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, 2018

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:	Name of Exchange where Securities are listed:
Common Shares, no par value	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:
395,792,732 Common Shares outstanding as of December 31, 2018

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, 2018 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, 2018.

(d) **Attestation report of the registered public accounting firm**. The effectiveness of Cameco Corporation's internal control over financial reporting as of December 31, 2018 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, 2018, there were no 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.

Audit & Finance Committee Financial Expert. Cameco Corporation's board of directors has determined that at least two of the members of its audit and finance committee (the "audit committee") are audit committee financial experts. The audit committee financial experts are John Clappison and Ian Bruce. Mr. Bruce 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.

Mr. Clappison has been determined to be an independent director by Cameco Corporation's board of directors under NI 52-110, which is the Canadian corporate governance rule that applies to Cameco Corporation, and under the Commission's audit committee independence requirements. However, Mr. Clappison's son-in-law is a corporate finance partner with KPMG LLP and serves as President, KPMG Corporate Finance Inc., a company affiliated with KPMG LLP who are the auditors of Cameco Corporation, and therefore Mr. Clappison is deemed to be a non-independent director as such term is used in the rules of the New York Stock Exchange. Mr. Clappison's son-in-law is prohibited from being engaged in the Cameco Corporation audit. Under the rules of the Commission and the Public Company Accounting Oversight Board (United States), such relationship does not impair the independence of KPMG LLP.

Information concerning the relevant experience of Mr. Clappison and Mr. Bruce is included in their 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 2018, we amended our previously filed Code and made non-substantive changes including updates to document references and wording around privacy and conflicts of interest.

The Code was furnished to the Commission on January 22, 2019 as Exhibit 1 to a report on Form 6-K and is incorporated by reference herein as Exhibit 99.19.

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 – 2018 Management's Discussion and Analysis and the notes to the financial statements in Exhibit 99.2 – 2018 Consolidated Audited Financial Statements:

(a) **Financial assurances**. In the 2018 Management's Discussion and Analysis, see the disclosure at "Off-balance sheet arrangements" (page 44). In the 2018 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 2018 Management's Discussion and Analysis, see the disclosure at "Off-balance sheet arrangements" (page 44).

Tabular Disclosure of Contractual Obligations. See Exhibit 99.5.

Identification of the Audit Committee. Cameco Corporation has a separately-designated standing audit and finance committee established in accordance with Section 3(a)(58)(A) of the Exchange Act. Cameco

Corporation's audit and finance committee is comprised of: John Clappison (chair), Ian Bruce, Daniel Camus, 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, 2018 and 2017 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 with the exception of John Clappison. 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; John Clappison; 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 with the exception of John Clappison.

EXHIBIT INDEX

Exhibit No.	Description
99.1	2018 Annual Information Form
99.2	2018 Consolidated Audited Financial Statements
99.3	2018 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 Linda Bray, P. Eng.
99.16	Consent of Darryl Clark, PhD, P. Geo.

Exhibit No.	Description
99.17	Consent of Lloyd Rowson, P. Eng.
99.18	Consent of Gregory M. Murdock, P. Eng.
99.19	Code of Conduct and Ethics (as amended and restated as of October 2018) (incorporated by reference to Cameco Corporation's Form 6-K, furnished to the Commission on January 22, 2019)

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 29th day of March, 2019.

CAMECO CORPORATION

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

EXHIBIT 99.1

Cameco Corporation

2018 Annual Information Form

March 29, 2019



Cameco Corporation

2018 Annual information form

March 29, 2019

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Important information about this document

This annual information form (AIF) for the year ended December 31, 2018 provides important information about Cameco Corporation. It describes our history, our markets, our operations and projects, our mineral reserves and resources, sustainability, 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 (MD&A) for the year ended December 31, 2018 (2018 MD&A), which is available on SEDAR (sedar.com) and on EDGAR (sec.gov) as an exhibit to our Form 40-F
- our audited consolidated financial statements for the year ended December 31, 2018 (2018 financial statements), which is 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.

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*.

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 97, and our 2018 MD&A, which include 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 expectations about 2019 and future global uranium supply, consumption, demand, prices, contracting volumes and number of reactors, including the discussion under the heading Market overview and developments
- our belief that the current backlog of long-term contracting presents a substantial opportunity
- our expectation about 2019 and future consumption for conversion services
- the discussion under the heading Marketing framework – balanced contract portfolio, including our belief that using the marketing framework will create long-term value for shareholders
- expectations for repayment of our $500 million debenture maturing in 2019
- our expectations relating to care and maintenance costs
- our expectations relating to 2019 uranium purchases, including our belief that the uranium available in the spot market will not be enough to satisfy long-term demand
- our belief that our actions in reducing supply and streamlining operations will 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
- the discussion of our expectations relating to our Canada Revenue Agency (CRA) transfer pricing dispute, including that the Tax Court of Canada (Tax Court) ruling will be upheld on appeal and our estimate of the amount and timing of expected cash taxes and transfer pricing penalties
- our expectations for future tax payments and rates, including effective tax rates
- future plans and expectations for uranium properties, advanced projects, and fuel services operating sites
- estimates of operating and capital costs and mine life for our tier one uranium operations
- estimated decommissioning 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
- 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
- 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, including the potential restart any time after 2019

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 are unsuccessful or have unanticipated consequences
- our estimates of production, purchases, cash flow, costs, decommissioning, reclamation expenses, or our tax expense prove to be inaccurate
- 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 or with TEPCO Resources Inc. (TEPCO)
- 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
- 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
- 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
- the outcome of the investigation initiated by the US Department of Commerce (DOC) under Section 232 of the Trade Expansion Act, which may result in the US imposing tariffs or quotas on uranium imports
- 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 or resuming production after the extended shutdown scheduled for the third quarter
- 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 (including at our Port Hope conversion facility and Orano's McClean Lake mill), 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 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 disputes 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
- the outcome of the investigation initiated by the DOC under Section 232 of the Trade Expansion Act does not result in the US imposing tariffs or quotas on uranium imports
- our decommissioning and reclamation estimates, including the underlying assumptions, associated with them, 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 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, including the resumption of production after the end of the extended shutdown scheduled for the third quarter
- the McClean Lake mill is able to process Cigar Lake ore as expected
- 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
- 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 (including at our Port Hope conversion facility and Orano's McClean Lake mill), 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

About Cameco

Our head office is in Saskatoon, Saskatchewan. We are one of the world's largest providers of uranium fuel, with uranium assets on three continents. Nuclear energy plants around the world use our uranium products to generate one of the cleanest sources of electricity available today.

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 14 and in our 2018 MD&A.

Cameco Corporation
2121 – 11th Street West
Saskatoon, Saskatchewan
Canada S7M 1J3
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 1,897 employees at December 31, 2018.

Business segments

URANIUM

Our uranium production capacity is among the world's largest. However, in 2018, 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 467 million pounds proven and probable

Mineral resources

- approximately 423 million pounds measured and indicated
- approximately 176 million pounds inferred

Tier-one operations

- McArthur River and Key Lake, Saskatchewan (curtailed)
- Cigar Lake, Saskatchewan
- Inkai, Kazakhstan

Tier-two curtailed 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 0.7 million 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 control 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, 2018 and 2017, see our 2018 MD&A as follows:

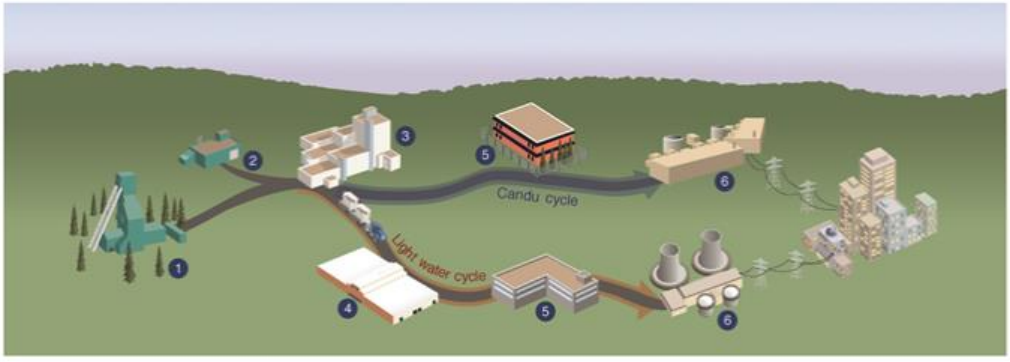
- uranium – page 46
- fuel services – page 48

Other fuel cycle investments

Enrichment

GE-Hitachi Global Laser Enrichment (GLE) is testing a third-generation technology that, if successful, will use lasers to commercially enrich uranium. We have a 24% interest in GLE, which is currently undergoing restructuring.

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. U-235 atoms ir 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

2016

April

- We suspend production at our Rabbit Lake operation and curtail production at Cameco Resources' US ISR operations.

May

- We enter into an agreement with Joint Stock Company National Atomic Company Kazatomprom (Kazatomprom) and JV Inkai to restructure and enhance Inkai, subject to acquiring necessary government approvals.

July

- We enter into a three-year collective agreement with approximately 230 unionized employees at our Port Hope conversion facility.

August

- Transition to care and maintenance at our Rabbit Lake operation was completed.

2017

January

- 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.

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)
- 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 119 and 120.

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, 2019, 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 May 2019 annual meeting of shareholders to be available in April 2019.

See our 2018 financial statements and 2018 MD&A for additional financial information.

Our strategy

Tier-one focus

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 population, electricity demand and clean air concerns.

We are a pure-play nuclear fuel supplier, 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.

For more information on our strategy, see our 2018 MD&A.

Market overview and developments

Cautiously optimistic

The uranium market has improved significantly relative to a year ago. There have been substantial production cuts, cuts to some secondary supplies, reductions in producer inventories, and an increase in demand for uranium in the spot market from producers and financial players. These actions have helped remove excess material from the spot market and have put upward pressure on the uranium spot price. At the end of the year, the spot price was up almost 17% compared to the end of 2017. The market has finally reached the point where, on an annual basis, consumption has returned to pre-2011 levels, and some interest in long-term contracting is emerging.

Despite these improvements in the uranium market, we believe there is still a need for some caution in the near term. It is important to remember that much of the supply that has been removed from the market is a result of supply curtailment not supply destruction. There is plenty of idle tier-one production and tier-one expansion capabilities, as well as idle tier-two production and expansion capabilities. And, we can't lose sight of material sitting with financial players. This is capacity that can come back to the market relatively quickly. As a result, new supply poses a significant risk to the uranium market recovery. Today, we believe even the promise of new supply could create a headwind and put downward pressure on uranium prices.

A lot of moving parts

While the reason for continued caution is the same as last year (a lack of acceptable long-term contracting opportunities) the cause has changed. Previously, the lack of acceptable contracting opportunities was caused by an oversupplied uranium spot market, which led to complacency and discretion. However, there have been a number of significant supply and demand developments, which make for a lot of moving parts in our industry. These moving parts have shifted market sentiment to one of uncertainty and confusion, resulting in some market paralysis while participants try to digest the implications of the changing dynamics.

Supply is not guaranteed

Economic realities 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 – we have seen additional existing primary supply shutdown and not just by the higher-cost producers. 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 are the market access and trade policy issues facing the nuclear industry. These market access and trade policy issues highlight the importance of origin in an industry where 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 or no primary production. Furthermore, the issues highlight the fact that nearly 70% of primary production is in the hands of state-owned enterprises, after taking into account all of the cuts to primary production that have occurred. Some of the more significant supply developments are:

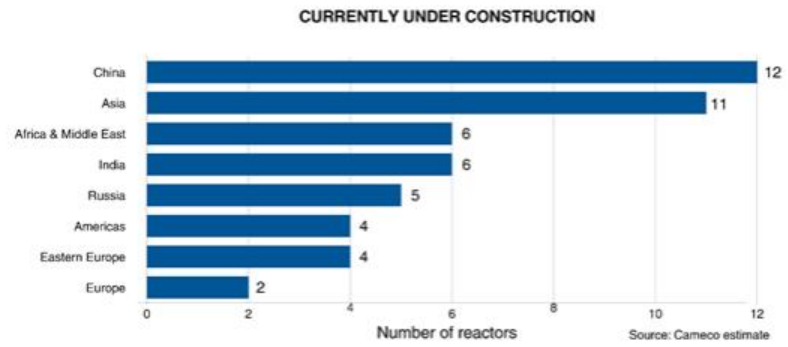
- Our 2018 decision, along with our partner, Orano, to extend the production suspension at McArthur River/Key Lake for an indeterminate duration, removing 18 million pounds annually from the market, and adding to the production curtailments at Rabbit Lake and in the US in 2016.
- In the US, which has the largest fleet of nuclear reactors in the world, an investigation was launched by the Department of Commerce in July of 2018 under section 232 of the Trade Expansion Act. The investigation is to determine whether the quantity and circumstances of foreign uranium imports into the US threaten to impair national security.
- In March 2018, the US Department of Energy suspended its remaining excess uranium sales for the fiscal year, removing about 1.6 million pounds of secondary supply from the market. Legislation has been approved that extends the program suspension for the 2019 fiscal year as well, which is expected to result in a reduction of available secondary supplies of about 3 million pounds.
- The review of the Russian Suspension Agreement, which imposes annual quotas on imports of Russian uranium into the US, and expires at the end of 2020.
- Kazatomprom announced its intent to reduce 2018 production to about 56 million pounds, about 8% less than its production in 2017, and during the year sold inventory in excess of 8 million pounds to Yellow Cake plc's uranium fund. And, in conjunction with its initial public offering (IPO), it stated its intent to shift to a market-centric operator, as opposed to a production-led operator.

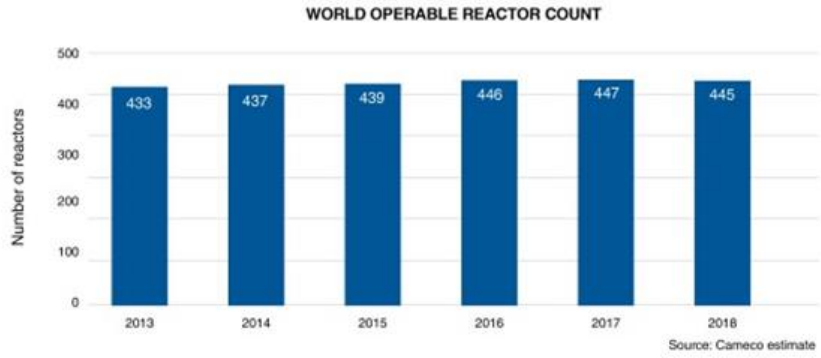
- The recapitalization of Paladin and its subsequent decision to put its Langer-Heinrich operation in Namibia on care and maintenance.
- Reports that the Husab mine in Namibia faced several technical and operational challenges in its rampup of production.
- Rio Tinto's announcement that it has entered into a binding agreement with China National Uranium Corporation Limited to sell its entire 68.62% share in the Rossing mine in Namibia.
- The May 2019 expiration of the contract with unionized employees at Orano's McClean Lake mill, which poses a risk to production plans at Cigar Lake if an agreement cannot be reached and there is a labour dispute.

Demand has recovered and is growing

The demand gap left by forced and premature nuclear reactor shut-downs since March of 2011 has largely been filled. And, with eight new reactors beginning commercial operation in 2018, 50 reactors under construction, and many more planned, demand is growing. This growth is largely occurring in Asia and the Middle East, however it is being partially offset by early reactor retirements, plans for reduced reliance on nuclear, or phase-out policies in other regions. There is mixed demand news for the nuclear industry. Some of the more significant developments are:

- The increased demand from financial players who are interested in holding physical uranium, including the IPO by Yellow Cake plc. UxC estimates financial players purchased around 14.5 million pounds of uranium on the spot market in 2018.
- The increased demand for uranium on the spot market by producers, including us, to replace curtailed production in order to meet delivery commitments. Over 11 million pounds were purchased in the spot market by producers in 2018, triple the volume of 2017.
- In China, the fastest growing nuclear energy market in the world, six reactors, including the world's first AP1000 and EPR reactors, began commercial operation in 2018. Although there has been a slowdown in construction starts, we believe the startup and regulatory approval of this new generation of reactors will clear the path for additional new build projects in that country.
- In the US, news was mixed. The owners of the Vogtle 3 and 4 nuclear construction project voted to proceed, and several states including Illinois, New York, New Jersey, and Connecticut enacted incentives to support the continued operation of nuclear plants. However, several planned reactor shutdowns were also announced.
- In Taiwan, 60% of the ballots cast in a November referendum rejected the government's plan to phase-out nuclear by 2025.
- A number of Japanese utilities have now successfully navigated through the new, rigorous safety inspection process, with nine reactors operating and an additional 18 reactors at various stages in the restart approval process. The Japanese government approved a new basic energy plan confirming that nuclear power will play a significant role in its energy strategy.
- In India, the government announced nine reactors were under construction and were to be completed by 2025. Another 12 reactors have obtained administrative and financial approval and the government is targeting startup by 2031.
- Poland's draft energy policy plans for its first nuclear power plant to be in operation by 2033 and for total installed nuclear capacity to reach 6000 to 9000 MWe by 2040, representing 10% of its electricity supply.
- In France, the long-term energy strategy plans for a reduction in nuclear power's share of its energy mix to 50% by 2035, resulting in the eventual shutdown of 14 nuclear reactors. The closures are subject to its ability to ensure the security of its electricity supply and the evolution of the transition of its energy mix to renewables. The plan did maintain the option for future construction of new reactors.
- In South Korea, the government announced the early retirement of one of its nuclear reactors and cancelled plans for four new units. Construction on five units is still proceeding.
- A number of other countries, such as UAE, Belarus, Bangladesh, Turkey and Saudi Arabia, continue with their nuclear energy construction programs and plans.





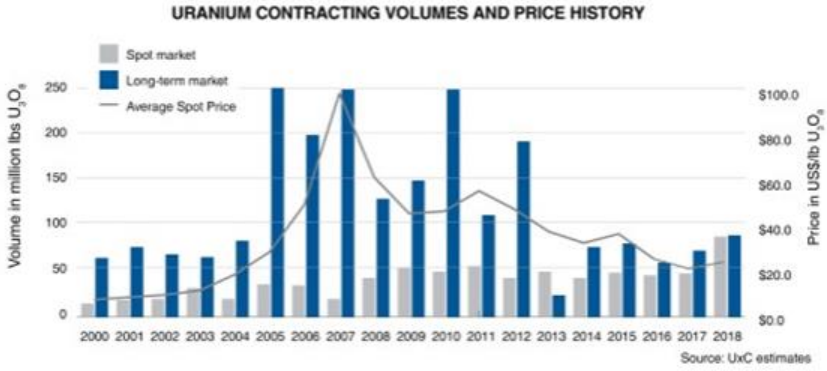
Growing support from proponents of clean air and climate change

In addition to the market dynamics discussed above, there is a growing acknowledgment that adherence to clean air and global climate change goals requires a material dedication to all non-emitting energy sources, including nuclear. World electricity demand will grow because of the positive impact it has on quality of life, however this cannot occur at the expense of clean air. The director of the Sustainable Energy Division of the United Nations Economic Commission for Europe (UNECE) has stated that the search for a solution to climate change must include a discussion of nuclear power, and the UNECE included it on its annual conference agenda for the first time. In addition, the United Nations Intergovernmental Panel on Climate Change special report made it clear that nuclear energy is a necessary part of an effective global response to achieving climate change goals. The Union of Concerned Scientists, who has traditionally not supported nuclear energy, has also acknowledged that in order to combat climate change, all zero carbon options have to be considered, including nuclear.

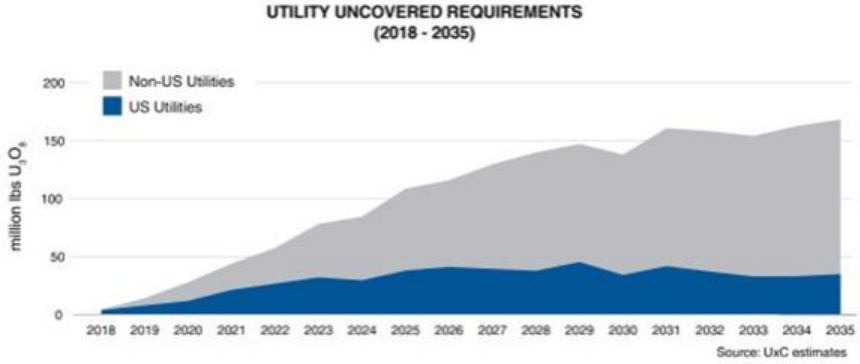
Opportunities for those who can wait

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 seven 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 so far this decade, 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 initially created by the low-price environment, and now by the uncertainty and confusion in our industry, 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 plan 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 1.9 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. 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 enough to satisfy the growing backlog of long-term demand. As a result, we expect there will be increased pressure for a return to long-term contracting on acceptable terms.

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, while at the same time recognizing that uncertainty persists.

With demand coming on in the form of restarts and new reactors, and supply becoming less certain as a result of curtailments, lack of investment, and market access and trade policy issues, we're continuing to expect a market shift. Until that time, 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 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, while maintaining our investment-grade rating so we can self-manage risk, including being in a position to retire our $500 million debenture maturing in 2019.

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

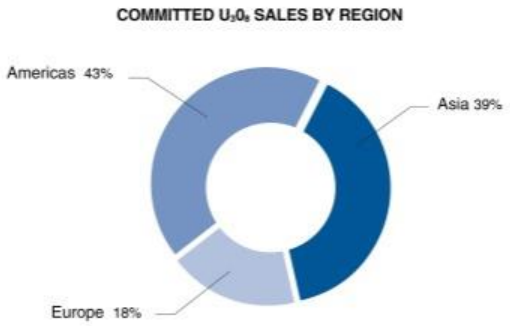
We work with our customers to optimize the value of our existing contract portfolio. In cases where a customer is seeking relief due to a challenging policy, operating, or economic environment, we evaluate their specific circumstances and assess their long-term sustainability. Where we deem the customer's 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 125 million pounds of U_3O_8 with 33 customers worldwide in our uranium segment, and over 40 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 20 million pounds, with commitment levels in 2019 and 2020 higher than in 2021 through 2023.

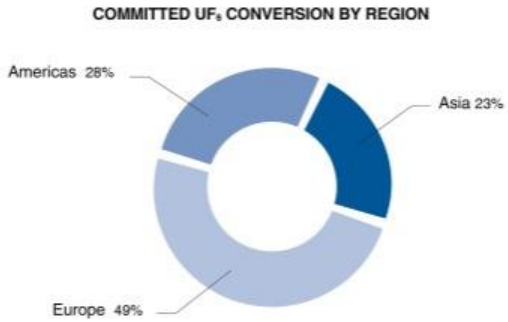
Customers – U_3O_8:

Five largest customers account for 56% of commitments



Customers – UF_6 conversion:

Five largest customers account for 61% 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, under long-term agreements and in the spot market
- our existing inventory

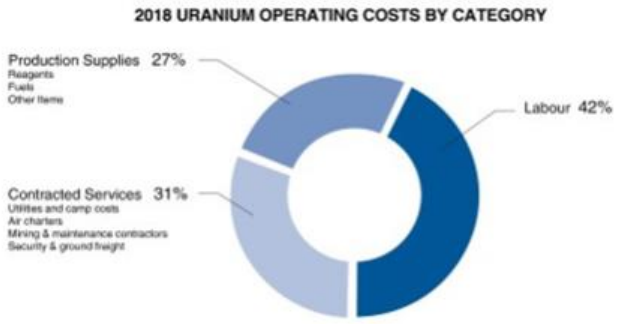
We allow sales volumes to vary year-to-year depending on:

- 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 2019, 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 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.

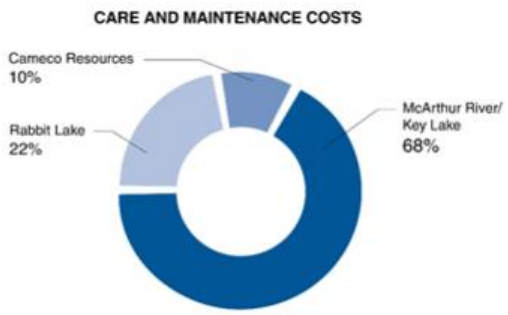
Operating costs in our fuel services segment are mainly fixed. In 2018, labour accounted for about 52% of the total. The largest variable operating cost is for zirconium, followed by energy (natural gas and electricity), and anhydrous hydrogen fluoride.

Care and maintenance costs

In 2019, we expect to incur between $130 million and $160 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.

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. As a result, we are focused on asset integrity, and ensuring we have the resources critical for a restart. This means higher care and maintenance costs 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. We also make purchases on the spot and long-term market where it is beneficial to do so. In 2019, 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, based on our view that the market will transition from being supply-driven to being demand-driven, we expect uranium prices will rise to 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 incent new mine production and not high enough to keep some current mines in operation.

We estimate world mine production in 2018 was about 135 million pounds U_3O_8, down from 152 million pounds in 2017:

- Over 75% of estimated world production came from four countries: Kazakhstan (42%), Canada (14%), Australia (12%) and Namibia (8%)
- About 55% of estimated world production was attributable to four producers. We accounted for about 9% (13 million pounds) of estimated world production in 2018.

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 US Department of Energy (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.

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 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 aims 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.

Conversion services

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

Operations and projects

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Uranium production

Cameco's share (million lbs U_3O_8)	**2017**	**2018**	**2019 Plan**
McArthur River/Key Lake	11.2	0.1	— [2]
Cigar Lake	9.0	9.0	9.0
Inkai[1]	3.2	—	—
Rabbit Lake	0.0	— [2]	— [2]
US ISR Operations	0.4	0.1[2]	— [2]
Total	**23.8**	**9.2**	**9.0**

1 We expect total production from Inkai to be 8.3 million pounds in 2019 on a 100% basis. Due to the transition to equity accounting, our share of production will be shown as a purchase when delivered.

2 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 the US ISR Operations.

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)	5.4 million pounds (measured and indicated), average grade U_3O_8 – 2.65% 2.8 million pounds (inferred), average grade U_3O_8 – 2.25%
Mining methods	blasthole stoping raiseboring
Licensed capacity	mine and mill: 25.0 million pounds per year
Total packaged production 2000 to 2018	325.4 million pounds (McArthur River/Key Lake) (100% basis)
2018 production	0.1 million pounds (0.2 million pounds on 100% basis)
2019 production outlook	0 million pounds (0 million pounds on 100% basis)
Estimated mine life	23 years (assumes production of 18 million pounds per year after ramp-up)
Estimated decommissioning cost[2] (100% basis)	$38 million – McArthur River $222 million – Key Lake

1 Mineral resources that are not mineral reserves have no demonstrated economic viability.
2 These updated estimates are under regulatory review.

Business structure

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

- Cameco – 69.805%
- Orano (formerly AREVA) – 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 Linda Bray, 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 14 to 16, environmental matters see *Safety, Health and Environment* starting on page 82, and taxes see page 96.

For a description of royalties payable to the province of Saskatchewan on the sale of uranium extracted from orebodies within the province, see page 95.

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 111, Environmental risks starting at page 112 and Legal and other risks starting at page 113.

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 22 mineral claims, totaling 88,319 hectares, surrounding the deposit. The mineral claims are in good standing until 2020, 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. One of the ways we implement this commitment is through our Five Pillar Corporate Social Responsibility (CSR) Strategy. For more information, see Sustainable development at page 81.

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 extracted 327.5 million pounds (100% basis) since mining began in 1999.

McArthur River currently has nine zones with delineated mineral reserves and/or resources (Zones 1 to 4, 4 South, A, B, McA North 1 and McA North 2). Active mining was occurring from Zone 2 and Zone 4 prior to care and maintenance.

Zone 2 has been actively mined since production began in 1999. The ore zone was initially divided into three freeze panels and 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 near completion with 4.8 million pounds of mineral reserves remaining secured behind freeze walls.

Zone 4 has been actively mined since 2010. Similar to Zone 2, the zone was divided into four freeze panels and 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 mining restarts.

Zone 1 is the next planned area to be brought into production. Freeze hole drilling was 90% complete and brine distribution construction was approximately 10% when work was suspended. Work remaining before production can begin includes completion of freeze hole drilling, completion of 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.

We have extracted 327.5 million pounds (100% basis) since mining began in 1999.

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))
- *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 method

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 hazards due to the high-grade uranium ore. As such, mine designs and methods are selected on their ability to mitigate hydrological, radiological and geotechnical risks.

All the mineralized areas discovered to date at McArthur River are in or partially in water-bearing ground with pressures ranging from 680 to 850 psi. 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.

Ground freezing

Ground freezing is used at McArthur River as a means to prevent or restrict high pressure ground water from entering the mine. Chilled brine is circulated through freezeholes 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.

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.

Raisebore mining

Raisebore mining has been in use since 1999. It is suitable for massive high-grade zones where there is access both above and below the ore zone. The raise opening created by mechanical cutting has proven to be very stable making this method favourable for mining the weaker rock mass areas of the deposit. In addition, holes can be drilled accurately over long distances when compared to traditional production drilling, eliminating the need for sublevel access. Waste and ore can be easily separated by bucket scanning.

Production raises are designed to overlap each other in order to maximize recovery of the high-grade ore at the expense of an average cement dilution of approximately 17%. Recoveries are typically 97.5% with a small amount of the ore lost in the cusps between the circular raises.

Raisebore mining is planned to continue to be one of the main extraction methods over the mine life, specifically for the creation of slots for blasthole stoping, for mining the Zone 4 clay area and for mining the more massive vertical ore areas of Zone B.

Blasthole stoping

Testing of blasthole stoping began in 2011 and was approved by the CNSC as an extraction method in November 2013. Since approval, the use of this method has expanded to the point where the majority of the ore is now extracted using this method.

Blasthole stoping is planned in areas where blastholes can be accurately drilled and small stable stopes excavated without jeopardizing the freeze wall integrity. Blasthole stope mining has shown an advantage over raisebore mining on overall extraction efficiency by reducing underground development, concrete consumption, mineralized waste generation, and improving extraction cycle time. Use of this method has significantly improved McArthur River's overall operating costs.

Boxhole boring

After successful testing, boxhole boring was approved by the CNSC as an extraction method in July 2013. Originally, boxhole mining was planned for some of the more challenging upper mining areas, but following the success in development of Zone 2 – Panel 5, mine designs were revised and boxhole mining was replaced with more productive and cost effective methods. In 2015, the boxhole program was discontinued. No further use of this mining method is planned.

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.

Processing for transport to Key Lake Mill

High-grade ore is slurried, ground, and thickened underground at McArthur River. The resulting finely-ground slurry is pumped to surface and, after blending and further thickening, is transported to Key Lake Mill in slurry trucks.

Low-grade mineralization is hoisted to surface and stored on the low-grade mineralization pads. This material is then hauled to the Key Lake low-grade mineralization blend pads.

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. In 2019, 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. In 2019, 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 recycle 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 Production

In 2018, beginning in February, we had a temporary planned production suspension. In response to market conditions, 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. Production from McArthur River/Key Lake for the year was 0.2 million pounds (100% basis); our share was 0.1 million pounds compared to 11.2 million pounds in 2017 due to the production suspension in 2018.

2019 Production

Due to continued uranium price weakness, we have suspended production for an indeterminate duration. As a result of the suspension, we do not expect the operations to produce any uranium in 2019. Our share of the cash operating and capital costs to maintain both operations during the suspension is expected to range between $7 million and $9 million per month.

The collective agreement with the United Steelworkers local 8914 for unionized employees at McArthur River and Key Lake expired in December 2017, and the collective bargaining process has begun. There is a risk to the restart of operations after the production suspension if we are unable to reach agreement and there is a labour dispute.

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 2019.

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.

McArthur River production 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. The annual licensed capacity is 25 million pounds per year (100% basis). We expect that this paced approach will allow us to extract maximum value from the operation as the market transitions.

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)
- *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
- 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 23 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
- 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 tailings management facilities 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.
- 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 TMF was experienced. We therefore implemented a long-term stabilization plan and the final phase is targeted for completion in 2019.

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 submitted to the CNSC in 2014 and we received final approval from the CNSC in January 2015. These documents include our estimated cost for implementing the decommissioning plan and addressing known environmental liabilities.

We, along with our joint venture participant, have letters of credit posted as financial assurances with the government of Saskatchewan to cover the amount in the 2013 *preliminary decommissioning cost estimate* for McArthur River ($48 million) and the 2015 *preliminary decommissioning cost estimate* for Key Lake ($218 million).

