2028
- approximately 0.3 million kgU as UF_6 in conversion services in 2020
- about 0.1 million Separative Work Units (SWU) of enrichment services to meet existing forward sales commitments under agreements with a non-Western supplier

The suppliers do not have the right to terminate agreements other than pursuant to customary events of default provisions.

Financial assurances

Standby letters of credit and surety bonds provide financial assurance for the decommissioning and reclamation of our mining and conversion facilities as well as for our obligations relating to the CRA dispute. We are required to provide financial assurances to various regulatory agencies until decommissioning and reclamation activities are complete. We are also providing letters of credit until the CRA dispute is resolved. Our financial assurances renew automatically on an annual basis, unless otherwise advised by the issuing institution. At December 31, 2019 our financial assurances totaled $1.5 billion, down from $1.6 billion at December 31, 2018. The decrease in 2019 was mainly due to small changes in reclamation requirements as well as the change in foreign exchange rates.

Other arrangements

We have arranged for standby product loan facilities with three different counterparties. The arrangements allow us to borrow up to 1.2 million kgU of UF_6 conversion services over the period 2020 to 2022 with repayment in kind up to March 31, 2023. Under the loan facilities, standby fees of up to 1% are payable based on the market value of the facilities and interest is payable on the market value of any amounts drawn at rates ranging from 0.5% to 2.0%.

BALANCE SHEET

DECEMBER 31, 2019 ($ MILLIONS EXCEPT PER SHARE AMOUNTS)	2019	2018	2017	CHANGE 2018 TO 2019
Inventory	**321**	468	950	(31)%
Total assets	**7,427**	8,019	7,779	(7)%
Long-term financial liabilities	**2,099**	2,102	2,448	—
Dividends per common share	**0.08**	0.08	0.40	—

Total product inventories decreased by 31% to $321 million this year due to higher sales volumes than the quantities produced and purchased during the year. At December 31, 2019, our average cost for uranium was $33.41 per pound, up from $32.62 per pound at December 31, 2018. As of December 31, 2019, we held an inventory of 6.1 million pounds of U_3O_8 equivalent (excluding broken ore).

At the end of 2019, our total assets amounted to $7.4 billion, a decrease of $0.6 billion compared to 2018, due to a decrease in cash and investment balances resulting from the repayment of long term debt, offset by strong cash flow from operations. In addition, lower inventories, the repayment of our loan to JV Inkai and ongoing depreciation on our property plant and equipment impacted our total assets. In 2018, the total asset balance increased by $0.2 billion compared to 2017, primarily due to an increase in cash and investment balances.

The major components of long-term financial liabilities are long-term debt, the provision for reclamation, deferred sales and financial derivatives.

2019 financial results by segment

Uranium

HIGHLIGHTS		2019	2018	CHANGE
Production volume (million lbs)		**9.0**	9.2	(2)%
Sales volume (million lbs)		**31.5**	35.1	(10)%
Average spot price	($ US/lb)	**25.64**	24.59	4%
Average long-term price	($ US/lb)	**31.75**	30.38	5%
Average realized price	($ US/lb)	**33.77**	37.01	(9)%
	($Cdn/lb)	**44.85**	47.96	(6)%
Average unit cost of sales (including D&A)	($Cdn/lb)	**39.99**	40.33	(1)%
Revenue ($ millions)		**1,414**	1,684	(16)%
Gross profit ($ millions)		**153**	268	(43)%
Gross profit (%)		**11**	16	(31)%

Production volumes in 2019 decreased by 2% compared to 2018. See *Uranium – production overview* on page 59 for more information.

Uranium revenues this year were down 16% compared to 2018 due to a decrease in sales volumes of 10% and a decrease of 6% in the Canadian dollar average realized price. Although the spot price for uranium averaged $25.64 (US) per pound in 2019, an increase of 4% compared to the 2018 average price of $24.59 (US) per pound, the average realized price decreased due to a lower proportion of sales from higher priced fixed-price contracts and lower prices on market-related contracts due to a change in the protection from floor prices compared to 2018 partially offset by the weakening of the Canadian dollar compared to the prior year.

Total cost of sales (including D&A) decreased by 11% ($1.26 billion compared to $1.42 billion in 2018) mainly due to a decrease in sales volume of 10%.

The net effect was a $115 million decrease in gross profit for the year.

The following table shows the costs of produced and purchased uranium incurred in the reporting periods (non-IFRS measures, see below). These costs do not include care and maintenance costs, selling costs such as royalties, transportation and commissions, nor do they reflect the impact of opening inventories on our reported cost of sales.

($CDN/LB)	2019	2018	CHANGE
Produced			
Cash cost	**15.70**	15.31	3%
Non-cash cost	**16.09**	15.90	1%
Total production cost [1]	**31.79**	31.21	2%
Quantity produced (million lbs)[1]	**9.0**	9.2	(2)%
Purchased			
Cash cost[1]	**35.26**	36.01	(2)%
Quantity purchased (million lbs)[1]	**19.0**	14.0	36%
Totals			
Produced and purchased costs	**34.14**	34.11	0%
Quantities produced and purchased (million lbs)	**28.0**	23.2	21%

1 Our share of Inkai production was 3.3 million pounds for 2019 (2018 - 2.9 million pounds). Due to equity accounting, our share of production is shown as a purchase at the time of delivery. JV Inkai purchases will fluctuate during the quarters and timing of purchases will not match production. In 2019 we purchased 3.5 million pounds at a purchase price per pound of $32.43 ($24.37 (US)).

The average cash cost of production was 3% higher in the year than in 2018. While McArthur River and Key Lake are shut down, our annual cash cost of production is expected to reflect the estimated life-of-mine operating cost, between $15 and $16 per pound, of mining and milling our share of Cigar Lake mineral reserves, but it may fluctuate from quarter-to-quarter.

The benefit of the estimated life-of-mine operating cost for Inkai's production of between $8 and $9 per pound, is expected to be reflected in the line item on our statement of earnings called "share of earnings from equity-accounted investee".

Although purchased pounds are transacted in US dollars, we account for the purchases in Canadian dollars. In the year, the average cash cost of purchased material was $35.26 (Cdn), or $26.49 (US) per pound, compared to $36.01 (Cdn), or $27.68 (US) per pound in the same period in 2018.

Cash cost per pound, non-cash cost per pound and total cost per pound for produced and purchased uranium presented in the above table are non-IFRS measures. These measures do not have a standardized meaning or a consistent basis of calculation under IFRS. We use these measures in our assessment of the performance of our uranium business. We believe that, in addition to conventional measures prepared in accordance with IFRS, certain investors use this information to evaluate our performance and ability to generate cash flow.

These measures are non-standard supplemental information and should not be considered in isolation or as a substitute for measures of performance prepared according to accounting standards. These measures are not necessarily indicative of operating profit or cash flow from operations as determined under IFRS. Other companies may calculate these measures differently, so you may not be able to make a direct comparison to similar measures presented by other companies.

To facilitate a better understanding of these measures, the following table presents a reconciliation of these measures to our unit cost of sales for the years ended 2019 and 2018 as reported in our financial statements.

CASH AND TOTAL COST PER POUND RECONCILIATION

($ MILLIONS)	2019	2018
Cost of product sold	**1,041.9**	1,138.9
Add / (subtract)		
Royalties	**(32.5)**	(39.1)
Other selling costs	**(10.5)**	(12.6)
Care and maintenance and severance costs	**(109.5)**	(168.3)
Change in inventories	**(78.2)**	(273.9)
Cash operating costs (a)	**811.2**	645.0
Add / (subtract)		
Depreciation and amortization	**218.8**	277.2
Care and maintenance costs	**(44.4)**	(44.2)
Change in inventories	**(29.6)**	(86.7)
Total operating costs (b)	**956.0**	791.3
Uranium produced & purchased (million lbs) (c)	**28.0**	23.2
Cash costs per pound (a ÷ c)	**28.97**	27.80
Total costs per pound (b ÷ c)	**34.14**	34.11

ROYALTIES

We pay royalties on the sale of all uranium extracted at our mines in the province of Saskatchewan. Two types of royalties are paid:

- **Basic royalty**: calculated as 5% of gross sales of uranium, less the Saskatchewan resource credit of 0.75%.
- **Profit royalty**: a 10% royalty is charged on profit up to and including $23.76/kg U_3O_8 ($10.78/lb) and a 15% royalty is charged on profit in excess of $23.76/kg U_3O_8. Profit is determined as revenue less certain operating, exploration, reclamation and capital costs. Both exploration and capital costs are deductible at the discretion of the producer.

As a resource corporation in Saskatchewan, we also pay a corporate resource surcharge of 3% of the value of resource sales.

URANIUM SEGMENT OUTLOOK

In July 2018 we announced the extension of the suspension of production at the McArthur River/Key Lake operation for an indeterminate duration and therefore, we expect to produce 9 million pounds in 2020. In addition, we expect to purchase between 20 million and 22 million pounds in 2020 to meet our sales commitments and achieve our desired inventory level. This includes our spot market purchases and other purchase commitments, including from JV Inkai and the purchase of NUKEM's excess inventory. We anticipate an average purchase price of $31.40 per pound for our planned purchases, based on the uranium price and foreign exchange rate assumptions used in our outlook table on page 38.

Based on the contracts we have in place, and not including sales between our segments, we expect to deliver between 28 million and 30 million pounds of U_3O_8 in 2020. We expect the unit cost of sales to be between $38.50 per pound and $40.50 per pound, about the same as in 2019. The required spot market purchases and any additional discretionary purchases we may make in 2020 are subject to market prices throughout the year. If they are at a cost different than the assumptions noted, then we expect the overall unit cost of sales to be affected, as well as our revenue.

We expect revenue to be between $1,120 million to $1,210 million, lower than in 2019 as a result of a lower expected average realized price and lower sales volumes.

Fuel services

(includes results for UF_6, UO_2, UO_3 and fuel fabrication)

HIGHLIGHTS		2019	2018	CHANGE
Production volume (million kgU)		**13.3**	10.5	27%
Sales volume (million kgU)		**14.1**	11.6	22%
Average realized price	($Cdn/kgU)	**26.21**	26.78	(2)%
Average unit cost of sales (including D&A)	($Cdn/kgU)	**19.84**	21.86	(9)%
Revenue ($ millions)		**370**	313	18%
Gross profit ($ millions)		**90**	59	53%
Gross profit (%)		**24**	19	26%

Total revenue increased by 18% from 2018 due to a 22% increase in sales volume that was partially offset by a 2% decrease in the realized price.

Total cost of products and services sold (including D&A) increased by 10% ($280 compared to $255 in 2018), due to the 22% increase in sales volume, partially offset by a 9% decrease in average unit cost of sales compared to 2018.

The net effect was a $31 million increase in gross profit.

FUEL SERVICES OUTLOOK

In 2020, we plan to produce 13 million to 14 million kgU, and we expect sales volumes, not including intersegment sales, to be 12 million to 13 million kgU. Overall revenue is expected to be between $340 million and $370 million, slightly lower than 2019 due to lower committed sales volumes. We expect the average unit cost of sales (including D&A) to be between $19.70/kgU and $20.70/kgU.

Fourth quarter financial results

Consolidated results

HIGHLIGHTS ($ MILLIONS EXCEPT WHERE INDICATED)	THREE MONTHS ENDED DECEMBER 31 2019	2018	CHANGE
Revenue	**874**	831	5%
Gross profit	**184**	207	(11)%
Net earnings attributable to equity holders	**128**	160	(20)%
$ per common share (basic)	**0.32**	0.40	(20)%
$ per common share (diluted)	**0.32**	0.40	(20)%
Adjusted net earnings (non-IFRS, see page 28)	**94**	202	(53)%
$ per common share (adjusted and diluted)	**0.24**	0.51	(53)%
Cash provided by operations (after working capital changes)	**274**	57	>100%

NET EARNINGS

The following table shows what contributed to the change in net earnings and adjusted net earnings (non-IFRS measure, see page 28) in the fourth quarter of 2019 compared to the same period in 2018.

($ MILLIONS)		IFRS	ADJUSTED
Net earnings - 2018		**160**	**202**
Change in gross profit by segment (we calculate gross profit by deducting from revenue the cost of products and services sold, and depreciation and amortization (D&A), net of hedging benefits)			
Uranium	Higher sales volume	20	20
	Lower realized prices ($US)	(84)	(84)
	Foreign exchange impact on realized prices	6	6
	Lower costs	15	15
	change – uranium	(43)	(43)
Fuel services	Higher sales volume	5	5
	Higher realized prices ($Cdn)	5	5
	Lower costs	11	11
	change – fuel services	21	21
Other changes			
Lower administration expenditures		2	2
Lower exploration expenditures		1	1
Change in reclamation provisions		36	—
Change in gains or losses on derivatives		64	(1)
Change in foreign exchange gains or losses		(25)	(25)
Change in earnings from equity-accounted investments		7	7
Gain on sale of interest in Wheeler River Joint Venture in 2018		(17)	(17)
Change in income tax recovery or expense		(69)	(44)
Other		(9)	(9)
Net earnings - 2019		**128**	**94**

ADJUSTED NET EARNINGS

We use adjusted net earnings, a non-IFRS measure, as a more meaningful way to compare our financial performance from period to period. See page 28 for more information. The following table reconciles adjusted net earnings with our net earnings.

