

Arensdorf John R.  
Form 3  
June 18, 2010

**FORM 3 UNITED STATES SECURITIES AND EXCHANGE COMMISSION**  
**Washington, D.C. 20549**

OMB APPROVAL

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**INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934,  
Section 17(a) of the Public Utility Holding Company Act of 1935 or Section  
30(h) of the Investment Company Act of 1940

(Print or Type Responses)

|  |   |   |   |   |  |
|--|---|---|---|---|--|
| <p>1. Name and Address of Reporting Person *</p> <p>Â Arensdorf John R.</p> <p>(Last) (First) (Middle)</p> <p>5400 WESTHEIMER COURT</p> <p>(Street)</p> <p>HOUSTON,Â TXÂ 77056</p> <p>(City) (State) (Zip)</p> | <p>2. Date of Event Requiring Statement</p> <p>(Month/Day/Year)</p> <p>06/08/2010</p> | <p>3. Issuer Name and Ticker or Trading Symbol</p> <p>Spectra Energy Corp. [SE]</p> | <p>4. Relationship of Reporting Person(s) to Issuer</p> <p>(Check all applicable)</p> <p><input type="checkbox"/> Director <input type="checkbox"/> 10% Owner</p> <p><input checked="" type="checkbox"/> Officer <input type="checkbox"/> Other</p> <p>(give title below) (specify below)</p> <p>Chief Communications Officer</p> | <p>5. If Amendment, Date Original Filed(Month/Day/Year)</p> | <p>6. Individual or Joint/Group Filing(Check Applicable Line)</p> <p><input checked="" type="checkbox"/> Form filed by One Reporting Person</p> <p><input type="checkbox"/> Form filed by More than One Reporting Person</p> |
|--|---|---|---|---|--|

**Table I - Non-Derivative Securities Beneficially Owned**

| 1. Title of Security<br>(Instr. 4) | 2. Amount of Securities Beneficially Owned<br>(Instr. 4) | 3. Ownership Form:<br>Direct (D)<br>or Indirect (I)<br>(Instr. 5) | 4. Nature of Indirect Beneficial Ownership<br>(Instr. 5) |
|------------------------------------|--|---|--|
| Common Stock                       | 17,785   | D <sup>(4)</sup>  | Â  |
| Common Stock                       | 192  | I   | By Wife  |

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

SEC 1473 (7-02)

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**Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

| 1. Title of Derivative Security<br>(Instr. 4) | 2. Date Exercisable and Expiration Date<br>(Month/Day/Year) | 3. Title and Amount of Securities Underlying Derivative Security<br>(Instr. 4) | 4. Conversion or Exercise Price of Derivative | 5. Ownership Form of Derivative Security: | 6. Nature of Indirect Beneficial Ownership<br>(Instr. 5) |
|---|---|--|---|---|--|
|---|---|--|---|---|--|

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|                                      | Date Exercisable          | Expiration Date | Title        | Amount or Number of Shares | Security      | Direct (D) or Indirect (I) (Instr. 5) |                                   |
|--------------------------------------|---------------------------|-----------------|--------------|----------------------------|---------------|---------------------------------------|-----------------------------------|
| Phantom Shares Esp                   | Â <u>(3)</u>              | Â <u>(2)</u>    | Common Stock | 1,647.7932                 | \$ <u>(1)</u> | I                                     | By Trustee Executive Savings Plan |
| Employee Stock Option (Right to Buy) | 12/20/2000                | 12/20/2010      | Common Stock | 2,100                      | \$ 36.86      | D                                     | Â                                 |
| Employee Stock Option (Right to Buy) | 12/19/2001                | 12/19/2011      | Common Stock | 2,800                      | \$ 32.44      | D                                     | Â                                 |
| Employee Stock Option (Right to Buy) | 01/17/2002                | 01/17/2012      | Common Stock | 750                        | \$ 33         | D                                     | Â                                 |
| Employee Stock Option (Right to Buy) | 01/28/2003                | 01/28/2013      | Common Stock | 250                        | \$ 14.37      | D                                     | Â                                 |
| Employee Stock Option (Right to Buy) | 02/25/2003                | 02/25/2013      | Common Stock | 2,950                      | \$ 11.86      | D                                     | Â                                 |
| Employee Stock Option (Right to Buy) | 02/27/2007                | 02/25/2017      | Common Stock | 16,200                     | \$ 25.64      | D                                     | Â                                 |
| Ltip Phantom Stock Grant Apr 2006    | 04/04/2007 <sup>(5)</sup> | Â <u>(2)</u>    | Common Stock | 690                        | \$ <u>(1)</u> | D                                     | Â                                 |
| Ltip Phantom Stock Grant Feb 2008    | 02/26/2009 <sup>(6)</sup> | Â <u>(2)</u>    | Common Stock | 2,500                      | \$ <u>(1)</u> | D                                     | Â                                 |
| Performance Shares Grant Feb 2008    | 02/26/2011 <sup>(7)</sup> | Â <u>(2)</u>    | Common Stock | 2,600                      | \$ <u>(1)</u> | D                                     | Â                                 |
| Ltip Phantom Stock Grant Feb 2009    | 02/24/2012 <sup>(7)</sup> | Â <u>(2)</u>    | Common Stock | 8,300                      | \$ <u>(1)</u> | D                                     | Â                                 |
| Performance Shares Feb 2009          | 02/24/2012 <sup>(7)</sup> | Â <u>(2)</u>    | Common Stock | 8,800                      | \$ <u>(1)</u> | D                                     | Â                                 |
| Ltip Phantom Stock Grant             | 02/23/2013 <sup>(7)</sup> | Â <u>(2)</u>    | Common Stock | 6,100                      | \$ <u>(1)</u> | D                                     | Â                                 |
| Performance Shares                   | 02/23/2013 <sup>(7)</sup> | Â <u>(2)</u>    | Common Stock | 6,500                      | \$ <u>(1)</u> | D                                     | Â                                 |

## Reporting Owners

| Reporting Owner Name / Address                                  | Relationships |           |                                |       |
|---|---------------|-----------|--------------------------------|-------|
|   | Director      | 10% Owner | Officer                        | Other |
| Arensdorf John R.<br>5400 WESTHEIMER COURT<br>HOUSTON, TX 77056 | Â             | Â         | Â Chief Communications Officer | Â     |

## Signatures

/s/Beverly J . Fite as Attorney-in-Fact for John R.  
Arensdorf

06/18/2010

\_\_Signature of Reporting Person

Date

## Explanation of Responses:

- \* If the form is filed by more than one reporting person, *see* Instruction 5(b)(v).
- \*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- (1) Converts to Common Stock on a 1-for-1 basis
- (2) Expiration date not applicable.
- (3) Payment upon termination of employment or occurrence of other events as specified in the Spectra Energy Corp Executive Savings Plan, subject to holding periods required by law.
- (4) Includes 10,304 held by Trustee, Retirement Savings Plan.
- (5) The Phantom Shares vest in 5 annual installments beginning April 2007.
- (6) The phantom shares vest in 3 annual installments beginning February 2009.
- (7) Grant Cliff vests 3 years from date of Grant.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *See* Instruction 6 for procedure.  
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