We have submitted updates for our McArthur River and Key Lake preliminary decommissioning cost estimates, $38 million and $222 million respectively, and await regulatory feedback and ultimately approval.

Operating, capital costs and economic analysis

The following is a summary of the operating and capital cost estimates for the life of mine, stated in constant 2018 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	$ 995.1
Mining costs	1,715.4
Process	310.8
Corporate overhead	186.3
Total mining costs	$ 3,207.6
Key Lake Milling	
Administration	$ 990.4
Milling costs	1,501.5
Corporate overhead	145.8
Total milling costs	$ 2,637.7
Total operating costs	**$ 5,845.3**
Total operating cost per pound U_3O_8	**$ 14.97**

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) Operational spending in Year 0 is representative of annual operational spending while the McArthur River mine and Key Lake mill are both in a state of care and maintenance.

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	$ 419.3
McArthur River Mine Capital	
Freeze infrastructure	$ 122.7
Ventilation	7.3
Concrete batching and delivery	11.0
Other mine capital	201.5
Total mine capital	$ 342.5
Key Lake Mill Sustaining	
Total mill capital	$ 180.1
Total capital costs	**$ 941.9**

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) Capital spending in Year 0 is representative of annual capital spending while the McArthur River mine and Key Lake mill are both in a state of care and maintenance.
(4) 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 capital at McArthur River is mine development. Other significant capital includes freeze infrastructure costs. 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. However, to prepare the economic analysis, the following assumptions have been made:

- work commences to restart operations at McArthur River and Key Lake on January 1, 2020
- ramp-up of operations in 2020 with 4 million pounds packaged
- annual production is 18 million pounds from 2021 to 2040
- ramp-down of production in the last 2 years of production
- an average realized price of $56.39 (Cdn) per pound U_3O_8 over the period 2020 to 2042

The foregoing dates are for assumption purposes only and do not reflect a decision to restart operations or a preferred timetable for a restart. No decision to restart has been made.

The analysis is from the point of view of Cameco, which owns 69.805% of the MRJV, and incorporates 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 has been 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.

The economic analysis 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) has been estimated to be 11.6%.

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	Yea
Production volume (000's lbs U3O8)	—	2,788	12,508	12,550	12,653	12,591	12,621	12,611	12,550	12,556	12,587	12,553	12
Sales revenue	$—	$131.7	$ 572.2	$ 577.5	$ 602.8	$ 618.7	$ 635.0	$ 651.6	$ 662.9	$ 683.3	$ 698.0	$ 709.1	$ 7
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	1
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	
Basic royalty	—	5.6	24.3	24.5	25.6	26.3	27.0	27.7	28.2	29.0	29.7	30.1	
Resource surcharge	—	3.9	17.2	17.3	18.1	18.6	19.0	19.5	19.9	20.5	20.9	21.3	
Profit royalty	—	—	42.6	49.7	53.5	54.1	57.3	59.6	60.4	62.3	64.1	61.1	
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	$ 3

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	12,603	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	33.3	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	$2,973.3											
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 annual cash flows, production and mine life are forward-looking information and are based specifically on the risks and assumptions discussed on pages 2 and 3. We may change our operating or capital spending plans in 2019, depending upon uranium markets, our financial position, results of operation or other factors. Estimates of expected future production, net annual cashflows, 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 2018 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 is also 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

- GPS or mine site surveying instruments are used in the field to verify the location of surface drillholes.
- Holes are generally drilled every 12 to 25 metres, on sections 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 drilled width. Angled holes usually intercept mineralization closer to perpendicular, giving intercepts that are closer to true width.
- All holes are radiometrically probed, where possible.
- A geoscientist examines the surface drillhole core in the field, determines its overall characteristics, including mineralization, logs the information, and takes samples that have noteworthy alteration, structures and radiometric anomalies.
- Basement sampling procedures depend on the length of the interval sampled, and attempts are made to avoid having samples cross lithological boundaries.
- All core with radioactivity greater than a set threshold is split and sampled for assay.
- We measure the uranium grade by assaying core. Core recovery is generally considered excellent with some local exceptions. The quality and representativeness of the surface drillhole samples and probe readings are generally adequate for mineral resource estimation and mine planning. Samples deemed inadequate are not used for mineral resource estimation.

Underground samples

- Holes are drilled in stations 30 metres apart. Each station is drilled with three fans of holes, covering approximately 10 metres across the deposit.
- Uranium grade is calculated from the adjusted radiometric probe readings. Radiometric probing is at 0.1 metre spacing in mineralized zones and 0.5 metre spacing in non-mineralized zones. The drillhole fans give the gamma probes representative access across the entire 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, we log the core, photograph it, and then sample it for uranium analysis. We sample the entire interval instead of splitting the core, which ensures more representative results.
- Core recovery is generally excellent with some local exceptions.
- The quality and representativeness of the underground drillhole samples is adequate for mineral resource estimation and mine planning.

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:HNO3, 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.

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 database used for the current mineral resource and mineral reserve estimates was validated by Cameco qualified geoscientists. Many of the original assay certificates are available and have been reviewed by Cameco geoscientists.

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 potential for manual data transfer errors.

Additional quality control measures and data verification procedures taken include:

- enter surveyed drillhole collar coordinates and hole deviations in the database, display them in plan views and sections and visually compare them to their planned location
- visually validate core logging information on plan views and sections, and verify it against photographs of the core or the core itself
- compare downhole radiometric probing results with core radioactivity and drilling depth measurements
- validate uranium grade based on radiometric probing with sample assay results, when available
- compare the information in the database against the original data, including paper logs, deviation survey films, assay certificates and original probing data files

Quality assurance and quality control for underground drillhole information focuses on ensuring quality probing results. We do this by:

- using a software program to check for data errors such as overlapping intervals and out of range values
- entering surveyed drillhole collar coordinates and downhole deviations into the database and visually validating and comparing to the planned location of the holes
- checking the calibration of probes before using them and periodically duplicating probe runs
- comparing downhole radiometric probing results with radioactivity measurements made on the core and drilling depth measurements
- validating uranium grades based on radiometric probing with sample assay results once available

Since 2000, 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 also compare the uranium block model with mine production results on a quarterly basis to ensure an acceptable level of accuracy is maintained.

In 2014, we completed at Cigar Lake a test program of the McArthur River radiometric probes to demonstrate that consistent count rates were being obtained between probes. A total of eight surface freezeholes were probed multiple times with each probe to compare count rates. This test demonstrated that probes with the same equipment configurations and GM tubes produced very consistent count rates. The reliability of the probe readings was confirmed in January 2015 by comparison with the results of an independent non-Cameco test using a series of probes built by a different manufacturer. Additional testing was completed in 2016 and 2017 to ensure consistent count rates between probes. Radiometric probe reliability is continually monitored, recorded and reviewed according to internal documented standards.

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 expected production supports this opinion.

Mineral reserve and resource estimates

Please see page 75 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)	88.3 million pounds (proven and probable), average grade U_3O_8 – 14.48%
Estimated mineral resources[1] (our share)	51.0 million pounds (measured and indicated), average grade U_3O_8 – 14.41% (our share) 11.8 million pounds (inferred), average grade U_3O_8 – 5.97%
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 2018	64.9 million pounds (100% basis)
2018 production	9.0 million pounds (18.0 million pounds on 100% basis)
2019 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 – 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., Linda Bray, 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 14 to 16, environmental matters see *Safety, Health and Environment* starting on page 82, and taxes see page 96.

For a description of royalties payable to the province of Saskatchewan on the sale of uranium extracted from orebodies within the province, see page 95.

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 111, Environmental risks starting at page 112 and Legal and other risks starting at page 113.

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 km northeast by road and McArthur River mine is 46 km 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 December 1, 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 25 mineral claims (Nos. S-106540 to 106564), totaling 92,740 hectares, adjoining the mineral lease and surrounding the site. The mineral claims are in good standing until 2023.

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. One of the ways we implement this commitment is through our Five Pillar CSR Strategy. For more information, see Sustainable development at page 81.

The closest inhabited site is Points North Landing, 56 km northeast by road. The community of Wollaston Lake is approximately 80 km 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. Phase 1, the eastern part of Cigar Lake, is approximately 670 metres long by 100 metres wide and Phase 2, 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 48 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
- 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.

McLean 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 99% 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 tailings management facility. The ore is processed at the McClean Lake mill. See *Toll Milling Agreement* below for a discussion of the McClean Lake tailings management facility.

Waste

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
- 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 2018, total packaged production from Cigar Lake was 18 million pounds U_3O_8; our share was 9 million pounds, achieving our forecast. In 2019, we expect to produce 18.0 million packaged pounds at Cigar Lake; our share is 9.0 million pounds.

The mining plan is designed to extract all of the current mineral reserves. The following is a general summary of the production schedule guideline and parameters on a 100% basis for the remainder of the Cigar Lake mineral reserves:

Total mill production	• 174.8 million pounds of U_3O_8, based on current mineral reserves and an overall milling recovery of 99%
	• Full annual production of 18 million pounds of U_3O_8[1]
Total mine production	• 553 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	• 14.5% 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, our 2019 production plan for the Cigar Lake mine includes an extended shut-down during the third quarter, which is expected to result in reduced flight and camp costs. The shut-down will consist of a four-week vacation period, 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 expires on May 31, 2019. There is a risk to the production plan if Orano is unable to reach an agreement and there is a labour dispute.

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. As mine production progresses, a significant expansion to the surface freeze plant capacity will be required.

During 2018, we:

- advanced the freeze plant expansion project, achieving substantial completion of construction and commencement of the commissioning phase
- implemented an extended summer shutdown, during which maintenance activities were completed as well as a capital upgrade to process pumps underground
- refurbished a JBS unit and brought two new production tunnels online
- 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

In alignment with our production plans, limited underground mine development was undertaken in 2018.

In 2019, we expect to:

- continue surface freeze drilling and complete construction and commissioning of the freeze plant infrastructure expansion in support of future production
- resume underground mine development and complete two new production tunnels as well as expand ventilation and access drifts in alignment with the long-term mine plan

The McClean Lake mill has been expanded to process and package all Cigar Lake ore. Construction of the expanded facility was completed in 2016.

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. The McClean Lake mill required modification and expansion to process and package all of Cigar Lake's current mineral reserves. All major upgrades are complete and the mill has sufficient capacity to meet Cigar Lake's production schedule.

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 174.8 million pounds.

Operating Costs ($Cdn million)	Total (2019 – 2029)
Cigar Lake Mining	
Site administration	$ 404.7
Mining costs	787.1
Process	196.2
Corporate overhead	83.1
Total mining costs	$ 1,471.1
McClean Lake Milling	
Administration	$ 411.7
Milling costs	644.1
Corporate overhead	38.5
Toll milling	202.3
Total milling costs	$ 1,296.6
Total operating costs	**$ 2,767.7**
Total operating cost per pound U_3O_8	**$ 15.91**

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 (2019 – 2029)
Cigar Lake Mine Development	$239.0
Cigar Lake Mine Capital	
Sustaining capital	$ 81.3
Capacity replacement capital	94.2
Growth capital	—
Reclamation	1.4
Total mine capital	$176.9
McClean Lake mill sustaining capital	$ 63.1
McClean Lake mill expansion capital	165.6
Total mill capital	$228.7
Total capital costs	**$644.6**

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 and 3. We may change operating or capital spending plans in 2019, 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 25 surrounding mineral claims. The data from the exploration program on the 25 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 Phase 1 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 (Phase 1) and the western portion (Phase 2) 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 at Phase 1. In 2016, we initiated a surface delineation program on the Phase 2 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 Phase 1 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 on the Phase 1 deposit is 7 x 7 metres.

The Phase 2 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 of Phase 2, locally reducing the drillhole spacing down to an approximate 15 x 15 m pattern.

The majority of exploration and delineation drilling completed by us on the surface of the mineral lease consists of wireline diamond drilling recovering NQ size (47.6 millimetres) drill core. All surface freezehole core is of PQ size (85.0 millimetres).

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 within the Phase 1 mineral resource and reserve and Phase 2 mineral resource.

Surface freezehole drilling over Phase 1 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.

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 (aN), 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
- 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:HNO3, 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.

Additional data quality control measures taken include:

- entering surveyed drillhole collar coordinates and downhole deviations into the database and visually validating and comparing to the planned location of the holes
- random survey spot checks of drillhole collar locations, which are reviewed in detail if differences are encountered
- using a software program to check for data errors such as overlapping intervals and out of range values
- comparing downhole radiometric probing results with radioactivity measurements made on the core and drilling depth measurements
- validating uranium grades based on radiometric probing with sample assay results once available

In 2014, we completed a thorough test program of our high-flux probes to demonstrate that consistent count rates were being obtained between probes. A total of eight surface freezeholes were probed multiple times with each probe to compare count

rates. This test demonstrated that probes with the same equipment configurations and GM tubes produced very consistent count rates. The reliability of the probe readings was confirmed in January 2015 by comparison with the results of an independent non-Cameco test using a series of probes built by a different manufacturer. Probe reliability is continually monitored, recorded and reviewed according to internal documented standards. For drillholes completed prior to 2011, the reliance on down-hole radiometric probing for determination of uranium grades for mineral resource estimation is minimal. Boreholes completed prior to 2011 were consistently sampled to obtain U_3O_8 chemical assays when uranium mineralization was encountered.

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 75 for our mineral reserve and resource estimates for Cigar Lake.

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 Kazatomprom (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)	104.6 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% 30.0 million pounds (inferred), average grade U_3O_8 – 0.03%
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 2018	49.2 million pounds (100% basis)
2018 production	6.9 million pounds (100% basis)
2019 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 review)

1 We signed an agreement with our partner Kazatomprom 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 59.

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%
- Kazatomprom – 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	• Kazatomprom is established
1998	• KATEP transfers all of its interest in JV Inkai to Kazatomprom
	• 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 Kazatomprom, 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 Kazatomprom 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 Kazatomprom 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 Kazatomprom and JV Inkai to restructure and enhance JV Inkai, subject to closing, increasing Kazatomprom'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 Kazatomprom 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 Darryl Clark, PhD, FAusIMM, Linda Bray, 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 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 14 to 16, environmental matters see *Safety, Health and Environment* starting on page 82, and taxes see page 96.

For a description of royalties payable to the province of Saskatchewan on the sale of uranium extracted from orebodies within the province, see page 95.

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 111, Environmental risks starting at page 112 and Legal and other risks starting at page 113.

About the Inkai property

Location

Inkai is located in the Suzak District of South Kazakhstan 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 Kazatomprom 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 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 60 for more information.

JV Inkai must give preference to local businesses. See Kazakhstan government and legislation – local content – on page 62 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 January 23, 2020
- “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 January 23, 2020
- “Licence for radioactive waste handling” valid until January 23, 2020

JV Inkai’s material environmental permits are described on page 60.

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 International Atomic Energy Agency 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.

Engineering 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

Total production	Based on current mineral reserves, we expect Inkai to produce a total of 222.5 million pounds U_3O_8 (100% basis, recovered after processing) over the life of the mine from January 2019 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. Engineering work is in progress for a process expansion of the Inkai circuit to 10.4 million pounds U_3O_8 per year.

Production increase and restructuring – Implementation Agreement

In 2016, we signed an agreement with Kazatomprom 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 Kazatomprom's ownership interest is 60%. However, during production ramp up, we are entitled to purchase 57.5% of the first 5.2 million pounds. As annual production increases above 5.2 million pounds, we are entitled to 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, our share in all production will be 40%, 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
- the loan that our subsidiary made to JV Inkai to fund exploration and evaluation of the historically defined block 3 area provides for priority repayment

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 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 Kazatomprom, which, subject to receiving the required government permits, will allow Kazatomprom 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.

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 Kazatomprom. 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.

Cameco funding

We have an outstanding loan for JV Inkai's work on block 3 prior to the restructuring and, as of December 31, 2018, the principal and interest amounted to $91 million (US). Under the implementation agreement, the partners have agreed that JV Inkai will distribute excess cash from its operation first as priority repayment of this loan. To date in 2019, payments of $44 million (US) have been received.

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 84 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 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 pre-emptive 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 pre-emptive 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 large 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 licenses 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, 137 areas are declared to be strategic deposits, including Inkai's blocks.

Transfer of subsoil use rights on strategic areas is subject to the preemptive 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. Thus, 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 on Currency Regulation and Currency Control* No. *57-III ZRK* dated June 13, 2005, the Kazakhstan government is granted the power to establish a special currency regime for a period of up to one year that can:

- require a holder to deposit a certain portion of its foreign currency with a Kazakhstan bank or the National Bank of Kazakhstan for a set period on an interest-free basis
- require the permission of the National Bank of Kazakhstan for certain currency transactions
- require the mandatory sale of foreign currency received by residents
- restrict use of overseas bank accounts, and
- establish terms for the return of foreign currency earnings and limits on volumes, amount and currency of settlement under foreign exchange transactions.

On July 2, 2018, a new *Law of the Republic of Kazakhstan on Currency Regulation and Currency Control No. 167-VI* was adopted (New Currency Law) (effective from July 1, 2019). Under the New Currency Law, the requirements of the special currency regime may not restrict the obligations owed to non-residents arising under currency contracts entered into before the introduction of the special currency regime as well as the transfer of dividends, interest and other proceeds under deposit, and securities of non-residents.

The New Currency Law envisages *inter alia* the following substantial changes to Kazakhstan currency control:

- 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 222.5 million pounds U_3O_8 and a 279 Kazakhstan Tenge to 1 Cdn dollar exchange rate assumption.

Operating Costs ($Cdn million)	Total (2019 – 2045)
Site administration	$ 514.6
Processing costs	242.2
Mining costs	706.8
Corporate overhead	439.0
Total operating costs	**$1,902.3**
Average cost per pound U_3O_8	**$ 8.65**

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 (2019 – 2045)
Total wellfield development	$594.7
Construction and maintenance capital	143.1
Sustaining capital	56.6
Total capital costs	**$794.3**

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	10,399	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.

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 2019 to 2020 due to the capital required for the production ramp-up to 10.4 million pounds annually as well as upgrades to existing facilities.

Capital and operating cost estimates were reduced relative to the estimates reported in last year's Annual Information Form. The reduction is due to the combined effect of optimizations in lixiviant processing, wellfield and maintenance planning, as well as a more favorable Kazakhstan Tenge to Cdn dollar exchange rate.

Our expectations 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 and 3. Operating or capital spending plans may change in 2019, depending on uranium markets 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

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 2018 JV Inkai started infill drilling program in the central and western parts of the MA Area aimed at upgrading the inferred and indicated resources and probable reserves to higher categories. A total of 689 drillholes, (259,556 metres) were drilled, including 268 core holes (101,733 metres) and 421 non-core holes (157,824 metres). Drilling was carried out on progressively tightening from 400 by 100 metres to 200 by 50 metres grids. The infill drilling program is planned to be completed by the end of 2019. It is to be followed by the preparation of a resource estimate report 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 Kazatomprom, 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, past and recent production, 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 75 for our mineral reserve and resource estimates for Inkai.

Uranium – Tier-two curtailed 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 2018	202.2 million pounds
2018 production	0 million pounds
2019 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 2018. As a result, there was no production in 2018.

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.

Impairment

In 2016, as a result of the production suspension, we recognized an impairment charge for the full carrying value of $124 million.

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 2018		33.0 million pounds
2018 production		0.1 million pounds
2019 production outlook		0 million pounds
Estimated decommissioning cost		Smith Ranch-Highland: $224 million (US), including North Butte Crow Butte: $51 million (US)

1 Including Highland mill.

Production and curtailment

As a result of our 2016 decision, production at the US ISR Operations ceased in 2018, resulting in production of approximately 100,000 pounds.

On September 30, 2018, the Nuclear Regulatory Commission approved a 10-year renewal of the operating licence for Smith Ranch-Highland. The licence is valid until September 30, 2028.

Future production

We do not expect any production in 2019.

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 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. In 2018, we increased our ownership from 70% to 100%.

2018 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.

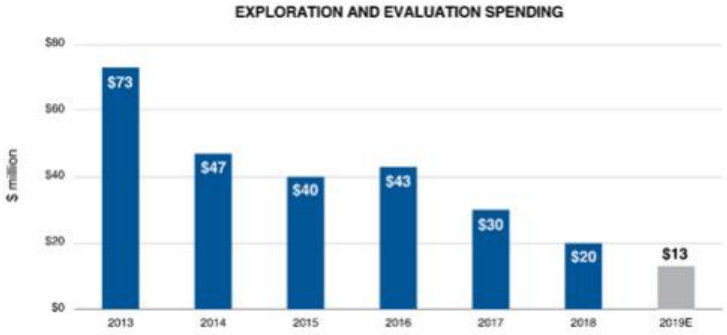
Planning for the future

2019 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 0.7 million hectares (1.7 million acres). In northern Saskatchewan alone, we have direct interests in about 0.6 million hectares (1.6 million acres) of land covering many of the most prospective exploration areas of the Athabasca Basin.



2018 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 2018, we spent about $4 million on brownfields and advanced uranium projects in Saskatchewan and Australia. At the US ISR Operations we spent $1 million.

Regional exploration

We spent about $15 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 CSR 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 maintaining 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



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	UO_3
ISO certification	ISO 14001 certified
Licensed capacity	18 million kgU as UO_3 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.

Fuel services – conversion and fuel manufacturing



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	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
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 UO_2 as finished bundles
Estimated decommissioning cost	$21 million

Fuel services produced 10.5 million kgU, 33% higher than 2017. 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 produces 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 United States 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.

Environment

In 2009, we completed a site-wide environmental investigation of subsurface contamination and a site-wide risk assessment to identify contaminants that could pose a potential risk to the environment. We used the results to develop an environmental management plan to mitigate potential risks. In 2010, we enhanced the plan by adding a number of groundwater retrieval wells. In 2011, we added four additional wells. The environmental management plan has met expectations since that time. In 2014, we also met with the regulatory authorities to discuss and agree on the adequacy of the environmental management plan and opportunities to further enhance it through the Vision in Motion project.

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

In 2018, the Vision in Motion project made significant progress and began substantial implementation activities. The first loads of historical waste were successfully delivered to the Long Term Waste Management Facility being constructed and operated by Canadian Nuclear Laboratories (CNL). The project work will continue for several years.

Labour relations

The collective agreement with unionized employees at our conversion facility in Port Hope expires in June 2019. There is a risk to our production plans if we are unable to reach an agreement and there is a labour disruption.

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.

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. The previous contract expired May 30, 2018.

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, 2018.

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

- Linda Bray, principal metallurgist, technical services, Cameco
- Greg Murdock, general manager, McArthur River/Key Lake, Cameco
- Alain D. Renaud, lead geologist, technical services, Cameco

Cigar Lake

- Scott Bishop, director, technical services, Cameco
- Linda Bray, principal metallurgist, technical services, Cameco
- Alain D. Renaud, lead geologist, technical services, Cameco
- Lloyd Rowson, general manager, Cigar Lake/Rabbit Lake, Cameco

Inkai

- Darryl Clark, consultant geologist, (former president, Cameco Kazakhstan LLP)
- Linda Bray, principal metallurgist, technical services, Cameco
- Alain D. Renaud, lead geologist, 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 97 for a discussion of the risks that can affect our business.

Please see pages 79 and 80 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 104. 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 98
- Technical challenges – see *Technical challenges at Cigar Lake and McArthur River* at page 99

Inkai mineral resource and reserve estimates

- Political risks – see page 108

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 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, 2018 (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	
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)	RESERVES CONTENT (LBS U_3O_8)	METALLURGICA RECOVERY (%
Cigar Lake	UG	171.0	15.74	59.4	382.1	13.91	117.2	553.1	14.48	176.6	**88.3**	9
Key Lake	OP	61.1	0.52	0.7	—	—	—	61.1	0.52	0.7	**0.6**	9
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**	9
Inkai	ISR	205,349.0	0.04	164.3	155,529.5	0.03	97.2	360,878.5	0.03	261.6	**104.6**	8
Total		**207,615.1**	**—**	**544.6**	**156,450.1**	**—**	**286.1**	**364,065.2**	**—**	**830.8**	**467.1**	**—**

(UG – underground, OP – open pit, ISR – in situ recovery), totals may not add up due to rounding.

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 298 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 increased from 458 million pounds U_3O_8 at the end of 2017, to 467 million pounds at the end of 2018. The change was primarily the result of:

- McArthur River's Zone B mineral resource update which added approximately 23.8 million pounds of proven and probable reserves

partially offset by:

- production, which removed 12.3 million pounds from our mineral inventory
- other minor adjustments at Cigar Lake and McArthur River

Mineral resources

As at December 31, 2018 (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	14.2	11.91	3.7	307.1	14.52	98.3	102.0	51.0	180.0	5.97	23.7	11.8
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	35.1	2.86	2.2	7.8	5.4	80.5	2.25	4.0	2.8
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	1,607.3	0.19	6.7	939.3	0.35	7.3	13.9	13.9	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	621.7	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	3,712.4	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	**70,683.6**	**—**	**144.1**	**69,334.8**	**—**	**381.8**	**525.9**	**422.8**	**132,036.4**	**—**	**257.7**	**175.6**

Totals may not add up due to rounding.

Note that mineral resources:

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

Changes this year

Measured and indicated mineral resources decreased from 425 million pounds U_3O_8 at the end of 2017, to 423 million pounds at the end of 2018. Our share of inferred mineral resources is 176 million pounds U_3O_8, a decrease of 14 million pounds from the end of 2017. The variance in mineral resources was mainly the result of:

- the sale of our interest in the Wheeler River Joint Venture which resulted in a reduction of 18.7 million pounds of indicated and 11.8 million pounds of inferred resources
- removal of 0.7 million pounds of measured from restoration related activities and 1.3 million pounds of indicated and 1.1 million pounds of inferred resources following a review of economic parameters from the US ISR Operations
- reduction of 3.1 million pounds of inferred resources from McArthur River

partially offset by:

- an increase in our ownership in the Kintyre project from 70% to 100% which added 16.1 million pounds of indicated and 1.8 million pounds of inferred resources

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 mine extraction process. Mineral resources do not include such allowances.
- 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.
- 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 planned production and the annual forecast realized prices.
- Mining rates assume annual packaged production of 18 million pounds.

Key parameters

- The uranium grade is determined from assay samples where available, or by converting radiometric probing values to equivalent % U_3O_8 based on a correlation between radiometric counts and assay values.
- When not measured, densities are determined using formulas based on the relation between density measurements of drill core and chemical assay grades.
- 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

- Mineral resources were estimated using 3-dimensional block models and cross-sectional method. Mineral reserves were estimated with 3-dimensional block models.
- The models were created from the geological interpretation on section and plan views and in 3D derived from surface and underground drillhole information. Estimates of block grade and density were obtained with ordinary kriging or inverse squared distance methods.
- Maptek Vulcan and Leapfrog Geo software were used to generate mineral resources and reserves estimates.

Cigar Lake

Key assumptions

- Mineral reserves have been estimated with an average allowance of 30% dilution at 0% U_3O_8, inclusive of 0.5 m of dilution material above and below the planned cavity.
- 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 planned production and 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.
- A correlation between uranium, nickel, cobalt and clay content and density was applied where the density was not directly measured for each sample.

- 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 on section and plan views and in 3D derived from drillhole information. Mineral resources and mineral reserves were estimated using a 3-dimensional block model. Geostatistical conditional simulation (with sequential Gaussian simulation) and inverse distance squared were used to estimate the grade and density of the different areas.
- Maptek Vulcan and Leapfrog Geo software were used to generate mineral resources and reserves 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 298 Kazakhstan Tenge to $1.00 Cdn.

Key parameters

- The mineral resources estimates are based on 2,352 surface drillholes.
- 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 reserves have been estimated at a minimum grade-thickness of 0.130 m% U_3O_8.
- 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 outlines was done on 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.
- Only indicated and measured mineral resources are considered for conversion to mineral reserves.
- 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.

Sustainable development

Social responsibility, safety of our workforce and the public, as well as environmental protection are top priorities for us. In fact, we have built our corporate objectives around them within our four measures of success: a safe, healthy and rewarding workplace, a clean environment, supportive communities, and outstanding financial performance. Sustainability is at the core of our company culture. It helps us:

- build trust, credibility and corporate reputation
- gain and enhance community support for our operations and plans
- attract and retain employees
- manage risk
- drive innovation and continual improvement to build competitive advantage

Sustainability policy

We have a sustainability policy that defines our standards and expectations for sustainable development throughout the company. Under this policy:

- We view sustainability as an integrated approach to conducting business that incorporates social, environmental and economic principles into the way we operate.
- We are committed to a continuous effort to instill sustainability into the many facets of our 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.
- Our goal is to be recognized globally as a leader in sustainability.

We seek to implement our sustainability policy through policies and programs implemented in areas such as conduct and ethics; safety, health, environment and quality; human resources; procurement; risk; community investment; and community engagement.

Our chief executive officer is responsible for ensuring the policy is maintained, complied with, and implemented through its supporting policies and programs.

Five Pillar CSR Strategy

Over more than 30 years of operation and partnership in northern Saskatchewan, we have developed a comprehensive Five Pillar CSR Strategy aimed at ensuring the support of the communities with whom we work, all across our operations globally. The strategy is flexible and is implemented by our global operations at a local level to reflect the needs of the local communities.

While developed in part as a result of some of the socioeconomic obligations that are contained in our surface lease agreements with the Saskatchewan government, 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. The pillars are:

1. *Workforce Development* is designed to deliver programming that aims to build educational and skills capacity in local communities. The goal of this pillar is to ensure that students stay in school, have the means to attend post-secondary education, and receive training to facilitate employment opportunities in our industry. We launched a new northern Saskatchewan scholarship program in 2018 designed to help students from across the north reach their post-secondary goals.

2. *Business Development* is designed to promote the involvement of locally-owned businesses in contracting opportunities at our operations, and to provide additional jobs, revenue streams and capacity building at the local community level. We work with local contractors in a variety of ways, including by providing updates on contracting opportunities. In Saskatchewan, we also have a northern contractor strategy, which gives preference to majority-owned northern companies and helps to build a long-term relationship between northern contractors and ourselves.

3. *Community Engagement* is 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. While the main activities here are focused specifically on the communities in closest proximity to our operations, in northern Saskatchewan, we also ensure that the

greater region is kept informed of our operations, whether it is through our yearly community tours or community focused websites.

4. *Community Investment* is designed to help local communities with much-needed funding for community programming and infrastructure. Through this pillar, we look to support community initiatives that are focused on youth, education and literacy, health and wellness and community development.

5. *Environmental Stewardship* is designed to support our overall environmental programming. It is intended to provide communities with a voice in both the formal environmental assessment regulatory process, as well as ongoing monitoring activities.

Impact of organizational changes

We recognize that changes in our operations and support functions, including the suspension of production at Rabbit Lake, curtailment at Cameco Resources' US ISR Operations, the suspension of production at McArthur River/Key Lake for an indeterminate duration, and the reduction of the workforce at our northern Saskatchewan operations and at our corporate office, all have a significant impact on the communities where we operate. We regret the negative impact that these carefully deliberated decisions have on affected employees and other stakeholders. However, these actions are deemed necessary for the long-term health of the company in a uranium market that continues to be weak. Improving operational efficiency is part of our strategy to effectively manage costs and remain competitive through these low times, while positioning the company and our stakeholders to benefit as the market improves.

Safety, Health and Environment

We introduced our safety, health, environment and quality (SHEQ) policy in 1991. We have refined our approach over the years and have since developed our overall integrated SHEQ management system.

The SHEQ policy was reviewed and reissued in 2018, includes our statement of principles and identifies the seven programs that comprise the SHEQ management system, which implements the SHEQ policy and supports these principles.

Our principles

- Preventing injury, ill health and pollution
- Fulfilling compliance obligations
- Keeping risks at levels as low as reasonably achievable, taking into account economic and societal factors
- Ensuring quality of processes, products and services
- Continually improving our overall performance

SHEQ management system

The seven programs that comprise our SHEQ management system are as follows:

- Quality management program
- Safety and health management program
- Radiation protection program
- Environmental management program
- Management system audit program
- Emergency preparedness and response program
- Contractor management program

We benchmark our system against those used by other companies in the mining and nuclear power generation sectors. On behalf of the board, the safety, health and environment committee oversees our SHEQ policy and management system as well as our safety and environmental performance. Our chief executive officer is responsible for ensuring this system is established and maintained across the company.

Our SHEQ management system is centralized and managed at the corporate level. It is implemented across the corporation as a whole with a focus on our operations.

