
**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): **April 11, 2006**

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) 872-3526

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))
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Item 1.01 Entry Into a Material Definitive Agreement.

On April 13, 2006 (the "Closing Date"), Potomac Electric Power Company ("Pepco"), a wholly owned subsidiary of Pepco Holdings, Inc., completed a tax-exempt bond financing in which the Maryland Economic Development Corporation ("Medco") issued and sold \$109,500,000 aggregate principal amount of its Maryland Economic Development Corporation Pollution Control Revenue Refunding Bonds (Potomac Electric Project), 2006 Series (the "Medco Bonds"). The entire \$109,500,00 of proceeds were, in turn, loaned by Medco to Pepco pursuant to a Loan Agreement, dated as of April 1, 2006, between Medco and Pepco (the "Loan Agreement"). Pepco intends to use the proceeds to effect the redemption of all of the outstanding (i) \$30,000,000 in aggregate principal amount of Prince George's County, Maryland Pollution Control Revenue Refunding Bonds (Potomac Electric Project) 1992 Series, (ii) \$37,000,000 in aggregate principal amount of Prince George's County, Maryland Pollution Control Revenue Refunding Bonds (Potomac Electric Project) 1993 Series and (iii) \$42,500,000 in aggregate principal amount of Montgomery County, Maryland Pollution Control Revenue Refunding Bonds (Potomac Electric Project) 1994 Series. The Medco Bonds mature on September 1, 2022 and bear interest at an auction rate, daily rate, weekly rate, flexible rate, or term rate, as determined from time to time by Pepco. The Medco Bonds initially bear interest at 3.30% per annum, which interest rate will be reset pursuant to an auction on May 17, 2006. Pepco's payment obligations under the Loan Agreement correspond to the payments of principal, premium, if any, and interest when and as due on the Medco Bonds.

The regularly scheduled payments of principal and interest on the Medco Bonds are insured by a financial guaranty insurance policy issued by Ambac Assurance Corporation ("Ambac") pursuant to an Insurance Agreement, dated as of April 1, 2006, between Ambac and Pepco (the "Insurance Agreement"). In order to secure its obligations to Ambac under the Insurance Agreement, Pepco on the Closing Date issued to Ambac \$109,500,000 in aggregate principal amount of its Senior Notes, Medco Series due September 1, 2022 (the "Senior Notes"). Payment by Pepco of its obligations under the Loan Agreement discharges the corresponding payment obligations on the Senior Notes. The Senior Notes were issued under the Indenture, dated as of November 17, 2003 (the "Senior Indenture"), between Pepco and The Bank of New York, as trustee (the "Trustee"). Simultaneously with the issuance of the Senior Notes, Pepco issued and delivered to the Trustee, for the benefit of the holders of the Senior Notes in order to secure the Company's obligations under the Senior Notes, \$109,500,000 in aggregate principal amount of First Mortgage Bonds, Medco Collateral Series due September 1, 2022 (the "Collateral Bonds"). The Collateral Bonds were issued under the Mortgage and Deed of Trust, dated July 1, 1936, between Pepco and The Bank of New York, as trustee (as successor in such capacity to The Riggs National Bank of Washington, D.C.), as amended and supplemented, including pursuant to the Supplemental Indenture, dated as of April 1, 2006 (the "Supplemental Indenture"), relating to the issuance of the Collateral Bonds. The Supplemental Indenture is filed herewith as Exhibit 4.1. Payment or deemed payment by Pepco of its obligations under the Senior Notes discharges the corresponding payment obligations on the Collateral Bonds. In accordance with the terms of the Senior Indenture, on the release date the Collateral Bonds will cease to secure the Senior Notes and the Senior Notes will become Pepco's general unsecured obligations and rank on a parity with Pepco's other unsecured and unsubordinated indebtedness.

Item 2.03 Creation of a Direct Financial Obligation or an Obligation under an Off-balance Sheet Arrangement of a Registrant.

The information set forth in Item 1.01 above is incorporated herein by reference.

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
(Registrant)

Date April 17, 2006

JOSEPH M. RIGBY
Name: Joseph M. Rigby
Title: Senior Vice President and
Chief Financial Officer