No securities regulatory authority has expressed an opinion about these securities and it is an offence to claim otherwise. These securities have not been and will not be registered under the United States Securities Act of 1933, as amended (the “U.S. Securities Act”), and, subject to certain exceptions, may not be offered or sold in the United States or to U.S. persons within the meaning of Regulation S under the U.S. Securities Act. See “Plan of Distribution”.

This prospectus supplement, together with the short form base shelf prospectus dated August 24, 2009 to which it relates, as amended or supplemented, and each document incorporated or deemed to be incorporated by reference in the short form base shelf prospectus, constitutes a public offering of securities offered pursuant hereto only in the jurisdictions where they may be lawfully offered for sale and therein only by persons permitted to sell such securities.

Information has been incorporated by reference in this prospectus supplement and the accompanying short form base shelf prospectus dated August 24, 2009 from documents filed with securities commissions or similar authorities in Canada. Copies of the short form base shelf prospectus and documents incorporated by reference therein may be obtained on request without charge from the Corporate Secretary, Cameco Corporation at 2121 – 11th Street West, Saskatoon, Saskatchewan S7M 1J3 (Telephone (306) 956-6200), and are also available electronically at www.sedar.com.

PROSPECTUS SUPPLEMENT
To a Short Form Base Shelf Prospectus dated August 24, 2009

New Issue August 27, 2009

$500,000,000 5.67% Senior Unsecured Debentures, Series D due September 2, 2019

This prospectus supplement (the “prospectus supplement”) qualifies the distribution (the “Offering”) of $500,000,000 aggregate principal amount of 5.67% senior unsecured debentures, Series D due September 2, 2019 (the “Series D Debentures”) of Cameco Corporation (“Cameco” or the “Company”) at a price of $999.92 per Series D Debenture. The Series D Debentures will be unsecured obligations of Cameco. The Series D Debentures will mature on September 2, 2019 and will have an interest rate of 5.67% per annum, calculated and payable semi-annually in arrears on March 2 and September 2 in each year, commencing March 2, 2010. The effective yield on the Series D Debentures if held to maturity will be 5.671%.

Cameco’s head office and registered office is located at 2121 – 11th Street West, Saskatoon, Saskatchewan S7M 1J3.

The Series D Debentures will be redeemable at the option of the Company at any time, in whole or in part, upon not more than 60 days and not less than 30 days prior notice, at the higher of the Canada Yield Price (as herein defined) and par, together in each case with accrued and unpaid interest to the date fixed for redemption. If a Change of Control Triggering Event (as herein defined) occurs, unless the Company has exercised its optional right to redeem all of the Series D Debentures as described above, the Company will be required to make an offer to repurchase all or, at the option of a holder of Series D Debentures (a “Holder”), any part of such Holder’s Series D Debentures (a “Change of Control Offer”). In a Change of Control Offer, the Company will be required to offer payment in cash equal to 101% of the aggregate principal amount of Series D Debentures together with accrued and unpaid interest on the Series D Debentures repurchased to the date of purchase.

<table>
<thead>
<tr>
<th>Price: $999.92 per Series D Debenture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Series D Debenture</td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>$999.92</td>
</tr>
<tr>
<td>$7.50</td>
</tr>
</tbody>
</table>
Before deducting expenses of this Offering, estimated to be $350,000 which, together with the Underwriters‘ fee, will be paid from the general funds of the Company.

See “Description of Series D Debentures” for further particulars of the material attributes of the Series D Debentures.

You should carefully review and evaluate certain risk factors before purchasing the Series D Debentures. See “Risk Factors”.

There is no market through which the securities may be sold and purchasers may not be able to resell securities purchased under this prospectus supplement. This may affect the pricing of the securities in the secondary market, the transparency and availability of trading prices, the liquidity of the securities and the extent of issuer regulation. See “Risk Factors”.

RBC Dominion Securities Inc. (“RBC DS”), Scotia Capital Inc. (“Scotia”), National Bank Financial Inc., BMO Nesbitt Burns Inc., CIBC World Markets Inc., HSBC Securities (Canada) Inc., TD Securities Inc., BNP Paribas (Canada) Securities Inc. and Merrill Lynch Canada Inc. (collectively the “Underwriters”), as principals, conditionally offer the Series D Debentures, subject to prior sale, if, as and when issued by us and accepted by the Underwriters in accordance with the conditions contained in the underwriting agreement referred to under “Plan of Distribution” and subject to the approval of certain legal matters on behalf of the Company by Osler, Hoskin & Harcourt LLP and on behalf of the Underwriters by Borden Ladner Gervais LLP.

Subscriptions for the Series D Debentures will be received subject to rejection or allotment, in whole or in part, and the right is reserved to close the subscription books at any time without notice. It is expected that the closing of this Offering will take place on September 2, 2009 or on such other date as Cameco and the Underwriters may agree but, in any event, no later than September 9, 2009. At the closing of the Offering, the Series D Debentures will be available for delivery in book-entry form only through the facilities of CDS Clearing and Depository Services Inc. (“CDS”).

In connection with this Offering, the Underwriters may, subject to applicable law, effect transactions that stabilize or maintain the market price of the Series D Debentures at levels other than those which otherwise might prevail on the open market. Such transactions, if commenced, may be discontinued at any time. See “Plan of Distribution”.

RBC DS, Scotia, National Bank Financial Inc., BMO Nesbitt Burns Inc., CIBC World Markets Inc., HSBC Securities (Canada) Inc., TD Securities Inc., BNP Paribas (Canada) Securities Inc. and Merrill Lynch Canada Inc. are affiliates of Canadian chartered banks or other financial institutions that, among other lenders, have provided us with certain credit facilities, and/or have provided us with other credit accommodations or are counterparties to certain currency swaps or other derivatives transactions with us. The net proceeds of the Offering will be used to refinance existing indebtedness and for general corporate purposes, and our receipt of the net proceeds of the Offering will enable us not to borrow amounts we might otherwise have borrowed under such credit facilities or other credit accommodations. Consequently, we may be considered to be a “connected issuer” of each of the Underwriters under applicable securities laws. See “Plan of Distribution”.

Note:
(1) Before deducting expenses of this Offering, estimated to be $350,000 which, together with the Underwriters’ fee, will be paid from the general funds of the Company.
Cameco owns approximately 49% of and has voting control over approximately 53% of Centerra’s shares.

NOTE REGARDING FORWARD-LOOKING INFORMATION AND STATEMENTS

"outlook", "goals", "targets", "projects", "may", "hope", "can", "will", "shall", "should", "expect", "intend", "is designed by them. Sentences and phrases containing words such as "believe", "estimate", "anticipate", "plan", "predict", "outlook", "goals", "targets", "projects", "may", "hope", "can", "will", "shall", "should", "expect", "intend", "is designed to", "continues", "with the intent", "potential", "strategy", and the negative of any of these words, or variations of them, or comparable terminology that does not relate strictly to current or historical facts, are all indicative of forward-looking information or statements. Discussions containing forward-looking statements may be found, among other places, in “The Company” section herein and in the “General Development of The Business”, “The Nuclear Business”, “Bruce Power LP—Nuclear Electrical Generation”, “Centerra Gold Inc.” and “Risk Factors” sections of our Annual Information Form (as defined herein) and other documents incorporated by reference herein. Examples of forward-looking information and statements in this prospectus supplement and the Annual Information Form and the other documents incorporated by reference herein include, but are not limited to: mineral resource and mineral reserve estimates; our forecasts relating to mining and milling activities at McArthur River, Key Lake, Rabbit Lake, Inkai and Kumtor; and our forecast for sealing the August 12, 2008 water inflow at Cigar Lake.