Corporate SHEQ activity at our operations focuses on ensuring consistent and effective application of programs and procedures, as well as carrying out certain centralized functions and providing support for identified issues. We regularly audit our sites to ensure safety, health, and environmental requirements, including legal ones are being met. The SHEQ programs are part of the management system that addresses environmental risks, which is an integral part of meeting the requirements of ISO 14001. All of our operating sites are included in the corporation's certification to the ISO 14001 standard.

In 2018, we invested:

- $70 million in environmental protection, monitoring and assessment programs, approximately 11% more than in 2017
- $20 million in health and safety programs, or 13% less than 2017

The increase in environmental expenditures in 2018 was largely due to expenditures related to Vision in Motion projects, which were somewhat offset by overall cost reductions at other Cameco locations. The decrease in health and safety related expenditures were due to overall cost reductions across our operations.

Spending on environmental and health and safety programs is expected to decrease in 2019 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 ISR Operations, as well as the shutdown of the McArthur River and Key Lake operations for an indeterminate duration.

There were no environmentally significant incidents in 2018.

2018 Highlights:

- as part of Vision in Motion, began shipping contaminated soil and legacy low level radiative waste stored at the conversion facility to the long term waste management facility
- remained a top performer under Canada's Fisheries Act Metal and Diamond Mining Effluent Regulations with effluent performance well below regulatory limits
- sustained Cigar Lake at full production without exceeding an environmental limit or having a significant environmental incident
- continued efforts to reduce low level radioactive waste stored at our fuel services division
- implemented Canadian Standards Association (CSA) waste management standards at our fuel services division facilities
- continued efforts to systematically improve energy conservation and efficiency at both our fuel services and Saskatchewan facilities
- continued industry-leading research developing enhanced groundwater restoration techniques that can be applied at our US ISR Operations

Focus on the environment

Our business by its nature has an impact on the environment, so environmental performance is a key area of focus for us.

Our focus in this regard is reinforced by our systematic approach to SHEQ issues. We have integrated this approach into activities at our operating properties and our planning process for major projects. We also have conceptual decommissioning plans in place for all of our operating sites.

We report our performance annually. You can find this information on our website (cameco.com) and in our sustainable development report, which is also available on our website.

Reducing our impact

We have been carrying out our long-term plan to reduce the impact we have on the environment. This includes assessing, monitoring and looking for opportunities to reduce our effect on air, water and land, optimize the amount of energy we consume, and manage the effects of waste.

We are investing in management systems and safety initiatives to achieve operational excellence and reliability, and this continues to improve our safety and environmental performance and operating efficiency. We have also incorporated life cycle value assessment (LCVA) into our project management and engineering processes to ensure social, environmental and financial risks have been more fully considered when designing new facilities.

Like other large industrial organizations, we use chemicals in our operations that could be hazardous to our health and the environment if they are not handled correctly. We train our employees in the proper use of hazardous substances and in emergency response techniques.

We work with communities who are affected by our activities by informing them of what we are doing and to obtain feedback and further input, to build and sustain their trust. In Saskatchewan, we participate in the Northern Saskatchewan Environmental Quality Committee as well as three environmental subcommittees that were created through our collaboration agreements with various northern Saskatchewan communities.

In Ontario, we liaise with the community by regularly holding educational and environment-focused activities including through our Community Forum series, our presence at the Port Hope Fair, our regular community newsletters and ongoing communication with local elected officials and community leaders.

Land

Cameco's North American operating sites affect a relatively small area compared to what would be required to generate the same amount of energy using other technologies.

Our mines in northern Saskatchewan are underground mines so the impact on the surface land is minimal. We use ISR mining in our US ISR Operations to extract uranium from underground non-potable, brackish aquifers, so the impact on the surface there is also minimal.

Water

We look to improve processes and adopt new technologies to improve how we manage water, and the effect it has on receiving water bodies.

United States

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 has been completed, an ISR wellfield must be restored according to regulatory requirements. This generally involves restoring the groundwater to its pre-mining state or equivalent class of use water standard. We are involved in industry leading research and innovation in groundwater restoration at ISR operations.

Wellfields are being restored in accordance with plans filed with state and federal regulatory agencies. See pages 86 and 87 for more information.

Kazakhstan

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.

Air

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.

	2018	2017	2016
Greenhouse gas emissions[1] of kilotonnes of CO_2 equivalent (CO_2e)	295	415	483

1 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 as we no longer have operational control over JV Inkai.

Port Hope

The Port Hope conversion facility has sustained a uranium air emission reduction of 50% since 2014, resulting in over 150 kg uranium in air emission reduction over the past five years (2014-2018).

McArthur River

McArthur River has a large refrigeration plant that produces cold brine used for freezing the area of the deposit to be mined. The plant uses refrigerants, but they are not ozone-depleting chemicals that harm the earth's atmosphere.

Cigar Lake

Cigar Lake has a large refrigeration plant that produces cold brine used for freezing the area of the deposit to be mined. The plant uses refrigerants, but they are not ozone-depleting chemicals that harm the earth's atmosphere.

Waste

Our mines and the Key Lake mill in northern Saskatchewan account for most of the tailings and waste rock our operations generate.

We treat the mill tailings at Key Lake to stabilize contaminants before depositing them in tailings management facilities (in mined-out open pits near the mill).

We divert groundwater and surface water around the tailings management facilities, monitor the water to make sure it is not impacted by the tailings, and treat it if necessary. We monitor runoff and treat water from waste rock piles as needed. We stockpile some waste rock to blend with higher grade ores. We contour other waste rock piles and revegetate them before decommissioning the site. We plan to continue to monitor groundwater after the facility has been decommissioned.

In 2018, we took steps to address legacy waste at several of our operations. In particular, our legacy waste management plan within our fuel services division included the shipment of 2304 drums of historically-contaminated drums to a permitted facility and 73 drums of legacy hazardous materials to an appropriate facility from the Blind River refinery. A new process to allow for the use of a reduced cost backhaul for waste was implemented at the Port Hope conversion facility shipping approximately 400 drum-equivalents of legacy waste and seven historically-contaminated pieces of inoperable mobile equipment to a permitted facility. Waste characterization and planning activities occurred across the division and these activities will continue in 2019.

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 *Nuclear Safety and Control Act* (NSCA), is our main federal regulator in Canada. It regulates our compliance with the NSCA and is the federal lead for environmental assessments required to be carried out under the *Canadian Environmental Assessment Act*, *2012*, which was introduced as part of the federal government's responsible resource development policy, but is being reviewed by the current federal government with significant changes being proposed.

The primary objectives of an environmental assessment are to ensure that:

- potential adverse environmental effects are considered before proceeding with a project
- projects that cause unjustifiable, significant adverse environmental effects are not permitted to proceed
- appropriate measures are implemented, where necessary, to mitigate risk

Plans to expand production or build new mines in Saskatchewan are subject to this 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 expenses.

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 2019.

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 and the NRC.

See page 89 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.

JV Inkai has environmental insurance, as required by the *Ecological Code* and the resource use contract.

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 and tailings management facilities and the 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 2018, our estimate of total decommissioning and reclamation costs was $1.16 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 2018 (the present value of the $1.16 billion). Since we expect to incur most of these expenditures at the end of the useful lives

of the operations they relate to, 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 $1.05 billion in financial assurances supporting our reclamation liabilities at the end of 2018. 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 2018 financial statements for our estimate of decommissioning and reclamation costs and related financial assurances.

Canada

Decommissioning estimates[1]

(100% basis)	
McArthur River	$ 38 million
Rabbit Lake	$213 million
Key Lake	$222 million
Cigar Lake	$ 62 million

1 Under regulatory review

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 and 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.

Historical waste

When Cameco was formed, we assumed ownership and primary responsibility for managing the waste already existing at the time of the reorganization. This historical waste was all in Ontario, at the historical facilities, which include the Port Hope Conversion Facility, Blind River Refinery, Port Granby Waste Management Facility, Welcome Waste Management Facility and the Centre Pier in Port Hope.

In March 2004, we reached an agreement to transfer two historical facilities and their associated liabilities to the Government of Canada: the Welcome Waste Management Facility and the Port Granby Waste Management Facility. We transferred the Welcome Waste Management Facility and the Port Granby Waste Management Facility to Natural Resources Canada on March 31, 2010 and March 29, 2012, respectively.

In March 2012, we entered into a settlement with Canada Eldor Inc., the entity established by the federal government to assume the historical liabilities and obligations of Eldorado Nuclear Limited, regarding liability for historical waste located at the historical facilities. We are now responsible for all liabilities and costs and expenses related to historical waste and the

remaining historical facilities owned or leased by us, which are the Port Hope Conversion Facility, the Blind River Refinery and the Centre Pier in Port Hope.

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. Arrangements for recycling of this material are also in place at our Key Lake mill. We received regulatory approval from the Saskatchewan government for this process in 2003, and were advised by the CNSC in 2011 that the project could proceed. 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 $51 million (US). We have provided the state of Nebraska with $48 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) and the NRC. 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 $224 million (US), including North Butte. We have provided the state of Wyoming with $247 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 84 for additional details.

The regulatory environment

This section, and the section *Complying with environmental regulations* starting on page 85, discuss 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 International Atomic Energy Agency. 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 International Atomic Energy Agency's 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 119 and 120 for more information.

Industry governance

The 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 61.

Taxes and Royalties

Transfer pricing dispute

Tax Court decision

On September 26, 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 below.

In accordance with the ruling, we have made an application to the Tax Court to recover costs in the amount of $38 million, which were incurred over the course of this case. In its response to the Tax Court regarding our cost submission, CRA is claiming $9.6 million would be an appropriate award in this case. The actual cost award will be at the discretion of the Tax Court.

In addition, given the clear and decisive ruling in our favour, and the endorsement by the Tax Court of our transfer pricing methodology, we have reversed the provision on our balance sheet of $61 million.

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. We will not have more specific information on how and why the CRA believes the Tax Court was wrong in its interpretation of the transfer pricing provisions until we are in receipt of the CRA's complete written submissions.

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 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 2012 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 2012, 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. Taxes of approximately

$321 million for the 2003 to 2018 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 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. 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
Total	**377**	**219**	**185**	**781**	**303**	**478**

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 2012 will be suspended until the three years covered under the decision are finally resolved, with the exception of the transfer pricing penalty noted above. The tax years 2013 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 2012 tax years. In that scenario, and including the $4.9 billion already reassessed, we would expect to receive notices of reassessment for a total of approximately $8.4 billion of additional income taxable in Canada for the years 2003 through 2018, which would result in a related tax expense of approximately $2.5 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 would 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. We have already paid or secured $562 million in cash taxes and transfer pricing penalties and $219 million in interest and instalment penalties.

Under the Canadian federal and provincial tax rules, the 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. 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 2018 along with estimated post-2018 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 2018.

$ MILLIONS	2003-2018	Post-2018	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 $219 million to December 31, 2018.

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 $781 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 2013 through 2018 using a similar methodology as for the years 2003 through 2012, 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

Material risks that could cause actual results to differ materially

- CRA reassesses us for years 2013 through 2018 using a different methodology than for years 2003 through 2012, 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

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 $23.29/kg U_3O_8 ($10.56/lb) and a 15% royalty is charged on profit in excess of $23.29/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 2018 was $5.91 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 $1.61 million (US) in taxes in 2018.

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 2018 MD&A.

Types of risk

Operational	97
Financial	103
Political	108
Regulatory	111
Environmental	112
Legal and other	113
Industry	114

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
- 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
- electrical power interruptions
- equipment failures
- catastrophic accident
- fires
- blockades or other acts of social or political activism
- regulatory constraints and non-compliance with laws and licences
- 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 46 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, 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.

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 2019 forecast production is 9 million pounds. Cigar Lake production is milled at the McClean Lake mill operated by Orano. The collective agreement between Orano and unionized employees at the McClean Lake mill expires May 31, 2019. There is a risk to the Cigar Lake production plan if Orano is unable to reach an agreement and there is a labour dispute, or for any other reasons 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 2019, expected to be 3.7 million pounds).

Any disruption in or reduction in production from one or both 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.

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, 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 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, fuel services 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, 2018, we had 1,897 employees (including employees of our subsidiaries). This includes 435 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

- The collective agreements with the bargaining unit employees at our conversion facilities at Port Hope expires June 2019.
- The collective agreement with the bargaining unit employees at the McArthur River and Key Lake operations expired December 31, 2017.
- 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.

There is a risk to our production plans for the Port Hope conversion facility if we are unable to reach an agreement and there is a labour dispute.

There is a risk to the restart of operations at the McArthur River and Key Lake operations after the production suspension ends if we are unable to reach agreement and there is a labour dispute.

The collective agreement between Orano and unionized employees at the McClean Lake mill expires on May 31, 2019. There is a risk to our Cigar Lake production plan if Orano is unable to reach an agreement and there is a labour dispute

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

	2014	2015	2016	2017	2018
High	$39.50	$39.45	$34.70	$24.50	$29.10
Low	28.23	34.23	18.00	19.60	21.00
Spot UF_6 conversion values					
$US/kg U					
High	$ 8.25	$ 8.25	$ 6.88	$ 5.93	$13.50
Low	7.25	6.88	5.93	4.50	6.13

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

	2014	2015	2016	2017	2018
High	$50.00	$49.50	$44.00	$33.00	$32.00
Low	44.00	44.00	30.00	30.00	29.00

Term UF_6 conversion values
$US/kg U

High	$16.00	$16.00	$12.75	$14.50	$16.00
Low	16.00	13.50	12.25	13.00	12.25

Notes:
(1) Spot and term uranium prices are the average of prices published monthly by Ux Consulting and from The Nuexco Exchange Value, published by TradeTech.
(2) 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 20 million pounds, with commitment levels in 2019 and 2020 higher than in 2021 through 2023. 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 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 2019 through 2021, we expect:

- in our uranium segment, our five largest customers to account for 50% of our contracted supply of U_3O_8
- in our fuel services segment, our five largest UF_6 conversion customers to account for 59% 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 37% of our UO_2 sales in 2018. In addition, revenues in 2018 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.

We are currently involved in a dispute with TEPCO regarding its contract termination notice, alleging force majeure, with respect to a uranium supply agreement. We are seeking approximately $700 million (US) in damages plus interest and legal costs. Arbitration proceedings took place in January 2019. See page 8 of our 2018 MD&A for details about this dispute.

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
- 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, 2018, 95% of our forecast revenue under contract for the period 2019 to 2021 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 2019. If we expand our projects or programs overall, we may need to raise additional financing through joint ventures, debt financing, equity financing or other means.

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.

Pre-feasibility and feasibility studies contain estimated capital and operating costs, production and economic returns and other estimates that may be significantly different than actual results, and there is no assurance that they will not be different than anticipated or than what was disclosed in the studies. Our estimates may also be different from those of other companies, so they should not be used to project operating profit.

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 United States, 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 United States 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
- 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
- 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 United States 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 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. Among other things, this risk includes the imposition of governmental laws or policies that could restrict or hinder JV Inkai repaying the block 3 loan, 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. 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 61 to 63 for a more detailed discussion of the regulatory and political environment in Kazakhstan.

Presidential succession

The President of Kazakhstan, Nursultan Nazarbayev, has been in office since Kazakhstan became an independent republic in 1991 until he resigned on March 20, 2019. 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, 2018, approximately 36% 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. However, starting in 2019, the US administration may choose to impose a special tariff and/or quota on imports of uranium into the US. Such tariffs or import quotas may have an impact on our sales in the US and our results of operations more generally.

In January 2018, two US uranium mining companies filed a petition under Section 232 of the US Trade Expansion Act of 1962, as amended (Section 232), requesting the US Commerce Department to initiate an investigation into the national security effects of uranium imports, arguing that imports from certain state-owned enterprises have eroded the ability of U.S. entities to produce nuclear materials, including the uranium needed for defence purposes. These petitioners request that the US President impose an import quota that would effectively reserve 25% of the US market for domestic uranium and a “Buy American” policy that would require US government agencies to procure uranium produced in the US. On July 18 2018, the Commerce Department initiated the investigation in response to the petition. In September 2018, we, along with hundreds of other interested parties, submitted written comments to the Commerce Department on the claims made by the US uranium mining companies and their requested remedies.

If the Commerce Department finds in this investigation that uranium imports threaten to impair US national security, the US President must then determine whether he concurs with the Commerce Department’s findings and, if so, the nature and duration of the action to be taken to ensure that such imports will not threaten or impair national security. Under Section 232, the US President has broad power to adjust imports by imposing trade remedies such as tariffs and quotas. We cannot predict whether the Commerce Department will make an affirmative finding and recommend that the US President adjust imports of uranium ore and product imports, or whether, if recommended, the US President will take action against such imports. The Commerce Department’s decision is currently due in April 2019, and the US President will have 90 days to determine whether he concurs and, if so, what action to take.

The imposition of tariffs, import quotas or other restrictions on sales of uranium in the US as a result of this Section 232 investigation or otherwise 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 aboriginal 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.

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.

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 117 for more information.

We are currently involved in a dispute with TEPCO regarding its contract termination notice, alleging force majeure, with respect to a uranium supply agreement. Arbitration proceedings took place in January 2019. We are seeking approximately $700 million (US) in damages plus interest and legal costs. See page 8 of our 2018 MD&A for details about this dispute.

We are also currently involved in tax litigation with CRA and in 2017 settled a dispute with the IRS. See *Transfer pricing dispute* at pages 93 to 95. 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 the tax authorities in other countries could be material, to our cash flows, financial condition, results of operations or prospects.

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. Cameco has 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 the 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, 2018, Germany has shut down eight 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, 2018 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 over the past five years, 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 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 four other 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, 2018, in note 21 to the 2018 financial statements.

We are currently involved in a dispute with CRA. See *Transfer pricing dispute* at page 93 for more details about this dispute.

We are currently involved in a dispute with TEPCO regarding its contract termination notice, alleging force majeure, with respect to a uranium supply agreement. We are seeking $700 million (US) in damages plus interest and legal costs. Arbitration proceedings took place in January 2019. See page 8 of our 2018 MD&A for 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, 2018, we had 395,792,732 common shares outstanding. These were fully paid and non-assessable.

As of March 1, 2019, there were 8,873,525 stock options outstanding, which includes the grant on March 1, 2019 to acquire common shares of Cameco under the company's stock option plan with exercise prices ranging from $11.32 to $26.81.

In 2018, we granted the following stock options:

March 1, 2018 – 1,473,430 stock options to acquire common shares of Cameco at an exercise price of $11.32.

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.

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, in-depth 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 and liquidity position.

We have four series of senior unsecured debentures outstanding:

- $500 million of debentures issued on September 2, 2009 that have an interest rate of 5.67% per year and mature on September 2, 2019
- $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 $1.25 billion unsecured revolving credit facility that matures November 1, 2022. As of December 31, 2018, 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 (high)**	**Negative**
S&P	**A-3**	**Stable**
Senior Unsecured Debentures		
DBRS	**BBB (high)**	**Negative**
S&P	**BBB-**	**Stable**

The rating trend/outlook represents the ratings agency's assessment of the likelihood and direction that the rating could change in the future.

The rating agencies may revise or withdraw these ratings if they believe circumstances warrant. A change in our credit ratings could affect our cost of funding and our access to capital through the capital markets.

DBRS identified that if weakness in uranium prices persists it could pressure EBITDA and cash flow. A positive rating action could be supported by increased uranium prices and repayment of the $500 million debentures due in September 2019.

S&P downgraded Cameco on March 1, 2019 to BBB- and changed their outlook to stable from negative. The downgrade was primarily on the basis uranium prices have not improved to an extent that increases the prospects for new long-term contracts, resulting in continued pressure on the company's credit measures. However, S&P also indicated that the actions Cameco has taken should contribute to a tighter supply-demand balance, particularly in 2019. The outlook was changed to stable based on the liquidity position of the company.

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	**R-2 (high)**	• upper end of the R-2 category • represents "adequate credit quality" • fourth highest of 10 available credit ratings
rates commercial paper by categories ranging from a high of *R-1* to a low of *D*		
S&P	**A-3**	
rates commercial paper by categories ranging from a high of *A-1 (high)* to a low of *D*		• represents "adequate protection parameters" • third highest of six available credit ratings

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 (high)**	• higher end of the BBB category • represents “adequate credit quality” • fourth highest of 10 available credit ratings • 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 11 available credit ratings • adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity to meet financial commitment • “stable” outlook means the rating is not likely to change

Payments to credit rating agencies

Over the last two years, we paid $432,000 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 *Fourth supplemental indenture* with CIBC Mellon Trust Company (CIBC Mellon) on September 2, 2009, relating to the issue of $500 million in unsecured debentures at an interest rate of 5.67% per year and due in 2019.

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 60 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 2018.

2018	High ($)	Low ($)	Volume
January	12.48	10.85	28,501,332
February	11.98	10.50	25,576,688
March	12.33	11.22	20,400,267
April	13.64	11.61	24,326,904
May	15.01	13.37	26,913,183
June	15.95	13.43	34,717,184
July	15.84	13.64	22,261,635
August	14.54	13.21	15,684,932
September	15.62	12.31	23,169,674
October	16.00	13.39	28,641,984
November	16.70	14.06	27,458,008
December	16.34	14.42	24,054,168

Dividend

Starting in 2018, our board of directors reduced the planned dividend to $0.08 per common share to be paid annually. Our 2018 dividend was paid on December 14, 2018. 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.

	2018	2017	2016
Cash dividends	$0.08	$0.40	$0.40
Total dividends paid (millions)	$ 71[1]	$ 158	$ 158

1 The total dividends paid in 2018 include the dividend declared in the fourth quarter of 2017.

Directors

Director	Board committees	Principal occupation or employment
Ian Bruce Calgary, Alberta, Canada Director since 2012	As Chair, is a member of all board committees	Corporate director as of 2010
Daniel Camus Westmount, Québec, Canada Director since 2011	Audit and finance Human resources and compensation Nominating, corporate governance and risk	Corporate director as of 2011
John Clappison Toronto, Ontario, Canada Director since 2006	Audit and finance (Chair) Nominating, corporate governance and risk	Corporate director as of 2006
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 Safety, health and environment	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 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 May 2004 to March 2014 – Vice-President, Law and General Counsel
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 606,681 as at March 3, 2019. 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 CCAA protection order from March 26, 2015 to February 1, 2016.

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 five members: John Clappison (chair), Ian Bruce, Daniel Camus, 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

John Clappison, a corporate director, is the former managing partner of the Greater Toronto Area office of PricewaterhouseCoopers LLP (PwC). He is our committee chair and currently serves on the board of one other publicly-traded company, of which he is the chair of the audit committee. Mr. Clappison has over 35 years of experience as a practicing chartered accountant and was an audit partner at PwC. Mr. Clappison is a chartered accountant and a Fellow of the Chartered Professional Accountants of Ontario.

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 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 boards 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 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 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 two 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 2018 and 2017:

	2018 ($)	% of total fees	2017 ($)	% of total fees
Audit fees				
Cameco[1]	2,033,100	68.5	2,030,800	59.3
Subsidiaries[2]	709,800	23.9	864,900	25.3
Total audit fees	2,742,900	92.4	2,895,700	84.6
Audit-related fees				
Translation services	—	—	—	—
Pensions and other	27,300	0.9	27,300	0.8
Total audit-related fees	27,300	0.9	27,300	0.8
Tax fees				
Compliance	94,800	3.2	151,200	4.4
Planning and advice[3]	102,300	3.5	295,800	8.6
Total tax fees	197,100	6.7	447,000	13.0
All other fees				
Other non-audit fees[4]	—	0.0	55,300	1.6
Total other non-audit fees	—	0.0	55,300	1.6
Total fees	2,967,300	100.0	3,425,300	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 2017 related to Cameco's I-4 Membership and ESTMA reporting.

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 2018 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 76. 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

2018 Consolidated Audited Financial Statements

February 7, 2019



Cameco Corporation
2018 consolidated financial statements

February 7, 2019

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, 2018.

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 7, 2019

Original signed by Grant E. Isaac
Senior Vice-President and Chief Financial Officer
February 7, 2019

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, 2018 and 2017, 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, 2018 and 2017, 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, 2018, 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 7, 2019 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Change in accounting policies

As discussed in note 3A to the consolidated financial statements, the Company has changed its accounting policies for revenue recognition and financial instruments in 2018 due to the adoption of IFRS 15 – *Revenue from Contracts with Customers* (IFRS 15) and IFRS 9 – *Financial Instruments* (IFRS 9).

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.

Original signed by KPMG LLP

Chartered Professional Accountants

We have served as the Company's auditor since 1988.

Saskatoon, Canada
February 7, 2019

Consolidated statements of earnings

For the years ended December 31 ($Cdn thousands, except per share amounts)	Note	2018	2017
Revenue from products and services	17	$2,091,661	$2,156,852
Cost of products and services sold		1,467,940	1,390,233
Depreciation and amortization		327,973	330,345
Cost of sales		1,795,913	1,720,578
Gross profit		295,748	436,274
Administration		141,552	163,095
Impairment charges	8, 9	—	358,330
Exploration		20,283	29,933
Research and development		1,757	5,660
Other operating expense	15	59,616	43
Loss on disposal of assets		2,303	6,947
Earnings (loss) from operations		70,237	(127,734)
Finance costs	19	(111,779)	(110,608)
Gain (loss) on derivatives	26	(81,081)	56,250
Finance income		22,071	5,265
Share of earnings from equity-accounted investee	11	32,321	—
Other income (expense)	20	108,160	(30,410)
Earnings (loss) before income taxes		39,929	(207,237)
Income tax recovery	21	(126,306)	(2,519)
Net earnings (loss)		**$ 166,235**	**$ (204,718)**
Net earnings (loss) attributable to:			
Equity holders		166,323	(204,942)
Non-controlling interest		(88)	224
Net earnings (loss)		**$ 166,235**	**$ (204,718)**
Earnings (loss) per common share attributable to equity holders:			
Basic	22	**$ 0.42**	**$ (0.52)**
Diluted	22	**$ 0.42**	**$ (0.52)**

See accompanying notes to consolidated financial statements.

Consolidated statements of comprehensive income

For the years ended December 31 ($Cdn thousands)	Note	2018	2017
Net earnings (loss)		**$166,235**	**$(204,718)**
Other comprehensive income (loss), net of taxes:			
Items that will not be reclassified to net earnings:			
Remeasurements of defined benefit liability [1]	25	6,226	(6,216)
Equity investments at FVOCI - net change in fair value [2]		(9,728)	5,837
Items that are or may be reclassified to net earnings:			
Exchange differences on translation of foreign operations		(1,875)	(44,080)
Reclassification of foreign currency translation reserve to net earnings	20	(5,450)	—
Other comprehensive loss, net of taxes		**(10,827)**	**(44,459)**
Total comprehensive income (loss)		**$155,408**	**$(249,177)**
Other comprehensive income (loss) attributable to:			
Equity holders		$ (10,854)	$ (44,449)
Non-controlling interest		27	(10)
Other comprehensive loss for the year		**$ (10,827)**	**$ (44,459)**
Total comprehensive income (loss) attributable to:			
Equity holders		$155,469	$(249,391)
Non-controlling interest		(61)	214
Total comprehensive income (loss) for the year		**$155,408**	**$(249,177)**

1 Net of tax (2018 - $(2,200); 2017 - $2,155)
2 Net of tax (2018 - $1,349; 2017 - $(665))

See accompanying notes to consolidated financial statements.

Consolidated statements of financial position

As at December 31 ($Cdn thousands)	Note	2018	2017
Assets			
Current assets			
Cash and cash equivalents		$ 711,528	$ 591,620
Short-term investments		391,025	—
Accounts receivable	6	402,350	396,824
Current tax assets		6,996	11,408
Inventories	7	467,795	949,766
Supplies and prepaid expenses		89,206	149,872
Current portion of long-term receivables, investments and other	10	13,826	36,089
Total current assets		2,082,726	2,135,579
Property, plant and equipment	8	3,881,926	4,191,892
Goodwill and intangible assets	9	65,602	70,012
Long-term receivables, investments and other	10	751,868	520,073
Investment in equity-accounted investee	11	230,502	—
Deferred tax assets	21	1,006,012	861,171
Total non-current assets		5,935,910	5,643,148
Total assets		**$8,018,636**	**$7,778,727**
Liabilities and shareholders' equity			
Current liabilities			
Accounts payable and accrued liabilities	12	$ 224,754	$ 258,405
Current tax liabilities		19,633	20,133
Dividends payable		—	39,579
Current portion of long-term debt	13	499,599	—
Current portion of other liabilities	14	79,573	54,370
Current portion of provisions	15	52,316	38,507
Total current liabilities		875,875	410,994
Long-term debt	13	996,072	1,494,471
Other liabilities	14	142,061	126,103
Provisions	15	1,011,036	875,033
Deferred tax liabilities	21	—	12,467
Total non-current liabilities		2,149,169	2,508,074
Shareholders' equity			
Share capital		1,862,652	1,862,652
Contributed surplus		234,982	224,812
Retained earnings		2,791,321	2,650,417
Other components of equity		104,327	121,407
Total shareholders' equity attributable to equity holders		4,993,282	4,859,288
Non-controlling interest		310	371
Total shareholders' equity		4,993,592	4,859,659
Total liabilities and shareholders' equity		**$8,018,636**	**$7,778,727**

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							
	Share capital	Contributed surplus	Retained earnings	Foreign currency translation	Equity investments at FVOCI	Total	Non-controlling interest	Total equity
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
Balance at January 1, 2017	$1,862,646	$ 216,213	$3,019,872	$156,411	$ 3,229	$5,258,371	$ 157	$5,258,528
Net earnings (loss)	—	—	(204,942)	—	—	(204,942)	224	(204,718)
Other comprehensive income (loss)	—	—	(6,216)	(44,070)	5,837	(44,449)	(10)	(44,459)
Total comprehensive income (loss)	—	—	(211,158)	(44,070)	5,837	(249,391)	214	(249,177)
Share-based compensation	—	13,960	—	—	—	13,960	—	13,960
Stock options exercised	6	(1)	—	—	—	5	—	5
Restricted and performance share units released	—	(5,360)	—	—	—	(5,360)	—	(5,360)
Dividends	—	—	(158,297)	—	—	(158,297)	—	(158,297)
Balance at December 31, 2017	$1,862,652	$ 224,812	$2,650,417	$112,341	$ 9,066	$4,859,288	$ 371	$4,859,659

See accompanying notes to consolidated financial statements.

Consolidated statements of cash flows

For the years ended December 31 ($Cdn thousands)	Note	2018	2017
Operating activities			
Net earnings (loss)		$ 166,235	$(204,718)
Adjustments for:			
Depreciation and amortization		327,973	330,345
Deferred charges		10,683	(1,101)
Unrealized loss (gain) on derivatives		74,295	(62,569)
Share-based compensation	24	14,976	13,960
Loss on disposal of assets		2,303	6,947
Finance costs	19	111,779	110,608
Finance income		(22,071)	(5,265)
Share of earnings in equity-accounted investee	11	(32,321)	—
Impairment charges	8, 9	—	358,330
Other expense (income)	20	(100,310)	30,522
Other operating expense	15	59,616	43
Income tax recovery	21	(126,306)	(2,519)
Interest received		18,311	11,592
Income taxes paid		(20,709)	(77,182)
Other operating items	23	183,062	87,057
Net cash provided by operations		**667,516**	**596,050**
Investing activities			
Additions to property, plant and equipment		(55,362)	(114,028)
Increase in short-term investments		(391,025)	—
Increase in long-term receivables, investments and other		33,508	19,023
Proceeds from sale of property, plant and equipment		1,249	1,951
Net cash used in investing		**(411,630)**	**(93,054)**
Financing activities			
Interest paid		(72,976)	(69,498)
Proceeds from issuance of shares, stock option plan		—	4
Dividends paid		(71,224)	(158,297)
Net cash used in financing		**(144,200)**	**(227,791)**
Increase in cash and cash equivalents, during the year		111,686	275,205
Exchange rate changes on foreign currency cash balances		8,222	(3,863)
Cash and cash equivalents, beginning of year		591,620	320,278
Cash and cash equivalents, end of year		**$ 711,528**	**$ 591,620**
Cash and cash equivalents is comprised of:			
Cash		$ 317,296	$ 190,174
Cash equivalents		394,232	401,446
Cash and cash equivalents		**$ 711,528**	**$ 591,620**

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, 2018 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. As of January 1, 2018, JV Inkai is accounted for on an equity basis (see note 11). Previously, JV Inkai's results were proportionately consolidated therefore Cameco's 2017 results reflect its proportionate share of JV Inkai's assets, liabilities, revenues, expenses and cash flows.

