

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D. C. 20549

FORM 11-K

ANNUAL REPORT

Pursuant to Section 15(d) of the
Securities Exchange Act of 1934

For the Fiscal Year Ended December 30, 2004

ATLANTIC ELECTRIC 401(K) SAVINGS AND INVESTMENT PLAN - B
(Full title of plan)

PEPCO HOLDINGS, INC.
(Name of issuer of securities held pursuant to the plan)

701 NINTH STREET, N.W.
WASHINGTON, D. C. 20068
(Address of principal executive office)

Atlantic Electric 401(k) Savings and Investment Plan - B

**Financial Statements and Supplemental Schedules
December 30, 2004 and 2003**

Atlantic Electric 401(k) Savings and Investment Plan - B
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December 30, 2004 and 2003

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* Other supplemental schedules required by 29 CFR 2520.103-10 of the Department of Labor's Rules and Regulations for Reporting and Disclosures under the Employee Retirement Income Security Act of 1974 have been omitted because they are not applicable.

Report of Independent Registered Public Accounting Firm

To the Participants and Administrator of
Atlantic Electric 401(k) Savings and Investment Plan-B

In our opinion, the accompanying statements of net assets available for benefits and the related statement of changes in net assets available for benefits present fairly, in all material respects, the net assets available for benefits of Atlantic Electric 401(k) Savings and Investment Plan-B (the "Plan") at December 30, 2004 and 2003, and the changes in net assets available for benefits for the year ended December 30, 2004 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedules of Schedule of Assets (Held at End of Year) and Schedule of Reportable Transactions are presented for the purpose of additional analysis and are not a required part of the basic financial statements but are supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. These supplemental schedules are the responsibility of the Plan's management. The supplemental schedules have been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, are fairly stated in all material respects in relation to the basic financial statements taken as a whole.

/s/ PRICEWATERHOUSECOOPERS LLP

Washington, DC
June 24, 2005

Atlantic Electric 401(k) Savings and Investment Plan - B
Statements of Net Assets Available for Benefits
December 30, 2004 and 2003

	2004	2003
Investments		
Cash	\$ 5,002	\$ -
Investments, at fair value	53,866,643	47,827,807
Participant loans	<u>1,537,975</u>	<u>1,668,013</u>
Total investments	55,409,620	49,495,820
Receivables		
Participant Contributions	71,499	71,576
Employer Contributions	<u>15,354</u>	<u>19,855</u>
Total receivables	86,853	91,431
Net assets available for benefits	<u>\$55,496,473</u>	<u>\$49,587,251</u>

The accompanying notes are an integral part of these financial statements.

Atlantic Electric 401(k) Savings and Investment Plan - B
Statement of Changes in Net Assets Available for Benefits
Year Ended December 30, 2004

Additions

Participant contributions	\$ 3,123,264
Employer contributions	800,500
Interest income	114,539
Dividend income	1,585,806
Net appreciation in fair value of investments	3,276,864
Transfers from another plan	<u>176,585</u>
Total additions	<u>9,077,558</u>

Deductions

Benefits paid to participants	(3,166,186)
Administrative fees	<u>(2,150)</u>
Total deductions	<u>(3,168,336)</u>
Net increase	5,909,222
Net assets available for benefits, at beginning of year	<u>49,587,251</u>
Net assets available for benefits, at end of year	<u>\$ 55,496,473</u>

The accompanying notes are an integral part of these financial statements.

Atlantic Electric 401(k) Savings and Investment Plan - B

Notes to Financial Statements

December 30, 2004 and 2003

1. Description of Plan

General

The following description of the Atlantic Electric 401(k) Savings and Investment Plan - B (the "Plan"), a defined contribution plan, provides only general information. Participants should refer to the Plan document for a more comprehensive description of the Plan's provisions. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 ("ERISA"). T. Rowe Price Trust Company ("T. Rowe Price") serves as the Plan's trustee.

