

EMC METALS CORP.  
Form S-8  
February 24, 2012

---

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**FORM S-8  
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933**

**EMC METALS CORP.**

(Exact Name of Registrant as Specified in Its Charter)

**British Columbia, Canada**  
(State or Other Jurisdiction of  
Incorporation or  
Organization)

**Not Applicable**  
(IRS Employer Identification  
Number)

**Suite 501 - 1430 Greg Street  
Sparks, NV 89431**  
(Address of Principal Executive Offices and Zip Code)

**2008 STOCK OPTION PLAN**  
(Full title of plan)

**George Putnam  
Chief Executive Officer  
EMC Metals Corp.  
Suite 501 - 1430 Greg Street  
Sparks, NV 89431**  
(Name and address of agent for service)

**(775) 355-9500**  
(Telephone number, including area code, of agent for service)

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act (Check one):

Large Accelerated Filer   
Non-Accelerated Filer

Accelerated Filer   
Smaller Reporting Company

---

## CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered <sup>(1)</sup>	Amount to be Registered	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
EMC Metals Corp. 2008 Stock Option Plan				
Common Stock	4,800,000	\$0.100 <sup>(2)</sup>	\$480,000	\$55.01
Common Stock	200,000	\$0.105 <sup>(2)</sup>	\$21,000	\$2.41
Common Stock	225,000	\$0.120 <sup>(2)</sup>	\$27,000	\$3.09
Common Stock	300,000	\$0.155 <sup>(2)</sup>	\$46,500	\$5.33
Common Stock	1,445,000	\$0.160 <sup>(2)</sup>	\$231,200	\$26.50
Common Stock	1,545,000	\$0.200 <sup>(2)</sup>	\$309,000	\$35.41
Common Stock	1,571,250	\$0.250 <sup>(2)</sup>	\$392,813	\$45.02
Common Stock	1,047,500	\$0.300 <sup>(2)</sup>	\$314,250	\$36.01
Common Stock	120,000	\$0.310 <sup>(2)</sup>	\$37,200	\$4.26
Common Stock	250,000	\$0.315 <sup>(2)</sup>	\$78,750	\$9.02
Common Stock	220,000	\$0.390 <sup>(2)</sup>	\$85,800	\$9.83
Common Stock	20,000	\$1.000 <sup>(2)</sup>	\$20,000	\$2.29
Common Stock	100,000	\$2.000 <sup>(2)</sup>	\$200,000	\$22.92
Common Stock	5,000	\$2.150 <sup>(2)</sup>	\$10,750	\$1.23
Common Stock	10,753,056	\$0.155 <sup>(3)</sup>	\$1,666,724	\$191.01
<b>TOTAL</b>	<b>22,601,806</b>		<b>\$3,920,987</b>	<b>\$449.34</b>

- (1) Consists of common shares of EMC Metals Corp. (the **Registrant** ) issued or to be issued or delivered on exercise of stock options under the Registrant's 2008 Stock Option Plan. Pursuant to Rule 416(a), this registration statement also covers additional securities that may be offered as a result of stock splits, stock dividends or similar events.
- (2) Represents the exercise price of options granted pursuant to the Registrant's 2008 Stock Option Plan, which are outstanding and unexercised as at the date of this registration statement. Such exercise prices are in U.S. dollars based upon the exchange rates quoted on the Bank of Canada.
- (3) Estimated solely for the purpose of determining the amount of the registration fee in accordance with Rule 457(h) under the Securities Act of 1933, as amended, for options not yet granted under the Registrant's 2008 Stock Option Plan, and based upon the average of the high and low trading prices for the common shares of Registrant as reported on the Toronto Stock Exchange on February 20, 2012.

**PART I**  
**INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS**

The information called for in Part I of Form S-8 is not being filed with or included in this Form S-8 (by incorporation by reference or otherwise) in accordance with the rules and regulations of the Securities and Exchange Commission (the **Commission** ).

**PART II**  
**INFORMATION REQUIRED IN THE REGISTRATION STATEMENT**

**Item 3. Incorporation of Documents by Reference.**

The following documents or extracts of documents, which previously have been filed by the Registrant with the Commission, are incorporated herein by reference and made a part hereof:

- (a) The Registrant's effective registration statement on Form 10 (Registration No. 000- 54416), filed under the Securities Exchange Act of 1934, as amended (the "**Exchange Act**") on May 24, 2011, including any amendments or reports filed for the purpose of updating such description;
- (b) The Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2011 filed with the Commission on February 14, 2012;
- (c) The Registrant's Quarterly Reports on Form 10-Q (Unaudited, prepared by management) for the fiscal quarters ended June 30, 2011, and September 30, 2011 filed with the Commission on August 15, 2011, and November 14, 2011, respectively;
- (d) The Registrant's Current Reports on Form 8-K filed with the Commission on August 5, 2011, September 12, 2011, and February 22, 2012;
- (e) The description of the Registrant's common stock contained in the Registrant's registration statement on Form 10 (Registration No. 000-54416), filed under the Exchange Act on May 24, 2011, including any amendments or reports filed for the purpose of updating such description; and
- (f) All documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, after the date hereof and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities covered hereby then remaining unsold, such documents to form a part hereof, commencing on the respective dates on which the documents are filed.