	THREE MONTHS ENDED DECEMBER 31	
($ MILLIONS)	2019	2018
Net earnings attributable to equity holders	**128**	160
Adjustments		
Adjustments on derivatives	**(18)**	47
Reclamation provision adjustments	**(26)**	10
Income taxes on adjustments	**10**	(15)
Adjusted net earnings	**94**	202

Every quarter we are required to update the reclamation provisions for all operations based on new cash flow estimates, discount and inflation rates. This normally results in an adjustment to an asset retirement obligation asset in addition to the provision balance. When the assets of an operation have been written off due to an impairment, as is the case with our Rabbit Lake and US ISR operations, the adjustment is recorded directly to the statement of earnings as “other operating expense (income)”. See note 15 of our annual financial statements for more information. This amount has been excluded from our adjusted net earnings measure.

ADMINISTRATION

	THREE MONTHS ENDED DECEMBER 31		
($ MILLIONS)	2019	2018	CHANGE
Direct administration	**32**	33	(3)%
Stock-based compensation	**2**	3	(33)%
Total administration	**34**	**36**	**(6)%**

Direct administration costs were $32 million in the quarter, $1 million lower than the same period last year. Stock-based compensation expenses were $1 million lower from the fourth quarter of 2018. See note 24 to the financial statements.

Quarterly trends

HIGHLIGHTS	2019				2018			
($ MILLIONS EXCEPT PER SHARE AMOUNTS)	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Revenue	**874**	303	388	298	831	488	333	439
Net earnings (loss) attributable to equity holders	**128**	(13)	(23)	(18)	160	28	(76)	55
$ per common share (basic)	**0.32**	(0.03)	(0.06)	(0.05)	0.40	0.07	(0.19)	0.14
$ per common share (diluted)	**0.32**	(0.03)	(0.06)	(0.05)	0.40	0.07	(0.19)	0.14
Adjusted net earnings (loss) (non-IFRS, see page 28)	**94**	(2)	(18)	(33)	202	15	(28)	23
$ per common share (adjusted and diluted)	**0.24**	(0.01)	(0.04)	(0.08)	0.51	0.04	(0.07)	0.06
Cash provided by (used in) operations (after working capital changes)	**274**	232	(59)	80	57	278	57	275

Key things to note:

- Our financial results are strongly influenced by the performance of our uranium segment, which accounted for 76% of consolidated revenues in the fourth quarter of 2019 and 81% of consolidated revenues in the fourth quarter of 2018.
- The timing of customer requirements, which tends to vary from quarter to quarter, drives revenue in the uranium and fuel services segments.
- Net earnings do not trend directly with revenue due to unusual items and transactions that occur from time to time. We use adjusted net earnings, a non-IFRS measure, as a more meaningful way to compare our results from period to period (see page 28 for more information).

- Cash from operations tends to fluctuate as a result of the timing of deliveries and product purchases in our uranium and fuel services segments.
- Quarterly results are not necessarily a good indication of annual results due to the variability in customer requirements noted above.

The table that follows presents the differences between net earnings and adjusted net earnings for the previous seven quarters.

HIGHLIGHTS	2019				2018			
($ MILLIONS EXCEPT PER SHARE AMOUNTS)	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Net earnings (loss) attributable to equity holders	**128**	(13)	(23)	(18)	160	28	(76)	55
Adjustments								
Adjustments on derivatives	**(18)**	9	(17)	(23)	47	(24)	20	22
Reclamation provision adjustments	**(26)**	3	24	2	10	5	44	1
Gain on restructuring of JV Inkai	**—**	—	—	—	—	—	—	(49)
Income taxes on adjustments	**10**	(1)	(2)	6	(15)	6	(16)	(6)
Adjusted net earnings (losses) (non-IFRS, see page 28)	**94**	(2)	(18)	(33)	202	15	(28)	23

Fourth quarter financial results by segment

Uranium

HIGHLIGHTS		THREE MONTHS ENDED DECEMBER 31 2019	2018	CHANGE
Production volume (million lbs)		**2.7**	2.4	13%
Sales volume (million lbs)		**14.0**	12.6	11%
Average spot price	($US/lb)	**25.08**	28.27	(11)%
Average long-term price	($US/lb)	**32.17**	31.50	2%
Average realized price	($US/lb)	**35.92**	40.50	(11)%
	($Cdn/lb)	**47.50**	53.11	(11)%
Average unit cost of sales (including D&A)	($Cdn/lb)	**37.80**	38.89	(3)%
Revenue ($ millions)		**666**	670	(1)%
Gross profit ($ millions)		**136**	179	(24)%
Gross profit (%)		**20**	27	(26)%

Production volumes this quarter were 13% higher compared to the fourth quarter of 2018. See *Uranium – production overview* on page 59 for more information.

Uranium revenues were down 1% due to an 11% decrease in the Canadian dollar average realized price offset by an 11% increase in sales volume. The US dollar average realized price decreased by 11% compared to 2018. Average realized price decreased due to a lower proportion of sales from higher priced fixed-price contracts compared to the same period in 2018 and lower prices on both fixed and market-related contracts. The Canadian dollar was slightly weaker compared to the same period last year, $1.00 (US) for $1.32 (Cdn) compared to $1.00 (US) for $1.31 (Cdn) in the fourth quarter of 2018.

Total cost of sales (including D&A) increased by 9% ($519 million compared to $477 million in 2018). This was primarily the result of the 11% increase in sales volume as the average unit cost of sales decreased by 3%.

The net effect was a $43 million decrease in gross profit for the quarter.

The following table shows the costs of produced and purchased uranium incurred in the reporting periods (which are non-IFRS measures, see the paragraphs below the table). These costs do not include care and maintenance costs, selling costs such as royalties, transportation and commissions, nor do they reflect the impact of opening inventories on our reported cost of sales.

($CDN/LB)	THREE MONTHS ENDED DECEMBER 31 2019	2018	CHANGE
Produced			
Cash cost	**17.21**	14.91	15%
Non-cash cost	**15.54**	15.07	3%
Total production cost [1]	**32.75**	29.98	9%
Quantity produced (million lbs)[1]	**2.7**	2.4	13%
Purchased			
Cash cost[1]	**34.17**	38.13	(10)%
Quantity purchased (million lbs)[1]	**4.3**	7.3	(41)%
Totals			
Produced and purchased costs	**33.62**	36.11	(7)%
Quantities produced and purchased (million lbs)	**7.0**	9.7	(28)%

1 Our share of Inkai production was 0.9 million pounds for Q4, 2019. Due to equity accounting, our share of production will be shown as a purchase at the time of delivery. JV Inkai purchases will fluctuate during the quarters and timing of purchases will not match production. During the quarter, we purchased 1.4 million pounds at a purchase price per pound of $32.18 ($24.40 (US)).

The average cash cost of production was 15% higher for the quarter than in the comparable period in 2018. While McArthur River and Key Lake are shut down, our annual cash cost of production is expected to reflect the estimated life-of-mine operating cost, between $15 and $16 per pound, of mining and milling our share of Cigar Lake mineral reserves, but it may fluctuate from quarter-to-quarter.

The benefit of the estimated life-of-mine operating cost for Inkai's production of between $8 and $9 per pound, is expected to be reflected in the line item on our statement of earnings called "share of earnings from equity-accounted investee".

Although purchased pounds are transacted in US dollars, we account for the purchases in Canadian dollars. In the fourth quarter, the average cash cost of purchased material was $34.17 (Cdn) per pound, or $25.87 (US) per pound in US dollar terms, compared to $38.13 (Cdn) per pound, or $29.08 (US) per pound in the fourth quarter of 2018.

Cash cost per pound, non-cash cost per pound and total cost per pound for produced and purchased uranium presented in the above table are non-IFRS measures. These measures do not have a standardized meaning or a consistent basis of calculation under IFRS. We use these measures in our assessment of the performance of our uranium business. We believe that, in addition to conventional measures prepared in accordance with IFRS, certain investors use this information to evaluate our performance and ability to generate cash flow.

These measures are non-standard supplemental information and should not be considered in isolation or as a substitute for measures of performance prepared according to accounting standards. These measures are not necessarily indicative of operating profit or cash flow from operations as determined under IFRS. Other companies may calculate these measures differently, so you may not be able to make a direct comparison to similar measures presented by other companies.

To facilitate a better understanding of these measures, the following table presents a reconciliation of these measures to our unit cost of sales for the fourth quarters of 2019 and 2018.

CASH AND TOTAL COST PER POUND RECONCILIATION

	THREE MONTHS ENDED DECEMBER 31	
($ MILLIONS)	2019	2018
Cost of product sold	**442.8**	409.2
Add / (subtract)		
Royalties	**(14.3)**	(2.6)
Other selling costs	**(4.4)**	(4.4)
Care and maintenance and severance costs	**(29.7)**	(38.6)
Change in inventories	**(201.0)**	(49.5)
Cash operating costs (a)	**193.4**	314.1
Add / (subtract)		
Depreciation and amortization	**87.4**	81.1
Care and maintenance costs	**(11.5)**	(13.4)
Change in inventories	**(33.9)**	(31.5)
Total operating costs (b)	**235.4**	350.3
Uranium produced & purchased (million lbs) (c)	**7.0**	9.7
Cash costs per pound (a ÷ c)	**27.63**	32.38
Total costs per pound (b ÷ c)	**33.62**	36.11

Fuel services

(includes results for UF_6, UO_2, UO_3 and fuel fabrication)

HIGHLIGHTS		THREE MONTHS ENDED DECEMBER 31 2019	2018	CHANGE
Production volume (million kgU)		**4.0**	3.5	14%
Sales volume (million kgU)		**6.2**	5.1	22%
Average realized price	($Cdn/kgU)	**24.61**	23.56	4%
Average unit cost of sales (including D&A)	($Cdn/kgU)	**17.11**	18.76	(9)%
Revenue ($ millions)		**152**	120	27%
Gross profit ($ millions)		**47**	24	96%
Gross profit (%)		**31**	20	55%

Total revenue increased by 27% due to a 22% increase in sales volumes and a 4% increase in average realized price. The increase in average realized price was due to higher realized prices for all product lines.

Total cost of sales (including D&A) increased by 12% to $106 million compared to the fourth quarter of 2018 due to the 22% increase in sales volumes partially offset by a decrease of 9% in the average unit cost of sales, primarily as a result lower costs for UF_6 due to higher production rates.

The net effect was a $23 million increase in gross profit.

Operations and projects

This section of our MD&A is an overview of the mining properties we operate or have an interest in, our curtailed operations and our projects, what we accomplished this year, our plans for the future and how we manage risk.

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Managing the risks

The nature of our operations means we face many potential risks and hazards that could have a significant impact on our business. Our risk policy and program involves a broad, systematic approach to identifying, assessing, reporting and managing the significant risks we face in our business and operations, including ESG risks. The policy establishes clear accountabilities for enterprise risk management. We use a common risk matrix throughout the company and consider any risk that has the potential to significantly affect our ability to achieve our corporate objectives or strategic plan as an enterprise risk. However, there is no assurance we will be successful in preventing the harm any of these risks and hazards could cause. We recommend you read our most recent management proxy circular for more information about our risk oversight.

Below we list the risks that generally apply to all of our operations and advanced projects. We also talk about how we manage specific risks in each operation or project update. These risks could have a material impact on our business in the near term.

We recommend you also review our annual information form, which includes a discussion of other material risks that could have an impact on our business.