Contributions

All full-time bargaining unit employees of Atlantic City Electric Company (the "Company"), a wholly-owned subsidiary of Conectiv, are eligible to participate in the Plan. Additionally, any employee who is not a regular full-time employee shall be eligible to participate upon completion of 1,000 hours of service during the twelve consecutive month period, or if such employee does not complete 1,000 hours of service during the twelve month period, during a subsequent Plan year. During 2002, Potomac Electric Power Company ("Pepco") acquired Conectiv. In accordance with the Agreement and Plan Merger, Conectiv and Pepco became wholly owned subsidiaries of Pepco Holdings, Inc. ("PHI").

Employees may contribute up to 50 percent of base pay. Upon enrollment in the Plan, a participant may direct employee contributions in any of six investment options, which includes four mutual funds, one common/collective trust and the PHI Common Stock Fund. The tax savings portion of participant contributions (up to 6 percent of an employee's base pay) is matched by the Company at a rate of 50 percent not to exceed 3 percent of the employee's compensation. The Company's matching contributions are invested in the T. Rowe Price Stable Value Fund ("TRP Stable Value Fund"). From December 2000 to July 31, 2002, an employee who elected to invest in Conectiv's common stock and held the common stock for one year received an additional contribution of Conectiv's common stock equal to 15 percent of the participant's original contribution. As a result of the merger, the outstanding common stock of Conectiv was cancelled and exchanged for PHI common stock. After August 1, 2002, an employee will continue to receive the 15 percent stock match (See Note 7 - Subsequent Event), which will be invested in PHI common stock, if the PHI common stock is held for one year. The holding period of the PHI common stock includes the holding period of the Conectiv common stock. At December 30, 2004 and 2003, \$30,499 and \$25,047, respectively, was included in the PHI Common Stock Fund that related to employee contributions under the one year holding period.

Payment of Benefits

Benefits from the tax savings portion of the Plan can be withdrawn upon the attainment of age 59-1/2, retirement, separation from service, death or in special financial hardship situations. Distributions of a participant's account may be made in a lump sum cash payment or in regular installments over a fixed period with certain limitations stated in the Plan. Hardship withdrawals must be approved by the Personnel and Compensation Committee. After making a hardship withdrawal, a participant is prohibited from making before and after tax contributions for a period of six months.

Participant Accounts

Individual accounts are maintained for each of the Plan's participants to reflect the participant's share of the Plan's income (losses), the participant's and the Company's contributions, and the

Atlantic Electric 401(k) Savings and Investment Plan - B

Notes to Financial Statements

December 30, 2004 and 2003

participant's loan, if applicable. Such allocations are based on participant earnings or account balances, as defined.

Vesting

Upon enrollment in the Plan, participants are fully vested at all times in all amounts held in their accounts.

Termination of Plan

Although it has not expressed any intent to do so, the Company has the right to terminate the Plan in whole or in part at any time for any reason.

Administration Fees

Certain professional fees and administrative expenses incurred in connection with the Plan are paid by the Company. The facilities of the Company are used by the Plan at no charge. Loan processing fees are paid by the participants and deducted from Plan assets.

Participant Loans

Participants may borrow from their fund accounts a minimum of \$1,000 up to a maximum equal to the lesser of \$50,000 or 50 percent of their account balance. Loan terms range from one to five years and up to fifteen years for the purchase of a primary residence. The loans are secured by the balance in the participant's account and bear interest at a rate commensurate with local prevailing rates as determined quarterly by the Plan Administrator. Principal and interest is paid ratably through weekly payroll deductions. A participant may pre-pay a loan at any time without penalty.

2. Summary of Significant Accounting Policies

Basis of Accounting

The financial statements of the Plan are prepared under the accrual basis of accounting.

Investment Valuation and Income Recognition

The Plan's investments are stated at fair value. Shares of registered investment companies' mutual funds are valued at quoted market prices which represent the net asset value of shares held by the Plan at year end. The carrying value of participant loans approximates fair value. Common stock is valued at closing price on its principal exchange; shares of common/collective trusts are valued at net asset value.

Purchases and sales of investments are recorded on the trade-date. Interest income is accrued when earned. Dividend income is recorded on the ex-dividend date.

The Plan presents in the Statement of Changes in Net Assets Available for Benefits the net appreciation (depreciation) in the fair value of its investments, which consists of the realized gains or losses and the unrealized appreciation (depreciation) on those investments.