For the purposes of this registration statement, any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

**Item 4. Description of Securities.**

Not Applicable.

**Item 5. Interests of Named Experts and Counsel.**

No experts named in the registration statement has any equity or other interest in the Registrant or was retained on a contingent basis or will receive a direct or indirect interest in the Registrant in connection with the registration statement.

**Item 6. Indemnification of Directors and Officers.**

As authorized by Section 160 of the *Business Corporations Act* (British Columbia), we may indemnify our officers and directors against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment in a civil, criminal or administrative action or proceeding to which the person is made a party, so long as such persons acted honestly and in good faith and in a manner in which they reasonably believed to be in the best interests of the Registrant. If the legal proceeding, however, is by or in our right, the director or officer may not be indemnified in respect of any claim, issue or matter as to which he is adjudged to be liable for negligence or misconduct in the performance of his duty to us unless a court determines otherwise.

Under British Columbia law, corporations may also purchase and maintain insurance on behalf of any person who is or was a director or officer (or is serving at the request of the Registrant as a director or officer of another corporation) for any liability asserted against such person and any expenses incurred by him in his capacity as a director or officer.

Our corporate articles provide that subject to the provisions of the *Business Corporations Act* (British Columbia), we will indemnify our directors and former directors against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, actually and reasonably incurred by him or them in a civil, criminal or administrative action or proceeding to which they are a party by reason of their role as a director of the company. Such indemnification shall continue as to an indemnitee who has ceased to be a director or officer of the Registrant and shall enure to the benefit of the indemnitee's heirs, executors and administrators.

The effect of these provisions is potentially to indemnify the Registrant's directors and officers from all costs and expenses of liability incurred by them in connection with any action, suit or proceeding in which they are involved by reason of their affiliation with the Registrant.

**Item 7. Exemption from Registration Claimed.**

Not applicable.

**Item 8. Exhibits.**

The following exhibits are filed with or incorporated by reference into this Registration Statement:

- 4.1 Articles of Incorporation <sup>(1)</sup>
- 5.1 Opinion of Morton & Company
- 10.1 2008 Stock Option Plan<sup>(1)</sup>
- 23.1 Consent of Davidson & Company, LLP, Chartered Accountants
- 23.2 Consent of Morton & Company (see Exhibit 5.1)
- 23.3 Consent of Bart Stryhas, PhD., CPG, of SRK Consulting
- 23.4 Consent of Duncan Pursell (BSc, MAusIMM)
- 23.5 Consent of Maxel Franz Rangott (BSc.)
- 23.6 Consent of Sanja Van Huet (MSc., PhD.)
- 24.1 Power of attorney (see Signature Page)

<sup>(1)</sup> Incorporated by reference from the Registrant's effective registration statement on Form 10 filed with the Commission (Commission File No. 000-54416) on May 24, 2011.

**Item 9. Undertakings.**

(a) The undersigned Registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
  - (i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;
  - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided however, that:

- (A) paragraphs (a)(1)(i) and (a)(1)(ii) of this section do not apply if the registration statement is on Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement; and
  - (B) paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the registration statement is on Form S-3 or Form F-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.
- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
  - (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
  - (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the County of Sparks, State of Nevada, on February 23, 2012.

**EMC METALS CORP.**

(Registrant)

By: */s/ George Putnam*  
George Putnam  
Principle Executive Officer

By: */s/ Edward Dickinson*  
Edward Dickinson  
Principle Financial Officer

**POWER OF ATTORNEY**

KNOW ALL PERSONS BY THESE PRESENTS that each of the undersigned officers and directors of EMC Metals Corp. hereby constitutes and appoints George Putnam and Edward Dickinson, or any of them individually, such person's true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution, for and in such person's name, place and stead, in the capacities indicated below, to sign this Registration Statement on Form S-8 of EMC Metals Corp. and any and all amendments (including post-effective amendments) thereto, and to file or cause to be filed the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as such person might, or could, do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, and each of them, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons in the capacities and on the dates indicated:

**Signature and Title**

**Date**

*/s/ George Putnam*  
George Putnam  
Director, President and  
Principle Executive Officer

February 23, 2012

*/s/ William Harris*  
William Harris  
Director and Chairman

February 23, 2012

*/s/ Willem Duyvesteyn*  
Willem Duyvesteyn  
Director

February 23, 2012

*/s/ Daniel Wolfus*  
Daniel Wolfus  
Director

February 23, 2012

*/s/ Barry Davies*  
Barry Davies  
Director

February 23, 2012