Regulatory risks

A significant part of our economic value depends on our ability to:

- obtain and renew the licences and other approvals we need to operate, to increase production at our mines and to develop new mines. If we do not receive the regulatory approvals we need, or do not receive them at the right time, then we may have to delay, modify or cancel a project, which could increase our costs and delay or prevent us from generating revenue from the project. Regulatory review, including the review of environmental matters, is a long and complex process.
- comply with the conditions in these licences and approvals. Our right to continue operating facilities, increase production at our mines and develop new mines depends on our compliance with these conditions.
- comply with the extensive and complex laws and regulations that govern our activities. Environmental legislation imposes strict standards and controls on almost every aspect of our operations and projects, and is not only introducing new requirements, but also becoming more stringent. For example:
    - we must complete the environmental assessment process before we can begin developing a new mine or make any significant change to our operations
    - we may need regulatory approval to make changes to our operational processes, which can take a significant amount of time because it may require an extensive review of supporting technical information. The complexity of this process can be further compounded when regulatory approvals are required from multiple agencies.
    - the federal government has recently introduced a new Impact Assessment Act as well as a Canadian Navigable Waters Act along with significant revisions to the federal Fisheries Act. This new legislation will impact the scope and timeliness of approvals for projects and the revisions could impact existing operations.
    - Environment and Climate Change Canada has brought forward an amended national recovery plan for woodland caribou that has the potential to impact economic and social development in northern Saskatchewan. Research completed in northern Saskatchewan has resulted in a report indicating the range in which our northern Saskatchewan operations are located, hosts a secure and self-sustaining population of woodland caribou, perhaps one of the most secure boreal caribou populations in Canada. The population status was incorporated by Environment and Climate Change Canada into the amended national recovery plan; however, potential habitat protection measures could still have an impact on our Saskatchewan operations and advanced projects.

We use significant management and financial resources to manage our regulatory risks.

Environmental risks

We have the safety, health and environmental risks associated with any mining and chemical processing company. Our uranium and fuel services segments also face unique risks associated with radiation.

Laws to protect the environment are becoming more stringent for members of the nuclear energy industry, including mining, milling and processing facilities, and have inter-jurisdictional aspects (both federal and provincial/state regimes are applicable). Once we have permanently stopped mining and processing activities at an operating site, we are required to decommission the site to the satisfaction of the regulators. We have developed preliminary decommissioning plans for our operating sites and use them to estimate our decommissioning costs. Regulators review and accept our preliminary decommissioning plans on a regular basis. As the site approaches or goes into decommissioning, regulators review the detailed decommissioning plans. This can result in further regulatory process, as well as additional requirements, costs and financial assurances.

Currently, Cameco has submitted updates to all Saskatchewan operations' Preliminary Decommissioning Plan (PDP) and Preliminary Decommissioning Cost Estimate (PDCE) documents in accordance with the five year timeline specified in the regulations. Upon acceptance of the final PDP and PDCE documents by the Saskatchewan Ministry of Environment and Canadian Nuclear Safety Commission (CNSC) staff, a formal Commission proceeding will be required for final approval of the PDP and PDCE by the Commission. We have received the required approvals for the revised PDP and the letters of credit have been updated for McArthur River. For Cigar Lake and Key Lake, the revised PDP has been reviewed and accepted by staff and we are awaiting Commission proceedings to formally approve them. The revised PDP for Rabbit Lake is still under review by CNSC staff.

At the end of 2019, our estimate of total decommissioning and reclamation costs was $1.13 billion. This is the undiscounted value of the obligation and is based on our current operations. We had accounting provisions of $1.05 billion at the end of 2019 (the present value of the $1.13 billion). Regulatory approval is required prior to beginning decommissioning. Since we expect to incur most of these expenditures at the end of the useful lives of the operations they relate to, and none of our assets have approval for decommissioning, our expected costs for decommissioning and reclamation for the next five years are not material.

We provide financial assurances for decommissioning and reclamation such as letters of credit or surety bonds to regulatory authorities, as required. We had a total of about $994 million in financial assurances supporting our reclamation liabilities at the end of 2019. All of our North American operations have financial assurances in place in connection with our preliminary plans for decommissioning of the sites.

Some of the sites we own or operate have been under ongoing investigation and/or remediation and planning as a result of historic soil and groundwater conditions.

We use significant management and financial resources to manage our environmental risks.

We manage environmental risks through our safety, health, environment and quality (SHEQ) management system. Our chief executive officer is responsible for ensuring that our SHEQ management system is implemented. Our board's safety, health and environment committee also oversees how we manage our environmental risks.

In 2019, we invested:

- $73 million in environmental protection, monitoring and assessment programs, approximately 4% more than in 2018
- $18 million in health and safety programs, or 10% less than 2018

The increase in environmental expenditures in 2019 was largely due to expenditures related to the Vision in Motion projects, but also some spending on projects involving tailings and waste rock in northern Saskatchewan. The decrease in health and safety related expenditures were due to overall cost reductions across Cameco operations.

Spending on environmental and health and safety programs is expected to level off in 2020 as a result of the continued impacts of the decisions to transition Rabbit Lake into care and maintenance and to curtail production at the US operations, as well as the continued shutdown of the McArthur River and Key Lake operations for an indeterminate duration.

Operational risks

Other operational risks and hazards include:

- environmental damage
- industrial and transportation accidents
- labour shortages, disputes or strikes
- cost increases for labour, contracted or purchased materials, supplies and services
- shortages of required materials, supplies and equipment
- transportation and delivery disruptions
- interruptions in the supply of electricity, water, and other utilities
- equipment failures
- non-compliance with laws and licences
- catastrophic accidents
- fires
- blockades or other acts of social or political activism
- natural phenomena, such as inclement weather conditions, floods and earthquakes
- unusual, unexpected or adverse mining or geological conditions
- underground floods
- ground movement or cave-ins
- tailings pipeline or dam failures
- technological failure of mining methods
- unanticipated consequences of our cost reduction strategies

We have insurance to cover some of these risks and hazards, but not all of them, and not to the full amount of losses or liabilities that could potentially arise.

Uranium – production overview

Production in our uranium segment in the fourth quarter was 2.7 million pounds, 13% higher compared to the same period in 2018, while production for the year was 9.0 million pounds, 2% lower than in 2018. See *Uranium – Tier-one operations* starting on page 60 for more information.

Uranium production

CAMECO SHARE (MILLION LBS)	THREE MONTHS ENDED DECEMBER 31 2019	2018	YEAR ENDED DECEMBER 31 2019	2018	2019 PLAN	2020 PLAN
McArthur River/Key Lake	**—**	—	**—**	0.1	—	— [1]
Cigar Lake	**2.7**	2.4	**9.0**	9.0	9.0	9.0
US ISR	**—**	—	**—**	0.1	—	— [1]
Total	**2.7**	2.4	**9.0**	9.2	9.0	9.0

1 The McArthur River/Key Lake and Rabbit Lake operations are in a safe and sustainable state of care and maintenance, and we are no longer developing new wellfields at Crow Butte and Smith Ranch-Highland. Please see *Uranium – Tier-one operations* beginning on page 60 and *Uranium – Tier-two operations* beginning on page 71 for more information.

We expect total production from Inkai to be 8.3 million pounds in 2020 on a 100% basis. Due to equity accounting, our share of production is shown as a purchase.

Production Outlook

We remain focused on taking advantage of the long-term growth we see coming in our industry, while maintaining the ability to respond to market conditions as they evolve. Our strategy is to focus on our tier-one assets and profitably produce at a pace aligned with market signals in order to preserve the value of those assets and increase long-term shareholder value, and to do that with an emphasis on safety, people and the environment.

Given today's weak market conditions and to mitigate risk, we plan to:

- ensure we continue to operate safely
- evaluate the optimal mix of production, inventory and purchases in order to retain the flexibility to deliver long-term value
- focus on technology and its applications to improve efficiency, reduce costs and improve operational effectiveness across our operations, including the use of digital and automation technologies

Uranium – Tier-one operations

McArthur River mine / Key Lake mill



2019 Production (our share)

0.0M lbs

2020 Production Outlook (our share)

0.0M lbs

Estimated Reserves (our share)

273.6M lbs

Estimated Mine Life[1]

23 years

1 Estimated mine life based on the production schedule presented in the National Instrument 43-101 Technical Report dated March 29, 2019.

McArthur River is the world's largest, high-grade uranium mine, and Key Lake is the world's largest uranium mill.

Ore grades at the McArthur River mine are 100 times the world average, which means it can produce more than 18 million pounds per year by mining only 300 to 400 tonnes of ore per day. We are the operator of both the mine and mill.

In 2018, a decision was made to suspend production and place the mine and mill in care and maintenance, which will continue for an indeterminate duration.

McArthur River is considered a material uranium property for us. There is a technical report dated March 29, 2019 (effective December 31, 2018) that can be downloaded from SEDAR (sedar.com) or from EDGAR (sec.gov).

Location		Saskatchewan, Canada
Ownership		McArthur River – 69.805% Key Lake – 83.33%
Mine type		Underground
Mining methods		Primary: blasthole stoping Secondary: raiseboring
End product		Uranium concentrate
Certification		ISO 14001 certified
Estimated reserves		273.6 million pounds (proven and probable), average grade U_3O_8: 6.91%
Estimated resources		6.7 million pounds (measured and indicated), average grade U_3O_8: 2.36% 1.8 million pounds (inferred), average grade U_3O_8: 2.85%
Licensed capacity		Mine and mill: 25.0 million pounds per year
Licence term		Through October, 2023
Total packaged production:	**2000 to 2019** **1983 to 2002**	325.4 million pounds (McArthur River/Key Lake) (100% basis) 209.8 million pounds (Key Lake) (100% basis)
2019 production		0 million pounds (0.0 million pounds on 100% basis)
2020 production outlook		0.0 million pounds (0.0 million pounds on 100% basis)
Estimated decommissioning cost[1]		$42 million – McArthur River (100% basis) $223 million – Key Lake (100% basis)

All values shown, including reserves and resources, represent our share only, unless indicated.

1 The Key Lake estimate is currently under regulatory review.

BACKGROUND

Mine description

The McArthur River reported mineral reserves are contained within seven zones: Zones 1, 2, 3, 4, 4 South, A and B. Prior to care and maintenance, there were two active mining zones and one where development was significantly advanced.

Zone 2 has been actively mined since production began in 1999. The ore zone was initially divided into three freeze panels. As the freeze wall was expanded, the inner connecting freeze walls were decommissioned in order to recover the inaccessible uranium around the active freeze pipes. Mining of zone 2 is almost complete. About 4.8 million pound of mineral reserves remain and we expect to recover them using a combination of raisebore and blasthole stope mining.

Zone 4 has been actively mined since 2010. The zone was divided into four freeze panels, and like in zone 2, as the freeze wall was expanded, the inner connecting freeze walls were decommissioned. Zone 4 has 117.5 million pounds of mineral reserves secured behind freeze walls and it will be the main source of production when mine production restarts. Raisebore mining and blasthole stoping will be used to recover the mineral reserves.

Zone 1 is the next planned mine area to be brought into production. Freezehole drilling was 90% complete and brine distribution construction was approximately 10% complete when work was suspended in 2018 as part of the production suspension. Work remaining before production can begin includes completion of the freezehole drilling, brine distribution construction, ground freezing and drill and extraction chamber development. Once complete, an additional 46.6 million pounds of mineral reserves will be secured behind freeze walls. Blasthole stope mining is currently planned as the main extraction method.

We have successfully extracted over 325 million pounds (100% basis) since we began mining in 1999.

Mining methods and techniques

The McArthur River deposit presents unique challenges that are not typical of traditional hard or soft rock mines. These challenges are the result of mining in or near high pressure ground water in challenging ground conditions with significant radiation concerns due to the high-grade uranium ore. Therefore, mine designs and mining methods are selected based on their ability to mitigate hydrological, radiological and geotechnical risks.

There are three approved mining methods at McArthur River: raisebore mining, blasthole stope mining and boxhole mining. However, only raisebore and blasthole stope mining remain in use. In addition, we use ground freezing to mine the McArthur River deposit.

Ground freezing

All the mineralized areas discovered to date at McArthur River are in, or partially in, water-bearing ground with significant pressure at mining depths. This high pressure water source is isolated from active development and production areas in order to reduce the inherent risk of an inflow. To date, McArthur River has relied on pressure grouting and ground freezing to successfully mitigate the risks of the high pressure ground water.

Chilled brine is circulated through freeze holes to form an impermeable freeze barrier around the area being mined. This prevents water from entering the mine, and helps stabilize weak rock formations.

Blasthole stoping

Our use of blasthole stoping began in 2011 and has expanded; the majority of ore extraction is now carried out using this method. It is planned in areas where blastholes can be accurately drilled and small stable stopes excavated without jeopardizing the freeze wall integrity. The use of this method has allowed the site to improve operating costs by increasing overall extraction efficiency by reducing underground development, concrete consumption, mineralized waste generation and improving extraction cycle time.

Raisebore mining

Raisebore mining is an innovative non-entry approach that we adapted to meet the unique challenges at McArthur River, and it has been used since mining began in 1999. This method is favourable for mining the weaker rock mass areas of the deposit, and is suitable for massive high-grade zones where there is access both above and below the ore zone.

Initial processing

McArthur River produces two product streams which are both shipped to the Key Lake mill to produce uranium ore concentrates. We carry out initial processing of two product streams at McArthur River: high-grade slurry and low-grade mineralization. Both product streams are shipped to Key Lake mill to produce uranium ore concentrate.