There are risk factors that could cause actual results to differ materially from the forward-looking information and statements in this short form prospectus and the information incorporated herein. Factors that could cause such differences include, without limitation: the impact of the sales volume of fuel fabrication services, uranium, conversion services, electricity and gold; governmental or private sector competition; the financial results and operations of Bruce Power Limited Partnership (“Bruce Power”) and Centerra; the impact of change in foreign currency exchange rates (such as Canadian/U.S. rates), interest rates and costs of supplies critical to production; imprecision in production, costs (including capital costs), decommissioning, reclamation, mineral reserve and tax estimates; the impact of significant cost increases, in particular capital cost increases; litigation or arbitration proceedings (including as the result of disputes with governments (including tax authorities), suppliers, customers or joint venture partners); inability to enforce legal rights; non-performance by one or more significant customers or critical suppliers; defects in title; environmental, safety and regulatory risks including
increased regulatory burdens, long-term waste disposal and the risk of uranium and production-associated chemicals affecting the soil and groundwater at the Port Hope site and other sites; unexpected or challenging geological or hydrological conditions (including at the McArthur River, Cigar Lake, Rabbit Lake and Kumtor deposits); adverse mining conditions; reduction in mineral reserves due to geotechnical or other risks; political risks arising from operating in certain developing countries (including the Kyrgyz Republic, Kazakhstan and Mongolia); nationalization risk; terrorism; sabotage; a possible deterioration in political support for nuclear energy; changes in government regulations and policies, including tax and trade laws and policies (including legislation in Kazakhstan allowing the government to renegotiate previously signed agreements); demand for nuclear power; replacement of production (including through placing Inkai and Cigar Lake into production, transitioning to new mining areas at McArthur River beginning in 2009, and overcoming geotechnical challenges at the Kumtor deposit); failure to maintain or construct sufficient tailings capacity for uranium and gold production; the risk of uranium and conversion service providers failing to fulfill delivery commitments or requiring material amendments to agreements relating thereto (including the Russian HEU Agreement); failure to obtain or maintain necessary permits, licenses and approvals from government authorities; legislative and regulatory initiatives regarding deregulation, regulation or restructuring of the electric utility industry in Ontario; Ontario electricity rate regulations; natural phenomena including inclement weather conditions, fire, flood, underground floods (including flooding of McArthur River, Cigar Lake or Rabbit Lake), earthquakes, pit wall failure (including further highwall ground movement at the Kumtor mine), tailings pipeline and dam failures, and cave-ins; ability to maintain and further improve positive labour relations; strikes or lockouts; operating performance, disruption in the operation of, and life of, our and our customers’ facilities; availability of equipment, operating parts, reagents and supplies critical to production (including the availability of acid at our operations in Kazakhstan and hydrofluoric acid at our Port Hope UF6 conversion plant); decrease in electrical production due to planned and unplanned outages; success and timely completion of planned development and remediation projects (including the remediation of and return to pre-flood construction and development at Cigar Lake); failure of radiation protection plans; the risk of equipment failure; the risk of a significant decline in general economic conditions; and other development, operating, safety and environmental risks. There may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. These factors are not intended to represent a complete list of the material risk factors that could affect us. Additional risk factors are noted elsewhere in this prospectus supplement and under the heading “Risk Factors” in the Annual Information Form and under the heading “Risk and Risk Management” in the Company’s most recently filed annual management’s discussion and analysis as well as any risk factors discussed in any quarterly management’s discussion and analysis for the current year.

Forward-looking information and statements are based on a number of assumptions which may prove to be incorrect, including, but not limited to, assumptions about: the absence of material adverse changes in the ability of our business units to supply products and services, other than as disclosed; there being no disruption of supply from third party sources; there being no significant changes in current estimates for sales volume, purchases and prices for uranium, conversion services, electricity, and gold; the expected spot prices and realized prices for uranium; the average gold spot price; our effective tax rate; there being no significant adverse change in foreign currency exchange rates, interest rates or tax rates; there being no significant changes in production, costs (including capital costs), decommissioning, reclamation, tax and mineral reserve estimates; there being no significant changes in our ability to comply with current environmental, safety and other regulatory requirements, and the absence of any material increase in regulatory compliance requirements; our ability to obtain regulatory approvals (including permits and licences) in a timely manner; the status of geological, hydrological and other conditions at our mines; the absence of any material adverse effects arising as a result of political instability, terrorism, sabotage, natural disasters, equipment failure, adverse changes in government legislation, regulations or policies, or litigation or arbitration proceedings; continuing positive labour relations, and that no significant strikes or lockouts will occur; the success and timely completion of planned development and remediation projects and the replacement of production; and that general economic conditions do not deteriorate beyond currently anticipated levels. Forward-looking information and statements are also based upon the assumption that none of the identified risk factors that could cause actual results to differ materially from the forward-looking information and statements will occur.

The forward-looking information and statements included in this prospectus supplement and the short form base shelf prospectus dated August 24, 2009 to which it relates, together with the documents incorporated herein by reference, represent our views as of the date of such documents and should not be relied upon as representing our views as of any subsequent date. While we anticipate that subsequent events and developments may cause our views to change, we specifically disclaim any intention or obligation to update forward-looking information and statements, whether as a result of new information, future events or otherwise, except to the extent required by applicable securities laws. Forward-looking information and statements contained in this short form prospectus and the documents incorporated herein by reference about prospective results of operations, financial position or cash flows that are based upon assumptions about future economic conditions and courses of action are presented for the purpose of assisting our securityholders in understanding management’s current views regarding those future outcomes, and may not be appropriate for other purposes.

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There can be no assurance that the forward-looking information and statements will prove to be accurate, and actual results and future events could vary or differ materially from those anticipated by them. Accordingly, undue reliance should not be placed on forward-looking information and statements. Forward-looking information and statements for time periods subsequent to 2009 involve greater risks and require longer term assumptions and estimates from those for 2009, and are consequently subject to greater uncertainty. Therefore, special caution should be taken in terms of placing reliance on such long-term forward-looking information and statements.

**DOCUMENTS INCORPORATED BY REFERENCE**

This prospectus supplement is deemed to be incorporated by reference into the accompanying short form base shelf prospectus of Cameco dated August 24, 2009 (the “short form base shelf prospectus”) solely for the purposes of this Offering. Other documents are also incorporated or deemed to be incorporated by reference into the short form base shelf prospectus and reference should be made to the short form base shelf prospectus for full particulars thereof.

The following documents, which have been filed by the Company with securities commissions or similar authorities in Canada, are also specifically incorporated by reference into and form an integral part of the short form base shelf prospectus, as supplemented by this prospectus supplement:

(a) Annual Information Form of Cameco for the year ended December 31, 2008, dated March 27, 2009 (the “Annual Information Form”);

(b) Consolidated Financial Statements of Cameco (the “Consolidated Financial Statements”) as at December 31, 2008 and 2007 and for the years ended December 31, 2008 and 2007 and related notes, together with the auditors’ report thereon, and Management’s Discussion and Analysis of Cameco in respect of the Consolidated Financial Statements;

(c) Management Proxy Circular of Cameco dated April 16, 2009 in connection with the Annual Meeting of Shareholders held on May 27, 2009;

(d) Unaudited Interim Consolidated Financial Statements of Cameco as at and for the three month period ended March 31, 2009 and 2008 and related notes contained therein;

(e) Management’s Discussion and Analysis of Cameco for the three month period ended March 31, 2009;

(f) Unaudited Interim Consolidated Financial Statements of Cameco as at and for the three and six month periods ended June 30, 2009 and 2008 and related notes contained therein; and

(g) Management’s Discussion and Analysis of Cameco for the three and six month periods ended June 30, 2009.