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 7, 2019.

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 transferred to 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. Leased assets

Leases which result in the Company receiving substantially all the risks and rewards of ownership are classified as finance leases. Upon initial recognition, the leased asset is measured at an amount equal to the lower of its fair value and the present value of the minimum lease payments. Subsequent to initial recognition, the asset is accounted for in accordance with the accounting policy applicable to that asset. Minimum lease payments made under finance leases are apportioned between finance cost and the reduction of the outstanding liability. The finance cost is allocated to each period of the lease term to produce a constant periodic rate of interest on the remaining balance of the liability.

Lease agreements that do not meet the recognition criteria of a finance lease are classified and recognized as operating leases and are not recognized in the Company's consolidated statements of financial position. Payments made under operating leases are charged to income 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.

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, 2018 and 2017.

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 profits 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, 2018, Cameco adopted the following new standards as issued by the International Accounting Standards Board (IASB) in accordance with the transitional provisions:

i. Revenue

IFRS 15 clarifies the principles for recognizing revenue from contracts with customers. Cameco adopted IFRS 15 using the cumulative effect method without practical expedients which does not require comparative financial statements to be restated. As the adoption of the new standard did not have a material impact on our existing revenue recognition practices, there was no cumulative effect on net earnings at January 1, 2018 that would have required restatement. The new standard did result in additional disclosures. See note 17.

ii. Financial instruments

IFRS 9 includes revised guidance on the classification and measurement of financial assets. While it largely retains the existing requirements in IAS 39, *Financial Instruments: Recognition and Measurement* for the classification and measurement of financial liabilities, it eliminates the previous categories for financial assets of held to maturity, loans and receivables and available for sale. Upon adoption, we reclassified our financial instruments as follows:

	Original classification under IAS 39	New classification under IFRS 9
Financial assets		
Cash and cash equivalents	Loans and receivables	Amortized cost
Accounts receivable	Loans and receivables	Amortized cost
Derivative assets	FVTPL	FVTPL
Investments in equity securities	Available for sale	FVOCI
Advances receivable from Inkai	Loans and receivables	Amortized cost
Financial liabilities		
Accounts payable and accrued liabilities	Other financial liabilities	Amortized cost
Dividends payable	Other financial liabilities	Amortized cost
Derivative liabilities	FVTPL	FVTPL
Long-term debt	Other financial liabilities	Amortized cost

There was no impact on the measurement of any of these instruments at the date of transition. We did not have any financial assets or liabilities previously designated as measured at FVTPL that are no longer so designated.

The new standard also includes a new ECL model for calculating impairment on financial assets. This change did not have a material impact on the consolidated financial statements. See note 26.

IFRS 9 also introduces new hedge accounting requirements. Since Cameco does not apply hedge accounting, there was no impact on the consolidated financial statements.

B. New standards and interpretations not yet adopted

A number of new standards and amendments to existing standards are not yet effective for the year ended December 31, 2018 and have not been applied in preparing these consolidated financial statements. Cameco does not intend to early adopt any of the following standards or amendments to existing standards, unless otherwise noted.

i. Leases

In January 2016, the IASB issued IFRS 16, *Leases* (IFRS 16). IFRS 16 is effective for periods beginning on or after January 1, 2019, with early adoption permitted. IFRS 16 eliminates the current 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. Our assessment of the new standard included the review of contracts to identify arrangements that could contain leases that qualify for recognition under IFRS 16. This review also considered contracts containing embedded leases of right-of-use assets. Based on our assessment, which is substantially complete, we determined that we do not expect adoption of the standard to have a material impact on the financial statements, however we do expect to have additional disclosures.

ii. Income tax

In June 2017, the IASB issued IFRIC 23, *Uncertainty over Income Tax Treatments* (IFRIC 23). IFRIC 23 is effective for periods beginning on or after January 1, 2019 with early adoption permitted. 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. We do not expect adoption of the standard to 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 8 - Property, plant and equipment

Note 9 - Goodwill and intangible assets

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. 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. Determination of joint control

Cameco conducts certain operations through joint ownership interests. Judgment is required in assessing whether Cameco has joint control over the investee, which involves determining the relevant activities of the arrangement and whether decisions around relevant activities require unanimous consent. Judgment is also required to determine whether a joint arrangement should be classified as a joint venture or joint operation. Classifying the arrangement requires us to assess our rights and obligations arising from the arrangement. Specifically, management considers the structure of the joint arrangement and whether it is structured through a separate vehicle and when the arrangement is structured through a separate vehicle, we also consider the rights and obligations arising from the legal form of the separate vehicle, the terms of the contractual arrangements and other facts and circumstances, when relevant. This judgment influences whether we equity account or proportionately consolidate our interest in the arrangement.

G. 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

	2018	2017
Trade receivables	**$392,865**	$392,759
GST/VAT receivables	**3,711**	3,611
Other receivables	**5,774**	454
Total	**$402,350**	$396,824

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

	2018	2017
Uranium		
Concentrate	**$255,373**	$820,426
Broken ore	**51,545**	47,083
	306,918	867,509
NUKEM	**85,654**	13,801
Fuel services	**75,223**	68,456
Total	**$467,795**	$949,766

Cameco expensed $1,501,000,000 of inventory as cost of sales during 2018 (2017 - $1,601,000,000). Included in cost of sales is a $29,296,000 net write-down to reflect net realizable value (2017 - $8,662,000 net write-down).

8. Property, plant and equipment

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 [note 15]	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 [note 15]	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**

At December 31, 2017

	Land and buildings	Plant and equipment	Furniture and fixtures	Under construction	Exploration and evaluation	Total
Cost						
Beginning of year	$4,979,489	$2,640,543	$95,168	$ 340,340	$1,120,641	$9,176,181
Additions	27,343	13,649	3,521	97,729	1,091	143,333
Transfers	104,134	106,669	(2,455)	(208,359)	11	—
Change in reclamation provision	17,541	—	—	—	—	17,541
Disposals	(4,610)	(4,803)	(4,578)	(74,482)	—	(88,473)
Pre-commercial production revenue[(b)]	(22,818)	(6,487)	—	—	—	(29,305)
Effect of movements in exchange rates	(55,967)	(19,936)	(839)	(497)	(1,463)	(78,702)
End of year	**5,045,112**	**2,729,635**	**90,817**	**154,731**	**1,120,280**	**9,140,575**
Accumulated depreciation and impairment						
Beginning of year	2,508,212	1,460,953	80,592	80,674	390,164	4,520,595
Depreciation charge	137,853	175,811	6,490	—	—	320,154
Transfers	48,209	(35,243)	(2,451)	(10,515)	—	—
Change in reclamation provision	43	—	—	—	—	43
Disposals	(2,393)	(4,130)	(3,269)	(70,159)	—	(79,951)
Impairment charge[(c)(d)]	67,535	25,359	—	55,841	91,046	239,781
Effect of movements in exchange rates	(42,210)	(11,290)	(610)	(9)	2,180	(51,939)
End of year	**2,717,249**	**1,611,460**	**80,752**	**55,832**	**483,390**	**4,948,683**
Net book value at December 31, 2017	**$2,327,863**	**$1,118,175**	**$10,065**	**$ 98,899**	**$ 636,890**	**$4,191,892**

Cameco has contractual capital commitments of approximately $16,000,000 at December 31, 2018. 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 2019.

(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).

(b) During 2017, revenues of $29,305,000 from the sales of inventories before the commencement of commercial production of JV Inkai Block 3 were recorded as a reduction of the respective mining assets.

(c) In the fourth quarter of 2017, all remaining proven and probable reserves of our US operations were reclassified to resources, indicating that the mineable remaining pounds of U_3O_8 no longer had demonstrated economic viability, but had reasonable prospects for economic extraction. In accordance with the provisions of IAS 36, *Impairment of Assets*, Cameco considered this to be an indicator that the assets of the two cash generating units in the US could potentially be impaired and accordingly, we were required to estimate the recoverable amount of these assets.

An impairment charge of $184,448,000 ($144,450,000 (USD)) was recognized as part of the uranium segment. The amount of the charge was determined as the excess of the carrying value over the recoverable amount which was based on a fair value less costs to sell model and categorized as a non-recurring level 3 fair value measurement. The recoverable amount was determined to be $133,228,000 ($106,200,000 (USD)) based on the fair value of resources in place using comparable market metrics.

(d) Also in the fourth quarter of 2017, Cameco announced the planned temporary suspension of production at the McArthur River/Key Lake operation. Due to this announcement, the Key Lake calciner project, which is part of the uranium segment and was initially undertaken to allow for an increase in annual production, was re-evaluated. As a result, the Company wrote off $55,333,000 of assets under construction on this project.

9. Goodwill and intangible assets

A. Reconciliation of carrying amount

At December 31, 2018

	Goodwill	Contracts	Intellectual property	Patents	Total
Cost					
Beginning of year	$111,399	$109,812	$ 118,819	$10,966	$350,996
Effect of movements in exchange rates	—	9,559	—	—	9,559
End of year	**111,399**	**119,371**	**118,819**	**10,966**	**360,555**
Accumulated amortization and impairment					
Beginning of year	111,399	104,939	53,680	10,966	280,984
Amortization charge	—	1,325	3,474	—	4,799
Effect of movements in exchange rates	—	9,170	—	—	9,170
End of year	**111,399**	**115,434**	**57,154**	**10,966**	**294,953**
Net book value at December 31, 2018	**$ —**	**$ 3,937**	**$ 61,665**	**$ —**	**$ 65,602**

At December 31, 2017

	Goodwill	Contracts	Intellectual property	Patents	Total
Cost					
Beginning of year	$118,664	$117,533	$ 118,819	$11,737	$366,753
Effect of movements in exchange rates	(7,265)	(7,721)	—	(771)	(15,757)
End of year	**111,399**	**109,812**	**118,819**	**10,966**	**350,996**
Accumulated amortization and impairment					
Beginning of year	—	110,284	49,589	3,570	163,443
Amortization charge	—	2,002	4,091	630	6,723
Impairment charge	111,399	—	—	7,150	118,549
Effect of movements in exchange rates	—	(7,347)	—	(384)	(7,731)
End of year	**111,399**	**104,939**	**53,680**	**10,966**	**280,984**
Net book value at December 31, 2017	**$ —**	**$ 4,873**	**$ 65,139**	**$ —**	**$ 70,012**

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.

Patents acquired with UFP Investments LLC (UFP) were being amortized to cost of products and services sold on a straight-line basis over their remaining life which expires in July 2029. In the fourth quarter of 2017, Cameco recorded an impairment charge of $7,150,000 on these assets due to continuing weakness in the uranium market and limited budget allocated to this project.

C. Impairment test

For the purpose of impairment testing, goodwill is attributable to NUKEM, which is considered to be a CGU.

In the third quarter of 2017, Cameco restructured its global marketing organization in response to the changing business environment. The restructuring significantly impacted the marketing activities historically performed by NUKEM. In accordance with the provisions of IAS 36, *Impairment of Assets*, Cameco considered this to be an indicator that the assets of the CGU could potentially be impaired and accordingly, we were required to estimate the recoverable amount of these assets.

The recoverable amount of NUKEM was estimated based on a fair value less costs to sell calculation and was concluded to be equal to the carrying value of its inventory and existing contracts. A change in the previous assumption, that there would be cash flows generated beyond a five-year period, resulted in the elimination of the terminal value. Accordingly, an impairment charge of $111,399,000 ($88,377,000 (US)) was recorded, representing the full carrying value of NUKEM goodwill.

10. Long-term receivables, investments and other

	2018	2017
Investments in equity securities [note 26] (a)	**$ 28,916**	$ 21,417
Derivatives [note 26]	**3,881**	40,804
Advances receivable from JV Inkai [note 31]	**124,533**	58,820
Investment tax credits	**95,246**	92,846
Amounts receivable related to tax dispute [note 21]	**303,222**	303,222
Product loan (b)	**176,904**	—
Other	**32,992**	39,053
	765,694	**556,162**
Less current portion	**(13,826)**	(36,089)
Net	**$751,868**	$520,073

(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. In 2017, these investments were classified as available-for-sale and measured through OCI under IAS 39 (see note 3). There were no dividends recognized on any of these investments during the year.

	Fair value Dec 31/18
Investment in Denison Mines Corp.	$ 15,507
Investment in UEX Corporation	8,754
Investment in GoviEx	2,313
Other	2,342
	$ 28,916

(b) As a result of the decision to temporarily suspend production at the McArthur River mine, Cameco has entered into an agreement with its joint venture partner, Orano Canada Inc., (Orano) to provide them with up to 5,400,000 pounds of uranium concentrate through 2018. The product is deliverable in 12 equal monthly instalments of 450,000 pounds. Orano is not obligated to take delivery but must provide 30 days' notice prior to the upcoming delivery date if they do not wish to take that delivery. Orano is obligated to repay us in kind with uranium concentrate no later than December 31, 2023. At December 31, 2018, Cameco had provided the maximum amount of 5,400,000 pounds under this agreement. The loan is recorded at Cameco's weighted average cost of inventory.

11. Equity-accounted investee

On December 11, 2017, the Company announced that the restructuring of JV Inkai outlined in the implementation agreement dated May 27, 2016 with Kazatomprom and JV Inkai closed and would take effect January 1, 2018. As a result of the restructuring, Cameco's ownership interest was adjusted to 40% (previously 60%) and Cameco began accounting for JV Inkai on an equity basis, prospectively, as of January 1, 2018 as it was concluded Cameco no longer has joint control over the joint venture.

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. 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%) at December 31, 2018:

	2018
Cash and cash equivalents	$ 41,717
Other current assets	160,784
Non-current assets	407,816
Current liabilities	(151,728)
Non-current liabilities	(41,746)
Net assets	$ 416,843

	2018
Revenue from products and services	**$203,359**
Cost of products and services sold	**(52,172)**
Depreciation and amortization	**(27,504)**
Finance income	**160**
Finance costs	**(6,251)**
Other expense	**(30,419)**
Income tax expense	**(20,860)**
Net earnings	**66,313**
Cameco's share	**26,525**
Adjustments[a]	**5,796**
Cameco's share of net earnings	**$ 32,321**

The following table reconciles the summarized financial information to the carrying amount of Cameco's interest in JV Inkai:

	2018
Cameco's share of net assets, beginning of year before restructuring	**$236,857**
Adjustments[a]	**(75,257)**
Carrying amount in the statement of financial position, beginning of year before restructuring	**161,600**
Share of net earnings	**26,525**
Gain on restructuring [note 20]	**43,120**
Impact of foreign exchange	**(6,539)**
Adjustments[b]	**5,796**
Carrying amount in the statement of financial position at December 31, 2018	**$230,502**

(a) 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.
(b) Following the restructuring, in addition to the adjustments noted in (a), 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

	2018	2017
Trade payables	**$124,390**	$177,040
Non-trade payables	**92,183**	75,784
Payables due to related parties	**8,181**	5,581
Total	**$224,754**	$258,405

The Company's exposure to currency and liquidity risk related to trade and other payables is disclosed in note 26.

13. Long-term debt

	2018	2017
Unsecured debentures		
Series D - 5.67% debentures due September 2, 2019 [note 26]	**$ 499,599**	$ 499,020
Series E - 3.75% debentures due November 14, 2022	**398,873**	398,604
Series F - 5.09% debentures due November 14, 2042	**99,286**	99,271
Series G - 4.19% debentures due June 24, 2024	**497,913**	497,576
	1,495,671	1,494,471
Less current portion	**(499,599)**	—
Total	**$ 996,072**	$1,494,471

Cameco has a $1,250,000,000 unsecured revolving credit facility that is available until November 1, 2022. 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 $1,250,000,000 by increments no less than $50,000,000, to a total of $1,750,000,000. The facility ranks equally with all of Cameco's other senior debt. As of December 31, 2018 and 2017, there were no amounts outstanding under this facility.

Cameco has $1,716,473,000 (2017 - $1,667,932,000) in letter of credit facilities. Outstanding and committed letters of credit at December 31, 2018 amounted to $1,572,984,000 (2017 - $1,474,155,000), 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, 2018, Cameco was in compliance with the covenant and does not expect its operating and investing activities in 2019 to be constrained by it.

The table below represents currently scheduled maturities of long-term debt:

2019	2020	2021	2022	2023	Thereafter	Total
$499,599	—	—	398,873	—	597,199	**$1,495,671**

14. Other liabilities

	2018	2017
Deferred sales [note 17]	**$ 30,727**	$ 29,148
Derivatives [note 26]	**61,387**	23,414
Accrued pension and post-retirement benefit liability [note 25]	**68,255**	74,804
Other	**61,265**	53,107
	221,634	180,473
Less: current portion	**(79,573)**	(54,370)
Net	**$142,061**	$126,103

15. Provisions

	Reclamation	Waste disposal	Total
Beginning of year	$ 905,400	$ 8,140	$ 913,540
Changes in estimates and discount rates [note 8]			
Capitalized in property, plant and equipment	72,701	—	72,701
Recognized in earnings	59,616	1,690	61,306
Change to equity accounting [note 11]	(3,049)	—	(3,049)
Provisions used during the period	(30,771)	(540)	(31,311)
Unwinding of discount [note 19]	23,511	170	23,681
Effect of movements in exchange rates	26,484	—	26,484
End of period	**$1,053,892**	**$ 9,460**	**$1,063,352**
Current	$ 51,171	$ 1,145	$ 52,316
Non-current	1,002,721	8,315	1,011,036
	$1,053,892	**$ 9,460**	**$1,063,352**

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 $1,157,208,000 (2017 - $1,051,746,000). The expected timing of these outflows is based on life-of-mine plans with the majority of expenditures expected to occur after 2023. 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 $1,050,546,000 (2017 - $1,011,613,000) in the form of letters of credit to satisfy current regulatory requirements.

The reclamation provision relates to the following segments:

	2018	2017
Uranium	**$ 828,781**	$669,835
Fuel services	**225,111**	235,565
Total	**$1,053,892**	$905,400

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 $9,617,000 (2017 - $8,239,000). The majority of these expenditures are expected to occur within the next six 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)	**2018**	**2017**
Beginning of year	**395,792,732**	395,792,522
Issued:		
Stock option plan [note 24]	—	210
End of year	**395,792,732**	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, 2018, the dividend declared per share was $0.08 (December 31, 2017 - $0.40).

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, 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**

For the year ended December 31, 2017

	Uranium	Fuel services	Other	Total
Customer geographical region				
Americas	$ 737,095	$ 209,285	$105,673	$1,052,053
Europe	318,446	52,642	101,592	472,680
Asia	518,527	50,961	62,631	632,119
	$1,574,068	**$ 312,888**	**$269,896**	**$2,156,852**
Contract type				
Fixed-price	$ 502,437	$ 287,104	$252,702	$1,042,243
Market-related	1,071,631	25,784	17,194	1,114,609
	$1,574,068	**$ 312,888**	**$269,896**	**$2,156,852**

Deferred revenue

The following table provides information about contract liabilities (note 14) from contracts with customers:

	2018	2017
Beginning of year	**$ 29,148**	$ 29,423
Additions	**25,695**	31,405
Recognized in revenue	**(24,025)**	(31,499)
Effect of movements in exchange rates	**(91)**	(181)
End of year	**$ 30,727**	$ 29,148

Deferred revenue 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 $5,468,000 (2017 - $4,392,000) as a reduction of revenue during 2018 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:

	2019	2020	2021	2022	2023	Thereafter	Total
Uranium	$277,396	$182,711	$110,353	$112,459	$107,362	$166,615	**$ 956,896**
Fuel services	240,551	215,851	236,993	199,815	139,731	714,893	**1,747,834**
Other	32,161	4,030	4,212	—	—	—	**40,403**
Total	**$550,108**	**$402,592**	**$351,558**	**$312,274**	**$247,093**	**$881,508**	**$2,745,133**

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:

	2018	2017
Wages and salaries	**$305,367**	$331,521
Statutory and company benefits	**50,477**	60,334
Expenses related to defined benefit plans [note 25]	**3,527**	5,208
Expenses related to defined contribution plans [note 25]	**13,431**	15,929
Equity-settled share-based compensation [note 24]	**18,821**	18,433
Cash-settled share-based compensation [note 24]	**3,597**	134
Total	**$395,220**	$431,559

19. Finance costs

	2018	2017
Interest on long-term debt	**$ 73,039**	$ 73,211
Unwinding of discount on provisions [note 15]	**23,681**	22,020
Other charges	**15,059**	15,377
Total	**$111,779**	$110,608

No borrowing costs were determined to be eligible for capitalization during the year.

20. Other income (expense)

	2018	2017
Foreign exchange gains (losses)	$ 26,205	$(23,168)
Gain on restructuring of JV Inkai[a]	48,570	—
Sale of exploration interests[b]	25,027	—
Contract restructuring	6,201	—
Write-off of long-term receivables	—	(5,926)
Other	2,157	(1,316)
Total	**$108,160**	$(30,410)

(a) 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.

(b) In the fourth quarter of 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	
	2018	2017	2018	2017
Assets				
Property, plant and equipment	**$119,132**	$ (4,325)	**$ 245,206**	$115,193
Provision for reclamation	**(36,622)**	(16,760)	**191,189**	227,785
Inventories	**1,137**	1,027	**2,163**	1,027
Foreign exploration and development	**(14)**	16	**5,281**	5,295
Income tax losses	**39,289**	57,203	**499,180**	459,885
Defined benefit plan actuarial losses	**—**	—	**5,646**	7,845
Long-term investments and other	**24,169**	(27,166)	**57,347**	31,674
Deferred tax assets	**147,091**	9,995	**1,006,012**	848,704
Liabilities				
Inventories	**—**	(12,430)	**—**	—
Deferred tax liabilities	**—**	(12,430)	**—**	—
Net deferred tax asset	**$147,091**	$ 22,425	**$1,006,012**	$848,704

Deferred tax allocated as	2018	2017
Deferred tax assets	**$1,006,012**	$861,171
Deferred tax liabilities	**—**	(12,467)
Net deferred tax asset	**$1,006,012**	$848,704

Cameco has recorded a net deferred tax asset of $1,006,012,000 (December 31, 2017 - $861,171,000). 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

	2018	2017
Net deferred tax asset at beginning of year	**$ 848,704**	$820,048
Recovery for the year in net earnings	**147,091**	22,425
Recovery (expense) for the year in other comprehensive income	**(851)**	1,490
Change to equity accounting - JV Inkai	**10,849**	—
Effect of movements in exchange rates	**219**	4,741
End of year	**$1,006,012**	$848,704

C. Significant components of unrecognized deferred tax assets

	2018	2017
Income tax losses	**$270,154**	$259,770
Property, plant and equipment	**2,344**	2,076
Provision for reclamation	**88,036**	71,463
Long-term investments and other	**72,500**	68,544
Total	**$433,034**	$401,853

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:

	2018	2017
Earnings (loss) before income taxes and non-controlling interest	**$ 39,929**	$(207,237)
Combined federal and provincial tax rate	**26.9%**	26.7%
Computed income tax expense (recovery)	**10,741**	(55,332)
Increase (decrease) in taxes resulting from:		
Difference between Canadian rates and rates applicable to subsidiaries in other countries	**(78,138)**	(51,526)
Change in unrecognized deferred tax assets	**18,027**	70,353
Share-based compensation plans	**1,292**	1,349
Change in tax provision related to transfer pricing	**(61,000)**	3,000
Non-deductible (non-taxable) capital amounts	**(13,249)**	3,034
Change in legislation	**—**	(12,199)
Non-deductible goodwill impairment	**—**	35,520
Change in uncertain tax positions	**(3,517)**	—
Other permanent differences	**(462)**	3,282
Income tax recovery	**$(126,306)**	$ (2,519)

E. Earnings and income taxes by jurisdiction

	2018	2017
Earnings (loss) before income taxes		
Canada	**$(257,291)**	$ (53,521)
Foreign	**297,220**	(153,716)
	$ 39,929	$(207,237)
Current income taxes		
Canada	**$ 5,913**	$ 5,221
Foreign	**14,872**	14,685
	$ 20,785	$ 19,906
Deferred income taxes (recovery)		
Canada	**$(149,284)**	$ (18,272)
Foreign	**2,193**	(4,153)
	$(147,091)	$ (22,425)
Income tax recovery	**$(126,306)**	$ (2,519)

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 2012, which in aggregate have increased Cameco's income for Canadian tax purposes by approximately $4,900,000,000. 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, 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. Given the ruling in our favor, and the endorsement by the Tax Court of our transfer pricing methodology, we have reversed the cumulative tax provision related to this matter for the years 2003 through the current period in the amount of $61,000,000. 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 2012 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 2012 tax years. In that scenario, and including the $4,900,000,000 already reassessed, we expect to receive notices of reassessment for a total of approximately $8,700,000,000 for the years 2003 through 2018, 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. In that case, 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, 2018 (December 31, 2017 - $303,222,000) (note 10). In addition to the cash remitted, we have provided $478,000,000 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.

Further to Cameco's decision to contest CRA's reassessments, Cameco is pursuing its appeal rights under Canadian federal and provincial tax rules.

G. Income tax losses

At December 31, 2018, income tax losses carried forward of $2,809,926,000 (2017 - $2,609,070,000) are available to reduce taxable income. These losses expire as follows:

Date of expiry	Canada	US	Other	Total
2030	$ 47	$ —	$ —	$ 47
2031	—	21,909	—	21,909
2032	236,484	23,596	—	260,080
2033	299,692	40,224	—	339,916
2034	322,021	22,189	—	344,210
2035	363,569	15,439	—	379,008
2036	209,178	46,923	—	256,101
2037	143	35,147	—	35,290
2038	5,731	66,115	—	71,846
2039	—	—	—	—
2040	—	—	—	—
No expiry	—	—	1,101,519	1,101,519
	$1,436,865	**$271,542**	**$1,101,519**	**$2,809,926**

Included in the table above is $987,639,000 (2017 - $958,417,000) 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 2018 was 395,792,732 (2017 - 395,792,686).

	2018	2017
Basic earnings (loss) per share computation		
Net earnings (loss) attributable to equity holders	**$166,323**	$(204,942)
Weighted average common shares outstanding	**395,793**	395,793
Basic earnings (loss) per common share	**$ 0.42**	$ (0.52)
Diluted earnings (loss) per share computation		
Net earnings (loss) attributable to equity holders	**$166,323**	$(204,942)
Weighted average common shares outstanding	**395,793**	395,793
Dilutive effect of stock options	**257**	—
Weighted average common shares outstanding, assuming dilution	**396,050**	395,793
Diluted earnings (loss) per common share	**$ 0.42**	$ (0.52)

23. Supplemental cash flow information

Other operating items included in the statements of cash flows are as follows:

	2018	2017
Changes in non-cash working capital:		
Accounts receivable	**$ (44,353)**	$(174,613)
Inventories	**241,496**	299,980
Supplies and prepaid expenses	**52,192**	15,436
Accounts payable and accrued liabilities	**(39,616)**	(64,689)
Reclamation payments	**(31,311)**	(14,334)
Other	**4,654**	25,277
Total	**$183,062**	$ 87,057

The changes in liabilities arising from financing activities were as follows:

	Long-term debt[(a)]	Interest payable	Dividends payable	Share capital	Total
Balance at January 1, 2018	$1,494,471	$ 14,970	$ 39,579	$1,862,652	$3,411,672
Changes from financing cash flows:					
Dividends paid	—	—	(71,224)	—	(71,224)
Interest paid	—	(72,976)	—	—	(72,976)
Total cash changes	**—**	**(72,976)**	**(71,224)**	**—**	**(144,200)**
Non-cash changes:					
Amorization of issue costs	1,200	—	—	—	1,200
Dividends declared	—	—	31,645	—	31,645
Interest expense	—	71,839	—	—	71,839
Foreign exchange	—	(294)	—	—	(294)
Total non-cash changes	**1,200**	**71,545**	**31,645**	**—**	**104,390**
Balance at December 31, 2018	**$1,495,671**	**$ 13,539**	**$ —**	**$1,862,652**	**$3,371,862**

(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 27,870,289 shares have been issued.

Stock option transactions for the respective years were as follows:

(Number of options)	2018	2017
Beginning of year	**8,324,666**	8,020,311
Options granted	**1,473,430**	1,373,040
Options forfeited	**(315,340)**	(564,423)
Options expired	**(661,951)**	(504,052)
Options exercised [note 16]	**—**	(210)
End of year	**8,820,805**	8,324,666
Exercisable	**6,007,557**	5,809,077

Weighted average exercise prices were as follows:

	2018	2017
Beginning of year	**$22.19**	$23.61
Options granted	**11.32**	14.70
Options forfeited	**25.43**	26.49
Options expired	**28.90**	19.50
Options exercised	**—**	19.37
End of year	**$19.75**	$22.19
Exercisable	**$22.83**	$24.95

Total options outstanding and exercisable at December 31, 2018 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 - 17.84	4,119,810	5.8	$ 14.01	1,306,562	$ 15.79
$17.85 - 39.53	4,700,995	2	$ 24.79	4,700,995	$ 24.79
	8,820,805			**6,007,557**	

The foregoing options have expiry dates ranging from February 28, 2019 to February 28, 2026.

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 board'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. As of December 31, 2018, the total number of PSUs held by the participants, after adjusting for forfeitures on retirement, was 1,343,971 (2017 - 1,070,997).

C. 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, 2018, the total number of RSUs held by the participants was 456,704, (2017 - 463,151).

D. 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, 2018, there were 2,317 participants in the plan (2017 - 2,979). The total number of shares purchased in 2018 with Company contributions was 304,147 (2017 - 370,381). In 2018, the Company's contributions totaled $3,845,000 (2017 - $4,473,000).

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:

	2018	2017
Stock option plan	**$ 4,744**	$ 4,941
Performance share unit plan	**7,690**	6,186
Restricted share unit plan	**2,542**	2,833
Employee share ownership plan	**3,845**	4,473
Total	**$18,821**	$18,433

Fair value measurement of equity-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 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	1,473,430	602,530	377,021
Average strike price	$ 11.32	—	$ 11.46
Expected dividend	$ 0.08	—	—
Expected volatility	35%	37%	—
Risk-free interest rate	2.0%	1.9%	—
Expected life of option	4.8 years	3 years	—
Expected forfeitures	7%	9%	13%
Weighted average grant date fair values	$ 3.48	$ 11.43	$ 11.46

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 grant date by reviewing prior history and corporate budgets.

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, 2018, the total number of DSUs held by participating directors was 528,483 (2017 - 452,981).

B. 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, 2018, the number of options held by participating employees was 353,580 (2017 - 391,714) with exercise prices ranging from $11.32 to $39.53 per share (2017 - $14.70. to $39.53) and a weighted average exercise price of $17.74 (2017 - $22.13).

Cameco has recognized the following expenses (recoveries) under its cash-settled plans:

	2018	2017
Deferred share unit plan	**$2,922**	$ (42)
Phantom stock option plan	**675**	176
Total	**$3,597**	$134

At December 31, 2018, a liability of $9,352,000 (2017 - $5,771,000) 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 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 phantom stock option plan at the grant and reporting dates were as follows:

	Grant date March 1, 2018	Reporting date December 31, 2018
Number of units	101,895	353,580
Average strike price	$ 11.32	$ 17.74
Expected dividend	$ 0.08	$ 0.08
Expected volatility	35%	37%
Risk-free interest rate	1.9%	1.9%
Expected life of option	4.5 years	3.7 years
Expected forfeitures	7%	8%
Weighted average measurement date fair values	$ 3.68	$ 4.21

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 $1,044,000 in contributions and letter of credit fees to its defined benefit plans in 2019.