High-grade slurry is pumped to surface and, after blending and further thickening it is transported to Key Lake in slurry trucks.

The low-grade mineralization is hoisted to surface and hauled to Key Lake, where it is mixed with water, ground, thickened and blended with the high-grade slurry to a nominal 5% U_3O_8 mill feed grade. It is then processed into uranium ore concentrates and packaged.

Tailings capacity

Based on the current licence conditions, tailings capacity at Key Lake is sufficient to mill all the known McArthur River mineral reserves and resources, should they be converted to reserves, with additional capacity to toll mill ore from other regional deposits.

Licensed annual production capacity

The McArthur River mine and Key Lake mill are both licensed to produce up to 25 million pounds (100% basis) per year. The current production capacity of the Key Lake mill is sufficient to process McArthur River mineral reserves at a production rate of 18 million pounds U_3O_8 per year.

2019 UPDATE

Production suspension

The facilities remained in a state of safe and sustainable care and maintenance throughout 2019.

Approximately 175 employees remain at the McArthur River and Key Lake sites. Care and maintenance activities include mine dewatering, water treatment, freeze wall maintenance, and environmental monitoring. In addition, preservation maintenance and monitoring of the critical facilities continues. Our objective is that the McArthur River and Key Lake operations are available to return to production in a timely manner once a decision is made to end the production suspension.

Exploration

As a result of the production suspension, there was no exploration activity in 2019.

Labour relations

We reached a new collective agreement with unionized employees at our McArthur River/Key Lake operations. The new agreement expires on December 31, 2022.

PLANNING FOR THE FUTURE

Production

Due to continued uranium price weakness, we have suspended production for an indeterminate duration. As a result of the suspension, and the time required to restart the mine and mill, we do not expect the operation to produce any uranium in 2020. Our share of the cash and non-cash costs to maintain both operations during the suspension is expected to range between $8 million and $10 million per month. The increase in care and maintenance costs compared to 2019 is related to planned expenditures to fully assess our operating processes. See *Innovation* below.

Expansion potential

Once the market signals that new supply is needed and a decision is made to restart production, we will undertake the work necessary to optimize the capacity of both the McArthur River mine and Key Lake mill, up to a maximum of 25 million pounds per year (100% basis), the annual production licence limit. We expect that this paced approach will allow us to extract maximum value from the operation as the market transitions.

Innovation

While McArthur River/Key Lake is in a state of care and maintenance, we are taking the opportunity to fully assess our operating processes with the objective of enhancing the efficiency of these operations. Our goal is to streamline our processes and leverage digital and automation technologies to significantly reduce our future operating costs and increase operational flexibility when the time comes to restart. Any opportunities will be rigorously assessed before an investment decision is made.

MANAGING OUR RISKS

Production at McArthur River/Key Lake poses many challenges. These challenges include control of groundwater, weak rock formations, radiation protection, water inflow, mine area transitioning, regulatory approvals, surface and underground fires and other mining related challenges. Operational experience gained since the start of production has resulted in a significant reduction in risk.

Mine and mill restart

The operational changes we have made, including the suspension of production in 2018 for an indeterminate duration and the accompanying workforce reduction, carry with them the risks of a delay in restarting operations and subsequent production disruption.

There is increased uncertainty regarding the timing of a successful restart of the operations and the associated costs the longer the mine and mill are on care and maintenance.

Water inflow risk

Water inflows pose a significant risk to mine production. In 2003, a water inflow resulted in a three-month suspension of production. We also had a small water inflow in 2008 that did not impact production, but did cause significant development delays.

The consequences of another water inflow at McArthur River would depend on its magnitude, location and timing, but could include a significant interruption or reduction in production, a material increase in costs or a loss of mineral reserves.

We take significant steps and precautions to reduce the risk of inflows, but there is no guarantee that these will be successful. In the event that an inflow does occur, we believe we have sufficient pumping, water treatment and surface storage capacity to handle the estimated maximum sustained inflow.

We also manage the risks listed on pages 56 to 58.

Uranium – Tier-one operations

Cigar Lake



2019 Production (our share)

9.0M lbs

2020 Production Outlook (our share)

9.0M lbs

Estimated Reserves (our share)

86.3M lbs

Estimated Mine Life

2029

Cigar Lake is the world's highest grade uranium mine, with grades that are 100 times the world average. We are a 50% owner and the mine operator. Cigar Lake uranium is milled at Orano's (previously AREVA) McClean Lake mill.

Cigar Lake is considered a material uranium property for us. There is a technical report dated March 29, 2016 (effective December 31, 2015) that can be downloaded from SEDAR (sedar.com) or from EDGAR (sec.gov).

Location	Saskatchewan, Canada
Ownership	50.025%
Mine type	Underground
Mining method	Jet boring system
End product	Uranium concentrate
Certification	ISO 14001 certified
Estimated reserves	86.3 million pounds (proven and probable), average grade U_3O_8: 14.69%
Estimated resources	50.8 million pounds (measured and indicated), average grade U_3O_8: 14.44%
	11.9 million pounds (inferred), average grade U_3O_8: 5.92%
Licensed capacity	18.0 million pounds per year (our share 9.0 million pounds per year)
Licence term	Through June, 2021
Total packaged production: 2014 to 2019	82.9 million pounds (100% basis)
2019 production	9.0 million pounds (18.0 million pounds on 100% basis)
2020 production outlook	9.0 million pounds (18.0 million pounds on 100% basis)
Estimated decommissioning cost[1]	$62 million (100% basis)

All values shown, including reserves and resources, represent our share only, unless otherwise indicated.

1 This updated estimate is currently under regulatory review.

BACKGROUND

Development

We began developing the Cigar Lake underground mine in 2005, but development was delayed due to water inflows in 2006 and 2008. The underground workings were successfully remediated and secured in 2011 and, in October 2014 the McClean Lake mill produced the first uranium concentrate from ore mined at the Cigar Lake operation. Commercial production was declared in May 2015.

Mine description

Cigar Lake's geological setting is similar to McArthur River's: the permeable sandstone, which overlays the deposit and basement rocks, contains large volumes of water at significant pressure. However, unlike McArthur River, the Cigar Lake deposit has the shape of a flat- to cigar-shaped lens. As a result of these challenging geological conditions, we are unable to utilize traditional mining methods that require access above the ore, necessitating the development of a non-entry mining method specifically adapted for this deposit: the Jet Boring System (JBS).

Mine development is carried out uniquely in the basement rocks below the ore horizon. New mine development is required throughout the mine life to gain access to the ore above.

Mining method

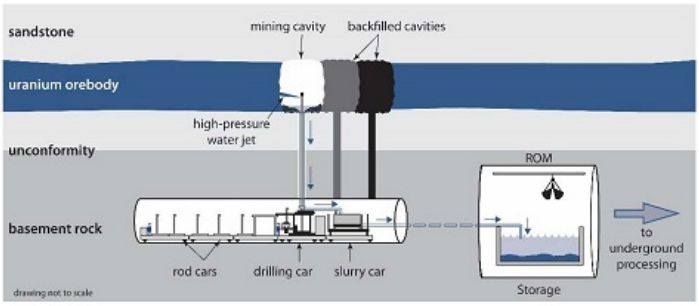
Bulk ground freezing

The sandstone that overlays the deposit and basement rocks is water-bearing, and to prevent water from entering the mine, help stabilize weak rock formations, and meet our production schedule, we freeze the ground from surface. The ore zone and surrounding ground in the area to be mined must meet specific ground freezing requirements before we begin jet boring.

Jet boring system (JBS) mining

After many years of test mining, we selected jet boring, a non-entry mining method, which we have developed and adapted specifically for this deposit. This method involves:

- drilling a pilot hole into the frozen orebody, inserting a high pressure water jet and cutting a cavity out of the frozen ore
- collecting the ore and water mixture (slurry) from the cavity and pumping it to storage (sump storage), allowing it to settle
- using a clamshell, transporting the ore from sump storage to an underground grinding and processing circuit
- once mining is complete, filling each cavity in the orebody with concrete
- starting the process again with the next cavity



We have divided the orebody into production panels and at least three production panels need to be frozen at one time to achieve the full annual production rate of 18 million pounds. One JBS machine is located below each frozen panel. Three JBS machines are currently in operation. Two machines actively mine at any given time while the third is moving, setting up, or undergoing maintenance.

Initial processing

We carry out initial processing of the extracted ore at Cigar Lake:

- the underground circuit grinds the ore and mixes it with water to form a slurry
- the slurry is pumped 500 metres to the surface and stored in one of two ore slurry holding tanks
- it is blended and thickened, removing excess water
- the final slurry, at an average grade of approximately 14% U_3O_8, is pumped into transport truck containers and shipped to McClean Lake mill on a 69 kilometre all-weather road

Water from this process, including water from underground operations, is treated on the surface. Any excess treated water is released into the environment.

Milling

All of Cigar Lake's ore slurry is being processed at the McClean Lake mill, operated by Orano. Given the McClean Lake mill's capacity, it is able to:

- operate at Cigar Lake's targeted annual production level of 18.0 million pounds U_3O_8
- process and package all of Cigar Lake's current mineral reserves

Licensing annual production capacity

The Cigar Lake mine is licensed to produce up to 18 million pounds (100% basis) per year. Orano's McClean Lake mill is licensed to produce 24 million pounds annually.

2019 UPDATE

Production

Total packaged production from Cigar Lake was 18.0 million pounds U_3O_8; our share was 9.0 million pounds, achieving our forecast.

During the year, we:

- completed and commissioned the freeze plant expansion project
- implemented an extended summer shutdown, during which maintenance activities were completed as well as a capital upgrade to the mine exhaust fans
- executed production activities from three production tunnels in the eastern part of the ore body
- extended our surface brine distribution infrastructure and expanded our ground freezing program ensuring continued frozen ore inventory growth in alignment with our long-term production plans

Underground development

In alignment with our production plans, underground mine development restarted in 2019. Development included focus on two new production panels in the eastern portion of the ore body along with initial access development towards the western portion. Development in these specific areas will continue in 2020 to ensure new production panels are available in alignment with long-term production plans.

Labour relations

Orano reached a new three-year collective agreement with unionized employees at the McClean Lake mill. The previous contract expired on May 31, 2019.

PLANNING FOR THE FUTURE

Production

In 2020, we expect to produce 18 million packaged pounds at Cigar Lake; our share is 9.0 million pounds.

Our 2020 production plan for the Cigar Lake mine includes an extended shutdown during the third quarter. The shut-down will consist of a four-week production outage, preceded by a two-week maintenance period with mine start-up planned before the end of the third quarter.

In 2020, we expect to:

- continue surface freeze drilling and complete construction and commissioning of the freeze distribution infrastructure expansion in support of future production
- continue underground mine development and complete three new production tunnels as well as expand ventilation and access drifts in alignment with the long-term mine plan
- expand underground piping and infrastructure towards new production panels required to sustain production

MANAGING OUR RISKS

Cigar Lake is a challenging deposit to develop and mine. These challenges include control of groundwater, weak rock formations, radiation protection, chemical ore characteristics, performance of the water treatment system, water inflow, regulatory approvals, surface and underground fires and other mining-related challenges. To reduce this risk, we are applying our operational experience and the lessons we have learned about water inflows at McArthur River and Cigar Lake.

Operational changes

The operational changes we have made, including the extended summer shutdown, the workforce reduction, changes to the shift rotation schedule, and changes to the commuter flight services at the site, which are intended to achieve cost savings and improve efficiency, carry with them increased risk of production disruption.

Transition to new mining areas

In order to successfully achieve the planned production schedule, we must continue to successfully transition into new mining areas, which includes mine development and investment in critical support infrastructure.

Ground freezing

To manage our risks and meet our production schedule, the areas being mined must meet specific ground freezing requirements before we begin jet boring. We have identified greater variation of the freeze rates of different geological formations encountered in the mine, based on information obtained through surface freeze drilling. As a mitigation measure, we have increased the site freeze capacity to facilitate the mining of ore cavities as planned.

Environmental performance

The Cigar Lake orebody contains elements of concern with respect to the water quality and the receiving environment. The distribution of elements such as arsenic, molybdenum, selenium and others is non-uniform throughout the ore body, and this can present challenges in attaining and maintaining the required effluent concentrations.

There have been ongoing efforts to optimize the current water treatment process and water handling systems to ensure acceptable environmental performance, which is expected to avoid the need for additional capital upgrades and potential deferral of production.

Water inflow risk

A significant risk to development and production is from water inflows. The 2006 and 2008 water inflows were significant setbacks.

The consequences of another water inflow at Cigar Lake would depend on its magnitude, location and timing, but could include a significant delay or disruption in Cigar Lake production, a material increase in costs or a loss of mineral reserves.

