As filed with the Securities and Exchange Commission on August 2, 2002 Registration No. 333- 57221

SECURITIES AND EXCHANGE COMMISSION Washington, D. C. 20549

POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

POTOMAC ELECTRIC POWER COMPANY

(Exact name of registrant as specified in its charter)

District of Columbia and Virginia

(State or other jurisdiction of incorporation)

53-0127880 (I.R.S. Employer Identification No.)

701 Ninth Street, NW Washington, D.C. 20068

(Address, including zip code, of registrant's principal executive offices)

Stock Compensation Plan for the Board of Directors of Potomac Electric Power Company (Full title of plan)

Ellen Sheriff Rogers Secretary and Assistant Treasurer Potomac Electric Power Company 701 Ninth Street, N.W. Washington, D.C. 20068 (202) 872-3526 (Name, address and telephone number, including area code, of agent for service) This Post-Effective Amendment No. 1 is being filed to amend the registration statement (the "Registration Statement") on Form S-8 (File No. 333-57221), pursuant to which Potomac Electric Power Company (the "Registrant") registered 294,569 shares of its common stock, \$1.00 par value ("Pepco Common Stock") for offer and sale pursuant to the Stock Compensation Plan for the Board of Directors of Potomac Electric Power Company (the "Plan").

On August 1, 2002, in accordance with an Agreement and Plan of Merger, dated as of February 9, 2001, among the Registrant, New RC, Inc., now named Pepco Holdings, Inc. ("Pepco Holdings"), and Conectiv, the Registrant and Conectiv combined their businesses by merging with acquisition subsidiaries of Pepco Holdings (the "Merger"). As a result of the Merger, the Registrant and Conectiv each have become subsidiaries of Pepco Holdings and the outstanding shares of Pepco Common Stock were converted in the right to receive shares of Pepco Holdings common stock, par value \$.01 per share ("Pepco Holding Common Stock"). In connection with the Merger, all outstanding awards under the Plan were converted into awards with respect to Pepco Holdings Common Stock and no future awards will be made under the Plan.

In accordance with its undertaking in the Registration Statement to remove from registration, by means of a post-effective amendment, any of the registered securities that remain unsold at the termination of the offering, the Registrant hereby amends the Registration Statement to remove from registration all shares of Pepco Common Stock that remained unsold at the time of the Merger.

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 this Post-Effective Amendment No. 1 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 City of Washington, District of Columbia, on the 1st day of August 2002.

POTOMAC ELECTRIC POWER COMPANY

By: JOHN M. DERRICK, JR. John M. Derrick Jr. Chairman of the Board

Pursuant to the requirements of the Securities Act of 1933, this Post-Effective Amendment No. 1 to the Registration Statement has been signed below by the following person in the capacities indicated.

Signature	Title	Date
JOHN M. DERRICK, JR. John M. Derrick, Jr.	Chairman of the Board (principal executive officer)	August 1, 2002
D. R. WRAASE Dennis R. Wraase	Chief Executive Officer and Director	August 1, 2002
WILLIAM J. SIM William J. Sim	President, Chief Operating Officer and Director	August 1, 2002
ANDREW W. WILLIAMS Andrew W. Williams	Senior Vice President, Chief Financial Officer and Director (principal financial officer)	August 1, 2002

JAMES P.LAVIN

James P. Lavin

Vice President and Controller (principal accounting officer)

August 1, 2002

THOMAS S. SHAW

Thomas S. Shaw

Director

August 1, 2002

WILLIAM T. TORGERSON William T. Torgerson

Director

August 1, 2002