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	
	2018	**2017**	**2018**	**2017**
Fair value of plan assets, beginning of year	**$ 8,061**	$ 8,652	**$ —**	$ —
Interest income on plan assets	**259**	320	**—**	—
Return on assets excluding interest income	**(292)**	(2)	**—**	—
Employer contributions	**61**	—	**—**	—
Benefits paid	**(910)**	(907)	**—**	—
Administrative costs paid	**(2)**	(2)	**—**	—
Fair value of plan assets, end of year	**$ 7,177**	$ 8,061	**$ —**	$ —
Defined benefit obligation, beginning of year	**$ 55,972**	$ 54,930	**$ 26,893**	$ 23,421
Current service cost	**1,670**	1,544	**1,429**	1,227
Interest cost	**1,668**	1,810	**946**	945
Actuarial loss (gain) arising from:				
- demographic assumptions	**—**	—	**(192)**	—
- financial assumptions	**(3,776)**	3,840	**(1,887)**	2,076
- experience adjustment	**56**	2,403	**(2,919)**	50
Past service cost	**—**	—	**(1,929)**	—
Benefits paid	**(2,028)**	(9,095)	**(1,180)**	(826)
Foreign exchange	**709**	540	**—**	—
Defined benefit obligation, end of year	**$ 54,271**	$ 55,972	**$ 21,161**	$ 26,893
Defined benefit liability [note 14]	**$(47,094)**	$(47,911)	**$(21,161)**	$(26,893)

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	
	2018	2017
Asset category[a]		
Canadian equity securities	**9%**	8%
Global equity securities	**21%**	16%
Canadian fixed income	**29%**	27%
Other[b]	**41%**	49%
Total	**100%**	100%

(a) The defined benefit plan assets contain no material amounts of related party assets at December 31, 2018 and 2017 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	
	2018	2017	2018	2017
Current service cost	**$ 1,670**	$ 1,544	**$ 1,429**	$ 1,227
Net interest cost	**1,409**	1,490	**946**	945
Past service cost	**—**	—	**(1,929)**	—
Administration cost	**2**	2	**—**	—
Defined benefit expense [note 18]	**3,081**	3,036	**446**	2,172
Defined contribution pension expense [note 18]	**13,431**	15,929	**—**	—
Net pension and other benefit expense	**$16,512**	$18,965	**$ 446**	$2,172

The total amount of actuarial losses (gains) recognized in other comprehensive income is:

	Pension benefit plans		Other benefit plans	
	2018	2017	2018	2017
Actuarial loss (gain)	**$ (3,720)**	$ 6,243	**$ (4,998)**	$ 2,126
Return on plan assets excluding interest income	**292**	2	**—**	—
	$(3,428)	$6,245	**$(4,998)**	$2,126

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	
	2018	**2017**	**2018**	**2017**
Discount rate - obligation	**3.7%**	3.4%	**3.9%**	3.4%
Discount rate - expense	**3.4%**	3.9%	**3.4%**	3.9%
Rate of compensation increase	**3.0%**	3.0%	**—**	—
Initial health care cost trend rate	**—**	—	**6.0%**	7.0%
Cost trend rate declines to	**—**	—	**5.0%**	5.0%
Year the rate reaches its final level	**—**	—	**2022**	2021
Dental care cost trend rate	**—**	—	**5.0%**	5.0%

At December 31, 2018, the weighted average duration of the defined benefit obligation for the pension plans was 19.4 years (2017—20.3 years) and for the other benefit plans was 14.3 years (2017 - 15.7 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	**$(6,548)**	$ 8,475	**$(2,784)**	$ 3,503
Rate of compensation increase	**2,481**	(2,281)	**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, 2018. 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 $1,245,000.

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.

Cameco is exposed to commodity price risk through its use of a uranium contract derivative. As of the reporting date, a 30% decrease in the price of uranium based on the Numerco forward uranium price curve, would result in a loss on this derivative of $3,103,000 ($2,404,000 (US)). A 30% increase would have an equal but opposite impact.

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	$ 105,463	$ 5,273
Accounts receivable	USD	358,904	17,945
Long-term receivables, investments and other	USD	124,533	6,227
Accounts payable and accrued liabilities	USD	(45,474)	(2,274)
Net foreign currency derivatives	USD	(52,665)	(48,923)

A 5% strengthening of the Canadian dollar against the currencies above at December 31, 2018 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, 2018, the proportion of Cameco's outstanding debt that carries fixed interest rates is 67% (2017 - 80%).

Cameco is exposed to interest rate risk through its interest rate swap contracts whereby fixed rate payments on a notional amount of $350,000,000 of the Series D senior unsecured debentures and $150,000,000 of the Series E senior unsecured debentures were swapped for variable rate payments. The Series D swaps terminate on September 2, 2019. Under the terms of the swaps, Cameco makes interest payments based on the three-month Canada Dealer Offered Rate plus an average margin of 3.6% and receives fixed interest payments of 5.67%. 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%. At December 31, 2018, the fair value of Cameco's interest rate swap net asset was $856,000 (2017 - net liability of $150,000).

Cameco is also exposed to interest rate risk on its loan facility with Inkai due to the variable nature of the interest rate contained in the terms therein (note 31).

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 variable rate financial instruments to be as follows:

	Gain (loss)
Interest rate contracts	$ (4,173)
Advances receivable from JV Inkai	1,179

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:

	2018	2017
Cash and cash equivalents	**$711,528**	$591,620
Short-term investments	**391,025**	—
Accounts receivable [note 6]	**398,639**	393,213
Advances receivable from JV Inkai [note 31]	**124,533**	58,820
Derivative assets [note 10]	**3,881**	40,804

Cash and cash equivalents

Cameco held cash and cash equivalents of $712,000,000 at December 31, 2018 (2017 - $592,000,000). 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.

Short-term investments

Cameco held short-term investments of $391,000,000 at December 31, 2018 (2017 - $nil). The Company mitigates its credit risk by requiring that the issuer/guarantor of the investment have a minimum short-term credit rating and/or a long-term debt rating at the time of purchase, according to the investment credit ratings as issued by DBRS or S&P, or the equivalent of the DBRS or S&P rating at another reputable rating agency.

In addition to the credit-rating requirement, Cameco also mitigates risk by prescribing limits by counterparty and types of investment products.

Cameco has assessed its counterparty credit risk related to short-term investments by applying historic default rates to outstanding investment 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	$327,682
Non-investment grade credit rating	65,183
Total gross carrying amount	**$392,865**
Loss allowance	—
Net	**$392,865**

At December 31, 2018, 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, 2018:

	Corporate customers	Other customers	Total
Current (not past due)	$389,012	$ 1,269	**390,281**
1-30 days past due	273	1,833	**2,106**
More than 30 days past due	96	382	**478**
Total	$389,381	$ 3,484	**392,865**

Cameco had programs for sales without recourse of trade accounts receivable to financial institutions. Through these programs, the Company surrendered the control, risks and benefits associated with the accounts receivable sold. The amount of receivables sold was recorded as a sale of financial assets and the balances were removed from the consolidated statement of financial position at the time of sale. These programs were terminated in 2018 and as such, the total amount of receivables sold under these programs and derecognized in accordance with IFRS 9 during 2018 was nil (2017 - $120,470,000 ($92,805,000 (USD))).

Advances receivable from JV Inkai

Impairment on Cameco's unsecured shareholder loan to JV Inkai (note 31) was measured by applying the general approach of IFRS 9. In doing so, Cameco determined that the credit risk on the loan had not increased significantly since initial recognition based on a low risk of default and the borrower's strong capacity to meet its contractual cash flow obligations in the near term. It was also concluded that adverse changes in economic and business conditions may, but will not necessarily, reduce the ability of the borrower to fulfill its contractual cash flow obligations. As a result, the loan was classified as stage one and the 12-month expected credit losses were analyzed. The Company concluded that the likelihood of a default event occurring in the next 12 months was very low and no allowance for ECLs was recorded.

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, 2018:

	Total amount	Outstanding and committed	Amount available
Unsecured revolving credit facility	$ 1,250,000	$ —	$ 1,250,000
Letter of credit facilities	1,716,473	1,572,984	143,489

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	$ 224,754	$ 224,754	$224,754	$ —	$ —	$ —
Long-term debt	1,495,671	1,500,000	500,000	—	400,000	600,000
Foreign currency contracts	54,866	54,866	29,013	25,853	—	—
Other derivative liabilities	6,521	6,521	6,521	—	—	—
Total contractual repayments	**$1,781,812**	**$1,786,141**	**$760,288**	**$25,853**	**$400,000**	**$ 600,000**

	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	**$ 336,210**	$ 69,390	$82,080	$ 67,080	$ 117,660

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, 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)**

At December 31, 2017

	FVTPL	Loans and receivables	Available for sale	Other financial liabilities	Total
Financial assets					
Cash and cash equivalents	$ —	$ 591,620	$ —	$ —	$ 591,620
Accounts receivable [note 6]	—	396,824	—	—	396,824
Derivative assets [note 10]					
Foreign currency contracts	39,984	—	—	—	39,984
Interest rate contracts	820	—	—	—	820
Investments in equity securities [note 10]	—	—	21,417	—	21,417
Advances receivable from Inkai [note 31]	—	58,820	—	—	58,820
	$40,804	**$1,047,264**	**$ 21,417**	**$ —**	**$1,109,485**
Financial liabilities					
Accounts payable and accrued liabilities [note 12]	$ —	$ —	$ —	$ 258,405	$ 258,405
Dividends payable	—	—	—	39,579	39,579
Derivative liabilities [note 14]					
Foreign currency contracts	5,624	—	—	—	5,624
Interest rate contracts	970	—	—	—	970
Uranium contracts	16,820	—	—	—	16,820
Long-term debt [note 13]	—	—	—	1,494,471	1,494,471
	23,414	**—**	**—**	**1,792,455**	**1,815,869**
Net	**$17,390**	**$1,047,264**	**$ 21,417**	**$(1,792,455)**	**$ (706,384)**

Cameco has pledged $191,188,000 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, 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)**

As at December 31, 2017

	Carrying value	Fair value		
		Level 1	Level 2	Total
Derivative assets [note 10]				
Foreign currency contracts	$ 39,984	$ —	$ 39,984	$ 39,984
Interest rate contracts	820	—	820	820
Investments in equity securities [note 10]	**21,417**	21,417	—	21,417
Derivative liabilities [note 14]				
Foreign currency contracts	(5,624)	—	(5,624)	(5,624)
Interest rate contracts	(970)	—	(970)	(970)
Uranium contracts	(16,820)	—	(16,820)	(16,820)
Long-term debt [note 13]	**(1,494,471)**	—	(1,652,230)	(1,652,230)
Net	**$ (1,455,664)**	**$21,417**	**$(1,634,840)**	**$(1,613,423)**

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 current portion of long-term debt is determined using a quoted market yield of 1.7% 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 1.9% to 2.2.% (2017 - 1.6% to 2.3%).

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 written options and price swaps. The fair value of uranium options is measured based on the Black Scholes option-pricing model. 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.

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:

	2018	2017
Non-hedge derivatives:		
Foreign currency contracts	**$(52,665)**	$ 34,360
Interest rate contracts	**857**	(150)
Uranium contracts	**(5,698)**	(16,820)
Net	**$(57,506)**	$ 17,390
Classification:		
Current portion of long-term receivables, investments and other [note 10]	**$ 1,028**	$ 25,948
Long-term receivables, investments and other [note 10]	**2,853**	14,856
Current portion of other liabilities [note 14]	**(35,534)**	(11,249)
Other liabilities [note 14]	**(25,853)**	(12,165)
Net	**$(57,506)**	$ 17,390

The following table summarizes the different components of the gains (losses) on derivatives included in net earnings:

	2018	2017
Non-hedge derivatives:		
Foreign currency contracts	**$(85,967)**	$58,983
Interest rate contracts	**2,032**	(4,014)
Uranium contracts	**2,854**	1,281
Net	**$(81,081)**	**$56,250**

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 2018 reflect the environment that the Company is operating in, similar to the prior comparative period.

The capital structure at December 31 was as follows:

	2018	2017
Current portion of long-term debt [note 13]	**$ 499,599**	$ —
Long-term debt [note 13]	**996,072**	1,494,471
Cash and cash equivalents	**(711,528)**	(591,620)
Short-term investments	**(391,025)**	—
Net debt	**393,118**	902,851
Non-controlling interest	**310**	371
Shareholders' equity	**4,993,282**	4,859,288
Total equity	**4,993,592**	4,859,659
Total capital	**$5,386,710**	$5,762,510

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, 2018, Cameco met these requirements.

28. Segmented information

As a result of a change to the way its global marketing activities are organized, during 2018, Cameco discontinued the reporting of NUKEM as a reportable segment. The consolidation of Canadian and international marketing activities in Saskatoon has resulted in NUKEM's activities no longer meeting the quantitative thresholds for separate disclosure. Its results are now included in the "other" column and comparative information has been adjusted.

Cameco now 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 $212,511,000 (2017 - $38,311,000) of care and maintenance costs during the year, including $32,111,000 (2017 - $1,200,000) 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 - 2018

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**

For the year ended December 31, 2017

	Uranium	Fuel services	Other	Total
Revenue	$1,574,068	$312,888	$ 269,896	$2,156,852
Expenses				
Cost of products and services sold	910,685	212,035	267,513	1,390,233
Depreciation and amortization	267,931	37,093	25,321	330,345
Cost of sales	**1,178,616**	**249,128**	**292,834**	**1,720,578**
Gross profit (loss)	**395,452**	**63,760**	**(22,938)**	**436,274**
Administration	—	—	163,095	163,095
Impairment charges	246,931	—	111,399	358,330
Exploration	29,933	—	—	29,933
Research and development	—	—	5,660	5,660
Other operating expense	43	—	—	43
Loss on disposal of assets	5,901	247	799	6,947
Finance costs	—	—	110,608	110,608
Gain on derivatives	—	—	(56,250)	(56,250)
Finance income	—	—	(5,265)	(5,265)
Other expense	7,193	—	23,217	30,410
Earnings (loss) before income taxes	**105,451**	**63,513**	**(376,201)**	**(207,237)**
Income tax recovery				(2,519)
Net loss				**(204,718)**
Capital expenditures for the year	**$ 132,073**	**$ 11,237**	**$ 23**	**$ 143,333**

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:

	2018	2017
United States	**$1,660,727**	$1,692,936
Canada	**424,079**	316,611
Germany	**2,817**	147,305
Switzerland	**4,038**	—
	$2,091,661	$2,156,852

The Company's non-current assets, excluding deferred tax assets and financial instruments, by geographic location are as follows:

	2018	2017
Canada	**$3,401,828**	$3,417,254
Australia	**414,084**	422,400
United States	**131,526**	138,455
Kazakhstan	**49**	283,562
Germany	**41**	233
	$3,947,528	$4,261,904

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 2018, revenues from one customer of Cameco's uranium and fuel services segments represented approximately $204,594,000 (2017 - $197,847,000), approximately 10% (2017 - 9%) 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 2018	2017
Subsidiaries:			
Cameco Fuel Manufacturing Inc.	Canada	100%	100%
Cameco Marketing Inc.	Canada	100%	—
Cameco Inc.	US	100%	100%
Power Resources, Inc.	US	100%	100%
Crow Butte Resources, Inc.	US	100%	100%
NUKEM, Inc.	US	100%	—
NUKEM Investments GmbH	Germany	100%	100%
Cameco Australia Pty. Ltd.	Australia	100%	100%
Cameco Europe Ltd.	Switzerland	100%	100%
Associates:			
JV Inkai	Kazakhstan	40%	60%

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.

As a result of the restructuring of JV Inkai, effective January 1, 2018 Cameco's ownership interest was reduced to 40% (previously 60%) and Cameco began accounting for JV Inkai on an equity basis. In 2017, the participants in the Inkai joint operation purchased uranium from JV Inkai and, in turn, derived revenue directly from the sale of such product to third party customers.

Cameco reflects its proportionate interest in these assets and liabilities as follows:

	Principal place of business	Ownership	2018	2017
Total assets				
McArthur River	Canada	69.81%	**$ 1,065,562**	$ 1,121,509
Key Lake	Canada	83.33%	**537,233**	482,879
Cigar Lake	Canada	50.03%	**1,503,863**	1,531,150
Inkai	Kazakhstan	40.00%	**—**	230,280
			$3,106,658	$3,365,818
Total liabilities				
McArthur River		69.81%	**$ 32,829**	$ 38,896
Key Lake		83.33%	**222,369**	140,214
Cigar Lake		50.03%	**38,478**	40,687
Inkai		40.00%	**—**	119,998
			$ 293,676	$ 339,795

Through unsecured shareholder loans, Cameco has agreed to fund the development of the Inkai project. While proportionately consolidating JV Inkai, in 2017 Cameco eliminated the loan balances recorded by Inkai and recorded advances receivable (notes 10 and 31) representing its 40% share.

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:

	2018	2017
Short-term employee benefits	**$24,821**	$26,569
Share-based compensation	**12,796**	11,525
Post-employment benefits	**4,323**	5,914
Termination benefits	**860**	916
Total	**$42,800**	$44,924

(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, 2018, $124,533,000 ($91,320,000 (US)) of principal and interest was outstanding (2017 - $117,218,000 (US) with Cameco's share, representing the 40% owed to it, being $58,820,000) (notes 10 and 30).

Effective January 1, 2018 due to a change in its ownership interest, Cameco now accounts for its interest in JV Inkai under the equity method. As a result, the full amount of the outstanding loan is reflected on the balance sheet as opposed to the 40% owed to it as was reflected at December 31, 2017.

For the year ended December 31, 2018, Cameco recorded interest income of $5,603,000 relating to this balance (2017 - $2,182,000 which related to the 40% owed to it).

As a result of the change to the equity method of accounting, Cameco no longer eliminates its uranium concentrate purchases from JV Inkai. For the year ended December 31, 2018, Cameco had purchases of $94,063,000 ($72,007,000 (US)).

EXHIBIT 99.3

Cameco Corporation

2018 Management's Discussion and Analysis

February 8, 2019

Management's discussion and analysis

February 8, 2019

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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, 2018. The information is based on what we knew as of February 7, 2019.

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

- we will continue to take the necessary actions intended to shield the company from the nearer-term risks we face and that we expect will reward shareholders for their continued patience and support of our strategy to build long-term value
- our expectations about 2019 and future global uranium supply, consumption, demand, contracting volumes and number of reactors, including the discussion under the heading *Market overview and developments*
- the discussion under the heading *Our strategy*
- expectations for repayment of our $500 million debenture maturing in 2019
- 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 and our estimate of the amount and timing of expected cash taxes and transfer pricing penalties
- the discussion of our expectations relating to our dispute with Tokyo Electric Power Company Holdings, Inc. (TEPCO), including the estimated damages sought of approximately $700 million (US)
- the discussion under the heading *Outlook for 2019*, including our 2019 financial outlook, expectations for 2019 gross profit and cash balances, and our price sensitivity analysis for our uranium segment
- the outlook for our uranium and fuel services segments for 2019
- our expectations for future tax payments and rates, including effective tax rates
- our expectation that existing cash balances and operating cash flows will meet our anticipated 2019 capital requirements, even if we decide to retire our $500 million debenture maturing in 2019
- our expectations for 2019, 2020 and 2021 capital expenditures
- our expectation that in 2019 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 $130 million and $160 million in 2019
- 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 are unsuccessful or have unanticipated consequences
- our estimates of production, purchases, cash flow, costs, decommissioning, reclamation expenses, or our tax expense prove to be inaccurate
- 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 or with TEPCO
- 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
- 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
- the outcome of the investigation initiated by the US Department of Commerce (DOC) under Section 232 of the Trade Expansion Act, which may result in the US imposing tariffs or quotas on uranium imports
- 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 or resuming production after the extended Cigar Lake shutdown scheduled for the third quarter
- 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 (including our Port Hope conversion facility and Orano's McClean Lake mill), 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, 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 the disputes with CRA and TEPCO, including that the Tax Court's ruling will be upheld on appeal
- we are able to utilize letters of credit to the extent anticipated in our dispute with CRA
- the outcome of the investigation initiated by the DOC under Section 232 of the Trade Expansion Act does not result in the US imposing tariffs or quotas on uranium imports
- our decommissioning and reclamation expenses
- 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, including the resumption of production after the end of the extended shutdown scheduled for the third quarter
- the McClean Lake mill is able to process Cigar Lake ore as expected
- 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
- 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 (including at our Port Hope conversion facility and Orano's McClean Lake mill), 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

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, clean and reliable 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 2018, 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 0.7 million hectares (1.7 million acres). In northern Saskatchewan alone, we have direct interests in about 0.6 million hectares (1.6 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 control about 25% of world primary conversion capacity.

MARKETING

We sell uranium and fuel services to nuclear utilities in 13 countries, with sales commitments to supply about 125 million pounds of U_3O_8 and over 40 million kilograms of UF_6 conversion services.

OTHER FUEL CYCLE INVESTMENTS

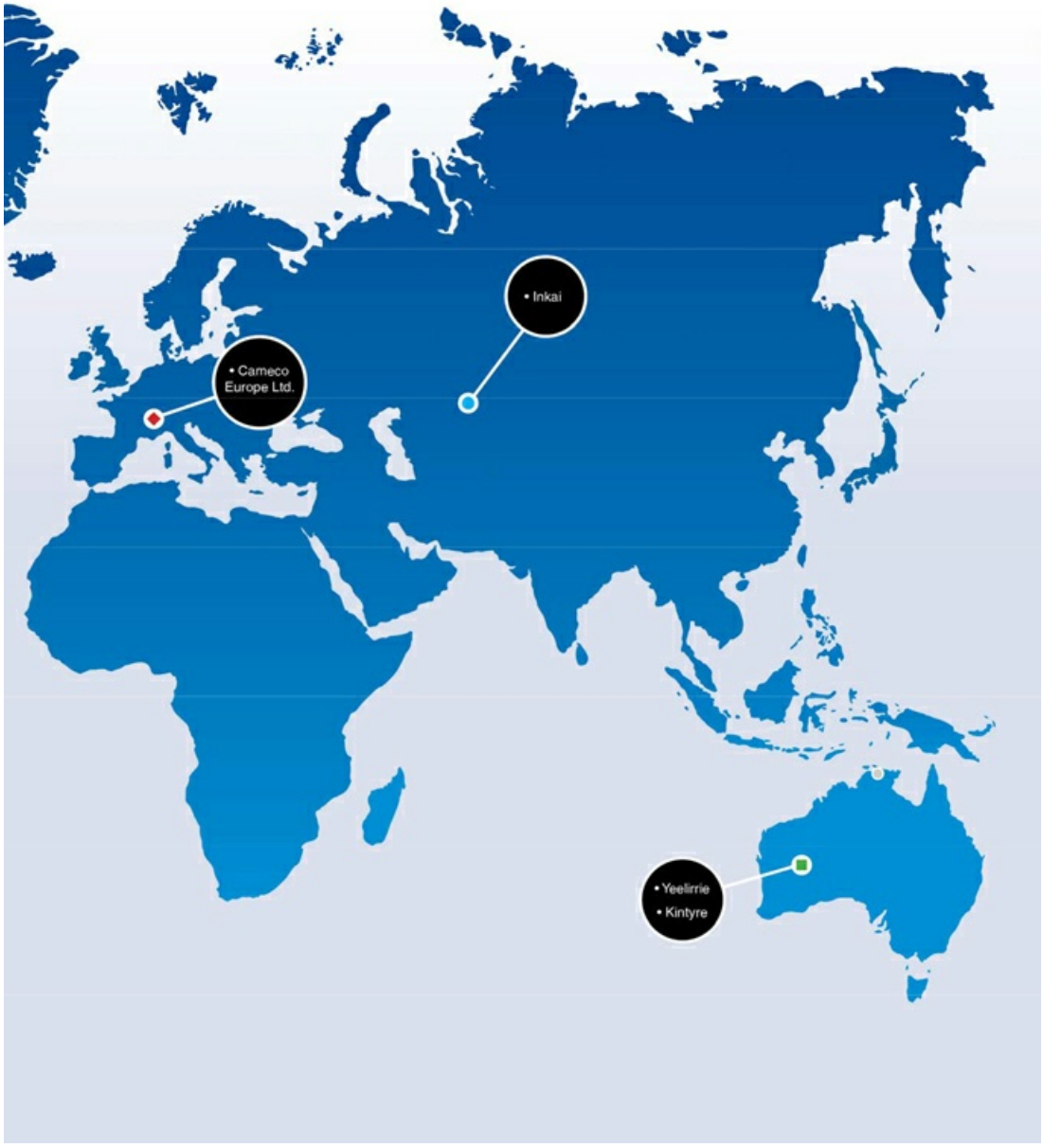
ENRICHMENT

GE-Hitachi Global Laser Enrichment (GLE) is testing a third-generation technology that, if successful, will use lasers to commercially enrich uranium. We have a 24% interest in GLE, which is currently undergoing restructuring.

* 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.



2018 performance highlights

Our focus throughout 2018 continued to be on lowering our costs and improving efficiency in order to maximize cash flow amid ongoing challenging and uncertain uranium market conditions. We have seen a significant improvement in the market relative to a year ago and continue to anticipate a market shift. Despite these improvements, the timing of that shift is still uncertain. Spot prices have increased by more than 20% since the beginning of 2018, and some interest in long-term contracting is emerging. However, uranium prices and contracting opportunities are still not where they need to be to restart the significant idled production capacity that exists, and are far below the level that would warrant investment in value-adding growth opportunities. Until we see that shift emerge, we will continue to take the necessary actions intended to shield the company from the nearer-term risks we face 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)	2018	2017	CHANGE
Revenue	**2,092**	2,157	(3)%
Gross profit	**296**	436	(32)%
Net earnings (loss) attributable to equity holders	**166**	(205)	>100%
$ per common share (diluted)	**0.42**	(0.52)	>100%
Adjusted net earnings (non-IFRS, see page 27)	**211**	59	>100%
$ per common share (adjusted and diluted)	**0.53**	0.15	>100%
Cash provided by operations (after working capital changes)	**668**	596	12%

Net earnings (loss) attributable to equity holders (net earnings (loss)) and adjusted net earnings were higher in 2018 compared to 2017, in-line with the outlook we provided. See *2018 consolidated financial results* beginning on page 26 for more information.

One of the more notable developments in 2018, was the unequivocal win in our court case with the Canada Revenue Agency (CRA) for the 2003, 2005 and 2006 tax years. In September, the Tax Court of Canada (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, reinstating our original filing position. In accordance with the ruling, we have made an application to the Tax Court to recover costs in the amount of $38 million. In its response to the Tax Court regarding our cost submission, CRA is claiming $9.6 million would be an appropriate award in this case. The actual award is at the discretion of the Tax Court.

In October, CRA filed a notice of appeal with the Federal Court of Appeal. In its filing, CRA did not appeal the Tax Court's finding that sham was not present, but focused on the Tax Court's interpretation and application of the transfer pricing provisions in section 247 of the Income Tax Act as the basis for its appeal. It could take up to two years to receive a decision from the Federal Court of Appeal. However, we expect the Tax Court's ruling will be upheld on appeal and believe the decision should apply in principle to subsequent years. See *Transfer Pricing Dispute* on page 31 for more information.

Our segment updates

In our uranium segment, annual production was in-line with expectations as a result of the planned suspension of production at the McArthur River/Key Lake operation. Key highlights:

- extended the production suspension at McArthur River/Key Lake for an indeterminate duration, removing 18 million pounds per year (100% basis) from the market
- annual production of 9.2 million pounds—in-line with the guidance provided in our 2018 third quarter MD&A
- quarterly production of 2.4 million pounds in the fourth quarter—65% lower than in 2017 due to the suspension of production at McArthur River/Key Lake and the change in reporting for JV Inkai
- annual purchases of 14 million pounds, including 6 million pounds on the spot market

Production in 2018 from our fuel services segment was 33% higher than in 2017, as a result of an increase in UF_6 production given the increase in demand in the market.

See *Our operations and projects* beginning on page 55 for more information.

HIGHLIGHTS			2018	2017	CHANGE
Uranium	Production volume (million lbs)		**9.2**	**23.8**	(61)%
	Sales volume (million lbs)		**35.1**	**33.6**	4%
	Average realized price	($US/lb)	**37.01**	**36.13**	2%
		($Cdn/lb)	**47.96**	**46.80**	2%
	Revenue ($ millions)		**1,684**	**1,574**	7%
	Gross profit ($ millions)		**268**	**395**	(32)%
Fuel services	Production volume (million kgU)		**10.5**	**7.9**	33%
	Sales volume (million kgU)		**11.7**	**11.5**	2%
	Average realized price	($Cdn/kgU)	**26.78**	**27.20**	(2)%
	Revenue ($ millions)		**314**	**313**	—
	Gross profit ($ millions)		**59**	**64**	(8)%

Industry prices

	2018	2017	CHANGE
Uranium ($US/lb U_3O_8)[1]			
Average annual spot market price	**24.59**	21.78	13%
Average annual long-term price	**30.38**	31.92	(5)%
Fuel services ($US/kgU as UF_6)[1]			
Average annual spot market price			
North America	**9.98**	5.26	90%
Europe	**10.32**	5.69	81%
Average annual long-term price			
North America	**14.33**	14.00	2%
Europe	**14.44**	14.04	3%

Note: the industry does not publish UO_2 prices.

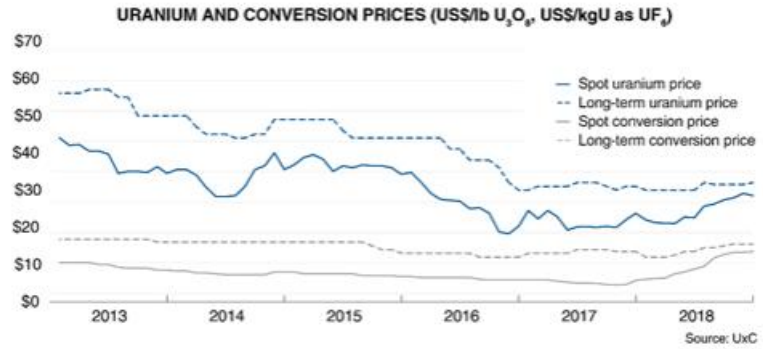
1 Average of prices reported by TradeTech and UxC, LLC (UxC)

On the spot market, where purchases call for delivery within one year, the volume reported by UxC for 2018 was approximately 88.5 million pounds, compared to 48.1 million pounds in 2017. At the end of 2018, the average reported spot price was $27.75 (US) per pound, up $4.00 (US) from the end of 2017. During the year, the uranium spot price ranged from a high of $29.10 (US) per pound to a low of about $21.00 (US) per pound, averaging around $24.60 (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 2018 was about 89.9 million pounds compared to about 82.9 million pounds in 2017. Volumes continue to be less than the quantities consumed. The average reported long-term price at the end of the year was $32.00 (US) per pound, up $1.00 (US) from 2017.

With the uncertainty created by market access and trade policy issues facing the nuclear industry, we expect contracting in 2019 could remain largely discretionary.

Spot UF_6 conversion prices increased in both the North American and European markets, as did long-term UF_6 conversion prices.



Also of note

TEPCO contract dispute

On January 31, 2017, TEPCO confirmed that it would not accept a uranium delivery scheduled for February 1, 2017, and would not withdraw the contract termination notice it provided to Cameco Inc. on January 24, 2017 with respect to a uranium supply agreement between TEPCO and Cameco Inc. TEPCO alleged that an event of "force majeure" had occurred because it had been unable to operate its nuclear reactors for 18 consecutive months due to the Fukushima nuclear accident in March 2011 and the resulting government regulations. Cameco Inc. sees no basis for terminating the agreement and is pursuing all its legal rights and remedies against TEPCO.

Under the agreement, TEPCO had already received and paid for 2.2 million pounds of uranium since 2014. The termination affects approximately 9.3 million pounds of uranium deliveries through 2028, worth approximately $1.3 billion in revenue to Cameco Inc., including about $126 million in each of 2017, 2018 and 2019 based on 855,000 pounds of deliveries in each of those years. All estimates and uranium volumes are provided on a consolidated basis for Cameco using expected contract prices and an exchange rate of $1.00 (US) for $1.30 (Cdn) and do not reflect any resale of the cancelled deliveries under the contract with TEPCO.

In accordance with the provisions in the supply agreement, an arbitration hearing to resolve the dispute took place during January of 2019. There are a number of post hearing steps and we expect they will be completed by mid-May, 2019. The timing of the final decision will be dependent on how long the arbitrators deliberate following receipt of post-hearing submissions. The arbitration proceedings are subject to a confidentiality order which limits the information we are able to disclose.

We are seeking damages of approximately $700 million (US) plus interest and legal costs.

In this MD&A, our 2019 financial outlook and other disclosures relating to our contract portfolio are presented on a basis that excludes this agreement with TEPCO, which is under dispute.