Any statement contained in the short form base shelf prospectus, in this prospectus supplement or in any document incorporated or deemed to be incorporated by reference in the short form base shelf prospectus for the purpose of this Offering shall be deemed to be modified or superseded, for purposes of this prospectus supplement, to the extent that a statement contained herein or in the short form base shelf prospectus or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein or in the short form base shelf prospectus modifies or supersedes such prior statement. The modifying or superseding statement need not state that it has modified or superseded a prior statement or include any other information set forth in the document which it modifies or supersedes. The making of such a modifying or superseding statement shall not be deemed an admission for any purposes that the modified or superseded statement, when made, constituted a misrepresentation, an untrue statement of a material fact or an omission to state a material fact that is required to be stated or that is necessary to make a statement not misleading in light of the circumstances in which it was made. Any statement so modified or superseded shall not constitute a part of this prospectus supplement, except as so modified or superseded.
WHERE YOU CAN FIND MORE INFORMATION

Information has been incorporated by reference in the accompanying short form base shelf prospectus from documents filed with securities commissions or similar authorities in Canada. Copies of this prospectus supplement, together with the short form base shelf prospectus and documents incorporated by reference therein, may be obtained on request without charge from the Corporate Secretary, Cameco Corporation at 2121 – 11th Street West, Saskatoon, Saskatchewan S7M 1J3 (Telephone (306) 956-6200). Copies of these documents are available on the System for Electronic Document Analysis and Retrieval of the Canadian Securities Administrators (“SEDAR”), at www.sedar.com.
<table>
<thead>
<tr>
<th><strong>SUMMARY OF THE OFFERING</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The following is a summary of the principal features of the Offering of the Series D Debentures and is subject to, and should be read together with the more detailed information, financial data and statements contained elsewhere in, and incorporated by reference into, this prospectus supplement and the accompanying short form base shelf prospectus to which it relates.</td>
</tr>
</tbody>
</table>

| **Issuer** | Cameco Corporation |
| **Issue** | $500,000,000 aggregate principal amount of 5.67% Series D Debentures. |
| **Price to the Public** | $999.92 per Series D Debenture |
| **Maturity** | September 2, 2019 |
| **Interest Rate** | 5.67% per annum, calculated and payable semi-annually in arrears. |
| **Interest Payment Dates** | March 2 and September 2 in each year, commencing March 2, 2010. |
| **Rank** | The Series D Debentures will be direct, unsecured obligations of Cameco and will rank equally and rateably with one another and with all other present and future unsecured and unsubordinated indebtedness of Cameco, including the Series C debentures of Cameco previously issued under the Indenture (as herein defined), except to the extent prescribed by law. |
| **Use of Proceeds** | The estimated net proceeds to Cameco from this Offering, after payment of the Underwriters’ fee and the estimated expenses of this Offering, are $495,860,000. The net proceeds will be used to refinance existing indebtedness and for general corporate purposes. |
| **Optional Redemption** | The Series D Debentures may be redeemed at the option of Cameco at any time, in whole or in part, upon not more than 60 days and not less than 30 days prior notice, at the greater of the Canada Yield Price (as herein defined) and par, together in each case with accrued and unpaid interest to the date fixed for redemption. See “Description of Series D Debentures – Redemption by Cameco”. |
| **Change of Control Offer** | If a Change of Control Triggering Event (as herein defined) occurs, unless the Company has exercised its optional right to redeem all of the Series D Debentures as described above, Cameco will be required to make an offer to repurchase all or, at the option of a Holder, any part of such Holder’s Series D Debentures pursuant to a Change of Control Offer. In a Change of Control Offer, Cameco will be required to offer payment in cash equal to 101% of the aggregate principal amount of Series D Debentures together with accrued and unpaid interest on the Series D Debentures repurchased. See “Description of Series D Debentures – Repurchase on a Change of Control Triggering Event”. |
| **Certain Covenants** | The Indenture pursuant to which the Series D Debentures will be issued will contain certain covenants that, among other things, limit the ability of Cameco and any Restricted Subsidiaries (as defined in the Indenture) to create any Lien (as defined in the Indenture) to secure any indebtedness and limit the ability of such Restricted Subsidiaries to incur indebtedness. The covenants are subject to important exceptions, limitations and qualifications as described in the short form base shelf prospectus under “Description of Series D Debentures – Negative Pledge” and “Limitations on Restricted Subsidiary Borrowing”.

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| Ratings | DBRS Limited: A(low), Stable  
| Standard & Poor’s Rating Service: BBB+, Stable |

These ratings are not recommendations to purchase, hold or sell the Series D Debentures and may be subject to revision or withdrawal at any time. See “Credit Ratings”.

| Purchase for Cancellation | All or any principal amount of the Series D Debentures may be purchased for cancellation at any time in the market, by tender or by private contract. |

| Form and Registration of Debentures | The Series D Debentures will be represented by one or more global debenture certificates issued in registered form to CDS and deposited with CDS on the closing date. Cameco understands that a purchaser of Series D Debentures will receive only a customer confirmation from the registered dealer who is a CDS participant from or through whom the Series D Debentures are purchased and that no other certificates representing the Series D Debentures will be issued. |

| Denomination | The Series D Debentures will be sold in denominations of $1,000 and integral multiples thereof. |

| Trustee | CIBC Mellon Trust Company. |

| Closing Date | On or about September 2, 2009, or such other date agreed upon by Cameco and the Underwriters, but not later than September 9, 2009. |

| Risk Factors | Investors should carefully review and evaluate certain risk factors before purchasing the Series D Debentures. See “Risk Factors”. |
THE COMPANY

We are one of the world’s largest uranium producers. Our competitive position is based on our large, high-grade mineral reserves and low-cost mining operations, significant market position and access to other supplies of uranium and uranium conversion services. We are also one of the four significant commercial converters of uranium concentrates (“U₃O₈”) to uranium hexafluoride (“UF₆”) in the western world and the only commercial supplier of services to convert uranium concentrates to uranium dioxide (“UO₂”) in the western world and, through a subsidiary, one of two Canadian commercial suppliers of fuel fabrication services for CANDU reactors. We continue to explore actively for uranium in a number of countries.

Through subsidiaries, we have a 31.6% limited partnership interest in Bruce Power, which leases and operates four reactors in Southwestern Ontario.

We also own approximately 49% of and have voting control over approximately 53% of Centerra’s shares. Centerra, the largest western-based gold producer in Central Asia and the former Soviet Union is publicly traded, operates and has a 100% interest in two producing gold mines, the Kumtor mine in the Kyrgyz Republic and the Boroo mine in Mongolia.

No resident of Canada, alone or together with associates, may hold, beneficially own or control, directly or indirectly, other than by way of security only or for purposes of distribution by an underwriter, voting securities to which are attached more than 25% of the votes that may ordinarily be cast to elect our directors. Similarly, no non-resident of Canada, alone or together with associates, may hold, beneficially own or control, directly or indirectly, other than by way of security only or for purposes of distribution by an underwriter, voting securities to which are attached more than 15% of the votes that may ordinarily be cast to elect our directors. Further, the votes attaching to our securities held, beneficially owned or controlled, directly or indirectly, by all non-residents of Canada together, and cast at any meeting of our shareholders, will be counted or pro-rated so as to limit the counting of those votes to not more than 25% of the total number of votes cast by the shareholders at that meeting. In certain prior years, including in 2009, we have limited the counting of votes cast by non-residents of Canada at our annual shareholder meeting to abide by this restriction, which resulted in non-residents of Canada receiving less than one vote per share. Our Articles contain provisions for the enforcement of the restrictions relating to ownership and voting by residents and non-residents of Canada described above, including provisions for suspension of voting rights, forfeiture of dividends and other distributions to shareholders, prohibitions against the issue and transfer of securities and suspension of all remaining shareholders’ rights.


The Company’s registered and principal office is located at 2121 — 11th Street West, Saskatoon, Saskatchewan S7M 1J3.

