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

**FORM 8-K
CURRENT REPORT**

**Pursuant to Section 13 or 15(d) of
The Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): **May 4, 2012**

POTOMAC ELECTRIC POWER COMPANY
(Exact name of registrant as specified in its charter)

District of Columbia and Virginia
(State or other jurisdiction
of incorporation)

001-01072
(Commission
File Number)

53-0127880
(IRS Employer
Identification No.)

701 Ninth Street, N.W., Washington, DC
(Address of principal executive offices)

20068
(Zip Code)

Registrant's telephone number, including area code

(202) 872-2000

Not Applicable

(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 8.01 Other Events.

Today, Potomac Electric Power Company (Pepco) and Delmarva Power & Light Company (Delmarva) filed notices of appeal of a Maryland Public Service Commission (MPSC) order in MPSC Case 9214 in Circuit Courts in Maryland. In the MPSC order issued on April 12, 2012, the MPSC determined that there is a need for additional generation in the state. Specifically, the MPSC ordered Pepco, Delmarva and Baltimore Gas and Electric to enter into a long-term contract with the winning bidder of the request for proposal issued last fall. Under the contract, the winning bidder will construct a 661 megawatt natural gas-fired combined cycle plant in Waldorf, Maryland, with a commercial operation date of June 2015. The order specifies that the contract amount for each utility would be proportionate to their relative Standard Offer Service, or SOS, loads and that cost recovery would be from SOS customers through surcharges. The order acknowledges concerns raised by the utilities and directs them to negotiate with the winning bidder and submit proposed changes to the contract to the MPSC for approval. Pepco has concerns about the order, including the full cost burden being placed on SOS customers who may choose to switch to other energy suppliers, as well as the impact the contract will have on the utilities' balance sheets and credit metrics. Because of these concerns, Pepco and Delmarva filed notices of appeal of this order in the Circuit Courts in Maryland.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

POTOMAC ELECTRIC POWER COMPANY

Date: May 4, 2012

/s/ FRED BOYLE

Name: Frederick J. Boyle

Title: Senior Vice President and
Chief Financial Officer