SHARES AND STOCK OPTIONS OUTSTANDING

At February 6, 2019, we had:

- 395,792,732 common shares and one Class B share outstanding
- 8,800,624 stock options outstanding, with exercise prices ranging from $11.32 to $39.53

DIVIDEND

In 2018, our board of directors declared a dividend of $0.08 per common share, which was paid December 14, 2018. 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

Cautiously optimistic

The uranium market has improved significantly relative to a year ago. There have been substantial production cuts, cuts to some secondary supplies, reductions in producer inventories, and an increase in demand for uranium in the spot market from producers and financial players. These actions have helped remove excess material from the spot market and have put upward pressure on the uranium spot price. At the end of the year, the spot price was up about 17% compared to the end of 2017. The market has finally reached the point where, on an annual basis, consumption has returned to pre-2011 levels, and some interest in long-term contracting is emerging.

Despite these improvements in the uranium market, we believe there is still a need for some caution in the near term. It is important to remember that much of the supply that has been removed from the market is a result of supply curtailment not supply destruction. There is plenty of idle tier-one production and tier-one expansion capabilities, as well as idle tier-two production and expansion capabilities. And, we can't lose sight of material sitting with financial players. This is capacity that can come back to the market relatively quickly. As a result, new supply poses a significant risk to the uranium market recovery. Today, we believe even the promise of new supply could create a headwind and put downward pressure on uranium prices.

A LOT OF MOVING PARTS

While the reason for continued caution is the same as last year (a lack of acceptable long-term contracting opportunities) the cause has changed. Previously, the lack of acceptable contracting opportunities was caused by an oversupplied uranium spot market, which led to complacency and discretion. However, there have been a number of significant supply and demand developments, which make for a lot of moving parts in our industry. These moving parts have shifted market sentiment to one of uncertainty and confusion, resulting in some market paralysis while participants try to digest the implications of the changing dynamics.

Supply is not guaranteed

Economic realities 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 – we have seen additional existing primary supply shutdown and not just by the higher-cost producers. 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 are the market access and trade policy issues facing the nuclear industry. These market access and trade policy issues highlight the importance of origin in an industry where 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 or no primary production. Furthermore, the issues highlight the fact that nearly 70% of primary production is in the hands of state-owned enterprises, after taking into account all of the cuts to primary production that have occurred. Some of the more significant supply developments are:

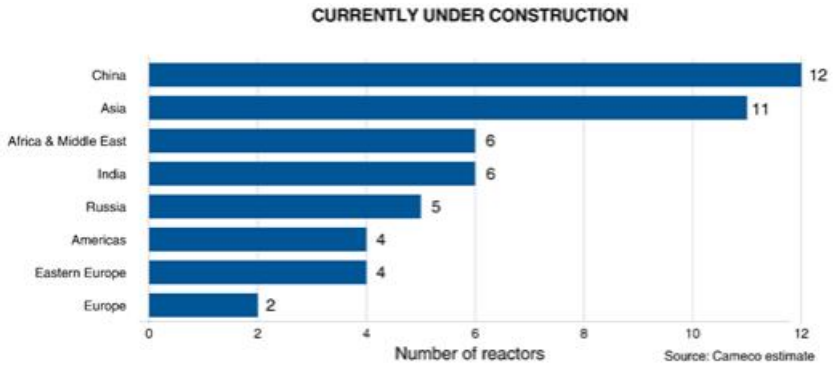
- Our 2018 decision, along with our partner, Orano, to extend the production suspension at McArthur River/Key Lake for an indeterminate duration, removing 18 million pounds annually from the market, and adding to the production curtailments at Rabbit Lake and in the US in 2016.
- In the US, which has the largest fleet of nuclear reactors in the world, an investigation was launched by the Department of Commerce in July of 2018 under section 232 of the Trade Expansion Act. The investigation is to determine whether the quantity and circumstances of foreign uranium imports into the US threaten to impair national security.
- In March 2018, the US Department of Energy suspended its remaining excess uranium sales for the fiscal year, removing about 1.6 million pounds of secondary supply from the market. Legislation has been approved that extends the program suspension for the 2019 fiscal year as well, which is expected to result in a reduction of available secondary supplies of about 3 million pounds.
- The review of the Russian Suspension Agreement, which imposes annual quotas on imports of Russian uranium into the US, and expires at the end of 2020.

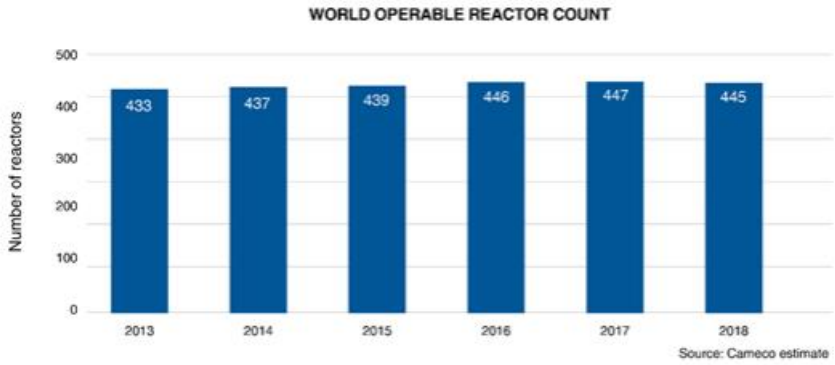
- Kazatomprom announced its intent to reduce 2018 production to about 56 million pounds, about 8% less than its production in 2017, and during the year sold inventory in excess of 8 million pounds to Yellow Cake plc's uranium fund. And, in conjunction with its initial public offering (IPO), it stated its intent to shift to a market-centric operator, as opposed to a production-led operator.
- The recapitalization of Paladin and its subsequent decision to put its Langer-Heinrich operation in Namibia on care and maintenance.
- Reports that the Husab mine in Namibia faced several technical and operational challenges in its rampup of production.
- Rio Tinto's announcement that it has entered into a binding agreement with China National Uranium Corporation Limited to sell its entire 68.62% share in the Rossing mine in Namibia.
- The May 2019 expiration of the contract with unionized employees at Orano's McClean Lake mill, which poses a risk to production plans at Cigar Lake if an agreement cannot be reached and there is a labour dispute.

Demand has recovered and is growing

The demand gap left by forced and premature nuclear reactor shut-downs since March of 2011 has largely been filled. And, with eight new reactors beginning commercial operation in 2018, 50 reactors under construction, and many more planned, demand is growing. This growth is largely occurring in Asia and the Middle East, however it is being partially offset by early reactor retirements, plans for reduced reliance on nuclear, or phase-out policies in other regions. There is mixed demand news for the nuclear industry. Some of the more significant developments are:

- The increased demand from financial players who are interested in holding physical uranium, including the IPO by Yellow Cake plc. UxC estimates financial players purchased around 14.5 million pounds of uranium on the spot market in 2018.
- The increased demand for uranium on the spot market by producers, including us, to replace curtailed production in order to meet delivery commitments. Over 11 million pounds were purchased in the spot market by producers in 2018, triple the volume of 2017.
- In China, the fastest growing nuclear energy market in the world, six reactors, including the world's first AP1000 and EPR reactors, began commercial operation in 2018. Although there has been a slowdown in construction starts, we believe the startup and regulatory approval of this new generation of reactors will clear the path for additional new build projects in that country.
- In the US, news was mixed. The owners of the Vogtle 3 and 4 nuclear construction project voted to proceed, and several states including Illinois, New York, New Jersey, and Connecticut enacted incentives to support the continued operation of nuclear plants. However, several planned reactor shutdowns were also announced.
- In Taiwan, 60% of the ballots cast in a November referendum rejected the government's plan to phase-out nuclear by 2025.
- A number of Japanese utilities have now successfully navigated through the new, rigorous safety inspection process, with nine reactors operating and an additional 18 reactors at various stages in the restart approval process. The Japanese government approved a new basic energy plan confirming that nuclear power will play a significant role in its energy strategy.
- In India, the government announced nine reactors were under construction and were to be completed by 2025. Another 12 reactors have obtained administrative and financial approval and the government is targeting startup by 2031.
- Poland's draft energy policy plans for its first nuclear power plant to be in operation by 2033 and for total installed nuclear capacity to reach 6000 to 9000 MWe by 2040, representing 10% of its electricity supply.
- In France, the long-term energy strategy plans for a reduction in nuclear power's share of its energy mix to 50% by 2035, resulting in the eventual shutdown of 14 nuclear reactors. The closures are subject to its ability to ensure the security of its electricity supply and the evolution of the transition of its energy mix to renewables. The plan did maintain the option for future construction of new reactors.
- In South Korea, the government announced the early retirement of one of its nuclear reactors and cancelled plans for four new units. Construction on five units is still proceeding.
- A number of other countries, such as UAE, Belarus, Bangladesh, Turkey and Saudi Arabia, continue with their nuclear energy construction programs and plans.





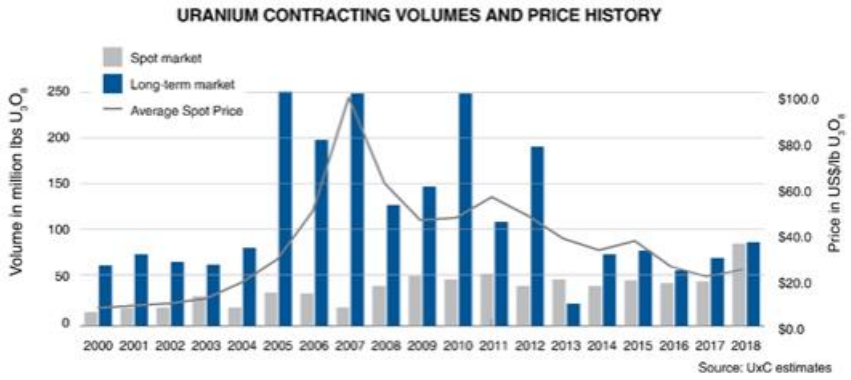
Growing support from proponents of clean air and climate change

In addition to the market dynamics discussed above, there is a growing acknowledgment that adherence to clean air and global climate change goals requires a material dedication to all non-emitting energy sources, including nuclear. World electricity demand will grow because of the positive impact it has on quality of life, however this cannot occur at the expense of clean air. The director of the Sustainable Energy Division of the United Nations Economic Commission for Europe (UNECE) has stated that the search for a solution to climate change must include a discussion of nuclear power, and the UNECE included it on its annual conference agenda for the first time. In addition, the United Nations Intergovernmental Panel on Climate Change special report made it clear that nuclear energy is a necessary part of an effective global response to achieving climate change goals. The Union of Concerned Scientists, who has traditionally not supported nuclear energy, has also acknowledged that in order to combat climate change, all zero carbon options have to be considered, including nuclear.

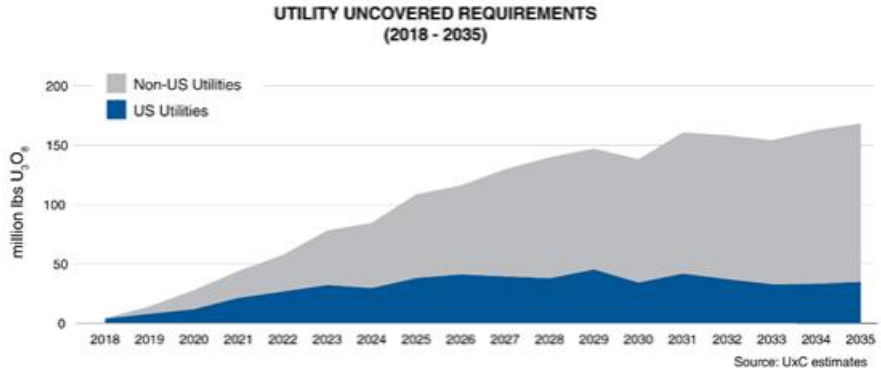
OPPORTUNITIES FOR THOSE WHO CAN WAIT

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 seven 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 so far this decade, 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 initially created by the low-price environment, and now by the uncertainty and confusion in our industry, 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 plan 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 1.9 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. 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 enough to satisfy the growing backlog of long-term demand. As a result, we expect there will be increased pressure for a return to long-term contracting on acceptable terms.

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, while at the same time recognizing that uncertainty persists.

With demand coming on in the form of restarts and new reactors, and supply becoming less certain as a result of curtailments, lack of investment, and market access and trade policy issues, we're continuing to expect a market shift. Until that time, 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 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 growing electricity demand. Nuclear energy is an option that can provide the power needed, not only reliably, but also safely and affordably, and in a way that avoids adding to the air pollution that plagues so many countries with developing economies.

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 2018, these actions resulted in:

- lower capital expenditures
- lower direct administration and exploration costs
- increased care and maintenance costs
- accumulation of significant cash on our balance sheet

Consistent with our actions, we reduced our 2018 dividend to $0.08 per share, which was paid on December 14, 2018. In addition, we have extended the production shutdown at our McArthur River/Key Lake operation 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 with 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. Our focus is on maintaining and optimizing profitability.

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.

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 maintain 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, our ongoing dispute with CRA, the pending decision in our TEPCO arbitration, and our $500 million debenture maturing in September 2019, the objective of our capital allocation is to maximize cash flow, while maintaining 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, and which, in 2018, resulted in the reduction of inventory and the release of significant working capital
- 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

As a result, we expect we will be in a position to retire our $500 million debenture maturing in 2019.

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.

While we are seeing some improvement in the spot market and we are beginning to get more clarity on our litigation risks, we have not yet seen the market transition needed to restart our idled production capacity. Therefore, until we see that transition, our focus for 2019 through 2021 will continue to be primarily on sustaining and capacity replacement capital to ensure we have the ability to meet our contractual commitments and to maintain optionality longer term. In addition, if we get clarity on our CRA or TEPCO disputes, which generate 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 sign 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 by maintaining our investment-grade rating, 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, while maintaining our investment-grade rating so we can self-manage risk, including being in a position to retire our $500 million debenture maturing in 2019.

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

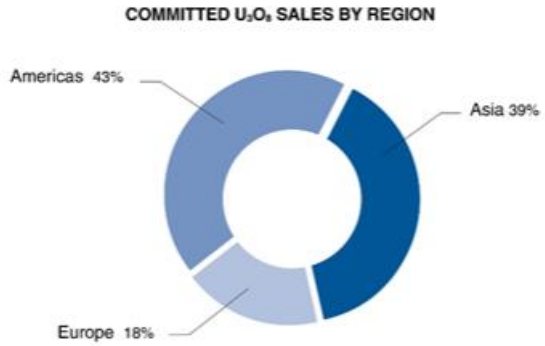
We work with our customers to optimize the value of our existing contract portfolio. In cases where a customer is seeking relief due to a challenging policy, operating, or economic environment, we evaluate their specific circumstances and assess their long-term sustainability. Where we deem the customer's 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 125 million pounds of U_3O_8 with 33 customers worldwide in our uranium segment, and over 40 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 20 million pounds, with commitment levels in 2019 and 2020 higher than in 2021 through 2023.

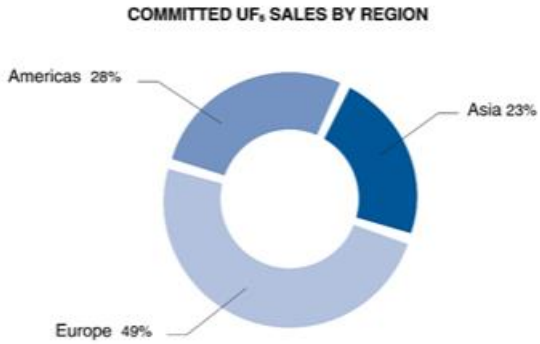
Customers – U_3O_8:

Five largest customers account for 56% of commitments



Customers – UF_6 conversion:

Five largest customers account for 61% 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, under long-term agreements and in the spot market
- our existing inventory

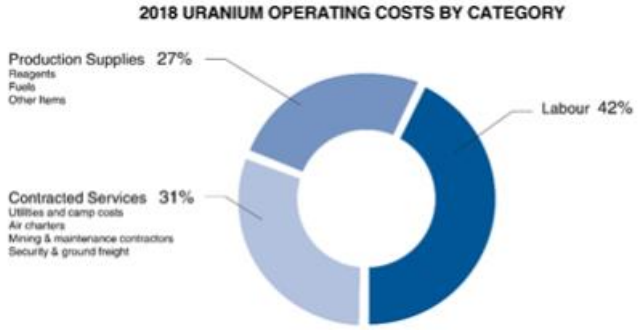
We allow sales volumes to vary year-to-year depending on:

- 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 2019, 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 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.

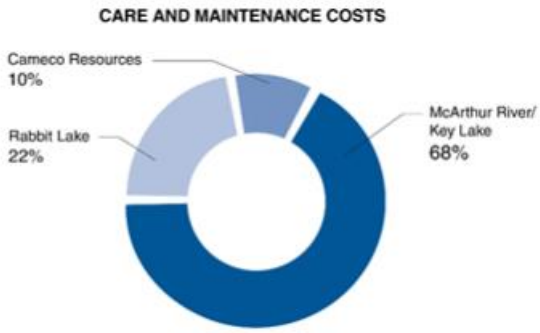
Operating costs in our fuel services segment are mainly fixed. In 2018, labour accounted for about 52% of the total. The largest variable operating cost is for zirconium, followed by energy (natural gas and electricity), and anhydrous hydrogen fluoride.

CARE AND MAINTENANCE COSTS

In 2019, we expect to incur between $130 million and $160 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.

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. As a result, we are focused on asset reliability, and ensuring we have the resources critical for a restart. This means higher care and maintenance costs 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. We also make purchases on the spot and long-term market where it is beneficial to do so. In 2019, 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, based on our view that the market will transition from being supply-driven to being demand-driven, we expect uranium prices will rise to 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.

Sustainable development: A key part of our strategy, reflecting our values

Social responsibility, safety of our workforce and the public, as well as environmental protection are top priorities for us. In fact, we have built our corporate objectives around them within our four measures of success: a safe, healthy and rewarding workplace, a clean environment, supportive communities, and outstanding financial performance. Sustainability is at the core of our company culture. It helps us:

- build trust, credibility and corporate reputation
- gain and enhance community support for our operations and plans
- attract and retain employees
- manage risk
- drive innovation and continual improvement to build competitive advantage

Given this, we have sustainable development principles and practices embedded throughout our organization, from our overall corporate strategy to day-to-day operations.

Consequently, we recognize that changes in our operations and support functions, including the suspension of production at Rabbit Lake and curtailment at the US operations in 2016, the suspension of production at our McArthur River/Key Lake operation for an indeterminate duration, the reduction of the workforce at our northern Saskatchewan operations and at our corporate office, and the changes made to the way our global marketing activities are organized all have a significant impact on the communities where we operate. We regret the negative impact that these carefully deliberated decisions have on affected employees and other stakeholders. However, these actions are deemed necessary for the long-term health of the company in a uranium market that continues to be weak. Improving operational efficiency is part of our strategy to effectively manage costs and remain competitive through these low times, while positioning the company and our stakeholders to benefit as the market improves.

SAFE, HEALTHY, REWARDING WORKPLACE

We are committed to living a strong safety culture, while looking to continually improve. As a result of this commitment, we have a long history of strong safety performance at our operations and across the organization.

2018 Highlights:

- best safety performance in the history of the company as measured by Total Recordable Incident Rate (TRIR) and Lost Time Incident rate. However, our TRIR performance did not meet the improvement target set for 2018.
- several operations reached significant safety milestones, including the Blind River refinery and the Crow Butte operation passing 12 and 11 years respectively without a lost time incident and several other facilities continued to increase their record of days without a lost time accident
- continued low average dose of radiation to workers, including the Cigar Lake operation as it sustained production at licensed capacity
- continued improvement of safety systems and performance for support groups, such as corporate facilities

A CLEAN ENVIRONMENT

We are committed to being a leading environmental performer. We strive to be a leader not only by complying with legal requirements, but also by keeping risks as low as reasonably achievable, and looking for opportunities to continually improve our performance.

We track our progress by monitoring the air, water and land near our operations, and by measuring the amount of energy we use and the amount of waste generated. We use this information to help identify opportunities to improve.

2018 Highlights:

- as part of Vision in Motion, we began shipping contaminated soil and legacy low level radiative waste stored at the Port Hope conversion facility to the long-term waste management facility
- remained a top performer under Canada’s Fisheries Act Metal and Diamond Mining Effluent Regulations with effluent performance well below regulatory limits
- sustained Cigar Lake at full production without exceeding an environmental limit or having a significant environmental incident
- continued efforts to reduce low level radioactive waste stored at our fuel services division

- implemented Canadian Standards Association (CSA) waste management standards at our fuel services division facilities
- continued efforts to systematically improve energy conservation and efficiency at both our fuel services and Saskatchewan facilities
- continued industry-leading research developing enhanced groundwater restoration techniques that can be applied at our US in-situ recovery operations

SUPPORTIVE COMMUNITIES

Gaining the trust and support of our communities, indigenous people, and governments is necessary to sustain our business. We earn support and trust through excellent safety and environmental performance, by proactively engaging our stakeholders in an open and transparent way, and by making a difference in communities wherever we operate. We are a leading employer of indigenous peoples in Canada, and a five-time Gold award winner through the Progressive Aboriginal Relations program as judged by the Canadian Council for Aboriginal Business. Since 2004, we have procured nearly $3.8 billion in services from local suppliers in northern Saskatchewan. These efforts are critical to obtaining and maintaining the necessary regulatory approvals.

2018 Highlights:

- over $120 million in procurement from locally owned northern Saskatchewan companies (89% of total)
- At December 31, in northern Saskatchewan, 319 of our employees were Residents of Saskatchewan's North (RSN) (49.7% of total), compared to 603 RSN employees at the end of 2017 (49.6% of total). While the number of employees declined as a result of the suspension of production at our McArthur River/Key Lake operation for an indeterminate duration, we maintained the proportion of RSN.
- Corporate Knights ranked Cameco as one of Canada's top five Corporate Citizens in 2018

OUTSTANDING FINANCIAL PERFORMANCE

Long-term financial stability and profitability are essential to our sustainability as a company. We believe that sound governance is the foundation for strong corporate performance.

2018 Highlights:

- continued to achieve an average realized price that outperformed the market
- continued to take action to decrease costs, including lower capital expenditures, and lower direct administration and exploration costs
- unequivocal win in our court case with CRA for the 2003, 2005 and 2006 tax years

Our governance practices

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. Its goal is to ensure we operate as a successful business, optimizing financial returns while effectively managing risk.

In 2018, our board consisted of 10 directors who were selected based on their collective ability to contribute expertise to the broad range of issues the board faces when carrying out its responsibilities in overseeing our business and affairs.

WHAT WE DO:

- Independent board – 90% of the directors in 2018 were independent
- Non-executive chair leads the board – we maintain separate chair and CEO positions and have had a non-executive, independent chair of the board since 2003
- Share ownership – we require our directors and executives to own shares, or have an equity interest in Cameco to align their interests with those of our shareholders and share ownership is disclosed
- Majority voting for directors – the board adopted a majority voting policy in 2006
- Strong risk oversight—the board and committees oversee our risk management program and strategic, financial and operational risks
- Formal assessment process – the directors assess the board, committees and individual directors' performance
- Independent third-party review – the director assessment process is augmented by a third-party review every three years

- Serving on other boards – we limit the number of other public company boards our directors can serve on, and serve on together
- Director recruitment and board succession – we have term limits and a retirement policy for directors
- Diverse board – our board has a diverse mix of skills, background and experience and 30% of directors in 2018 were female
- Independent advice – board committees have full authority to retain independent advisors to help them carry out their duties and responsibilities
- Code of conduct and ethics – directors, officers and employees must comply with our code of conduct and confirm their compliance every year
- Long-standing shareholder engagement – we communicate openly with shareholders and other stakeholders
- Say on pay – we have held an advisory vote on our approach to executive compensation every year since 2010

More information about our shareholder commitment, our governance principles, how our board operates and 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.

MONITORING AND MEASUREMENT

We take the integration of sustainable development and measurement of our performance seriously. We produced our first Sustainable Development (SD) Report in 2005, using the Global Reporting Initiative's Sustainability Framework (GRI). We use GRI as our sustainability report card to our stakeholders. It tells them how we are performing against globally recognized key indicators that measure our social, environmental and economic impacts in the areas that matter most to them. It provides information about our goals, where we have met, exceeded or struggled with them, and how we plan to do better. We updated the GRI indicator data in 2018, and will update all indicators again in 2019.

We encourage you to review our SD report at cameco.com/about/sustainability which outlines our commitment to people and the environment in more detail.

All of our North American operations are now ISO 14001:2015 certified under a single corporate certification.

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.

2018 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 slightly below the 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 achieve the improvement target set for 2018 • completion of corrective actions 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 2018
SUPPORTIVE COMMUNITIES		
Stakeholder support measure	Implement Collaboration Agreements by supporting northern business development opportunities and build corporate reputation.	• sourcing of northern services from Northern Saskatchewan vendors was above the target

1 Detailed results for our 2018 corporate objectives and the related targets will be provided in our 2019 management proxy circular prior to our Annual Meeting of Shareholders on May 7, 2019.

2019 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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2018 consolidated financial results

In this MD&A, our 2019 financial outlook and other disclosures relating to our contract portfolio are presented on a basis which excludes the agreement with TEPCO, which is under dispute. See *Also of Note* on page 8.

HIGHLIGHTS DECEMBER 31 ($ MILLIONS EXCEPT WHERE INDICATED)	2018	2017	2016	CHANGE FROM 2017 TO 2018
Revenue	**2,092**	2,157	2,431	(3)%
Gross profit	**296**	436	463	(32)%
Net earnings (loss) attributable to equity holders	**166**	(205)	(62)	>100%
$ per common share (basic)	0.42	(0.52)	(0.16)	>100%
$ per common share (diluted)	0.42	(0.52)	(0.16)	>100%
Adjusted net earnings (non-IFRS, see page 27)	**211**	59	143	>100%
$ per common share (adjusted and diluted)	0.53	0.15	0.36	>100%
Cash provided by operations (after working capital changes)	**668**	596	312	12%

Net earnings

Our net earnings normally trend with revenue, but, in recent years, have been significantly influenced by impairment charges due to the continued weakness in the uranium market.

The following table shows what contributed to the change in net earnings in 2018 compared to 2017 and 2016.

($ MILLIONS)		2018	2017	2016
Net earnings (losses) - previous year		**(205)**	**(62)**	**65**
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	18	29	(16)
	Higher (lower) realized prices ($US)	40	(222)	(129)
	Foreign exchange impact on realized prices	1	(36)	30
	Lower (higher) costs	(186)	180	(49)
	change – uranium	(127)	(49)	(164)
Fuel services	Higher (lower) sales volume	1	(5)	(4)
	Higher (lower) realized prices ($Cdn)	(5)	21	25
	Higher costs	(1)	(15)	(19)
	change – fuel services	(5)	1	2
Other changes				
Lower (higher) administration expenditures		21	44	(20)
Lower (higher) impairment charges		358	4	(147)
Lower (higher) exploration expenditures		10	13	(2)
Change in reclamation provisions		(60)	(34)	34
Lower (higher) loss on disposal of assets		5	16	(21)
Change in gains or losses on derivatives		(137)	22	315
Change in foreign exchange gains or losses		49	(17)	(65)
Change in earnings from equity-accounted investments		32	—	1
Gain on sale of interest in Wheeler River Joint Venture in 2018		17	—	—
Gain on restructuring of JV Inkai in 2018		49	—	—
Gain on customer contract restructuring in 2018		6	—	—
Sale of exploration properties in 2018		7	—	—
Gain on customer contract settlements in 2016		—	(59)	59
Reversal of tax provision related to CRA dispute		61	—	—
Change in income tax recovery or expense		62	(91)	(49)
Other		23	7	(70)
Net earnings (losses) - current year		**166**	**(205)**	**(62)**

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 NUKEM purchase price inventory recovery, 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 2018, 2017 and 2016.

($ MILLIONS)	2018	2017	2016
Net earnings (loss) attributable to equity holders	**166**	(205)	(62)
Adjustments			
Adjustments on derivatives	65	(108)	(130)
NUKEM purchase price inventory recovery	—	—	(6)
Impairment charges	—	358	362
Reclamation provision adjustments	60	—	(34)
Gain on restructuring of JV Inkai	(49)	—	—
Income taxes on adjustments	(31)	14	13
Adjusted net earnings	**211**	59	143

The following table shows what contributed to the change in adjusted net earnings (non-IFRS measure, see above) in 2018 compared to the same period in 2017 and 2016.

($ MILLIONS)		2018	2017	2016
Adjusted net earnings - previous year		**59**	**143**	**344**
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	18	29	(16)
	Higher (lower) realized prices ($US)	40	(222)	(129)
	Foreign exchange impact on realized prices	1	(36)	30
	Lower (higher) costs	(186)	180	(49)
	change – uranium	(127)	(49)	(164)
Fuel services	Higher (lower) sales volume	1	(5)	(4)
	Higher (lower) realized prices ($Cdn)	(5)	21	25
	Higher costs	(1)	(15)	(19)
	change – fuel services	(5)	1	2
Other changes				
Lower (higher) administration expenditures		21	44	(20)
Lower (higher) exploration expenditures		10	13	(2)
Lower (higher) loss on disposal of assets		5	16	(21)
Change in gains or losses on derivatives		36	44	19
Change in foreign exchange gains or losses		49	(17)	(65)
Change in earnings from equity-accounted investments		32	—	—
Gain on sale of interest in Wheeler River Joint Venture in 2018		17	—	—
Gain on customer contract restructuring in 2018		6	—	—
Sale of exploration properties in 2018		7	—	—
Gain on customer contract settlements in 2016		—	(59)	59
Reversal of tax provision related to CRA dispute		61	—	—
Change in income tax recovery or expense		17	(90)	63
Other		23	13	(72)
Adjusted net earnings - current year		**211**	**59**	**143**

Average realized prices

		2018	2017	2016	CHANGE FROM 2017 TO 2018
Uranium[1]	$US/lb	**37.01**	36.13	41.12	2%
	$Cdn/lb	**47.96**	46.80	54.46	2%
Fuel services	$Cdn/kgU	**26.78**	27.20	25.37	(2)%

1 Average realized foreign exchange rate ($US/$Cdn): 2018 – 1.30, 2017 – 1.30 and 2016 – 1.32.

Revenue

The following table shows what contributed to the change in revenue for 2018.

($ MILLIONS)	
Revenue – 2017	**2,157**
Uranium	
Higher sales volume	69
Higher realized prices ($Cdn)	41
Change in intersegment sales	4
Fuel services	
Higher sales volume	6
Lower realized prices ($Cdn)	(5)
Other[1]	(180)
Revenue – 2018	**2,092**

1 Due to the reorganization of Cameco's marketing activities, NUKEM is no longer considered a reportable segment. The change in NUKEM's revenue is included as other.

See 2018 *Financial results by segment* on page 46 for more detailed discussion.

THREE-YEAR TREND

In 2017, revenue decreased by 11% compared to 2016 due to a decrease in the uranium spot price, resulting in an overall lower average realized price. In addition, prices on fixed-price contracts were lower. This was partially offset by an increase in sales volumes in our uranium segment.

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.

Revenue Outlook for 2019

Based on currently committed sales volumes, we expect consolidated revenue to be between $1,650 million and $1,800 million, lower than in 2018 due to a decrease in average realized prices in our uranium segment as a result of lower expected prices under our contract portfolio and an expected decrease in 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 2019, 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 2019 to be weighted to the second half 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)	2018	2017	CHANGE
Direct administration (including severance costs of $14 million in 2018)	**126**	151	(17)%
Stock-based compensation	**16**	12	33%
Total administration	**142**	163	(13)%

Direct administration costs in 2018 were $25 million lower than in 2017. The decrease was mainly due to changes in our global marketing structure, lower costs related to our CRA litigation and our continued actions to reduce costs.

We recorded $16 million in stock-based compensation expenses in 2018 under our stock option, restricted share unit, deferred share unit, performance share unit and phantom stock option plans, $4 million higher than in 2017 due to the 33% increase in our share price compared to the same period in 2017. See note 24 to the financial statements.

Administration outlook for 2019

We expect direct administration costs to be between $110 million to $120 million, lower compared to 2018, due to our continued actions to reduce costs.

EXPLORATION

Our 2018 exploration activities were focused primarily on Canada. Our spending decreased from $30 million in 2017 to $20 million in 2018.

Exploration outlook for 2019

We expect exploration expenses to be about $13 million in 2019 due to an overall decrease in activity on our regional exploration projects. The focus for 2019 will be on our core projects in Saskatchewan.

FINANCE COSTS

Finance costs were $112 million, largely unchanged from $111 million in 2017. See note 19 to the financial statements.