CONSOLIDATED CAPITALIZATION

The following table sets forth the consolidated capitalization of the Company as at December 31, 2008, the date of the Consolidated Financial Statements, and as at June 30, 2009, both actual and as adjusted to reflect the issuance of the Series D Debentures offered hereby (net of estimated Offering expenses) and the application of the net proceeds as described under “Use of Proceeds”. This table should be read in conjunction with the Company’s Consolidated Financial Statements and the unaudited Interim Consolidated Financial Statements for the three and six months ended June 30, 2009.

<table>
<thead>
<tr>
<th></th>
<th>December 31, 2008</th>
<th>June 30, 2009 after giving effect to this Offering</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(in thousands, except share data)</td>
<td>(in thousands, except share data)</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>$269,176</td>
<td>$497,888</td>
</tr>
<tr>
<td>Short-term debt (1)</td>
<td>$ 99,992</td>
<td>$ 96,355</td>
</tr>
</tbody>
</table>

(1) See explanation in Notes to the Consolidated Financial Statements.
Long-term debt (2)

4.7% Senior Unsecured Debentures, Series C due 2015 ....... 298,177 298,313 298,313
5.67% Senior Unsecured Debentures, Series D, due 2019..... - - 495,860
Capital Lease Obligation – Bruce Power ............................... 170,609 164,921 164,921
Commercial paper and bank debt (3) ..................................... 744,196 347,326 -

Total long-term debt ....................................................................... $1,212,982 $810,560 $959,094
Total indebtedness  ......................................................................... $1,312,974 $906,915 $1,055,449

Shareholders’ equity

Share capital (4) .............................................................................. $1,062,714 $1,512,498 $1,512,498
(365,718,923 shares) (392,565,683 shares) (392,565,683 shares)
Contributed surplus ......................................................................... 131,858 135,509 135,509
Retained earnings ............................................................................ 2,153,315 2,435,060 2,435,060
Accumulated other comprehensive income .................................... 167,036 150,509 150,509
Total shareholders’ equity ............................................................... 3,514,923 4,233,576 4,233,576
Total capitalization ......................................................................... $4,827,897 $5,140,491 $5,289,025

Notes:
(1) Short-term debt is comprised of short-term debt and the current portion of long-term debt.
(2) The current portion of long-term debt is included under short-term debt. The general terms of the long-term indebtedness in the above table are set out in note 9 of the Consolidated Financial Statements.
(3) Our commercial paper program is supported by a $500 million unsecured revolving credit facility that matures November 30, 2012. Accordingly, our commercial paper has been classified as long-term debt. The average interest rate on the commercial paper outstanding at December 31, 2008 was 2.7% and the average interest rate on the commercial paper outstanding at June 30, 2009 was 0.3%.
(4) An unlimited number of common shares, first preferred shares and second preferred shares are authorized. At June 30, 2009, there were 392,565,683 common shares outstanding. This does not include 7,120,555 (December 31, 2008) and 8,255,610 (June 30, 2009) common shares of the Company issuable pursuant to the Company’s stock option plan. In the first six months of 2009, the Company issued 180,360 common shares pursuant to option exercises under its stock option plan.

Between June 30, 2009 and the date of this prospectus supplement, there has been no material change in the share or loan capital structure of Cameco, other than the changes noted in the capitalization table and notes set forth above.

USE OF PROCEEDS

The estimated net proceeds to Cameco from this Offering, after payment of the Underwriters’ fee and the estimated expenses of this Offering, are $495,860,000. The net proceeds from the Offering will be used to refinance existing indebtedness and for general corporate purposes. The indebtedness being refinanced includes indebtedness originally incurred as acquisition financing and for general corporate purposes.

DESCRIPTION OF SERIES D DEBENTURES

The following description of the Series D Debentures is a brief summary of their material attributes and characteristics, which does not purport to be complete. Additional attributes and characteristics which are applicable to all Debentures issued under the Trust Indenture are contained in the short form base shelf prospectus. For full particulars, reference should be made to the Trust Indenture and the Fourth Supplemental Indenture.

General

The Series D Debentures will be unsecured obligations of Cameco and will bear interest at the rate of 5.67% per annum from September 2, 2009, and will mature on September 2, 2019. Principal and interest (payable semi-annually on March 2 and September 2) on the Series D Debentures will be payable in lawful money of Canada. The first interest payment will be due on March 2, 2010. The Series D Debentures will be issued in denominations of $1,000 and integral multiples thereof. The record date for the payment of interest will be the tenth Business Day preceding the relevant interest payment date.

The Series D Debentures offered hereby will be issued under the trust indenture dated July 12, 1999 (the “Trust Indenture”) between Cameco and CIBC Mellon Trust Company, as trustee (the “Trustee”). The Series D Debentures will be issued, as the fourth series of debentures (“Debentures”) issued under the Trust Indenture, pursuant to a fourth supplemental trust indenture (the “Fourth Supplemental Indenture”) providing for, among other things, the creation and issue of the Series D
Debentures. The Trust Indenture does not limit the principal amount of Debentures that may be issued thereunder. The Trust Indenture provides that Debentures may be issued in one or more series, with certain terms to be fixed at the time of issuance. The Trust Indenture and Fourth Supplemental Indenture are herein collectively referred to as the “Indenture”.

A copy of the Trust Indenture was filed on SEDAR (www.sedar.com) under Cameco Corporation on August 31, 2005 and a copy of the Fourth Supplemental Indenture and the form of Series D Debenture (in draft form until executed) may be inspected during business hours at the head office of the Company or the principal offices of the Trustee in Calgary, Alberta or Toronto, Ontario during the course of the distribution.

Redemption by Cameco

The Series D Debentures will be redeemable at the option of the Company at any time, in whole or in part, upon not more than 60 days and not less than 30 days prior notice, at the higher of the Canada Yield Price and par, together in each case with accrued and unpaid interest to the date fixed for redemption.

Where less than all of the Series D Debentures are to be redeemed pursuant to their terms, the Series D Debentures to be so redeemed will be redeemed on a pro rata basis according to the principal amount of Series D Debentures registered in the respective name of each Holder of Series D Debentures or by lot by the Trustee in such manner as the Trustee may consider equitable.

For the purposes of the foregoing provisions, the following terms will be defined in the Indenture substantially as follows:

“Canada Yield Price” shall mean a price equal to the price of the Series D Debentures calculated to provide a yield to maturity, compounded semi-annually, equal to the Government of Canada Yield plus 0.55% on the business day preceding the day notice of redemption is given.

“Government of Canada Yield” shall mean, on any date, the arithmetic average of the interest rates quoted to the Company by two independent, registered Canadian investment dealers selected by the Company as being the annual yield to maturity, compounded semi-annually, which a non-callable Government of Canada bond would carry if issued in dollars in Canada, at 100% of its principal amount on such date with a maturity date that is the same as the maturity date of the Series D Debentures.

Repurchase on a Change of Control Triggering Event

If a Change of Control Triggering Event (as defined below) occurs, unless the Company has exercised its optional right to redeem all of the Series D Debentures as described above, the Company will be required to make an offer to repurchase all or, at the option of a Holder of Series D Debentures, any part (equal to $1,000 or an integral multiple thereof) of such Holder’s Series D Debentures (a “Change of Control Offer”). In a Change of Control Offer, the Company will be required to offer payment in cash equal to 101% of the aggregate principal amount of Series D Debentures together with accrued and unpaid interest on the Series D Debentures being repurchased pursuant to the Change of Control Offer to the date of such repurchase.