We take the following steps to reduce the risk of inflows, but there is no guarantee that these will be successful:

- Bulk freezing: Two of the primary challenges in mining the deposit are control of groundwater and ground support. Bulk freezing reduces but does not completely eliminate the risk of water inflows.
- Mine development: We plan for our mine development to take place away from known groundwater sources whenever possible. In addition, we assess all planned mine development for relative risk and apply extensive additional technical and operating controls for all higher risk development.
- Pumping capacity and treatment limits: We have pumping capacity to meet our standard for this operation of at least one and a half times the estimated maximum inflow.

We believe we have sufficient pumping, water treatment and surface storage capacity to handle the estimated maximum inflow.

We also manage the risks listed on pages 56 to 58.

Uranium – Tier-one operations

Inkai



2019 Production (100% basis)

8.3 M lbs
2020 Production Outlook (100% basis)

8.3 M lbs
Estimated Reserves (our share)

100.7M lbs
Estimated Mine Life

2045 *(based on licence term)*

Inkai is a very significant uranium deposit, located in Kazakhstan. The operator is JV Inkai limited liability partnership, which we jointly own (40%) with Kazatomprom (60%)[1].

Inkai is considered a material uranium property for us. There is a technical report dated January 25, 2018 (effective January 1, 2018) that can be downloaded from SEDAR (sedar.com) or from EDGAR (sec.gov).

Location	South Kazakhstan
Ownership	40%[1]
Mine type	In situ recovery (ISR)
End product	Uranium concentrate
Certifications	BSI OHSAS 18001 ISO 14001 certified
Estimated reserves	100.7 million pounds (proven and probable), average grade U_3O_8: 0.03%
Estimated resources	12.8 million pounds (measured and indicated), average grade U_3O_8: 0.03% 30 million pounds (inferred), average grade U_3O_8: 0.03%
Licensed capacity (wellfields)	10.4 million pounds per year (our share 4.2 million pounds per year)[1]
Licence term	Through July 2045
Total packaged production: 2009 to 2019	57.5 million pounds (100% basis)
2019 production	8.3 million pounds (100% basis)
2020 production outlook	8.3 million pounds (100% basis)[1]
Estimated decommissioning cost (100% basis)	$11 million (US) (100% basis) (this estimate is currently under review)

All values shown, including reserves and resources, represent our share only, unless indicated.

1 Effective January 1, 2018, our ownership interest in the joint venture dropped to 40% and we now equity account for our investment. Due to the transition to equity accounting, our share of production is shown as a purchase.

BACKGROUND

Mine description

The Inkai uranium deposit is a roll-front type orebody within permeable sandstones. The more porous and permeable units host several stacked and relatively continuous, sinuous “roll-fronts” of low-grade uranium forming a regional system. Superimposed over this regional system are several uranium projects and active mines.

Inkai’s mineralization ranges in depths from about 260 metres to 530 metres. The deposit has a surface projection of about 40 kilometres in length, and the width ranges from 40 to 1600 metres. The deposit has hydrogeological and mineralization conditions favourable for use of in-situ recovery (ISR) technology.

Mining and milling method

JV Inkai uses conventional, well-established, and very efficient ISR technology, developed after extensive test work and operational experience. The process involves five major steps:

- leach the uranium in-situ by circulating an acid-based solution through the host formation
- recover it from solution with ion exchange resin (takes place at both main and satellite processing plants)
- precipitate the uranium with hydrogen peroxide
- thicken, dewater, and dry it
- package the uranium peroxide product in drums

Production

Total 2019 production from Inkai was 8.3 million pounds (100% basis), an increase from 2018. While the production volume was in accordance with Kazatomprom's planned 20% decrease to the licensed production profile under the terms of the subsoil use contract, the subsoil use contract called for higher production in 2019 compared to 2018. The subsoil use law in Kazakhstan allows producers to produce within 20% (above or below) of their licensed capacity in a year.

Project funding and cash distribution

We had an outstanding loan for Inkai's work on block 3 prior to the restructuring. Under the restructuring agreement, the partners agreed that JV Inkai would distribute excess cash, after working capital requirements, as priority repayment of this loan. In 2019, principal and interest payments of $92.7 million (US) were received, which repaid the loan in full. As a result, excess cash, after working capital requirements, will be distributed to the partners as dividends. Our share of dividends follows our production purchase entitlements as described below.

JV Inkai Restructuring Agreement

In 2016, we signed an agreement with our partner Kazatomprom and JV Inkai to restructure and enhance JV Inkai. The restructuring closed in December 2017 and took effect January 1, 2018. This restructuring was subject to obtaining all required government approvals including an amendment to JV Inkai's Resource Use Contract, which were obtained. The restructuring consisted of the following:

- JV Inkai has the right to produce 10.4 million pounds of U_3O_8 per year, an increase from the prior licensed annual production of 5.2 million pounds
- JV Inkai has the right to produce until 2045 (previously, the licence terms, based on the boundaries prior to the restructuring, were to 2024 and 2030)
- our ownership interest in JV Inkai is 40% and Kazatomprom's share is 60%. However, during production rampup, we are entitled to purchase 57.5% of the first 5.2 million pounds of annual production, and, as annual production increases over 5.2 million pounds, we are entitled to purchase 22.5% of such incremental production, to the maximum annual share of 4.2 million pounds. Once the rampup to 10.4 million pounds annually is complete, we will be entitled to purchase 40% of such annual production, matching our ownership interest.
- a governance framework that provides protection for us as a minority owner
- the boundaries of the mining area match the agreed production profile for JV Inkai to 2045
- priority payment of the loan that our subsidiary made to JV Inkai to fund exploration and evaluation of the historically defined block 3 area

With Kazatomprom, we completed and reviewed a feasibility study for the purpose of evaluating the design, construction and operation of a uranium refinery in Kazakhstan. In accordance with the agreement, a decision was made not to proceed with construction of the uranium refinery as contemplated in the feasibility study. We subsequently signed an agreement to licence our proprietary UF_6 conversion technology to Kazatomprom, which will allow Kazatomprom to examine the feasibility of constructing and operating its own UF_6 conversion facility in Kazakhstan.

Our 2020 financial outlook is presented on the basis of equity accounting for our minority ownership interest in JV Inkai. Under equity accounting, our share of the profits earned by JV Inkai on the sale of its production are included in "income from equity-accounted investees" on our consolidated statement of earnings. Our share of production is purchased at a discount to the spot price and included at this value in inventory. In addition, JV Inkai capital is not included in our outlook for capital expenditures. Please see *Planning for the future* below for more details.

PLANNING FOR THE FUTURE

Production

We expect total production from Inkai to be 8.3 million pounds (100% basis) in 2020. Due to Kazatomprom's announced plans to maintain its aggregate production reduction of 20%, an adjustment to the restructuring agreement, as described above, has been made. As a result of this adjustment, we are entitled to purchase 59.4% of JV Inkai's planned production in 2020 which equates to 4.9 million pounds. Our share of the profits earned by JV Inkai on the sale of its production will be included in "income from equity-accounted investees" on our consolidated statement of earnings.

MANAGING OUR RISKS

Political risk

Kazakhstan declared itself independent in 1991 after the dissolution of the Soviet Union. Our investment in JV Inkai is subject to the greater risks associated with doing business in developing countries, which have significant potential for social, economic, political, legal and fiscal instability. Kazakh laws and regulations are complex and still developing and their application can be difficult to predict. The other owner of JV Inkai is Kazatomprom, an entity majority owned by the government of Kazakhstan. We have entered into agreements with JV Inkai and Kazatomprom intended to mitigate political risk. This risk includes the imposition of governmental laws or policies that could restrict or hinder JV Inkai paying us dividends, or selling us our share of JV Inkai production, or that impose discriminatory taxes or currency controls on these transactions. The restructuring of JV Inkai, which took effect January 1, 2018, was undertaken with the objective to better align the interests of Cameco and Kazatomprom and includes a governance framework that provides for protection for us as a minority owner of JV Inkai. We believe the political risk related to our investment in JV Inkai is manageable.

For more details on this risk, please our most recent annual information form under the heading political risks.

JV Inkai manages risks listed on pages 56 to 58.

Uranium – Tier-two operations

Rabbit Lake

Located in Saskatchewan, Canada, our 100% owned Rabbit Lake operation opened in 1975, and has the second largest uranium mill in the world. Due to market conditions, we suspended production at Rabbit Lake during the second quarter of 2016.

Location	Saskatchewan, Canada
Ownership	100%
End product	Uranium concentrates
ISO certification	ISO 14001 certified
Mine type	Underground
Estimated reserves	-
Estimated resources	38.6 million pounds (indicated), average grade U_3O_8: 0.95%
	33.7 million pounds (inferred), average grade U_3O_8: 0.62%
Mining methods	Vertical blasthole stoping
Licensed capacity	Mill: maximum 16.9 million pounds per year; currently 11 million
Licence term	Through October, 2023
Total production: 1975 to 2019	202.2 million pounds
2019 production	0 million pounds
2020 production outlook	0 million pounds
Estimated decommissioning cost[1]	$213 million

1 This updated estimate is currently under regulatory review.

PRODUCTION SUSPENSION

The facilities remained in a state of safe and sustainable care and maintenance throughout 2019.

While in standby, we continue to evaluate our options in order to minimize care and maintenance costs. We expect care and maintenance costs to range between $30 million and $35 million annually.

MANAGING OUR RISKS

We also manage the risks listed on pages 56 to 58.

US ISR Operations

Located in Nebraska and Wyoming in the US, the Crow Butte and Smith Ranch-Highland (including the North Butte satellite) operations began production in 1991 and 1975. Each operation has its own processing facility. Due to market conditions, we curtailed production and deferred all wellfield development at these operations during the second quarter of 2016.

Ownership		100%
End product		Uranium concentrates
ISO certification		ISO 14001 certified
Estimated reserves	*Smith Ranch-Highland:*	-
	North Butte-Brown Ranch:	-
	Crow Butte:	-
Estimated resources	*Smith Ranch-Highland:*	24.9 million pounds (measured and indicated), average grade U_3O_8: 0.06% 7.7 million pounds (inferred), average grade U_3O_8: 0.05%
	North Butte-Brown Ranch:	9.5 million pounds (measured and indicated), average grade U_3O_8: 0.07% 0.4 million pounds (inferred), average grade U_3O_8: 0.07%
	Crow Butte:	13.9 million pounds (measured and indicated), average grade U_3O_8: 0.25% 1.8 million pounds (inferred), average grade U_3O_8: 0.16%
Mining methods		In situ recovery (ISR)
Licensed capacity	*Smith Ranch-Highland:*[1]	Wellfields: 3 million pounds per year; processing plants: 5.5 million pounds per year
	Crow Butte:	Processing plants and wellfields: 2 million pounds per year
Licence term	*Smith Ranch-Highland:*	Through September, 2028
	Crow Butte:	Through October, 2024
Total production: 2002 to 2019		33.0 million pounds
2019 production		0 million pounds
2020 production outlook		0 million pounds
Estimated decommissioning cost[2]		Smith Ranch-Highland: $219 million (US), including North Butte Crow Butte: $52 million (US)

1 Including Highland mill
2 This updated estimate is currently under regulatory review.

PRODUCTION CURTAILMENT

As a result of our 2016 decision, production at the US operations ceased in 2018. We expect ongoing cash and non-cash care and maintenance costs to range between $14 million (US) and $16 million (US) for 2020.

FUTURE PRODUCTION

We do not expect any production in 2020.

IMPAIRMENT

In 2017, due to the continued weakening of the uranium market and a reduction in mineral reserves, we recorded a $184 million write down of our US assets.

MANAGING OUR RISKS

We manage the risks listed on pages 56 to 58.

Uranium – advanced projects

Work on our advanced projects has been scaled back and will continue at a pace aligned with market signals.

Millennium	
Location	Saskatchewan, Canada
Ownership	69.9%
End product	Uranium concentrates
Potential mine type	Underground
Estimated resources (our share)	53.0 million pounds (indicated), average grade U_3O_8: 2.39% 20.2 million pounds (inferred), average grade U_3O_8: 3.19%

BACKGROUND

The Millennium deposit was discovered in 2000, and was delineated through geophysical survey and surface drilling work between 2000 and 2013.

Yeelirrie	
Location	Western Australia
Ownership	100%
End product	Uranium concentrates
Potential mine type	Open pit
Estimated resources	128.1 million pounds (measured and indicated), average grade U_3O_8: 0.15%

BACKGROUND

The deposit was discovered in 1972 and is a near-surface calcrete-style deposit that is amenable to open pit mining techniques. It is one of Australia's largest undeveloped uranium deposits.

Kintyre	
Location	Western Australia
Ownership	100%
End product	Uranium concentrates
Potential mine type	Open pit
Estimated resources	53.5 million pounds (indicated), average grade U_3O_8: 0.62% 6.0 million pounds (inferred), average grade U_3O_8: 0.53%

BACKGROUND

The Kintyre deposit was discovered in 1985 and is amenable to open pit mining techniques.