FINANCE INCOME

Finance income was $22 million compared to $5 million in 2017 due to higher cash balances throughout the year.

GAINS AND LOSSES ON DERIVATIVES

In 2018, we recorded $81 million in losses on our derivatives compared to $56 million in gains in 2017. The decrease reflects the weakness in the Canadian dollar compared to the US dollar at the end of 2018 compared to 2017. See *Foreign exchange* on page 35 and note 26 to the financial statements.

INCOME TAXES

We recorded an income tax recovery of $126 million in 2018 compared to a recovery of $3 million in 2017. The increase in recovery was primarily due to the reversal of the provision related to our CRA dispute in the amount of $61 million (see *Tax Court of Canada decision* below for more details). In addition, a change in the Saskatchewan corporate tax rate in 2017, the change in reporting for JV Inkai, as well as a change in the distribution of earnings among jurisdictions compared to 2017 contributed to the difference. See note 21 to the financial statements.

In 2018, we recorded losses of $257 million in Canada compared to losses of $54 million in 2017, while earnings in foreign jurisdictions increased to $297 million from losses of $154 million. 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 recovery of $95 million in 2018 compared to a recovery of $17 million in 2017. The table below presents our adjusted earnings and adjusted income tax expenses attributable to Canadian and foreign jurisdictions.

($ MILLIONS)	2018	2017
Pre-tax adjusted earnings[1]		
Canada	**(181)**	(101)
Foreign	**297**	143
Total pre-tax adjusted earnings	**116**	42
Adjusted income taxes[1]		
Canada	**(112)**	(27)
Foreign	**17**	10
Adjusted income tax recovery	**(95)**	(17)

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 27).

TRANSFER PRICING DISPUTE

Tax Court of Canada decision

On September 26, 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.

In accordance with the ruling, we have made an application to the Tax Court to recover costs in the amount of $38 million, which were incurred over the course of this case. In its response to the Tax Court regarding our cost submission, CRA is claiming $9.6 million would be an appropriate award in this case. The actual cost award will be at the discretion of the Tax Court.

In addition, given the clear and decisive ruling in our favour, and the endorsement by the Tax Court of our transfer pricing methodology, we have reversed the provision on our balance sheet of $61 million.

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. We will not have more specific information on how and why the CRA believes the Tax Court was wrong in its interpretation of the transfer pricing provisions until we are in receipt of the CRA's complete written submissions.

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 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 2012 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 2012, 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. Taxes of approximately $321 million for the 2003 to 2018 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 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. 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
Total	**377**	**219**	**185**	**781**	**303**	**478**

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 2012 will be suspended until the three years covered under the decision are finally resolved, with the exception of the transfer pricing penalty noted above. The tax years 2013 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 2012 tax years. In that scenario, and including the $4.9 billion already reassessed, we would expect to receive notices of reassessment for a total of approximately $8.4 billion of additional income taxable in Canada for the years 2003 through 2018, which would result in a related tax expense of approximately $2.5 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 would 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. We have already paid or secured $562 million in cash taxes and transfer pricing penalties and $219 million in interest and instalment penalties.

Under the Canadian federal and provincial tax rules, the 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. 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 2018 along with estimated post-2018 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 2018.

$ MILLIONS	2003-2018	Post-2018	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 $219 million to December 31, 2018.

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 $781 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 2013 through 2018 using a similar methodology as for the years 2003 through 2012, 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

Material risks that could cause actual results to differ materially

- CRA reassesses us for years 2013 through 2018 using a different methodology than for years 2003 through 2012, 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

Tax outlook for 2019

On an adjusted net earnings basis, we expect a tax expense of up to $10 million in 2019, transitioning from a recovery in previous years due to the anticipated impact of our intercompany arrangements and the changes made to our global marketing organization.

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 39 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 2019 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 27.

The table below provides a summary of our hedge portfolio at December 31, 2018. You can use this information to estimate the expected gains or losses on derivatives for 2019 on an ANE basis. However, if we add contracts to the portfolio that are designated for use in 2019 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, 2018 ($ MILLIONS)		2019	AFTER 2019	TOTAL
US dollar forward contracts	($millions)	220	240	460
Average contract rate [1]	(US/Cdn dollar)	1.28	1.27	1.28
US dollar option contracts	($ millions)	200	110	310
Average contract rate range[1]	(US/Cdn dollar)	1.26 to 1.31	1.27 to 1.31	1.26 to 1.31
Total US dollar hedge contracts	**($ millions)**	**420**	**350**	**770**
Effective hedge rate range[2]	**(US/Cdn dollar)**	**1.26 to 1.28**	**1.27 to 1.28**	**1.26 to 1.28**
Hedge ratio[3]		**63%**	**8%**	**16%**

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, 2018:

- The value of the US dollar relative to the Canadian dollar was $1.00 (US) for $1.36 (Cdn), up from $1.00 (US) for $1.25 (Cdn) at December 31, 2017. The exchange rate averaged $1.00 (US) for $1.30 (Cdn) over the year.
- The mark-to-market position on all foreign exchange contracts was a $53 million loss compared to a $34 million gain at December 31, 2017.

We manage counterparty risk associated with hedging by dealing with highly rated counterparties and limiting our exposure. At December 31, 2018, 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 2019

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 2019 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, from a gross profit point of view, 2019 is expected to be a weaker year for us. The changing pricing terms under our existing contract portfolio and the proportion of purchased material compared to produced material making up our uranium supply are expected to adversely impact our revenue and cost of sales in 2019 relative to 2018. In addition, our outlook for the average unit cost of sales in 2019 continues to be impacted by care and maintenance costs, which, although lower than in 2018, are expected to be between $130 million and $160 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, even if we decide to retire our $500 million debenture maturing in 2019. We expect to continue to generate cash from operations in this difficult time, however, it will not be as robust as in 2018 given the weaker outlook provided, and without the release of working capital associated with the inventory drawdown we had in 2018.

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 sales, inventory and purchases are all variables. Therefore, in accordance with market opportunities and as the year unfolds, we expect our actual sales, purchases and inventory will vary from what we are reporting in the *2019 Financial Outlook* table. Also, in 2019, there is a greater risk of production variability due to the expiry of Orano's collective agreement with unionized employees at the McClean Lake mill on May 31, 2019.

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 results of the investigation under the Section 232 Trade Expansion Act in the US, and the impact, if any, on the uranium market and uranium prices
- a potential cost award from the Tax Court based on the unequivocal win in our case with CRA
- a potential award for damages from the TEPCO arbitration panel
- whether CRA issues a transfer pricing penalty for the 2012 tax year and/or continues to reassess us for years subsequent to 2012

See *2018 Financial results by segment* on page 46 for details.

2019 FINANCIAL OUTLOOK

	CONSOLIDATED	URANIUM	FUEL SERVICES
EXPECTED CONTRIBUTION TO GROSS PROFIT	100%	70%	30%
Production (owned and operated properties)	—	9.0 million lbs	12 to 13 million kgU
Purchases - committed	—	11 to 12 million lbs	—
- required for sales commitments	—	7 to 9 million lbs	—
Total purchases	—	18 to 21 million lbs	—
Sales/delivery volume	—	28 to 30 million lbs	11 to 12 million kgU
Revenue	$1,650-1,800 million	$1,290-1,380 million	$ 280-310 million
Average realized price	—	$ 46.10/lb	—
Average unit cost of sales (including D&A)	—	$ 41.00-43.00/lb	$ 20.20-21.20/kgU
Direct administration costs	$ 110-120 million	—	—
Exploration costs	—	$ 13 million	—
Expected loss on derivatives - ANE basis	$ 5-15 million	—	—
Tax expense - ANE basis	$ 0-10 million	—	—
Capital expenditures	$ 95 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 – committed are based on the volumes we currently have commitments to acquire under contract in 2019, including our JV Inkai purchases and the purchase of NUKEM's excess inventory.
- Purchases – required for sales commitments represent the additional volumes we currently need to purchase in order to meet the delivery commitments we currently have under contract in 2019.
- Our 2019 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 2019.
- Uranium revenue and average realized price are based on a uranium spot price of $28.90 (US) per pound (the UxC spot price as of January 28, 2019), a long-term price indicator of $32.00 (US) per pound (the UxC long-term indicator on January 28, 2019) 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 and expected purchases noted in the outlook. If we make discretionary purchases in 2019, then we expect the overall unit cost of sales may be affected.
- Direct administration costs do not include stock-based compensation expenses. See page 30 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 2019 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 *JV Inkai Planning for the future* on page 70 and *Capital spending* on page 42 for more details.

In addition, the financial outlook and other disclosures relating to our contract portfolio have been presented on a basis that excludes our contract with TEPCO, which is under dispute. 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 35.

REVENUE, ADJUSTED NET EARNINGS, AND CASH FLOW SENSITIVITY ANALYSIS

FOR 2019 ($ MILLIONS)	CHANGE	IMPACT ON: REVENUE	ANE	CASH FLOW
Uranium spot and term price [1]	**$5(US)/lb increase**	102	29	24
	$5(US)/lb decrease	(80)	(11)	—
Value of Canadian dollar vs US dollar	**One cent decrease in CAD**	12	4	2
	One cent increase in CAD	(12)	(4)	(2)

1 Assuming change in both UxC spot price ($28.90 (US) per pound on January 28, 2019) and the UxC long-term price indicator ($32.00 (US) per pound on January 28, 2019).

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, 2018 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, 2018, 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
2020	30	41	55	65	74	82	88
2021	27	40	55	64	70	75	80
2022	27	40	55	64	68	73	78
2023	28	42	56	67	73	78	84

The table illustrates the mix of long-term contracts in our December 31, 2018 portfolio, and is consistent with our marketing strategy. It has been updated to reflect contracts entered into up to December 31, 2018.

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 20 million pounds per year, with commitment levels in 2019 and 2020 higher than in 2021 through 2023
- excludes sales between our segments
- excludes the contract under dispute with TEPCO

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 2018, we had cash and short-term investments of $1.1 billion, while our total debt amounted to $1.5 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 2019 through 2023, we have commitments to deliver an average of 20 million pounds per year, with commitment levels in 2019 and 2020 higher than in 2021 through 2023.

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 will continue to generate cash from operations however, it will not be as robust as in 2018 given the weaker expected results, and without the release of working capital associated with the inventory drawdown we had in 2018. We expect our cash balances and operating cash flows to meet our capital requirements during 2019, even if we decide to retire our $500 million debenture maturing in 2019.

We received a favorable 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 31 for more information. In the above scenario, the table on page 33 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 would potentially have to pay or secure upfront if CRA continues to reassess us using the same methodology it reassessed the 2003 to 2012 tax years. The timing of these amounts is uncertain.

FINANCIAL CONDITION

	2018	2017
Cash position ($ millions) (cash and cash equivalents and short-term investments)	1,103	592
Cash provided by operations ($ millions) (net cash flow generated by our operating activities after changes in working capital)	668	596
Cash provided by operations/net debt (net debt is total consolidated debt, less cash position)	170%	66%
Net debt/total capitalization (total capitalization is net debt and equity)	7%	16%

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 remain focused on maintaining our investment-grade credit rating.

Third-party ratings for our commercial paper and senior debt as of February 7, 2019:

SECURITY	DBRS	S&P
Commercial paper	R-2 (high)	A-2
Senior unsecured debentures	BBB (high)	BBB
Rating trend / rating outlook	Negative	Negative

The rating trend/outlook represents the rating agency's assessment of the likelihood and direction that the rating could change in the future.

The rating agencies may revise or withdraw these ratings if they believe circumstances warrant. A change in our credit ratings could affect our cost of funding and our access to capital through the capital markets.

Liquidity

($ MILLIONS)	2018	2017
Cash and cash equivalents at beginning of year	**592**	320
Cash from operations	**668**	596
Investment activities		
Additions to property, plant and equipment and acquisitions	**(55)**	(114)
Other investing activities	**34**	21
Financing activities		
Interest paid	**(73)**	(69)
Dividends	**(71)**	(158)
Exchange rate on changes on foreign currency cash balances	**8**	(4)
Cash and cash equivalents and short-term investments at end of year	**1,103**	592

CASH FROM OPERATIONS

Cash from operations was 12% higher than in 2017 due largely to an increase in cash provided by working capital. This was a result of a larger decrease in inventory compared to in 2017. Working capital provided $89 million more in 2018. In addition, while we had lower gross profits in our operating segments, income taxes paid decreased and cost reduction measures resulted in a lower use of cash. Not including working capital requirements, our operating cash flows in the year were down $25 million. See note 23 to the financial statements.

Cash from operations for 2018 was lower than our previous outlook of between 20% and 30% higher than 2017 as a result of the timing of working capital receipts at the end of the year.

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)	2018 PLAN[1]	2018 ACTUAL	2019 PLAN
Sustaining capital			
McArthur River/Key Lake	5	1	**5**
Cigar Lake	10	9	**15**
US ISR	—	1	**—**
Fuel services	30	11	**30**
Other	—	1	**—**
Total sustaining capital	45	**23**	**50**
Capacity replacement capital			
McArthur River/Key Lake	—	2	**—**
Cigar Lake	35	30	**45**
Total capacity replacement capital	35	**32**	**45**
Total uranium & fuel services	80	**55**	**95**

1 Capital spending outlook was updated to $80 million (from $90 million) in our second quarter MD&A.

Total capital expenditures for 2018 were lower than our outlook of $80 million (updated in the second quarter) as a result of the timing of expenditures on the Vision in Motion project at fuel services.

Outlook for investing activities

CAMECO'S SHARE ($ MILLIONS)	2020 PLAN	2021 PLAN
Total uranium & fuel services	**75-125**	**75-125**
Sustaining capital	45-70	45-70
Capacity replacement capital	30-55	30-55
Growth capital	—	—

We expect total 2019 capital expenditures for uranium and fuel services to be about 73% higher than in 2018 mainly due to the Vision in Motion project at fuel services. Capital expenditures for JV Inkai are expected to be covered by JV Inkai cash flows in 2019, and are included in our overall equity investment.

Major sustaining and capacity replacement expenditures in 2019 include:

- Fuel services – ramp up of work on our Vision in Motion project
- Cigar Lake – underground development and necessary ground freezing infrastructure to meet production targets

Our estimate for capital spending in 2019 has been reduced to $95 million and between $75 million and $125 million in 2020 (previously both were between $100 million and $150 million) due to the suspension of production at McArthur River/Key Lake for an indeterminate duration. Our 2019, 2020 and 2021 capital spending estimates assume that market conditions remain such that McArthur River and Key Lake remain in a state of ongoing care and maintenance.

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)	2019	2020 AND 2021	2022 AND 2023	2024 AND BEYOND	TOTAL
Long-term debt	500	—	400	600	1,500
Interest on long-term debt	69	82	67	118	336
Provision for reclamation	51	93	72	941	1,157
Provision for waste disposal	1	3	4	2	10
Other liabilities	1	2	2	63	68
Capital commitments	16	—	—	—	16
Total	**638**	**180**	**545**	**1,724**	**3,087**

We have contractual capital commitments of approximately $16 million at December 31, 2018. 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 $2.9 billion, which include the following:

- A $1.25 billion unsecured revolving credit facility that matures November 1, 2022. 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 $1.25 billion, by increments of no less than $50 million, up to a total of $1.75 billion. The facility ranks equally with all of our other senior debt. At December 31, 2018, there were no amounts outstanding under this facility.
- At December 31, 2018, we had approximately $1.6 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 $1.5 billion in senior unsecured debentures outstanding:

- $500 million bearing interest at 5.67% per year, maturing on September 2, 2019
- $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, 2018, we complied with all covenants, and we expect to continue to comply in 2019.

OFF-BALANCE SHEET ARRANGEMENTS

We had two kinds of off-balance sheet arrangements at the end of 2018:

- purchase commitments
- financial assurances

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, 2018[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, 2018 ($ MILLIONS)	2019	2020 AND 2021	2022 AND 2023	2024 AND BEYOND	TOTAL
Purchase commitments[1,2]	346	207	133	329	1,015

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, 2018, but does not include deliveries taken under contract since December 31, 2018.

We have commitments of $1.0 billion (Cdn) for the following:

- approximately 23 million pounds of U_3O_8 equivalent from 2019 to 2028
- approximately 1 million kgU as UF_6 in conversion services in 2019
- about 0.2 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 letters of credit to various regulatory agencies until decommissioning and reclamation activities are complete. We are also providing letters of credit until the CRA dispute is resolved. Letters of credit are issued by financial institutions for a one-year term. At December 31, 2018 our financial assurances totaled $1.6 billion, up from $1.5 billion at December 31, 2017. The increase in 2018 was mainly due to obligations relating to the CRA dispute for which financial assurances were secured in the first quarter.

BALANCE SHEET

DECEMBER 31, 2018 ($ MILLIONS EXCEPT PER SHARE AMOUNTS)	2018	2017	2016	CHANGE 2017 TO 2018
Inventory	**468**	950	1,288	(51)%
Total assets	**8,019**	7,779	8,249	3%
Long-term financial liabilities	**2,102**	2,448	2,459	(14)%
Dividends per common share	**0.08**	0.40	0.40	(80)%

Total product inventories decreased by 51% to $468 million this year due to sales being higher than the quantities produced and purchased during the year. Also contributing to the decrease was the 5.4 million pounds of uranium concentrates provided to Orano, which is repayable in kind no later than December 31, 2023. In 2018, total volume of product inventories for the uranium segment decreased by 71% while the average cost of inventory increased by 8%. The average cost increased due to a reduction in low cost produced material as a result of the suspension of McArthur River and Key Lake and the change in accounting for JV Inkai, such that our share of production is now included in inventory at a discount to market prices. As a result, purchases which have a higher cost than produced material, now make up a higher proportion of our uranium supply. At December 31, 2018, our average cost for uranium was $33.05 per pound, up from $30.72 per pound at December 31, 2017. As of December 31, 2018, we held an inventory of 7.7 million pounds of U_3O_8 equivalent in our uranium segment (excluding broken ore).

At the end of 2018, our total assets amounted to $8 billion, an increase of $0.2 billion compared to 2017, primarily due to an increase in cash and investment balances. In 2017, the total asset balance decreased by $0.5 billion compared to 2016, primarily due to a decrease in property, plant and equipment due to asset impairments.

The major components of long-term financial liabilities are long-term debt, the provision for reclamation, deferred sales and financial derivatives. Our balance decreased by 14% in 2018 due to $500 million of long-term debt, which matures in September 2019, being reclassified to current debt. The balance did not change significantly in 2017.

2018 financial results by segment

Uranium

HIGHLIGHTS		2018	2017	CHANGE
Production volume (million lbs)		**9.2**	23.8	(61)%
Sales volume (million lbs)		**35.1**	33.6	4%
Average spot price	($US/lb)	**24.59**	21.78	13%
Average long-term price	($US/lb)	**30.38**	31.92	(5)%
Average realized price	($US/lb)	**37.01**	36.13	2%
	($Cdn/lb)	**47.96**	46.80	2%
Average unit cost of sales (including D&A)	($Cdn/lb)	**40.33**	35.04	15%
Revenue ($ millions)		**1,684**	1,574	7%
Gross profit ($ millions)		**268**	395	(32)%
Gross profit (%)		**16**	25	(36)%

Production volumes in 2018 decreased by 61% compared to 2017 mainly due to planned lower production from McArthur River/Key Lake as the operation moved into care and maintenance in the first quarter as well as a change in reporting for JV Inkai. See *Uranium – production overview* on page 59 for more information.

Uranium revenues this year were up 7% compared to 2017 due to an increase of 2% in the Canadian dollar average realized price and an increase in sales volumes of 4%. The average realized price increased due to increased prices under fixed price contracts. Although the spot price for uranium averaged $24.59 (US) per pound in 2018, an increase of 13% compared to the 2017 average price of $21.78 (US) per pound, prices on the remainder of our deliveries in 2018 decreased as the proportion of market-related contracts referencing the spot-price at the time of delivery and our spot market sales, increased relative to 2017.

Total cost of sales (including D&A) increased by 20% ($1.42 billion compared to $1.18 billion in 2017) mainly due to a 15% increase in the unit cost of sales and an increase in sales volume of 4%. The increase in the unit cost of sales compared to last year was mainly due to care and maintenance costs associated with the suspension of production at our McArthur River/Key Lake and US ISR operations. The cost of our purchases have decreased from 2017.

The net effect was a $127 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)	2018	2017	CHANGE
Produced			
Cash cost	**15.31**	15.11	1%
Non-cash cost	**15.90**	11.67	36%
Total production cost [1]	**31.21**	26.78	17%
Quantity produced (million lbs)[1]	**9.2**	23.8	(61)%
Purchased			
Cash cost[1]	**36.01**	37.19	(3)%
Quantity purchased (million lbs)[1]	**14.0**	6.1	130%
Totals			
Produced and purchased costs	**34.11**	28.90	18%
Quantities produced and purchased (million lbs)	**23.2**	29.9	(22)%

1 Due to the transition 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. In 2018 we purchased 2.9 million pounds at a purchase price per pound of $32.06 ($24.54 (US)).

The change to equity accounting for our interest in JV Inkai removes the impact of our share of Inkai's low cash cost of production from the mix. Those pounds now are reflected as a purchase at a discount to the spot price in this table. The benefit of the estimated life-of-mine operating cost, between $9 and $10 per pound, is expected to be reflected in the line item on our statement of earnings called "share of earnings from equity-accounted investee".

The average cash cost of production was 1% higher in the year than in 2017. While McArthur River and Key Lake are shut down, our 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.

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 $36.01 (Cdn), or $27.68 (US) per pound, compared to $29.23 (US) per pound in the same period in 2017.

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 2018 and 2017 as reported in our financial statements.

CASH AND TOTAL COST PER POUND RECONCILIATION

($ MILLIONS)	2018	2017
Cost of product sold	**1,138.9**	910.7
Add / (subtract)		
Royalties	**(39.1)**	(66.6)
Other selling costs	**(12.6)**	(7.5)
Care and maintenance and severance costs	**(168.3)**	(38.3)
Change in inventories	**(272.4)**	(211.8)
Cash operating costs (a)	**646.5**	586.5
Add / (subtract)		
Depreciation and amortization	**233.0**	267.9
Care and maintenance costs	**44.2**	—
Change in inventories	**(129.3)**	9.8
Total operating costs (b)	**794.4**	864.2
Uranium produced & purchased (million lbs) (c)	**23.2**	29.9
Cash costs per pound (a ÷ c)	**27.87**	19.62
Total costs per pound (b ÷ c)	**34.24**	28.90

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 $22.75/kg U_3O_8 ($10.26/lb) and a 15% royalty is charged on profit in excess of $22.75/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 2019. In addition, we have commitments under contracts to purchase approximately 11 million to 12 million pounds, including our purchases from JV Inkai and the purchase of NUKEM's excess inventory. In addition, we will be required to purchase 7 million to 9 million pounds in the spot market to meet our sales commitments, bringing total expected 2019 purchases to between 18 million and 21 million pounds. We anticipate an average purchase price of $36.70/lb for both our committed and required purchases, based on the uranium price and foreign exchange rate assumptions used in our outlook table on page 37.

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 2019. We expect the unit cost of sales to be between $41.00/lb and $43.00/lb, higher than in 2018 primarily due to the increased cost for purchased material. The required spot market purchases and any additional discretionary purchases we may make in 2019 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 $1,290 million to $1,380 million, lower than in 2018 as a result of a lower expected average realized price and lower sales volumes.

Fuel services
(includes results for UF_6, UO_2 and fuel fabrication)

HIGHLIGHTS		2018	2017	CHANGE
Production volume (million kgU)		**10.5**	7.9	33%
Sales volume (million kgU)		**11.7**	11.5	2%
Average realized price	($Cdn/kgU)	**26.78**	27.20	(2)%
Average unit cost of sales (including D&A)	($Cdn/kgU)	**21.76**	21.66	—
Revenue ($ millions)		**314**	313	—
Gross profit ($ millions)		**59**	64	(8)%
Gross profit (%)		**19**	20	(5)%

Total revenue increased marginally from 2017. The 2% increase in sales volumes was largely offset by a 2% decrease in the realized price.

The total cost of products and services sold (including D&A) increased by 2% compared to 2017 to $255 million, due to a 2% increase in sales volumes. The average unit cost of sales was only slightly higher than 2017.

The net effect was a $5 million decrease in gross profit.

FUEL SERVICES OUTLOOK

In 2019, we plan to produce 12 million to 13 million kgU, and we expect sales volumes, not including intersegment sales, to be 11 million to 12 million kgU. Overall revenue is expected to be between $280 million and $310 million, lower than 2018 due to a lower anticipated average realized price. We expect the average unit cost of sales (including D&A) to decrease to between $20.20/kgU and $21.20/kgU.

Fourth quarter financial results

Consolidated results

HIGHLIGHTS ($ MILLIONS EXCEPT WHERE INDICATED)	THREE MONTHS ENDED DECEMBER 31 2018	2017	CHANGE
Revenue	**831**	809	3%
Gross profit	**207**	237	(13)%
Net earnings (loss) attributable to equity holders	160	(62)	>100%
$ per common share (basic)	0.40	(0.16)	>100%
$ per common share (diluted)	0.40	(0.16)	>100%
Adjusted net earnings (non-IFRS, see page 27)	**202**	181	12%
$ per common share (adjusted and diluted)	0.51	0.46	11%
Cash provided by operations (after working capital changes)	**57**	320	(82)%

NET EARNINGS

The following table shows what contributed to the change in net earnings and adjusted net earnings (non-IFRS measure, see page 8) in the fourth quarter of 2018 compared to the same period in 2017.

($ MILLIONS)		IFRS	ADJUSTED
Net earnings (losses) - 2017		**(62)**	**181**
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	Lower sales volume	—	—
	Higher realized prices ($US)	17	17
	Foreign exchange impact on realized prices	21	21
	Higher costs	(75)	(75)
	change – uranium	(37)	(37)
Fuel services	Higher sales volume	2	2
	Higher realized prices ($Cdn)	2	2
	Higher costs	(1)	(1)
	change – fuel services	3	3
Other changes			
Lower administration expenditures		3	3
Lower impairment charges		247	—
Lower exploration expenditures		2	2
Change in reclamation provisions		5	—
Higher loss on disposal of assets		(1)	(1)
Change in gains or losses on derivatives		(51)	(2)
Change in foreign exchange gains or losses		3	3
Change in earnings from equity-accounted investments		26	26
Gain on sale of interest in Wheeler River Joint Venture in 2018		17	17
Change in income tax recovery or expense		(13)	(11)
Other		18	18
Net earnings - 2018		**160**	**202**

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 27 for more information. The following table reconciles adjusted net earnings with our net earnings.

	THREE MONTHS ENDED DECEMBER 31	
($ MILLIONS)	2018	2017
Net earnings (loss) attributable to equity holders	**160**	(62)
Adjustments		
Adjustments on derivatives	**47**	(2)
Impairment charges	**—**	247
Reclamation provision adjustments	**10**	15
Income taxes on adjustments	**(15)**	(17)
Adjusted net earnings	**202**	181

ADMINISTRATION

	THREE MONTHS ENDED DECEMBER 31		
($ MILLIONS)	2018	2017	CHANGE
Direct administration	**33**	36	(8)%
Stock-based compensation	**3**	3	—
Total administration	**36**	**39**	**(8)%**

Direct administration costs were $33 million in the quarter, $3 million lower than the same period last year due to cost reduction actions which further reduced administration costs in 2018. Stock-based compensation expenses were unchanged from the fourth quarter of 2017. See note 24 to the financial statements.

Quarterly trends

HIGHLIGHTS	2018				2017			
($ MILLIONS EXCEPT PER SHARE AMOUNTS)	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Revenue	**831**	488	333	439	809	486	470	393
Net earnings (loss) attributable to equity holders	**160**	28	(76)	55	(62)	(124)	(2)	(18)
$ per common share (basic)	**0.40**	0.07	(0.19)	0.14	(0.16)	(0.31)	(0.00)	(0.05)
$ per common share (diluted)	**0.40**	0.07	(0.19)	0.14	(0.16)	(0.31)	(0.00)	(0.05)
Adjusted net earnings (loss) (non-IFRS, see page 27)	**202**	15	(28)	23	181	(50)	(44)	(29)
$ per common share (adjusted and diluted)	**0.51**	0.04	(0.07)	0.06	0.46	(0.13)	(0.11)	(0.07)
Cash provided by (used in) operations (after working capital changes)	**57**	278	57	275	320	154	130	(8)

Key things to note:

- Our financial results are strongly influenced by the performance of our uranium segment, which accounted for 81% of consolidated revenues in the fourth quarter of 2018 and 78% of consolidated revenues in the fourth quarter of 2017.
- 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 27 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 ($ MILLIONS EXCEPT PER SHARE AMOUNTS)	2018				2017			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Net earnings (loss) attributable to equity holders	**160**	28	(76)	55	(62)	(124)	(2)	(18)
Adjustments								
Adjustments on derivatives	**47**	(24)	20	22	(2)	(40)	(44)	(22)
Impairment charges	**—**	—	—	—	247	111	—	—
Reclamation provision adjustments	**10**	5	44	1	15	(9)	(12)	6
Gain on restructuring of JV Inkai	**—**	—	—	(49)	—	—	—	—
Income taxes on adjustments	**(15)**	6	(16)	(6)	(17)	12	14	5
Adjusted net earnings (losses) (non-IFRS, see page 27)	**202**	15	(28)	23	181	(50)	(44)	(29)

Fourth quarter financial results by segment Uranium

HIGHLIGHTS		THREE MONTHS ENDED DECEMBER 31 2018	2017	CHANGE
Production volume (million lbs)		**2.4**	6.9	(65)%
Sales volume (million lbs)		**12.6**	12.6	—
Average spot price	($US/lb)	**28.27**	22.32	27%
Average long-term price	($US/lb)	**31.50**	30.67	3%
Average realized price	($US/lb)	**40.50**	39.44	3%
	($Cdn/lb)	**53.11**	50.04	6%
Average unit cost of sales (including D&A)	($Cdn/lb)	**38.89**	32.91	18%
Revenue ($ millions)		**670**	631	6%
Gross profit ($ millions)		**179**	216	(17)%
Gross profit (%)		**27**	34	(21)%

Production volumes this quarter were 65% lower compared to the fourth quarter of 2017, mainly due to a lack of production from the suspended McArthur River/Key Lake operations and a change in reporting for JV Inkai. See *Uranium – production overview* on page 59 for more information.

Uranium revenues were up 6% due to a 6% increase in the Canadian dollar average realized price. The US dollar average realized price increased by 3% compared to 2017. The average realized price increased due to increased prices under fixed price contracts. This was partially offset by a decrease in prices for the remainder of our deliveries in the fourth quarter as the proportion of market-related contracts referencing the spot-price at the time of delivery and our spot market sales, increased relative to 2017. In addition, the Canadian dollar was weaker compared to the same period last year, $1.00 (US) for $1.31 (Cdn) compared to $1.00 (US) for $1.27 (Cdn) in the fourth quarter of 2017.

Total cost of sales (including D&A) increased by 18% ($490 million compared to $415 million in 2017). This was the result of an 18% increase in the average unit cost of sales as sales volumes remained constant. The increase in the average unit cost of sales compared to last year was due mainly to increased costs associated with the suspension of production at our McArthur River/Key Lake operations. The cost of our purchases also increased from the fourth quarter of 2017.

The net effect was a $37 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 2018	2017	CHANGE
Produced			
Cash cost	**14.91**	13.28	12%
Non-cash cost	**15.07**	12.08	25%
Total production cost [1]	**29.98**	25.36	18%
Quantity produced (million lbs)[1]	**2.4**	6.9	(65)%
Purchased			
Cash cost[1]	**38.13**	34.74	10%
Quantity purchased (million lbs)[1]	**7.3**	3.1	135%
Totals			
Produced and purchased costs	**36.11**	28.27	28%
Quantities produced and purchased (million lbs)	**9.7**	10.0	(3)%

1 Due to the transition 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 1.5 million pounds at a purchase price per pound of $35.62 ($27.09 (US)).

The change to equity accounting for our interest in JV Inkai removes the impact of our share of Inkai's low cash cost of production from the mix. Those pounds now are reflected as a purchase at a discount to the spot price in this table. The benefit of the estimated life-of-mine operating cost, between $9 and $10 per pound, is expected to be reflected in the line item on our statement of earnings called "share of earnings from equity-accounted investee".

The average cash cost of production was 12% higher for the quarter than in the comparable period in 2017. While McArthur River and Key Lake are shut down, our 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.