Within 30 days following any Change of Control Triggering Event, unless the Company has exercised its optional right to redeem all of the Series D Debentures as described above within such 30 day period, the Company will be required to give written notice to Holders of Series D Debentures describing the transaction or transactions that constitute the Change of Control Triggering Event and offering to repurchase the Series D Debentures on the date specified in the notice, which date will be no earlier than 30 days and no later than 60 days from the date such notice is given (the “Change of Control Payment Date”). The Company must comply with the requirements of applicable securities laws and regulations in connection with the repurchase of the Series D Debentures as a result of a Change of Control Triggering Event. To the extent that the provisions of any such applicable securities laws and regulations conflict with the provisions described in this prospectus supplement relating to a Change of Control (as defined below), the Company will be required to comply with such laws and regulations and will not be deemed to have breached its obligations to repurchase the Series D Debentures by virtue of such conflict. The Company will not be required to make a Change of Control Offer upon a Change of Control Triggering Event if a third party makes such an offer substantially in the manner, at the times and in compliance with the requirements for a Change of Control Offer (and for at least the same purchase price payable in cash) and such third party purchases all Series D Debentures properly tendered and not withdrawn under its offer.
“Additional Designated Rating Agency” shall mean any “approved rating organization” within the meaning of National Instrument 41-101 of the Canadian Securities Administrators, or any replacement or updated instrument, (other than S&P and DBRS) selected by the Company.

“Change of Control” shall mean the occurrence of any one of the following: (a) the direct or indirect sale, transfer, conveyance, lease or other disposition (other than by way of consolidation, amalgamation or merger), in one transaction or a series of related transactions, of all or substantially all of the property and assets of the Company and its Controlled Entities, taken as a whole, to any person or group of persons acting jointly or in concert for purposes of such transaction (other than to the Company and its Controlled Entities); or (b) the consummation of any transaction including, without limitation, any consolidation, amalgamation, merger or issue of voting shares the result of which is that any person or group of persons acting jointly or in concert for purposes of such transaction (other than the Company and its Controlled Entities) becomes the beneficial owner, directly or indirectly, of more than 50% of the voting shares of the Company, measured by voting power rather than number of shares (but shall not include the creation of a holding company or similar transaction that does not involve a change in the beneficial ownership of the Company).

“Change of Control Triggering Event” shall mean the occurrence of both a Change of Control and a Rating Event.

“Controlled Entity” of any person shall mean and shall include (a) any corporation more than 50% of whose stock of any class or classes having by the terms thereof ordinary voting power to elect a majority of the directors of such corporation (irrespective of whether or not at the time stock or issued share capital or any class or classes of such corporation shall have or might have voting power by reason of the happening of any contingency) is at the time owned by such person directly or indirectly through subsidiaries and (b) any partnership, association, joint venture or other entity in which such person directly or indirectly through subsidiaries has more than a 50% ownership interest at the time and (c) any other corporation, association, partnership, joint venture or other entity (i) the accounts of which would be consolidated with those of such person in such person’s consolidated financial statements if such statements were prepared in accordance with generally accepted accounting principles or (ii) that is Controlled by such person. For this purpose, “Controlled” and similar expressions shall mean a relationship between two persons wherein one of such persons has the power, through the ownership of securities, by contractual arrangements or otherwise, to direct the management and policies of the other of such persons, and includes, without limitation, in the case of a corporation, the ownership, either directly or indirectly through one or more persons, of securities of such corporation carrying more than 50% of the votes that may be cast to elect the directors of such corporation either under all circumstances or under some circumstances that have occurred and are continuing (other than securities held as collateral for a bona fide debt where the holder thereof is not entitled to exercise the voting rights attached thereto), provided that such votes, if exercised, are sufficient to elect a majority of the directors of such corporation.

“Investment Grade Rating” shall mean a rating equal to or higher than BBB- (or the equivalent) by Standard & Poor’s, a division of McGraw-Hill Companies (“S&P”), BBB (low) (or the equivalent) by DBRS Limited (“DBRS”), or the equivalent investment grade credit rating from any other Specified Rating Agency.

“Rating Event” shall mean the rating on the Series D Debentures is lowered to below an Investment Grade Rating by at least two out of the three Specified Rating Agencies, if there are three, or all of the Specified Ratings Agencies, if there are less than three Specified Ratings Agencies (the “Required Threshold”), on any day within the 60 day period (which 60 day period will be extended so long as the rating of the Series D Debentures is under publicly announced consideration for a possible downgrade by such consolidated number of the Specified Rating Agencies which, together with Specified Ratings Agencies which have already lowered their ratings on the Series D Debentures as aforesaid, would aggregate in number the Required Threshold, but only to the extent that, and for so long as, a Change of Control Triggering Event would result if such downgrade were to occur) after the earlier of (a) the occurrence of a Change of Control and (b) public notice of the occurrence of a Change of Control or of the Company’s intention or agreement to effect a Change of Control.

“Specified Rating Agencies” shall mean each of S&P and DBRS and, if a rating of the Series D Debentures is obtained from an Additional Designated Rating Agency shall also include such Additional Designated Rating Agency, as long as, in each case, it has not ceased to rate the Series D Debentures or failed to make a rating of the Series D Debentures publicly available for reasons outside of the Company’s control; provided that if S&P or DBRS ceases to rate the Series D Debentures or fails to make a rating of the Series D Debentures publicly available for reasons outside of the Company’s control, the Company may select any other Additional Designated Rating Agency as a replacement agency for such one or more of them, as the case may be.
Purchase of Series D Debentures

The Company will be entitled at any time and from time to time (so long as it is not in default under the Indenture at such time) to purchase for cancellation all or any principal amount of Series D Debentures in the market, by tender or by private contract at any price, subject to applicable law.

Book-Entry System for Debentures

Series D Debentures will be issued in “book-entry only” form and must be purchased or transferred through a participant (“Participant”) in the depository service of CDS. On the closing date of this Offering, the Trustee will cause a global Series D Debenture or Series D Debentures (the “Global Debenture”) to be delivered to CDS and registered in the name of its nominee. The Series D Debentures will be evidenced by a single book-entry only certificate. Registration of interests in and transfers of the Series D Debentures will be made only through the depository service of CDS.

Except as described below, a purchaser acquiring a beneficial interest in the Series D Debentures (a “Beneficial Owner”) will not be entitled to a certificate or other instrument from the Trustee or CDS evidencing that purchaser’s interest therein, and such purchase will not be shown on the records maintained by CDS, except through a Participant. Such purchaser will receive a confirmation of purchase from the Underwriters or other registered dealer from whom Series D Debentures are purchased.

Neither the Company nor the Underwriters will assume any responsibility or any liability for: (a) any aspect of the records relating to the beneficial ownership of the Series D Debentures held by CDS or the payments relating thereto; (b) maintaining, supervising or reviewing any records relating to the Series D Debentures; or (c) any advice or representation made by or with respect to CDS and contained in this prospectus supplement and relating to the rules governing CDS or any action to be taken by CDS or at the direction of its Participants. The rules governing CDS provide that it acts as the agent and depository for the Participants. As a result, Participants must look solely to CDS and Beneficial Owners must look solely to Participants for the payment of the principal and interest on the Series D Debentures paid by or on behalf of the Company to CDS.

As indirect holders of Series D Debentures, investors should be aware that they (subject to the situations described below): (a) may not have Series D Debentures registered in their name; (b) may not have physical certificates representing their interest in the Series D Debentures; (c) may not be able to sell the Series D Debentures to institutions required by law to hold physical certificates for securities they own; and (d) may be unable to pledge Series D Debentures as security. The Company’s responsibility and liability in respect of notices or payments on the Series D Debentures is limited to giving notice or making payment on the Series D Debentures to CDS or its nominee. Holders of the Series D Debentures must rely on the procedures of CDS and its Participants to exercise any of their rights with respect to the Series D Debentures.

The Series D Debentures will be issued to Beneficial Owners in fully registered and certificate form (the “Definitive Debentures”) only if: (a) CDS resigns or is removed from its responsibilities as depository and the Company is unable or does not wish to locate a qualified successor; (b) if the book entry system ceases to exist; (c) the Company determines that it wishes Definitive Debentures to replace the Global Debenture; (d) if required by applicable law; or (e) after the occurrence of an Event of Default, holders of Series D Debentures representing beneficial interests aggregating over 50% of the outstanding principal amount of Series D Debentures determine that the continuation of the book-entry system is no longer in their best interests.