2019 PROJECT UPDATES

We believe that we have some of the best undeveloped uranium projects in the world. However, in the current market environment our primary focus is on preserving the value of our tier-one uranium assets. We continue to await a signal from the market that additional production is needed prior to making any new development decisions.

PLANNING FOR THE FUTURE

2020 Planned activity

No work is planned at Millennium, Yeelirrie or Kintyre. Further progress towards a development decision is not expected until market conditions improve.

MANAGING THE RISKS

For all of our advanced projects, we manage the risks listed on pages 56 to 58.

Uranium – exploration and corporate development

Our exploration program is directed at replacing mineral reserves as they are depleted by our production, and is key to sustaining our business. However, during this period of weak uranium prices, and as we have ample idled production capacity, we have reduced our spending to focus only on exploration near our existing operations where we have established infrastructure and capacity to expand. Globally, we have land with exploration and development prospects that are among the best in the world, mainly in Canada, Australia and the US. Our land holdings total about 0.8 million hectares (1.9 million acres). In northern Saskatchewan alone, we have direct interests in about 0.7 million hectares (1.7 million acres) of land covering many of the most prospective exploration areas of the Athabasca Basin.



2019 UPDATE

Brownfield exploration

Brownfield exploration is uranium exploration near our existing operations, and includes expenses for advanced exploration on the evaluation of projects where uranium mineralization is being defined.

In 2019, we spent about $4 million on brownfields and advanced uranium projects in Saskatchewan and Australia. At the US operations we spent $1 million.

Regional exploration

We spent about $9 million on regional exploration programs (including support costs), primarily in Saskatchewan's Athabasca Basin.

PLANNING FOR THE FUTURE

We will continue to focus on our core projects in Saskatchewan under our long-term exploration strategy. Long-term, we look for properties that meet our investment criteria. We may partner with other companies through strategic alliances, equity holdings and traditional joint venture arrangements. Our leadership position and industry expertise in both exploration and corporate social responsibility make us a partner of choice.

ACQUISITION PROGRAM

Currently, given the conditions in the uranium market, our extensive portfolio of reserves and resources and our belief that we have ample idle production capacity, our focus is on navigating by our investment-grade rating and preserving the value of our tier-one assets. We expect that these assets will allow us to meet rising uranium demand with increased production from our best margin operations, and will help to mitigate risk in the event of prolonged uncertainty.

However, we continually evaluate acquisition opportunities within the nuclear fuel cycle that could add to our future supply options, support our sales activities, and complement and enhance our business in the nuclear industry. We will invest when an opportunity is available at the right time and the right price. We strive to pursue corporate development initiatives that will leave us and our shareholders in a fundamentally stronger position. As such, an acquisition opportunity is never assessed in isolation. Acquisitions must compete for investment capital with our own internal growth opportunities. They are subject to our capital allocation process described in the strategy section, starting on page 15.

Fuel services

Refining, conversion and fuel manufacturing

We have about 25% of world UF_6 primary conversion capacity and are a supplier of natural UO_2. Our focus is on cost-competitiveness and operational efficiency.

Our fuel services segment is strategically important because it helps support the growth of the uranium segment. Offering a range of products and services to customers helps us broaden our business relationships and expand our uranium market share.

Blind River Refinery



Licensed Capacity

24.0M kgU as UO_3

Licence renewal in

Feb, 2022

Blind River is the world's largest commercial uranium refinery, refining uranium concentrates from mines around the world into UO_3.

Location	Ontario, Canada
Ownership	100%
End product	UO_3
ISO certification	ISO 14001 certified
Licensed capacity	18.0 million kgU as UO_3 per year, approved to 24.0 million subject to the completion of certain equipment upgrades (advancement depends on market conditions)
Licence term	Through February, 2022
Estimated decommissioning cost	$48 million

Port Hope Conversion Services



Licensed Capacity

12.5M kgU as UF_6

2.8M kgU as UO_2

Licence renewal in

Feb, 2027

Port Hope is the only uranium conversion facility in Canada and a supplier of UO_2 for Canadian-made CANDU reactors.

Location	Ontario, Canada
Ownership	100%
End product	UF_6, UO_2
ISO certification	ISO 14001 certified
Licensed capacity	12.5 million kgU as UF_6 per year 2.8 million kgU as UO_2 per year
Licence term	Through February, 2027
Estimated decommissioning cost	$129 million

Cameco Fuel Manufacturing Inc. (CFM)



Licensed Capacity

1.2M kgU as UO_2 fuel pellets

Licence renewal in

Feb, 2022

CFM produces fuel bundles and reactor components for CANDU reactors.

Location	Ontario, Canada
Ownership	100%
End product	CANDU fuel bundles and components
ISO certification	ISO 9001 certified, ISO 14001 certified
Licensed capacity	1.2 million kgU as UO_2 fuel pellets
Licence term	Through February, 2022
Estimated decommissioning cost	$21 million

2019 UPDATE

Production

Fuel services produced 13.3 million kgU, 27% higher than 2018. This was a result of increased demand.

Port Hope conversion facility cleanup and modernization (Vision in Motion)

Vision in Motion is a unique opportunity that demonstrates our continued commitment to a clean environment. It has been made possible by the opening of a long-term waste management facility by the government of Canada's Port Hope Area Initiative project. There is a limited opportunity during the life of this project to engage in clean-up and renewal activities that address legacy waste at the Port Hope Conversion facility inherited from historic operations. We made significant progress on the Vision in Motion project in 2019 and will continue with the implementation work in 2020.

PLANNING FOR THE FUTURE

Production

We plan to produce between 13 million and 14 million kgU in 2020.

In addition, in conjunction with our initiative intended to provide a greater focus on technology and its applications to improve efficiency and reduce costs across the organization, we will continue to look for opportunities to improve operational effectiveness, including the use of digital and automation technologies.

MANAGING OUR RISKS

Labour relations

A new collective agreement with unionized employees at our conversion facility in Port Hope was reached. The new agreement is for three years and expires on July 1, 2022.

We also manage the risks listed on pages 56 to 58.

Mineral reserves and resources

Our mineral reserves and resources are the foundation of our company and fundamental to our success.

We have interests in a number of uranium properties. The tables in this section show the estimates of the proven and probable mineral reserves, and measured, indicated, and inferred mineral resources at those properties. However, only three of the properties listed in those tables are material uranium properties for us: McArthur River/Key Lake, Cigar Lake and Inkai. Mineral reserves and resources are all reported as of December 31, 2019.

We estimate and disclose mineral reserves and resources in five categories, using the definition standards adopted by the Canadian Institute of Mining, Metallurgy and Petroleum Council, and in accordance with *National Instrument 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101),* developed by the Canadian Securities Administrators. You can find out more about these categories at www.cim.org.

About mineral resources

Mineral resources do not have to demonstrate economic viability, but have reasonable prospects for eventual economic extraction. They fall into three categories: measured, indicated and inferred. Our reported mineral resources are exclusive of mineral reserves.

- *Measured and indicated mineral resources* can be estimated with sufficient confidence to allow the appropriate application of technical, economic, marketing, legal, environmental, social and governmental factors to support evaluation of the economic viability of the deposit.
    - *measured resources*: we can confirm both geological and grade continuity to support detailed mine planning
    - *indicated resources*: we can reasonably assume geological and grade continuity to support mine planning
- *Inferred mineral resources* are estimated using limited geological evidence and sampling information. We do not have enough confidence to evaluate their economic viability in a meaningful way. You should not assume that all or any part of an inferred mineral resource will be upgraded to an indicated or measured mineral resource, but it is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.

Our share of uranium in the following mineral resource tables is based on our respective ownership interests. Mineral resources that are not mineral reserves have no demonstrated economic viability.

About mineral reserves

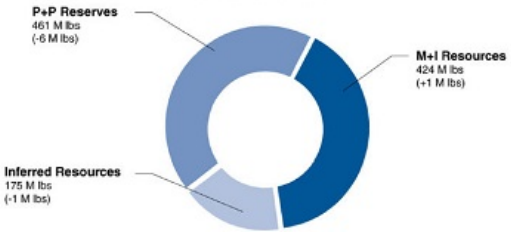
Mineral reserves are the economically mineable part of measured and/or indicated mineral resources demonstrated by at least a preliminary feasibility study. The reference point at which mineral reserves are defined is the point where the ore is delivered to the processing plant, except for ISR operations where the reference point is where the mineralization occurs under the existing or planned wellfield patterns. Mineral reserves fall into two categories:

- *proven reserves*: the economically mineable part of a measured resource for which at least a preliminary feasibility study demonstrates that, at the time of reporting, economic extraction could be reasonably justified with a high degree of confidence
- *probable reserves*: the economically mineable part of a measured and/or indicated resource for which at least a preliminary feasibility study demonstrates that, at the time of reporting, economic extraction could be reasonably justified with a degree of confidence lower than that applying to proven reserves

We use current geological models, an average uranium price of $44 (US) per pound U_3O_8, and current or projected operating costs and mine plans to report our mineral reserves, allowing for dilution and mining losses. We apply our standard data verification process for every estimate.

Our share of uranium in the mineral reserves table below is based on our respective ownership interests.

PROVEN AND PROBABLE (P+P) RESERVES, MEASURED AND INDICATED (M+I) RESOURCES, INFERRED RESOURCES
(SHOWING CHANGE FROM 2018)
at December 31, 2019



Changes this year

Our share of proven and probable mineral reserves decreased from 467 million pounds U_3O_8 at the end of 2018, to 461 million pounds at the end of 2019. The change was primarily the result of:

- production at Cigar Lake and Inkai, which removed 13 million pounds from our mineral inventory

partially offset by:

- a mineral resource and reserve estimate update at Cigar Lake, which added approximately 7 million pounds of proven and probable reserves

Our share of measured and indicated mineral resources slightly increased from 423 million pounds U_3O_8 at the end of 2018, to 424 million pounds at the end of 2019. Our share of inferred mineral resources is 175 million pounds U_3O_8, a slight decrease of 1 million pounds from the end of 2018. The variance in mineral resources was primarily the result of the Cigar Lake mineral resource estimate update and minor mineral resource estimation work at McArthur River.

Qualified persons

The technical and scientific information discussed in this MD&A for our material properties (McArthur River/Key Lake, Cigar Lake and Inkai) was approved by the following individuals who are qualified persons for the purposes of NI 43-101:

MCARTHUR RIVER/KEY LAKE

- Greg Murdock, general manager, McArthur River/Key Lake, Cameco
- Alain D. Renaud, lead geologist, technical services, Cameco
- Scott Bishop, director, technical services, Cameco

CIGAR LAKE

- Lloyd Rowson, general manager, Rabbit Lake/Cigar Lake, Cameco
- Scott Bishop, director, technical services, Cameco
- Alain D. Renaud, lead geologist, technical services, Cameco

INKAI

- Alain D. Renaud, lead geologist, technical services, Cameco
- Scott Bishop, director, technical services, Cameco

Important information about mineral reserve and resource estimates

Although we have carefully prepared and verified the mineral reserve and resource figures in this document, the figures are estimates, based in part on forward-looking information.

Estimates are based on knowledge, mining experience, analysis of drilling results, the quality of available data and management's best judgment. They are, however, imprecise by nature, may change over time, and include many variables and assumptions, including:

- geological interpretation
- extraction plans
- commodity prices and currency exchange rates
- recovery rates
- operating and capital costs

There is no assurance that the indicated levels of uranium will be produced, and we may have to re-estimate our mineral reserves based on actual production experience. Changes in the price of uranium, production costs or recovery rates could make it unprofitable for us to operate or develop a particular site or sites for a period of time. See page 2 for information about forward-looking information.

Please see our mineral reserves and resources section of our annual information form for the specific assumptions, parameters and methods used for McArthur River, Inkai and Cigar Lake mineral reserve and resource estimates.

Important information for US investors

We present information about mineralization, mineral reserves and resources as required by National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators (NI 43-101), in accordance with applicable Canadian securities laws. As a foreign private issuer filing reports with the US Securities and Exchange Commission (SEC) under the Multijurisdictional Disclosure System, we are not required to comply with the SEC's disclosure requirements relating to mining properties. Investors in the United States should be aware that the disclosure requirements of NI 43-101 are different from those under applicable SEC rules, and the information that we present concerning mineralization, mineral reserves and resources may not be comparable to information made public by companies that comply with the SEC's reporting and disclosure requirements for mining companies.