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 $38.13 (Cdn) per pound, or $29.08 (US) per pound in US dollar terms, compared to $28.41 (US) per pound in the fourth quarter of 2017.

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 2018 and 2017.

CASH AND TOTAL COST PER POUND RECONCILIATION

($ MILLIONS)	THREE MONTHS ENDED DECEMBER 31 2018	2017
Cost of product sold	**409.2**	319.2
Add / (subtract)		
Royalties	**(2.6)**	(20.4)
Other selling costs	**(4.0)**	(1.8)
Care and maintenance and severance costs	**(38.6)**	(9.5)
Change in inventories	**(48.4)**	(88.2)
Cash operating costs (a)	**315.6**	199.3
Add / (subtract)		
Depreciation and amortization	**67.7**	95.8
Care and maintenance costs	**13.4**	—
Change in inventories	**(43.4)**	(12.4)
Total operating costs (b)	**353.3**	282.7
Uranium produced & purchased (million lbs) (c)	**9.7**	10.0
Cash costs per pound (a ÷ c)	**32.54**	19.93
Total costs per pound (b ÷ c)	**36.42**	28.27

Fuel services
(includes results for UF_6, UO_2 and fuel fabrication)

HIGHLIGHTS		THREE MONTHS ENDED DECEMBER 31 2018	2017	CHANGE
Production volume (million kgU)		**3.5**	2.5	40%
Sales volume (million kgU)		**5.1**	4.6	11%
Average realized price	($Cdn/kgU)	**23.56**	23.13	2%
Average unit cost of sales (including D&A)	($Cdn/kgU)	**18.72**	18.43	2%
Revenue ($ millions)		**120**	107	12%
Gross profit ($ millions)		**25**	22	14%
Gross profit (%)		**21**	21	—

Total revenue increased by 12% due to an 11% increase in sales volumes and a 2% increase in average realized price. The increase in average realized price was due to the mix of products sold, as well as an increase in the average realized price for UF_6 and UO_2.

Total cost of sales (including D&A) increased by 13% to $96 million compared to the fourth quarter of 2017 due to an 11% increase in sales volumes and an increase of 2% in the average unit cost of sales, primarily as a result of higher prices for UF_6.

The net effect was a $3 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 process involves a broad, systematic approach to identifying, assessing, reporting and managing the significant risks we face in our business and operations. 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 regulatory, environmental and operational risks that generally apply to all of our operations and projects under evaluation. 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’s review of environmental and regulatory processes “to restore public trust” is now firmly underway. The review includes Bill C-69, which would impact the federal environmental assessment regime as well as the Navigation Protection Act and Bill C-68, which would change the Fisheries Act. Also under review is the Canadian Environmental Protection Act, 1996. Changes to this legislation could impact any future planned projects.
    - Environment Canada has brought forward a national recovery plan for woodland caribou that has the potential to impact economic and social development in northern Saskatchewan. Additional research work 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 research should lead Environment and Climate Change Canada to revise the national recovery plan to recognize the sustainability of the species in northern Saskatchewan; however, potential habitat protection measures could still have an impact on our Saskatchewan operations and projects under evaluation.

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 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 conceptual decommissioning plans for our operating sites and use them to estimate our decommissioning costs. Regulators review and accept our conceptual 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 hearing in writing will be required for final approval of the PDP and PDCE by the Commission. We have received comments on the revised PDP for McArthur River and Cigar Lake.

At the end of 2018, our estimate of total decommissioning and reclamation costs was $1.16 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 2018 (the present value of the $1.16 billion). A licence 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 a licence 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 $1.05 billion in financial assurances supporting our reclamation liabilities at the end of 2018. 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. For example, we are addressing issues related to historic soil and groundwater contamination at Port Hope.

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 2018, we invested:

- $70 million in environmental protection, monitoring and assessment programs, approximately 11% more than in 2017
- $20 million in health and safety programs, or 13% less than 2017

The increase in environmental expenditures in 2018 was largely due to expenditures related to the Vision in Motion projects, which were somewhat offset by overall cost reductions at other Cameco locations. 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 decrease in 2019 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 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
- electrical power interruptions
- 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 2.4 million pounds, 65% lower compared to the same period in 2017, while production for the year was 9.2 million pounds, 61% lower than in 2017. The decrease was due to the production suspension at McArthur River/Key Lake and a change in reporting for JV Inkai. See *Uranium — operations* starting on page 60 for more information.

Uranium production

CAMECO SHARE (MILLION LBS)	THREE MONTHS ENDED DECEMBER 31		YEAR ENDED DECEMBER 31			
	2018	2017	2018	2017	2018 PLAN	2019 PLAN
McArthur River/Key Lake	**—**	3.5	**0.1**	11.2	0.1	— [2]
Cigar Lake	**2.4**	2.5	**9.0**	9.0	9.0	9.0
Inkai[1]	**—**	0.9	**—**	3.2	—	—
US ISR	**—**	—	**0.1**	0.4	0.1	— [2]
Total	**2.4**	6.9	**9.2**	23.8	9.2	9.0

1 We expect total production from Inkai to be 8.3 million pounds in 2019 on a 100% basis. Due to the transition to equity accounting, our share of production will be shown as a purchase.

2 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 curtailed operations* beginning on page 71 for more information.

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 cost management, productivity improvements, and supply discipline

Uranium – Tier-one operations

McArthur River mine / Key Lake mill



2018 Production (our share)

0.1M lbs

2019 Production Outlook (our share)

0.0M lbs

Estimated Reserves (our share)

273.6M lbs

Estimated Mine Life[1]

22 years

1 Estimated mine life assumes production of 18 million pounds per year after restart.

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 at the mine and mill for an indeterminate duration.

McArthur River is considered a material uranium property for us.

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		5.4 million pounds (measured and indicated), average grade U_3O_8: 2.65% 2.8 million pounds (inferred), average grade U_3O_8: 2.25%
Licensed capacity		Mine and mill: 25.0 million pounds per year
Licence term		Through October, 2023
Total packaged production:	2000 to 2018 1983 to 2002	325.4 million pounds (McArthur River/Key Lake) (100% basis) 209.8 million pounds (Key Lake) (100% basis)
2018 production		0.1 million pounds (0.2 million pounds on 100% basis)
2019 production outlook		0.0 million pounds (0.0 million pounds on 100% basis)
Estimated decommissioning cost[1]		$38 million – McArthur River (100% basis) $222 million – Key Lake (100% basis)

All values shown, including reserves and resources, represent our share only, unless indicated.

1 These updated estimates are currently under regulatory review.

BACKGROUND

Mine description

McArthur River currently has six zones with delineated mineral reserves and resources (zones 1 to 4, zones A and B) and one additional area with delineated mineral resources (McArthur north). Active mining was occurring from zone 2 and zone 4 prior to care and maintenance.

Zone 2 has been actively mined since production began in 1999. The ore zone was initially divided into freeze panels and 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.

Zone 4 has been actively mined since 2010. The zone is divided into three mining areas: north, central, and south. Prior to the production suspension, active mining was occurring in the central and north areas and mine development was in progress in the south. Similar to zone 2, the ore zone was divided into freeze panels and the inner connecting freeze walls are decommissioned as new panels are brought on line in order to maximize ore recovery.

Zone 1 is the next planned mine area to be brought into production. Freeze hole drilling was suspended in 2018 as part of the production suspension and will resume following the mine start-up. Work remaining before production can begin includes completion of the freeze drilling, brine distribution construction, ground freezing and drill and extraction chamber development.

We have successfully extracted over 325 million pounds (100% basis) since we began mining in 1999.

Mining methods and techniques

We use a number of innovative methods to mine the McArthur River deposit:

Ground freezing

The sandstone that overlays the deposit and metasedimentary basement rocks is water-bearing and permeable, which results in significant water pressure at mining depths. In order to isolate the high-pressure water, ground freezing is used to form an impermeable wall 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 with blasthole stoping. The use of this method has allowed the site to improve operating costs by significantly reducing waste rock handling, backfill dilution, and backfill placement. This mining method has been used extensively in the mining industry, including uranium mining. It involves:

- establishing drill access above the ore and extraction access below the ore
- setting up a raisebore drill in the drill chamber, drilling a pilot hole down to the extraction chamber, attaching a 3-metre wide reaming head to the drill string, and pulling it back up through the ore zone
- expanding the circumference of the raise by drilling longholes around the raisebore hole and blasting the ore
- funneling the blasted material into the raisebore hole and dropping it to the extraction level below
- collecting the broken rock by line-of-sight remote-controlled scoop trams, and transporting it to the underground grinding circuit
- once the stope is mined out, backfilling it with concrete to maintain ground stability and allowing the next stope and/or raise to be mined

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. It involves:

- establishing a drill chamber above the ore and an extraction chamber below the ore
- setting up a raisebore drill in the drill chamber, drilling a pilot hole down to the extraction chamber, attaching a 3-metre wide reaming head to the drill string, and pulling it back up through the ore zone
- collecting the high-grade broken ore at the bottom of the raises using line-of-sight remote-controlled scoop trams, and transporting it to an underground grinding circuit

- filling each raisebore hole with concrete
- when a series of overlapping raisebore holes in a chamber is complete, removing the equipment and filling the entire chamber with concrete
- starting the process again in an adjacent raisebore chamber

Boxhole mining was tested and approved for use at McArthur River. It is a higher-cost mining method that is not currently being used.

Initial processing

We carry out initial processing of the extracted ore at McArthur River:

- the underground circuit grinds the ore and mixes it with water to form a slurry
- the slurry is pumped 680 metres to the surface and stored in one of four ore slurry holding tanks
- it is blended and thickened, removing excess water
- the final slurry, at an average grade of 12% - 20% U_3O_8, is pumped into transport truck containers and shipped to Key Lake mill on an 80 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.

Tailings capacity

We expect to have sufficient tailings capacity at Key Lake 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.

2018 UPDATE

Production

This year, beginning in February, we had a planned production suspension. In response to market conditions, 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 200 employees remain 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. Production from McArthur River/Key Lake for the year was 0.2 million pounds (100% basis); our share was 0.1 million pounds compared to 11.2 million pounds in 2017 due to the production suspension in 2018.

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.

Exploration

In 2018, all underground infill definition drilling was halted as part of the production suspension.

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 2019. Our share of the cash and non-cash costs to maintain both operations during the suspension is expected to range between $7 million and $9 million per month.

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. The annual licensed capacity is 25 million pounds per year (100% basis). We expect that this paced approach will allow us to extract maximum value from the operation as the market transitions.

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.

Operational changes

The operational changes we have made, including the suspension of production in 2018 for an indeterminate duration, and the associated workforce reduction, carry with them risks of delay in restarting operations and subsequent production disruption.

Labour relations

The collective agreement with the United Steelworkers local 8914 expired in December 2017, and the collective bargaining process has begun. There is a risk to the restart of operations after the production suspension if we are unable to reach agreement and there is a labour dispute.

Transition to new mining areas

In order to successfully achieve the planned production schedule after the restart of operations, we must continue to successfully transition into new mining areas, which includes mine development and investment in critical support infrastructure.

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 the following steps to reduce the risk of inflows, but there is no guarantee that these will be successful:

- Ground freezing: Before mining, we drill freezeholes and freeze the ground to form an impermeable freeze wall around the area being mined. Ground freezing reduces but does not 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: Our standard for this project 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 beginning work on any new zone.

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



2018 Production (our share)

9.0M lbs
2019 Production Outlook (our share)

9.0M lbs
Estimated Reserves (our share)

88.3M 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.

Location	Saskatchewan, Canada
Ownership	50.025%
Mine type	Underground
Mining method	Jet boring system
End product	Uranium concentrate
Certification	ISO 14001 certified
Estimated reserves	88.3 million pounds (proven and probable), average grade U_3O_8: 14.48%
Estimated resources	51.0 million pounds (measured and indicated), average grade U_3O_8: 14.41% 11.8 million pounds (inferred), average grade U_3O_8: 5.97%
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 2018	64.9 million pounds (100% basis)
2018 production	9.0 million pounds (18.0 million pounds on 100% basis)
2019 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 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).

We continue development below the mineralization and we are currently mining in the eastern part of the ore body.

Mining method

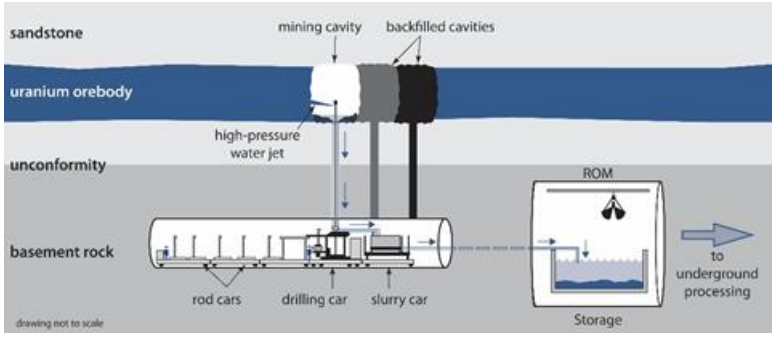
Bulk ground freezing

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 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.

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.

2018 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:

- advanced the freeze plant expansion project, achieving substantial completion of construction and commencement of the commissioning phase
- implemented an extended summer shutdown, during which maintenance activities were completed as well as a capital upgrade to process pumps underground
- refurbished a JBS unit and brought two new production tunnels online
- 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, limited underground mine development was undertaken in 2018. Mine development required to sustain long-term production will re-commence in 2019.

PLANNING FOR THE FUTURE

Production

In 2019, we expect to produce 18 million packaged pounds at Cigar Lake; our share is 9.0 million pounds.

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

In 2019, we expect to:

- continue surface freeze drilling and complete construction and commissioning of the freeze plant infrastructure expansion in support of future production
- resume underground mine development and complete two new production tunnels as well as expand ventilation and access drifts in alignment with the long-term mine plan

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.

Labour relations

The collective agreement between Orano and unionized employees at the McClean Lake mill expires on May 31, 2019. There is a risk to the production plan if Orano is unable to reach an agreement and there is a labour dispute.

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



2018 Production (100% basis)

6.9 M lbs
2019 Production Outlook (100% basis)

8.3 M lbs
Estimated Reserves (our share)

104.6M 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.

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	104.6 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 2018	49.2 million pounds (100% basis)
2018 production	6.9 million pounds (100% basis)
2019 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 favorable 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 2018 production from Inkai was 6.9 million pounds (100% basis), an increase from 2017. While the production volume was in accordance with Kazatomproms'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 2018 compared to 2017. The subsoil use law in Kazakhstan allows producers to produce within 20% (above or below) of their licensed capacity in a year.

Project funding

We have an outstanding loan for Inkai's work on block 3 prior to the restructuring and, as of December 31, 2018, the principal and interest amounted to $91 million (US). Under the restructuring agreement, the partners have agreed that JV Inkai will distribute excess cash first as priority repayment of this loan. To date in 2019, payments of $29 million (US) have been received.

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. As annual production increases above 5.2 million pounds, we are entitled to 22.5% of any incremental production, to the maximum annual share of 4.2 million pounds. Once the rampup to 10.4 million pounds annually is complete, our share in all production will be 40%, 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
- the loan that our subsidiary made to JV Inkai to fund exploration and evaluation of the historically defined block 3 area provides for priority repayment

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 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 Kazatomprom, which, subject to receiving the required government permits, will allow Kazatomprom to examine the feasibility of constructing and operating its own UF_6 conversion facility in Kazakhstan.

Our 2019 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 *JV Inkai 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 2019. We have the right to purchase 3.7 million pounds at a discount to the spot price, which will be included in inventory at this value at the time of delivery in accordance with 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.

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 repaying the block 3 loan, 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 curtailed 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 2018	202.2 million pounds
2018 production	0 million pounds
2019 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 2018. As a result, there was no production in 2018.

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.

IMPAIRMENT

In 2016, as a result of the production suspension, we recognized an impairment charge for the full carrying value of $124 million.

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 U3O8: 0.25% 1.8 million pounds (inferred), average grade U3O8: 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 2018		33.0 million pounds
2018 production		0.1 million pounds
2019 production outlook		0 million pounds
Estimated decommissioning cost		Smith Ranch-Highland: $224 million (US), including North Butte Crow Butte: $51 million (US)

1 Including Highland mill

PRODUCTION AND CURTAILMENT

As a result of our 2016 decision, production at the US operations ceased in 2018 resulting in production of less than 100,000 pounds.

On September 30, the Nuclear Regulatory Commission approved a 10-year renewal of the operating licence for Smith Ranch-Highland. The licence is valid until September 30, 2028.

FUTURE PRODUCTION

We do not expect any production in 2019.

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. In 2018, we increased our ownership from 70% to 100%.

2018 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

2019 Planned activity

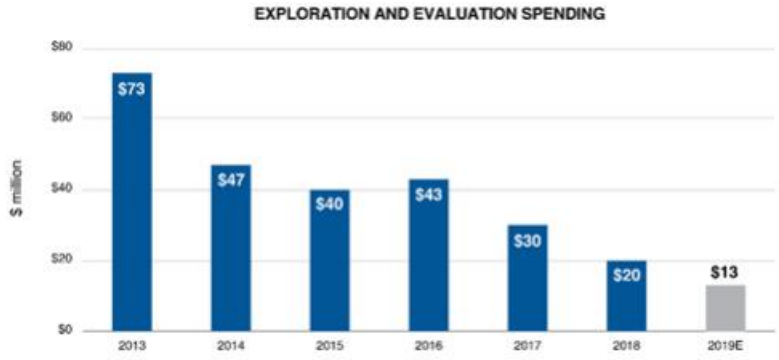
No work is planned at Millennium, Yeelirrie or Kintyre. Further progress towards a development decision is not expected until market conditions improve.

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 0.7 million hectares (1.7 million acres). In northern Saskatchewan alone, we have direct interests in about 0.6 million hectares (1.6 million acres) of land covering many of the most prospective exploration areas of the Athabasca Basin.



2018 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 2018, 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 $15 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 maintaining 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 14.

Fuel services

Refining, conversion and fuel manufacturing

We control 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 as fuel bundles
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 as finished bundles
Licence term	Through February, 2022
Estimated decommissioning cost	$21 million

2018 UPDATE

Production

Fuel services produced 10.5 million kgU, 33% higher than 2017. This was a result of increased demand.

Port Hope conversion facility cleanup and modernization (Vision in Motion)

We began implementation activities and made significant progress on the Vision in Motion project in 2018. In 2019, we will continue with the detailed engineering and implementation work.

Labour relations

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

PLANNING FOR THE FUTURE

Production

We plan to produce between 12 million and 13 million kgU in 2019.

MANAGING OUR RISKS

Labour relations

The collective agreement with unionized employees at our conversion facility in Port Hope expires in June 2019. There is a risk to our production plans if we are unable to reach an agreement and there is a labour disruption.

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, 2018.

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 2017)
at December 31, 2018



Changes this year

Our share of proven and probable mineral reserves increased from 458 million pounds U $_3O_8$ at the end of 2017, to 467 million pounds at the end of 2018. The change was primarily the result of:

- McArthur River's zone B mineral resource update which added approximately 23.8 million pounds of proven and probable reserves

partially offset by:

- production, which removed 12.3 million pounds from our mineral inventory
- other minor adjustments at Cigar Lake and McArthur River

Measured and indicated mineral resources decreased from 425 million pounds U $_3O_8$ at the end of 2017, to 423 million pounds at the end of 2018. Our share of inferred mineral resources is 176 million pounds U_3O_8, a decrease of 14 million pounds from the end of 2017. The variance in mineral resources was mainly the result of:

- the sale of our interest in the Wheeler River Joint Venture which resulted in a reduction of 18.7 million pounds of indicated and 11.8 million pounds of inferred resources
- removal of 0.7 million pounds of measured, 1.3 million pounds of indicated and 1.1 million pounds of inferred resources from the US ISR operations following a review of economic parameters
- reduction of 3.1 million pounds of inferred resources from McArthur River

partially offset by:

- an increase in our ownership in the Kintyre project from 70% to 100% which added 16.1 million pounds of indicated and 1.8 million pounds of inferred resources

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
- Linda Bray, principal metallurgist, 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
- Linda Bray, principal metallurgist, technical services, Cameco

INKAI

- Dr. Darryl Clark, consultant geologist
- Alain D. Renaud, lead geologist, technical services, Cameco
- Linda Bray, principal metallurgist, 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, 2018 (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)	METALLURGICAL RECOVERY (%)
Cigar Lake	UG	171.0	15.74	59.4	382.1	13.91	117.2	553.1	14.48	176.6	**88.3**	99
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	205,349.0	0.04	164.3	155,529.5	0.03	97.2	360,878.5	0.03	261.6	**104.6**	85
Total		**207,615.1**	**—**	**544.6**	**156,450.1**	**—**	**286.1**	**364,065.2**	**—**	**830.8**	**467.1**	**—**

(UG – underground, OP – open pit, ISR – in situ recovery), totals may not add up due to rounding.
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 298 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—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, 2018 (100% – only the shaded columns show our share)

MEASURED, INDICATED AND INFERRED

(tonnes in thousands; pounds in millions)

	MEASURED RESOURCES (M)			INDICATED RESOURCES (I)			TOTAL M+I	OUR SHARE TOTAL M+I	INFERRED RESOURCES			OUR SHARE INFERRED
PROPERTY	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)	CONTENT (LBS U_3O_8)	TONNES	GRADE % U3O8	CONTENT (LBS U_3O_8)	CONTENT (LBS U_3O_8)
Cigar Lake	14.2	11.91	3.7	307.1	14.52	98.3	102.0	51.0	180.0	5.97	23.7	11.8
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	35.1	2.86	2.2	7.8	5.4	80.5	2.25	4.0	2.8
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	1,607.3	0.19	6.7	939.3	0.35	7.3	13.9	13.9	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	621.7	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	3,712.4	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	**70,683.6**	**—**	**144.1**	**69,334.8**	**—**	**381.8**	**525.9**	**422.8**	**132,036.4**	**—**	**257.7**	**175.6**

Totalsmay not add up due to rounding.
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.

Commencement of production stage

When we determine that a mining property has reached the production stage, capitalization of development ceases, and depreciation of the mining property begins and is charged to earnings. Production is reached when management determines that the mine is able to produce at a consistent or sustainably increasing level. This determination is a matter of judgment. See note 2 to the financial statements for further information on the criteria that we used to make this assessment.

Purchase price allocations

The purchase price related to a business combination or asset acquisition is allocated to the underlying acquired assets and liabilities based on their estimated fair values at the time of acquisition. The determination of fair value requires us to make assumptions, estimates and judgments regarding future events. The allocation process is inherently subjective and impacts the amounts assigned to individually identifiable assets and liabilities. As a result, the purchase price allocation impacts our reported assets and liabilities and future net earnings due to the impact on future depreciation and amortization expense and impairment tests.

Determination of joint control

We conduct certain operations through joint ownership interests. Judgment is required in assessing whether we have joint control over the investee, which involves determining the relevant activities of the arrangement and whether decisions around relevant activities require unanimous consent. Judgment is also required to determine whether a joint arrangement should be classified as a joint venture or joint operation. Classifying the arrangement requires us to assess our rights and obligations arising from the arrangement. Specifically, management considers the structure of the joint arrangement and whether it is structured through a separate vehicle. When structured through a separate vehicle, we also consider the rights and obligations arising from the legal form of the separate vehicle, the terms of the contractual arrangements and other facts and circumstances, when relevant. This judgment influences whether we equity account or proportionately consolidate our interest in the arrangement.

Controls and procedures

We have evaluated the effectiveness of our disclosure controls and procedures and internal control over financial reporting as of December 31, 2018, 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, 2018. We have not made any change to our internal control over financial reporting during the 2018 fiscal year that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

New standards adopted

On January 1, 2018, we adopted the following new standards as issued by the International Accounting Standards Board (IASB) in accordance with the transitional provisions.

IFRS 15, *Revenue from Contracts with Customers* (IFRS 15) – IFRS 15 clarifies the principles for recognizing revenue from contracts with customers. We adopted IFRS 15 using the cumulative effect method without practical expedients which does not require comparative financial statements to be restated. As the adoption of the new standard did not have a material impact on our existing revenue recognition practices, there was no cumulative effect on net earnings at January 1, 2018 that would have required restatement. The new standard did result in additional disclosures.

IFRS 9, *Financial Instruments* (IFRS 9) –IFRS 9 includes revised guidance on the classification and measurement of financial assets. While it largely retains the existing requirements in IAS 39, *Financial Instruments: Recognition and Measurement* for the classification and measurement of financial liabilities, it eliminates the previous categories for financial assets of held to maturity, loans and receivables and available for sale. Upon adoption, we reclassified our financial instruments as follows:

	Original classification under IAS 39	**New classification under IFRS 9**
Financial assets		
Cash and cash equivalents	Loans and receivables	Amortized cost
Accounts receivable	Loans and receivables	Amortized cost
Derivative assets	FVTPL	FVTPL
Investments in equity securities	Available for sale	FVOCI
Advances receivable from Inkai	Loans and receivables	Amortized cost
Financial liabilities		
Accounts payable and accrued liabilities	Other financial liabilities	Amortized cost
Dividends payable	Other financial liabilities	Amortized cost
Derivative liabilities	FVTPL	FVTPL
Long-term debt	Other financial liabilities	Amortized cost

There was no impact on the measurement of any of these instruments at the date of transition. We did not have any financial assets or liabilities previously designated as measured at FVTPL that are no longer so designated.

The new standard also includes a new expected credit loss model for calculating impairment on financial assets. This change did not have a material impact on the consolidated financial statements.

IFRS 9 also introduces new hedge accounting requirements. Since we do not apply hedge accounting, there was no impact on the consolidated financial statements.

New standards and interpretations not yet adopted

A new standard and a new interpretation are not yet effective for the year ended December 31, 2018, and have not been applied in preparing the consolidated financial statements. We do not intend to early adopt the following standard or interpretation, unless otherwise noted.

IFRS 16, *Leases* (IFRS 16) – In January 2016, the IASB issued IFRS 16. IFRS 16 is effective for periods beginning on or after January 1, 2019, with early adoption permitted. IFRS 16 eliminates the current 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. Our assessment of the new standard included the review of contracts to identify arrangements that could contain leases that qualify for recognition under IFRS 16. This review also considered contracts containing embedded leases of right-of-use assets. Based on our assessment, which is substantially complete, we determined that we do not expect adoption of the standard to have a material impact on the financial statements, however we do expect to have additional disclosures.

IFRIC 23, *Uncertainty over Income Tax Treatments* (IFRIC 23) – In June 2017, the IASB issued IFRIC 23. IFRIC 23 is effective for periods beginning on or after January 1, 2019 with early adoption permitted. 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. We do not expect adoption of the standard to have a material impact on the financial statements.

EXHIBIT 99.4

For fiscal years ended December 31, 2018 and December 31, 2017, KPMG LLP and its affiliates were billed by Cameco Corporation and its subsidiaries the following fees:

	2018 ($)	% of total fees (%)	2017 ($)	% of total fees (%)
Audit fees				
Cameco[1]	2,033,100	68.5	2,030,800	59.3
Subsidiaries[2]	709,800	23.9	864,900	25.3
Total audit fees	2,742,900	92.4	2,895,700	84.6
Audit-related fees				
Translation services	—	—	—	—
Pensions and other	27,300	0.9	27,300	0.8
Total audit-related fees	27,300	0.9	27,300	0.8
Tax fees				
Compliance	94,800	3.2	151,200	4.4
Planning and advice[3]	102,300	3.5	295,800	8.6
Total tax fees	197,100	6.7	447,000	13.0
All other fees				
Other non-audit fees[4]	—	0.0	55,300	1.6
Total other non-audit fees	—	0.0	55,300	1.6
Total fees	**2,967,300**	**100.0**	**3,425,300**	**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 2017 related to Cameco's I-4 Membership and ESTMA reporting.

Pre-Approval Policies and Procedures

As part of Cameco Corporation's corporate governance practices, under its committee charter, the audit and finance committee is required to pre-approve the audit and non-audit services performed by the external auditors. The audit and finance 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 and finance committee or audit and finance committee chair, or in the absence of the audit and finance 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 and finance committee at its next meeting. The audit and finance committee has adopted a written policy to provide procedures to implement the foregoing principles. For each of the years ended December 31, 2018 and 2017, 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.

Contractual Cash Obligations

As at December 31, 2018 (Cdn$ 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	**1,500**	500	—	400	600
Interest on long-term debt	**336**	69	82	67	118
Provision for reclamation	**1,157**	51	93	72	941
Provision for waste disposal	**10**	1	3	4	2
Other liabilities	**68**	1	2	2	63
Capital commitments	**16**	16	—	—	—
Unconditional product purchase commitments[1, 2]	**1,015**	346	207	133	329
Total contractual cash obligations	**4,102**	984	387	678	2,053

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, 2019, but does not include deliveries taken under contract since December 31, 2018.

Commercial Commitments

As at December 31, 2018 (Cdn$ millions)	Total Amounts Committed
Standby letters of credit[1]	1,572
Total commercial commitments	1,572

1 The financial assurances (including standby letters of credit and surety bonds) maturing in 2018 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, 2018, 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, 2018, 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, 2018 and 2017, 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 7, 2019 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 7, 2019

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, 2018, and 2017, 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 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, 2018, and 2017, 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, 2018, 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 7, 2019 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Change in Accounting Policies

As discussed in Note 3A to the consolidated financial statements, the Company has changed its accounting policies for revenue recognition and financial instruments in 2018 due to the adoption of IFRS 15 – *Revenue from Contracts with Customers* (IFRS 15) and IFRS 9 – *Financial Instruments* (IFRS 9).

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's 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.

/s/ KPMG LLP
Chartered Professional Accountants

We have served as the Company's auditor since 1988.

Saskatoon, Canada
February 7, 2019

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 7, 2019, 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, 2018 and December 31, 2017, and the 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, 2018.

Our report on the consolidated financial statements refers to changes in accounting policies for revenue recognition and financial instruments in 2018 due to the adoption of IFRS 15 – *Revenue from Contracts with Customers* (IFRS 15) and IFRS 9 – *Financial Instruments* (IFRS 9).

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 29, 2019

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 29, 2019

/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 29, 2019

/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, 2018, 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 29, 2019

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, 2018, 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 29, 2019

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, 2018 dated March 29, 2019 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 of Financial Condition and Results of Operation for the year ended December 31, 2018 dated February 8, 2019 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 29, 2019

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 – Cigar Lake", "Mineral reserves and resources" and "Governance – Interest of Experts" in the Corporation's Annual Information Form for the year ended December 31, 2018 dated March 29, 2019 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 of Financial Condition and Results of Operation for the year ended December 31, 2018 dated February 8, 2019 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/ Scott Bishop

Name: Scott Bishop, P. Eng.
Title: Director, Technical Services, Cameco Corporation

Date: March 29, 2019

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 – 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, 2018 dated March 29, 2019 for the McArthur River mine/Key Lake mill and Cigar Lake 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 of Financial Condition and Results of Operation for the year ended December 31, 2018 dated February 8, 2019 for the McArthur River mine/Key Lake mill and Cigar Lake 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/ Linda Bray

Name: Linda Bray, MA(Oxon), MSc, CEng, MIMMM, MAusIMM (CP), RPEQ 11255, P. Eng.
Title: Principal Metallurgist, Technical Services, Cameco Corporation

Date: March 29, 2019

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 – Inkai", "Mineral reserves and resources" and "Governance – Interest of Experts" in the Corporation's Annual Information Form for the year ended December 31, 2018 dated March 29, 2019 for the Inkai operation; and

(b) under the headings "Operations and projects – Uranium – Tier-one operations – Inkai", and "Mineral reserves and resources" in Management's Discussion and Analysis of Financial Condition and Results of Operation for the year ended December 31, 2018 dated February 8, 2019 for the Inkai 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/ Darryl Clark

Name: Darryl Clark, PhD, P. Geo.
Title: Consultant Geologist

Date: March 29, 2019

EXHIBIT 99.17

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, 2018 dated March 29, 2019 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 of Financial Condition and Results of Operation for the year ended December 31, 2018 dated February 8, 2019 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/Rabbit Lake, Cameco Corporation

Date: March 29, 2019

EXHIBIT 99.18

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, 2018 dated March 29, 2019 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 of Financial Condition and Results of Operation for the year ended December 31, 2018 dated February 8, 2019 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 Mill Manager, Key Lake,
Cameco Corporation

Date: March 29, 2019