Upon the occurrence of any of the events described in the immediately preceding paragraph, the Trustee must notify CDS, for and on behalf of Participants and Beneficial Owners, of the availability through CDS of Definitive Debentures. Upon surrender by CDS of the Global Debenture representing the Series D Debentures, and receipt of instructions from CDS for the new registrations, the Trustee will deliver Definitive Debentures representing the Series D Debentures, and thereafter the Company will recognize the holders of such Series D Debenture certificates as Series D Debenture holders under the Indenture.

Payment

Except in the case of payment on maturity, in which case payment may be made on surrender of the Global Debenture, payments of interest and principal on each Global Debenture will be made to CDS as registered holder of the Global Debenture. Interest payments on the Global Debenture will be made by cheque dated the date interest is payable and delivered to CDS two days before the date interest is payable. Payments of interest may also be made by electronic funds
transferred to CDS at the option of the Company. Principal payments on the Global Debenture will be made by cheque dated the maturity date delivered to CDS at maturity, or by electronic transfer of funds to CDS, against receipt of the Global Debenture. As long as CDS is the registered holder of the Global Debenture, CDS will be considered the sole owner of the Global Debenture for the purpose of receiving payment on the Series D Debentures and for all other purposes under the Indenture and the Series D Debentures.

The Company expects that CDS, upon receipt of any payment of principal or interest in respect of the Global Debenture, will credit Participants’ accounts, on the date principal or interest is payable, with payments in amounts proportionate to their respective beneficial interests in the principal amount of such Global Debenture as shown on the records of CDS, subject to any applicable withholding tax. The Company also expects that payments of principal and interest by Participants to the owners of beneficial interests in such Global Debenture held through such Participants will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in “street name”, and will be the responsibility of such Participants. The responsibility and liability of the Company and the Trustee in respect of Series D Debentures represented by the Global Debenture is limited to making payment of any principal and interest due on such Global Debenture to CDS.

If the date for payment of any amount of principal or interest on any Series D Debenture is not a business day at the place of payment, then payment will be made on the next business day and the holder of the Series D Debenture will not be entitled to any further interest or other payment in respect of the delay. If Definitive Debentures are issued, interest will be paid by cheque drawn on the Company and sent by prepaid mail to the registered holder or by such other means as may become customary for the payment of interest. Payment of principal and the interest due, at maturity or on a redemption date, will be paid directly to CDS while the book-entry only system is in effect. If Definitive Debentures are issued, payment of principal and interest due, at maturity or on a redemption date, will be paid upon surrender thereof at any office of the Trustee or as otherwise specified in the Indenture.

Transfers of Series D Debentures

Transfers of ownership of Series D Debentures represented by the Global Debenture will be effected through records maintained by CDS or its nominee for the Global Debenture (with respect to interests of Participants) and on the records of Participants (with respect to interests of persons other than Participants). Beneficial Owners who are not Participants in the depository services of CDS, but who desire to purchase, sell or otherwise transfer ownership of or other interests in the Global Debenture, may do so only through Participants in the depository service of CDS.

The ability of a Beneficial Owner of an interest in a Series D Debenture represented by the Global Debenture to pledge the Series D Debenture or otherwise take action with respect to such owner’s interest in a Series D Debenture represented by the Global Debenture (other than through a Participant) may be limited due to the lack of a physical certificate.

The holder of a Definitive Debenture may transfer it upon payment of any taxes and transfer fees incidental thereto by executing a form of transfer and returning it along with the Definitive Debenture to either of the principal corporate trust offices of the Trustee in the cities of Toronto and Calgary, or such other office as the Company may, with the approval of the Trustee, designate, for issuance of one or more new Definitive Debentures in authorized denominations in the same aggregate principal amount registered in the name(s) of the transferee(s). The Trustee is not required to register any transfer of a Definitive Debenture within 10 Business Days immediately preceding any day fixed for payment of interest or principal.

Rank

The Series D Debentures will be direct, unsecured obligations of the Company and will rank equally and rateably with one another and with all other unsecured and unsubordinated indebtedness of the Company, including the Series C debentures previously issued under the Indenture, except to the extent prescribed by law.

Restriction on Reorganization

The Indenture will provide that the Company shall not, directly or indirectly, sell, lease, transfer or otherwise dispose of all or substantially all of its Property to any other person and shall not amalgamate or merge with or into any other corporation (other than a wholly-owned subsidiary) unless the successor provisions of the Indenture are complied with.
The Company has received an “A(low)” rating from DBRS and a “BBB+” rating from S&P in respect of the Series D Debentures to be issued pursuant to this prospectus supplement.

The rating organizations base the ratings on quantitative and qualitative considerations which are relevant for the Company. These ratings are intended to give an indication of the risk that the Company will not fulfill its obligations in a timely manner. Credit ratings may not reflect the potential impact of all risks on the value of the securities. These ratings are not recommendations to buy, sell or hold securities and may be subject to revision or withdrawal at any time by the rating organization.

A definition of the categories of each rating has been obtained from the respective rating organization’s website and is outlined below:

DBRS’ credit ratings for long term debt range from AAA to D. Each rating category is denoted by the subcategories “high” and “low”. The absence of either a “high” or “low” designation indicates the rating is in the “middle” of the category.

The “A” rating is ranked third of ten rating categories. Long-term debt rated "A" is of satisfactory credit quality. Protection of interest and principal is still substantial, but the degree of strength is less than that of AA rated entities. While "A" is a respectable rating, entities in this category are considered to be more susceptible to adverse economic conditions and have greater cyclical tendencies than higher-rated securities.

DBRS uses “rating trends” for its ratings in the corporate sector. Rating trends provide guidance in respect of DBRS’s opinion regarding the outlook for the rating in question, with rating trends falling into one of three categories – “Positive”, “Stable” or “Negative”. The rating trend indicates the direction in which DBRS considers the rating is headed should present tendencies continue, or in some cases, unless challenges are addressed. In general, the DBRS view is based primarily on an evaluation of the issuing entity, but may also include consideration of the outlook for the industry or industries in which the issuing entity operates.

A Positive or Negative Trend is not an indication that a rating change is imminent. Rather, a Positive or Negative Trend represents an indication that there is a greater likelihood that the rating could change in the future than would be the case if a Stable Trend were assigned to the security.

DBRS assigns a rating trend for each security of an issuing entity and it is not unusual for securities of the same entity to have different trends. DBRS has assigned a Stable rating trend to the rating for the Series D Debentures.

Standard & Poor’s long-term issue credit ratings range from AAA to D. The “BBB” rating is ranked fourth of ten rating categories. An obligation rated “BBB” exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.

The ratings from AA to CCC may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the major rating categories.

A Standard & Poor’s rating outlook assesses the potential direction of a long-term credit rating over the intermediate term (typically six months to two years). In determining a rating outlook, consideration is given to any changes in the economic and/or fundamental business conditions. An outlook is not necessarily a precursor of a rating change or future CreditWatch action. A Negative outlook means that a rating may be lowered whereas a Stable outlook means that a rating is not likely to change. Standard & Poor’s has assigned a Stable rating outlook to the rating for the Series D Debentures.

The following consolidated earnings coverage ratios have been calculated for the twelve-month period ended December 31, 2008 and the twelve-month period ended June 30, 2009 and are derived from audited financial information, in the case of the ratio for the twelve-month period ended December 31, 2008, and unaudited financial information, in the case of the ratio for the twelve-month period ended June 30, 2009. The following earnings coverage ratios: (a) give effect to the issuance of the Series D Debentures under this prospectus supplement as if the Series D Debentures had been issued at the beginning of the applicable period; (b) do not give effect to normal course advances, issuances and repayments, as the case may be, of long-
term debt under the Company’s revolving credit facilities or commercial paper program subsequent to December 31, 2008 or June 30, 2009, as applicable; (c) do not purport to be indicative of earnings coverage ratios for any future periods; and (d) have been calculated based on Canadian GAAP.