Mineral reserves

As at December 31, 2019 (100% – only the shaded column shows our share)

PROVEN AND PROBABLE

(tonnes in thousands; pounds in millions)

		PROVEN			PROBABLE			TOTAL MINERAL RESERVES			OUR SHARE RESERVES CONTENT	
PROPERTY	MINING METHOD	TONNES	GRADE % U_3O_8	CONTENT (LBS U_3O_8)	TONNES	GRADE % U_3O_8	CONTENT (LBS U_3O_8)	TONNES	GRADE % U_3O_8	CONTENT (LBS U_3O_8)	(LBS U_3O_8)	METALLURGI RECOVERY
Cigar Lake	UG	261.9	15.50	89.5	270.8	13.90	83.0	532.7	14.69	172.5	86.3	
Key Lake	OP	61.1	0.52	0.7	—	—	—	61.1	0.52	0.7	0.6	
McArthur River	UG	2,034.0	7.14	320.2	538.5	6.04	71.7	2,572.5	6.91	391.9	273.6	
Inkai	ISR	204,440.9	0.04	160.0	152,994.7	0.03	91.8	357,435.6	0.03	251.8	100.7	
Total		**206,797.9**	**—**	**570.4**	**153,804.0**	**—**	**246.5**	**360,601.9**	**—**	**816.9**	**461.2**	

(UG – underground, OP – open pit, ISR – in situ recovery)

Note that the estimates in the above table:

- Use a constant dollar average uranium price of approximately $44 (US) per pound U_3O_8
- are based on exchange rates of $1.00 US=$1.25 Cdn and 405 Kazakhstan Tenge to $1.00 Cdn

Our estimate of mineral reserves and mineral resources may be positively or negatively affected by the occurrence of one or more of the material risks discussed under the heading *Caution about forward-looking information* beginning on page 2, as well as certain property-specific risks. See *Uranium – Tier-one operations* starting on page 60.

Metallurgical recovery

We report mineral reserves as the quantity of contained ore supporting our mining plans, and provide an estimate of the metallurgical recovery for each uranium property. The estimate of the amount of valuable product that can be physically recovered by the metallurgical extraction process is obtained by multiplying the quantity of contained metal (content) by the planned metallurgical recovery percentage. The content and our share of uranium in the table above are before accounting for estimated metallurgical recovery.

Mineral resources

As at December 31, 2019 (100% – only the shaded columns show our share)

MEASURED, INDICATED AND INFERRED

(tonnes in thousands; pounds in millions)

	MEASURED RESOURCES (M)			INDICATED RESOURCES (I)				OUR SHARE	INFERRED RESOURCES			O SH
PROPERTY	TONNES	GRADE % U_3O_8	CONTENT (LBS U_3O_8)	TONNES	GRADE % U_3O_8	CONTENT (LBS U_3O_8)	TOTAL M+I CONTENT (LBS U_3O_8)	TOTAL M+I CONTENT (LBS U_3O_8)	TONNES	GRADE % U_3O_8	CONTENT (LBS U_3O_8)	INFE CON (LBS
Cigar Lake	11.6	8.54	2.2	307.1	14.66	99.3	101.5	50.8	182.1	5.92	23.8	
Fox Lake	—	—	—	—	—	—	—	—	386.7	7.99	68.1	
Kintyre	—	—	—	3,897.7	0.62	53.5	53.5	53.5	517.1	0.53	6.0	
McArthur River	97.8	2.57	5.5	85.0	2.12	4.0	9.5	6.7	41.0	2.85	2.6	
Millennium	—	—	—	1,442.6	2.39	75.9	75.9	53.0	412.4	3.19	29.0	
Rabbit Lake	—	—	—	1,836.5	0.95	38.6	38.6	38.6	2,460.9	0.62	33.7	
Tamarack	—	—	—	183.8	4.42	17.9	17.9	10.3	45.6	1.02	1.0	
Yeelirrie	27,172.9	0.16	95.9	12,178.3	0.12	32.2	128.1	128.1	—	—	—	
Crow Butte	1,601.0	0.19	6.7	939.3	0.35	7.3	14.0	14.0	531.4	0.16	1.8	
Gas Hills - Peach	687.2	0.11	1.7	3,626.1	0.15	11.6	13.3	13.3	3,307.5	0.08	6.0	
Inkai	36,680.9	0.03	21.3	21,132.2	0.02	10.7	32.0	12.8	116,394.6	0.03	75.0	
North Butte - Brown Ranch	621.3	0.08	1.1	5,530.3	0.07	8.4	9.5	9.5	294.5	0.07	0.4	
Ruby Ranch	—	—	—	2,215.3	0.08	4.1	4.1	4.1	56.2	0.14	0.2	
Shirley Basin	89.2	0.16	0.3	1,638.2	0.11	4.1	4.4	4.4	508.0	0.10	1.1	
Smith Ranch -Highland	3,711.3	0.10	7.9	14,372.3	0.05	17.0	24.9	24.9	6,861.0	0.05	7.7	
Total	**70,673.2**	**—**	**142.6**	**69,384.7**	**—**	**384.6**	**527.2**	**424.0**	**131,999.0**	**—**	**256.4**	

Note that mineral resources:

- do not include amounts that have been identified as mineral reserves
- do not have demonstrated economic viability

Additional information

Due to the nature of our business, we are required to make estimates that affect the amount of assets and liabilities, revenues and expenses, commitments and contingencies we report. We base our estimates on our experience, our best judgment, guidelines established by the Canadian Institute of Mining, Metallurgy and Petroleum and on assumptions we believe are reasonable.

We believe the following critical accounting estimates reflect the more significant judgments used in the preparation of our financial statements. These estimates affect all of our segments, unless otherwise noted.

Decommissioning and reclamation

In our uranium and fuel services segments, we are required to estimate the cost of decommissioning and reclamation for each operation, but we normally do not incur these costs until an asset is nearing the end of its useful life. Regulatory requirements and decommissioning methods could change during that time, making our actual costs different from our estimates. A significant change in these costs or in our mineral reserves could have a material impact on our net earnings and financial position. See note 15 to the financial statements.

Property, plant and equipment

We depreciate property, plant and equipment primarily using the unit-of-production method, where the carrying value is reduced as resources are depleted. A change in our mineral reserves would change our depreciation expenses, and such a change could have a material impact on amounts charged to earnings.

We assess the carrying values of property, plant and equipment and goodwill every year, or more often if necessary. If we determine that we cannot recover the carrying value of an asset or goodwill, we write off the unrecoverable amount against current earnings. We base our assessment of recoverability on assumptions and judgments we make about future prices, production costs, our requirements for sustaining capital and our ability to economically recover mineral reserves. A material change in any of these assumptions could have a significant impact on the potential impairment of these assets.

In performing impairment assessments of long-lived assets, assets that cannot be assessed individually are grouped together into the smallest group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. Management is required to exercise judgment in identifying these cash generating units.

Taxes

When we are preparing our financial statements, we estimate taxes in each jurisdiction we operate in, taking into consideration different tax rates, non-deductible expenses, valuation of deferred tax assets, changes in tax laws and our expectations for future results.

We base our estimates of deferred income taxes on temporary differences between the assets and liabilities we report in our financial statements, and the assets and liabilities determined by the tax laws in the various countries we operate in. We record deferred income taxes in our financial statements based on our estimated future cash flows, which includes estimates of non-deductible expenses, future market conditions, production levels and intercompany sales. If these estimates are not accurate, there could be a material impact on our net earnings and financial position.

Controls and procedures

We have evaluated the effectiveness of our disclosure controls and procedures and internal control over financial reporting as of December 31, 2019, as required by the rules of the US Securities and Exchange Commission and the Canadian Securities Administrators.

Management, including our Chief Executive Officer (CEO) and our Chief Financial Officer (CFO), supervised and participated in the evaluation, and concluded that our disclosure controls and procedures are effective to provide a reasonable level of assurance that the information we are required to disclose in reports we file or submit under securities laws is recorded, processed, summarized and reported accurately, and within the time periods specified. It should be noted that, while the CEO and CFO believe that our disclosure controls and procedures provide a reasonable level of assurance that they are effective, they do not expect the disclosure controls and procedures or internal control over financial reporting to be capable of preventing all errors and fraud. A control system, no matter how well conceived or operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

Management, including our CEO and our CFO, is responsible for establishing and maintaining internal control over financial reporting and conducted an evaluation of the effectiveness of our internal control over financial reporting based on the Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2019.

During the first quarter of 2019, we implemented a new marketing system resulting in a material change in internal controls over financial reporting. The new system provides for contract administration, including the processing and recording of delivery obligations as well as revenue forecasting and reporting. The implementation process included extensive involvement by key end users and management and incorporated user acceptance testing, change management procedures, data migration strategies and a parallel run period where users validated the new system. Post-implementation reviews and testing were conducted by management to ensure that internal controls surrounding the implementation process were properly designed to prevent material financial statement errors.

There have been no other changes in our internal control over financial reporting during the year that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

New standards adopted

On January 1, 2019, we adopted the following new standards as issued by the International Accounting Standards Board (IASB).

IFRS 16, *Leases,* eliminates the dual model for lessees, which distinguishes between on-balance sheet finance leases and off-balance sheet operating leases. Instead, there is a single, on-balance sheet accounting model that is similar to current finance lease accounting. We adopted IFRS 16 using the modified retrospective approach which does not require comparative information to be restated.

IFRIC 23, *Uncertainty over Income Tax Treatments* provides guidance on the accounting for current and deferred tax liabilities and assets in circumstances in which there is uncertainty over income tax treatments. The adoption of the standard did not have a material impact on the financial statements.

EXHIBIT 99.4

For fiscal years ended December 31, 2019 and December 31, 2018, KPMG LLP and its affiliates billed Cameco Corporation and its subsidiaries the following fees:

	2019 ($)	% of total fees	2018 ($)	% of total fees
Audit fees				
Cameco[1]	1,968,900	78.9	2,033,100	68.5
Subsidiaries[2]	221,800	8.9	709,800	23.9
Total audit fees	2,190,700	87.8	2,742,900	92.4
Audit-related fees				
Pensions	27,300	1.1	27,300	0.9
Total audit-related fees	27,300	1.1	27,300	0.9
Tax fees				
Compliance	37,900	1.5	94,800	3.2
Planning and advice[3]	200,800	8.1	102,300	3.5
Total tax fees	238,700	9.6	197,100	6.7
All other fees				
Other non-audit fees[4]	38,300	1.5	-	0.0
Total other non-audit fees	38,300	1.5	-	0.0
Total fees	**2,495,000**	**100.0**	**2,967,300**	**100.0**

[1] Includes amounts billed for the audit of Cameco's annual consolidated financial statements and the review of interim financial statements.

[2] Includes amounts billed for the audit of Cameco's subsidiary financial statements.

[3] Includes amounts billed for transfer pricing advisory.

[4] Includes amounts billed in 2019 related to Cameco's I-4 Membership.

Pre-Approval Policies and Procedures

As part of Cameco Corporation's corporate governance practices, under its committee charter, the audit committee is required to pre-approve the audit and non-audit services performed by the external auditors. The audit committee pre-approves the audit and non-audit services up to a maximum specified level of fees. If fees relating to audit and non-audit services are expected to exceed this level or if a type of audit or non-audit service is to be performed that previously has not been pre-approved, then separate pre-approval by Cameco Corporation's audit committee or audit committee chair, or in the absence of the audit committee chair, the chair of the board, is required. All pre-approvals granted pursuant to the delegated authority must be presented by the member(s) who granted the pre-approvals to the full audit committee at its next meeting. The audit committee has adopted a written policy to provide procedures to implement the foregoing principles. For each of the years ended December 31, 2019 and 2018, none of Cameco Corporation's Audit-Related Fees, Tax Fees or All Other Fees made use of the de minimis exception to pre-approval provisions contained in paragraph (c)(7)(i) of Rule 2-01 of Regulation S-X promulgated by the U.S. Securities and Exchange Commission.

EXHIBIT 99.5

Contractual Cash Obligations

As at December 31, 2019 (CAD$ Millions)	Total	Due in less than 1 Year	Due in 1 – 3 Years	Due in 4 – 5 Years	Due after 5 Years
Long-term debt	**1,000**	-	400	500	100
Interest on long-term debt	**267**	41	82	52	92
Provision for reclamation	**1,127**	55	53	98	921
Provision for waste disposal	**8**	1	3	3	1
Other liabilities	**94**	5	10	4	75
Capital commitments	**38**	38	-	-	-
Unconditional product purchase obligations[1,2]	**773**	216	180	126	251
Total contractual cash obligations	**3,307**	356	728	783	1,440

[1] Denominated in US dollars and Japanese yen, converted from US dollars to Canadian dollars at the rate of $1.30 and from Japanese yen to Canadian dollars at the rate of $0.01.

[2] These amounts have been adjusted for any additional purchase commitments that we have entered into as of February 7, 2020, but does not include deliveries taken under contract since December 31, 2019.

Commercial Commitments

As at December 31, 2019 (CAD$ Millions)	Total Amounts Committed
Financial assurances[1]	1,528
Total commercial commitments	1,528

[1] The financial assurances (including standby letters of credit and surety bonds) maturing in 2019 were issued with a one-year term and will be automatically renewed on a year-by-year basis until the underlying obligations are resolved. These obligations are primarily the decommissioning and reclamation of our operating sites which are expected to remain outstanding well into the future and our obligations under the CRA dispute which are expected to remain outstanding until the dispute is resolved.

EXHIBIT 99.6

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Cameco Corporation

Opinion on Internal Control Over Financial Reporting

We have audited Cameco Corporation's (the "Company") internal control over financial reporting as of December 31, 2019, based on the criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated statements of financial position of the Company as of December 31, 2019 and December 31, 2018, the related consolidated statements of earnings, comprehensive income, changes in equity, and cash flows for each of the years then ended, and the related notes (collectively, the "consolidated financial statements"), and our report dated February 6, 2020 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying management's discussion and analysis. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP
Chartered Professional Accountants

Saskatoon, Canada
February 6, 2020

EXHIBIT 99.7

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Cameco Corporation

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated statements of financial position of Cameco Corporation (the "Company") as of December 31, 2019, and 2018, the related consolidated statements of earnings, comprehensive income, changes in equity and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019, and 2018, and the results of its operations and its cash flows for the years then ended, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the Company’s internal control over financial reporting as of December 31, 2019, based on the criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 6, 2020 expressed an unqualified opinion on the effectiveness of the Company’s internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit and finance committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which they relate.

Assessment of recoverability of deferred tax assets

As discussed in Note 21 to the consolidated financial statements, as at December 31, 2019 the Company recorded deferred tax assets of $956,376,000 relating to tax losses incurred in certain jurisdictions and temporary differences. The assessment of the recoverability of these deferred tax assets is dependent on the generation of future taxable income. Significant judgment and estimation is required to assess the sufficiency of future taxable income to utilize the recognized deferred tax assets. The Company uses projections of future taxable income in order to assess the probability that the deferred tax assets will be realized. Predicting future taxable income is dependent on assumptions and judgments regarding future market conditions, production rates, and intercompany sales. The Company determined that the realization of these deferred tax assets is probable.

We identified the assessment of the recoverability of deferred tax assets as a critical audit matter due to the high degree of judgment required in assessing the significant assumptions and judgments that are reflected in the projections of future taxable income.

The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over the Company's assessment of the recoverability of the deferred tax asset, including controls over the assumptions and judgments used in the projections of future taxable income. To assess the Company's ability to estimate future taxable income, we compared the Company's previous forecasts to actual results. To assess the Company's estimate of future taxable income, we evaluated key assumptions in the model by comparing (1) forecast uranium sales prices to published views of independent market participants, (2) foreign exchange rates to external analyst estimates, (3) forecast sales to historical trends, board approved budgets and committed sales volumes, including to a sample of committed sales contracts, and (4) forecast production volumes to historical data, board approved budgets and life of mine plans. We performed a sensitivity analysis over the key assumptions to assess their impact on the Company's determination that the deferred tax assets were realizable. We involved income tax professionals with specialized skills and knowledge in assessing the Company's application of the tax regulations in relevant jurisdictions.

/s/ KPMG LLP
Chartered Professional Accountants

We have served as the Company's auditor since 1988.

Saskatoon, Canada
February 6, 2020

EXHIBIT 99.8

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors of Cameco Corporation

We consent to the use of our reports, included in this annual report on Form 40-F, each dated February 6, 2020, with respect to:

- our Report of Independent Registered Public Accounting Firm on the consolidated statements of financial position of the Corporation as at December 31, 2019 and December 31, 2018, and the related consolidated statements of earnings, comprehensive income, changes in equity and cash flows for each of the years then ended (the "consolidated financial statements"); and
- our Report of Independent Registered Public Accounting Firm on the effectiveness of the Corporation's internal control over financial reporting as of December 31, 2019.

We also consent to the incorporation by reference of such reports in the registration statements (Nos. 333-11736, 333-06180 and 333-139165) on Form S-8 for the Cameco Corporation Stock Option Plan and registration statement (No. 333-196422) on Form S-8 for the Cameco Corporation Employee Share Ownership Plan.

/s/ KPMG LLP
Chartered Professional Accountants

Saskatoon, Canada
March 27, 2020

EXHIBIT 99.9

I, Tim Gitzel, certify that:

1. I have reviewed this annual report on Form 40-F of Cameco Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

   a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Date: March 27, 2020

By: */s/ Tim Gitzel*
Name: Tim Gitzel
Title: President and Chief Executive Officer (Principal Executive Officer)

EXHIBIT 99.10

I, Grant Isaac, certify that:

1. I have reviewed this annual report on Form 40-F of Cameco Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

   a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Date: March 27, 2020

By: */s/ Grant Isaac*
Name: Grant Isaac
Title: Senior Vice-President and Chief Financial Officer
(Principal Financial Officer)

EXHIBIT 99.11

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Cameco Corporation (the "Company") on Form 40-F for the year ended December 31, 2019, as filed with the U.S. Securities and Exchange Commission on the date hereof (the "Report"), I, Tim Gitzel, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: */s/ Tim Gitzel*
Name: Tim Gitzel
Title: President and Chief Executive Officer

March 27, 2020

EXHIBIT 99.12

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Cameco Corporation (the "Company") on Form 40-F for the year ended December 31, 2019, as filed with the U.S. Securities and Exchange Commission on the date hereof (the "Report"), I, Grant Isaac, Senior Vice-President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: */s/ Grant Isaac*
Name: Grant Isaac
Title: Senior Vice-President and
Chief Financial Officer

March 27, 2020

EXHIBIT 99.13

CONSENT OF EXPERT

Reference is made to the Annual Report on Form 40-F (the "Form 40-F") of Cameco Corporation (the "Corporation") to be filed with the United States Securities and Exchange Commission pursuant to the United States Securities Exchange Act of 1934, as amended.

I hereby consent to reference to my name and my involvement in the preparation of, or supervision of the preparation of, scientific and technical information in the following instances:

(a) under the headings "Operations and projects – Uranium – Tier-one operations – McArthur River mine/Key Lake mill", "Operations and projects – Uranium – Tier-one operations – Cigar Lake", "Operations and projects – Uranium – Tier-one operations – Inkai", "Mineral reserves and resources" and "Governance – Interest of experts" in the Corporation's Annual Information Form for the year ended December 31, 2019 dated March 27, 2020 for the McArthur River mine/Key Lake mill, Cigar Lake and Inkai operations; and

(b) under the headings "Operations and projects – Uranium – Tier-one operations – McArthur River mine/Key Lake mill", "Operations and projects – Uranium – Tier-one operations – Cigar Lake", "Operations and projects – Uranium – Tier-one operations – Inkai", and "Mineral reserves and resources" in Management's Discussion and Analysis for the year ended December 31, 2019 dated February 7, 2020 for the McArthur River mine/Key Lake mill, Cigar Lake and Inkai operations,

(collectively the "Technical Information") in the Form 40-F, and to the inclusion and incorporation by reference of information derived from the Technical Information in the Form 40-F.

I also hereby consent to the incorporation by reference of such Technical Information in the registration statements (Nos. 333-11736, 333-06180 and 333-139165) on Form S-8 for the Cameco Corporation Stock Option Plan and registration statement (No. 333-196422) on Form S-8 for the Cameco Corporation Employee Share Ownership Plan.

Sincerely,

/s/ Alain D. Renaud
Name: Alain D. Renaud, P. Geo.
Title: Lead Geologist, Technical Services, Cameco Corporation

Date: March 27, 2020

EXHIBIT 99.14

CONSENT OF EXPERT

Reference is made to the Annual Report on Form 40-F (the "Form 40-F") of Cameco Corporation (the "Corporation") to be filed with the United States Securities and Exchange Commission pursuant to the United States Securities Exchange Act of 1934, as amended.

I hereby consent to reference to my name and my involvement in the preparation of, or supervision of the preparation of, scientific and technical information in the following instances:

(a) under the headings "Operations and projects – Uranium – Tier-one operations – McArthur River mine/Key Lake mill", "Operations and projects – Uranium – Tier-one operations – Cigar Lake", "Operations and projects – Uranium – Tier-one operations – Inkai", "Mineral reserves and resources" and "Governance – Interest of experts" in the Corporation's Annual Information Form for the year ended December 31, 2019 dated March 27, 2020 for the McArthur River mine/Key Lake mill, Cigar Lake and Inkai operations; and

(b) under the headings "Operations and projects – Uranium – Tier-one operations – McArthur River mine/Key Lake mill", "Operations and projects – Uranium – Tier-one operations – Cigar Lake", "Operations and projects – Uranium – Tier-one operations – Inkai", and "Mineral reserves and resources" in Management's Discussion and Analysis for the year ended December 31, 2019 dated February 7, 2020 for the McArthur River mine/Key Lake mill, Cigar Lake and Inkai operations,

(collectively the "Technical Information") in the Form 40-F, and to the inclusion and incorporation by reference of information derived from the Technical Information in the Form 40-F.

I also hereby consent to the incorporation by reference of such Technical Information in the registration statements (Nos. 333-11736, 333-06180 and 333-139165) on Form S-8 for the Cameco Corporation Stock Option Plan and registration statement (No. 333-196422) on Form S-8 for the Cameco Corporation Employee Share Ownership Plan.

Sincerely,

/s/ Scott Bishop
Name: Scott Bishop, P. Eng.
Title: Director, Technical Services, Cameco Corporation

Date: March 27, 2020

EXHIBIT 99.15

CONSENT OF EXPERT

Reference is made to the Annual Report on Form 40-F (the "Form 40-F") of Cameco Corporation (the "Corporation") to be filed with the United States Securities and Exchange Commission pursuant to the United States Securities Exchange Act of 1934, as amended.

I hereby consent to reference to my name and my involvement in the preparation of, or supervision of the preparation of, scientific and technical information in the following instances:

(a) under the headings "Operations and projects – Uranium – Tier-one operations – Cigar Lake", "Mineral reserves and resources" and "Governance – Interest of experts" in the Corporation's Annual Information Form for the year ended December 31, 2019 dated March 27, 2020 for the Cigar Lake operation; and

(b) under the headings "Operations and projects – Uranium – Tier-one operations – Cigar Lake" and "Mineral reserves and resources" in Management's Discussion and Analysis for the year ended December 31, 2019 dated February 7, 2020 for the Cigar Lake operation,

(collectively the "Technical Information") in the Form 40-F, and to the inclusion and incorporation by reference of information derived from the Technical Information in the Form 40-F.

I also hereby consent to the incorporation by reference of such Technical Information in the registration statements (Nos. 333-11736, 333-06180 and 333-139165) on Form S-8 for the Cameco Corporation Stock Option Plan and registration statement (No. 333-196422) on Form S-8 for the Cameco Corporation Employee Share Ownership Plan.

Sincerely,

/s/ Lloyd Rowson
Name: Lloyd Rowson, P. Eng.
Title: General Manager, Cigar Lake, Cameco Corporation

Date: March 27, 2020

EXHIBIT 99.16

CONSENT OF EXPERT

Reference is made to the Annual Report on Form 40-F (the "Form 40-F") of Cameco Corporation (the "Corporation") to be filed with the United States Securities and Exchange Commission pursuant to the United States Securities Exchange Act of 1934, as amended.

I hereby consent to reference to my name and my involvement in the preparation of, or supervision of the preparation of, scientific and technical information in the following instances:

(a) under the headings "Operations and projects – Uranium – Tier-one operations – McArthur River mine/Key Lake mill", "Mineral reserves and resources" and "Governance – Interest of experts" in the Corporation's Annual Information Form for the year ended December 31, 2019 dated March 27, 2020 for the McArthur River mine/Key Lake mill operations; and

(b) under the headings "Operations and projects – Uranium – Tier-one operations – McArthur River mine/Key Lake mill" and "Mineral reserves and resources" in Management's Discussion and Analysis for the year ended December 31, 2019 dated February 7, 2020 for the McArthur River mine /Key Lake mill operations,

(collectively the "Technical Information") in the Form 40-F, and to the inclusion and incorporation by reference of information derived from the Technical Information in the Form 40-F.

I also hereby consent to the incorporation by reference of such Technical Information in the registration statements (Nos. 333-11736, 333-06180 and 333-139165) on Form S-8 for the Cameco Corporation Stock Option Plan and registration statement (No. 333-196422) on Form S-8 for the Cameco Corporation Employee Share Ownership Plan.

Sincerely,

/s/ Gregory M. Murdock
Name: Gregory M. Murdock, P. Eng.
Title: General Manager, McArthur River/Key Lake, Cameco Corporation

Date: March 27, 2020