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<td>Interest requirements⁽¹⁾ (in thousands)</td>
<td>$67,096</td>
<td>$73,432</td>
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<tr>
<td>Earnings before interest expense and taxes (in thousands)</td>
<td>$542,210</td>
<td>$439,504</td>
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<tr>
<td>Consolidated earnings coverage on long term debt⁽⁴⁾</td>
<td>8.1 times</td>
<td>6.0 times</td>
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Note: Also reflects interest on a promissory note that was issued to finance the acquisition of GE Hitachi Global Laser Enrichment LLC, which note is classified as short-term debt.

The following cashflow coverage ratios for the twelve-month period ended December 31, 2008 and the twelve-month period ended June 30, 2009 were calculated by dividing cashflow from operating activities by total interest and dividends.

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<tr>
<td>Cashflow coverage</td>
<td>4.8 times</td>
<td>4.5 times</td>
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PLAN OF DISTRIBUTION

Pursuant to an underwriting agreement dated as of August 27, 2009 (the “Underwriting Agreement”) between the Company and the Underwriters, for whom RBC DS and Scotia are acting as representatives (the “Representatives”), the Company has agreed to sell, and the Underwriters have severally agreed to purchase from the Company, the Series D Debentures offered hereby at a price of $999.92 per $1,000 principal amount of the Series D Debentures for total consideration of $499,960,000. We have agreed to pay to the Underwriters a fee of $7.50 per $1,000 principal amount of Series D Debentures.

The obligations of the Underwriters under the Underwriting Agreement may be terminated at their discretion upon the basis of their assessment of the state of the financial markets and upon the occurrence of certain stated events. The Underwriting Agreement also provides that the obligations of the underwriters to purchase the Series D Debentures included in this Offering are subject to approval of legal matters by counsel and to other conditions. The Underwriters are obligated to purchase all the Series D Debentures if they purchase any of the Series D Debentures.

The Series D Debentures are being offered in each of the provinces and territories of Canada. The Series D Debentures have not been and will not be registered under the U.S. Securities Act or any state securities laws and may not be offered or sold within the United States, except in certain transactions exempt from the registration requirements of the U.S. Securities Act. In addition, until 40 days after the commencement of the Offering of the Series D Debentures, an offer or sale of the Series D Debentures within the United States by any dealer, whether or not participating in the Offering, may violate the registration requirements of the U.S. Securities Act if such offer or sale is made otherwise than in accordance with an exemption from the registration requirements of the U.S. Securities Act.

The Company has agreed to indemnify the Underwriters against certain liabilities under the applicable Canadian securities legislation, and to contribute to payments that the Underwriters may be required to make in respect thereof.

Subscriptions will be received subject to rejection or allotment in whole or in part and the right is reserved to close the subscription books at any time without notice. It is expected that the closing will be held on September 2, 2009 or such other date as may be agreed upon by the Company and the Underwriters, but, in any event, not later than September 9, 2009.

The Series D Debentures will not be listed on any securities exchange or quotation system and consequently, there is no market through which these securities may be sold and you may not be able to resell securities purchased under this prospectus supplement.
The Underwriters may not, throughout the period of distribution under this prospectus supplement, bid for or purchase Series D Debentures. This restriction is subject to certain exceptions, as long as the bid or purchase is not engaged in for the purpose of creating actual or apparent active trading in or raising the price of such securities. These exceptions include: (i) a bid or purchase permitted under the Universal Market Integrity Rules of the Investment Industry Regulatory Authority of Canada, and (ii) a bid or purchase made for and on behalf of a customer where the order was not solicited during the period of distribution. Under the first mentioned exception, the Underwriters may effect transactions which stabilize or maintain the market price of the Series D Debentures offered at levels other than those which might otherwise prevail in the open market.

Such transactions, if commenced, may be discontinued at any time. The Underwriters may make a market in the Series D Debentures, but they will not be obligated to do so and may discontinue any market making at any time without notice. No assurance can be given that a trading market in any of the Series D Debentures will develop or as to the liquidity of any trading market for the Series D Debentures.

The Company has agreed that it will not, without the prior written consent of the Representatives, on behalf of the Underwriters, such consent not to be unreasonably withheld, from the date of the Underwriting Agreement and ending a period of 90 days from the closing of the Offering, issue, offer, pledge, sell, contract to sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer, lend or dispose of directly or indirectly, additional senior unsecured debentures of the Company.

RBC DS, Scotia, National Bank Financial Inc., BMO Nesbitt Burns Inc., CIBC World Markets Inc., HSBC Securities (Canada) Inc., BNP Paribas (Canada) Securities Inc. and Merrill Lynch Canada Inc. are affiliates of Canadian chartered banks or other financial institutions that, among other lenders, are (as applicable) members of respective syndicates of lenders that have provided us with: (i) a $500 million unsecured revolving credit facility maturing in June 2010, and (ii) a $500 million unsecured revolving credit facility maturing in November 2012. TD Securities Inc. is an affiliate of a Canadian chartered bank that has provided us with a $100 million unsecured revolving credit facility maturing in February 2010. Such banks or financial institutions (or other affiliates of the Underwriters) have also provided us with unsecured uncommitted or demand credit accommodations (including letters of credit) of various types totalling $605 million, and/or entered into currency swaps or other derivatives transactions with us. Consequently, we may be considered to be a “connected issuer” of each of the Underwriters under applicable securities laws. As at August 27, 2009, no indebtedness was outstanding under the credit facilities or other credit accommodations referred to above. The net proceeds of this Offering will be used to refinance existing indebtedness and for general corporate purposes, and our receipt of the net proceeds of the Offering will enable us not to borrow amounts we might otherwise have borrowed under such credit facilities or other credit accommodations.

The Company is in compliance with the terms of, and the lenders have not waived any material breach of, the agreements governing the credit facilities, other credit accommodations and swap and other derivatives transactions referred to in the paragraph above since their respective dates of execution. The decision to distribute the Series D Debentures, including the determination of the terms of this Offering, has been made through negotiations between the Company and the Representatives. The affiliated lenders, credit accommodation providers or swap or other derivatives providers of the Underwriters did not have any involvement in that decision or determination. The proceeds of the Offering will not be applied for the benefit of the Underwriters or their affiliates, other than as described herein.

RISK FACTORS

An investment in the Series D Debentures involves certain risks. Before making an investment decision, you should carefully consider all of the information in this prospectus supplement and in the documents incorporated by reference herein and, in particular, should evaluate the risk factors below as well as those relating to the Company’s business and other conditions that may have a material impact on the financial condition and prospects of the Company referenced in this prospectus supplement, the Company’s Annual Information Form, the Company’s most recently filed annual management’s discussion and analysis as well as any risk factors discussed in any quarterly management’s discussion and analysis for the current year, and the other documents incorporated by reference herein. See “Documents Incorporated by Reference”.

Failure of an Active Trading Market for the Series D Debentures to Develop

The Series D Debentures are a new issue of securities for which there is no trading market. The Company does not intend to list the Series D Debentures on any Canadian, U.S. or other securities exchange. This may affect the pricing of the securities in the secondary market, the transparency and availability of the trading prices, the liquidity of the securities and the extent of issuer regulation. No assurance can be given to you that an active trading market for the Series D Debentures will develop or be sustained. If an active market for the Series D Debentures fails to develop or be sustained, the price at which the Series D Debentures could be sold may be adversely affected and you may have difficulty selling all or a portion of your Series D

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Debentures. Whether or not the Series D Debentures will trade at lower prices depends on many factors, including the prevailing interest rates and the markets for similar securities, general economic conditions and the Company’s financial condition, historic financial performance and future prospects.

Credit Ratings Assigned to Series D Debentures may Change

There cannot be any assurance that any credit rating assigned to the Series D Debentures issued hereunder will remain in effect for any given period of time or that any rating will not be lowered or withdrawn entirely by the relevant rating agency. A lowering or withdrawal of such rating may have an adverse effect on the market value of the Series D Debentures. In addition, real or anticipated changes in credit ratings can affect the cost at which the Company can access the debenture market.

The Series D Debentures are Unsecured Obligations and will be Effectively Subordinated to Creditors of our Subsidiaries.

The likelihood that purchasers of the Series D Debentures will receive payments owing to them under the terms of the Series D Debentures will depend on the Company’s financial condition and creditworthiness. In addition, the Series D Debentures are unsecured obligations of the Company.

The Company conducts its operations through a number of subsidiaries and to the extent any such subsidiary has or incurs indebtedness with a third party, the holders of the Series D Debentures will, subject to the negative pledge and limitation on restricted subsidiary borrowing (which are referenced under the heading “Description of Series D Debentures” in the short form base shelf prospectus), effectively be subordinated to the claims of the holders of such third party indebtedness, including in the event of liquidation or upon a realization of the assets of any such subsidiary.

Bankruptcy and Related Laws

The Company is incorporated under the laws of Canada and a substantial portion of its assets are located in Canada.

The rights of the Trustee to enforce remedies are likely to be significantly impaired by the restructuring provisions of applicable Canadian federal bankruptcy, insolvency and other restructuring legislation if the benefit of such legislation is sought with respect to the Company. For example, both the Bankruptcy and Insolvency Act (Canada) and the Companies’ Creditors Arrangement Act (Canada) contain provisions enabling “an insolvent person” to obtain a stay of proceedings as against its creditors and others and to prepare and file a proposal for consideration by all or some of its creditors to be voted on by the various classes of its creditors. Such a restructuring proposal could include a compromise of amounts owing under the Series D Debentures and, if accepted by the requisite majorities of creditors and if approved by the court, would be binding on persons who might not otherwise be willing to accept it. Moreover, this “proposal” legislation permits, in certain circumstances, the insolvent debtor to retain possession and administration of its property, even though it may be in default under the applicable debt instrument. The powers of the court under the Bankruptcy and Insolvency Act (Canada) and particularly under the Companies’ Creditors Arrangement Act (Canada) have been exercised broadly to protect a restructuring entity from actions taken by creditors and other parties. Accordingly, it is impossible to predict if payments under the Series D Debentures would be made following commencement of or during such a proceeding, whether or when the Trustee could exercise its rights under the Indenture or whether and to what extent holders of the Series D Debentures would be compensated for any delay in payments of principal and interest. Based on recent judicial authority, similar consequences may arise if the benefit of the arrangement provisions of the Canada Business Corporations Act is sought with respect to the Company.

Interest Rate Risks

Prevailing interest rates will affect the market price or value of the Series D Debentures. Generally, the market price or value of the Series D Debentures will decline as prevailing interest rates for comparable debt instruments rise, and increase as prevailing interest rates for comparable debt instruments decline. Fluctuations in interest rates may also impact borrowing costs of the Company which may adversely affect its creditworthiness.

Repurchase upon Change of Control Triggering Event

In the event that the Company is required to offer to repurchase the Series D Debentures upon the occurrence of a Change of Control Triggering Event, it may not have sufficient funds to repurchase the Series D Debentures in cash at such time. In
addition, the Company’s ability to repurchase the Series D Debentures for cash may be limited by applicable law. If the Company is unable to repurchase the Series D Debentures upon the occurrence of a Change of Control Triggering Event, cross-default provisions in the Company’s other debt instruments may be triggered resulting in events of default thereunder.

**ELIGIBILITY FOR INVESTMENT**

In the opinion of Osler, Hoskin & Harcourt LLP, legal counsel to the Company, and Borden Ladner Gervais LLP, legal counsel to the Underwriters, the Series D Debentures offered hereby, if issued on the date hereof, would be qualified investments under the *Income Tax Act* (Canada) (the “Tax Act”) and the regulations thereunder for trusts governed by registered retirement savings plans, registered retirement income funds, registered education savings plans, registered disability savings plans, deferred profit sharing plans (other than a trust governed by a deferred profit sharing plan for which any employer is the Company or an employer with whom the Company does not deal at arm’s length (for purposes of the Tax Act)) and tax-free savings accounts (“TFSAs”). The Series D Debentures will not be a “prohibited investment” for a TFSA provided the holder of the TFSA deals at arm’s length with the Company for purposes of the Tax Act and does not have a significant interest (for purposes of the Tax Act) in the Company or in a corporation, partnership or trust with which the Company does not deal at arm’s length (for purposes of the Tax Act).

**LEGAL MATTERS**

Certain legal matters relating to this Offering of the Series D Debentures will be passed upon on behalf of the Company by Osler, Hoskin & Harcourt LLP and on behalf of the Underwriters by Borden Ladner Gervais LLP. At the date hereof, partners and associates of Osler, Hoskin & Harcourt LLP, as a group, and Borden Ladner Gervais LLP, as a group, each own beneficially, directly or indirectly, less than 1% of any outstanding class of securities of the Company.

**AUDITORS**

The auditors of Cameco are KPMG LLP, 600, 128 — 4th Avenue South, Saskatoon, Saskatchewan, S7K 1M8.

**PURCHASERS’ STATUTORY RIGHTS**

Securities legislation in certain of the provinces and territories of Canada provides purchasers with the right to withdraw from an agreement to purchase securities. This right may be exercised within two business days after receipt or deemed receipt of a prospectus and any amendment. In several of the provinces and territories, securities legislation further provides a purchaser with remedies for rescission or, in some jurisdictions, revisions of the price or damages if the prospectus and any amendment contains a misrepresentation or is not delivered to the purchaser, provided that such remedies for rescission, revision of the price or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory for the particulars of these rights or consult with a legal adviser.
CERTIFICATE OF THE COMPANY

Dated August 27, 2009

The short form base shelf prospectus, together with the documents incorporated in the short form base shelf prospectus by reference, as supplemented by the foregoing, constitutes full, true and plain disclosure of all material facts relating to the securities offered by the short form base shelf prospectus and this supplement as required by the securities legislation of each of the provinces and territories of Canada.

(Signed) GERALD W. GRANDEY
President and Chief Executive Officer

(Signed) O. KIM GOHEEN
Senior Vice-President and Chief Financial Officer

On behalf of the Board of Directors

(Signed) NANCY E. HOPKINS
Director

(Signed) A. NEIL MCMILLAN
Director
CERTIFICATE OF THE UNDERWRITERS

Dated August 27, 2009

To the best of our knowledge, information and belief, the short form base shelf prospectus, together with the documents incorporated in the short form base shelf prospectus by reference, as supplemented by the foregoing, constitutes full, true and plain disclosure of all material facts relating to the securities offered by the short form base shelf prospectus and this supplement as required by the securities legislation in each of the provinces and territories of Canada.

RBC DOMINION SECURITIES INC.  SCOTIA CAPITAL INC.
By: (Signed) TUSHAR KITTUR  By: (Signed) JAMES G. GALLANT

NATIONAL BANK FINANCIAL INC.
By: (Signed) STEVEN FARBER

BMO NESBITT BURNS INC.  CIBC WORLD MARKETS INC.  HSBC SECURITIES (CANADA) INC.  TD SECURITIES INC.
By: (Signed) EGIZIO BIANCHINI  By: (Signed) DARRELL BURT  By: (Signed) NICOLE CATY  By: (Signed) MICHAEL FARALLA

BNP PARIBAS (CANADA) SECURITIES INC.  MERRILL LYNCH CANADA INC.
By: (Signed) RENE DESMARAIAS  By: (Signed) SCOTT LANGLEY