Payment of Benefits

Benefits are recorded when paid.

Atlantic Electric 401(k) Savings and Investment Plan - B

Notes to Financial Statements

December 30, 2004 and 2003

Contributions

Participants' contributions are recorded in the period of the related payroll deductions. The Company's matching contributions are recorded in the period of the related participants' contributions.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires the Plan's management to make estimates and assumptions that affect the reported amounts in the financial statements. Such estimates include those regarding fair value. Actual results could differ from those estimates.

Risks and Uncertainties

The Plan provides for various investment options in any combination of common stocks, mutual funds and common/collective trusts that invest in bonds, fixed income securities and other investment securities. Investment securities are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in risks in the near term could materially affect participants' account balances and the amounts reported in the Statements of Net Assets Available for Benefits.

3. Investments

The following presents investments that represent 5 percent or more of the Plan's net assets:

	2004	2003
TRP Stable Value Fund	\$ 16,644,634	\$ 16,564,650
Equity Index Fund	14,720,372	12,885,296
Equity Income Fund	16,240,136	13,820,178
Spectrum Growth Fund	4,260,705	3,176,988

During 2004, the Plan's investments (including investments bought, sold and held during the year) appreciated in value by \$3,276,864 as follows:

Registered investment companies' mutual funds	\$ 3,244,724
PHI common stock	<u>32,140</u>
	<u>\$ 3,276,864</u>

4. Nonparticipant-Directed Investments

Information about the net assets and the significant components of the changes in net assets relating to the nonparticipant-directed investments is as follows:

	2004	2003
Net assets		
TRP Stable Value Fund	\$ 16,644,634	\$ 16,564,650

Atlantic Electric 401(k) Savings and Investment Plan - B
Notes to Financial Statements
December 30, 2004 and 2003

	2004
Changes in net assets	\$ 1,718,808
Contributions	74,600
Net loan activity	57,618
Interest income	636,072
Dividend income	(1,933,019)
Benefits paid to participants	(754)
Administrative fees	(522,297)
Net exchanges to participant-directed investments	48,956
Transfers from another Plan	<u>\$ 79,984</u>

5. Tax Status

The Plan obtained its latest determination letter on October 9, 2003, in which the Internal Revenue Service stated that the Plan was in compliance with the applicable requirements of the Internal Revenue Code (IRC). The Plan has been amended since receiving the determination letter. However, the Company believes the Plan is designed and is currently being operated in compliance with the applicable requirements of the IRC.

6. Related Party Transactions

Certain Plan investments are shares of registered investment companies' mutual funds managed by T. Rowe Price. T. Rowe Price is the trustee as defined by the Plan; therefore, these transactions qualify as party-in-interest transactions.

Pepco Holdings, Inc., as the Plan sponsor, is a related party. Purchases and sales of PHI common stock were made during the year. The amount of PHI common stock included in Investments was \$414,330 and \$289,671 at December 30, 2004 and 2003, respectively.

In addition, participant loans are related party transactions.

7. Subsequent Event

Two amendments were made to the Plan, effective January 1, 2005. The first amendment is the 15 percent stock match for employees that hold PHI Common Stock more than one year will be discontinued. The second amendment is in the event of a mandatory distribution greater than \$1,000, if the participant does not elect to have such distribution paid directly to an eligible retirement plan specified by the participant in a direct rollover or to receive the distribution directly, then the Plan Administrator will pay the distribution in a direct rollover to an individual retirement plan designated by the Plan Administrator.

Supplemental Schedules

Atlantic Electric 401(k) Savings and Investment Plan - B
EIN#: 52-2297449, PLAN#: 003
Schedule H - Line 4(i)
Schedule of Assets (Held at End of Year)
December 30, 2004

(a)	(b) Identity of Issue	(c) Investment Type	(d) Cost	(e) Current Value
	T. Rowe Price			
*	Stable Value Fund	Common/Collective Trust	\$ 16,644,634	\$ 16,644,634
*	Equity Index Fund	Mutual Fund		14,720,372
*	Equity Income Fund	Mutual Fund		16,240,136
*	Spectrum Growth Fund	Mutual Fund		4,260,705
*	International Stock Fund	Mutual Fund		1,586,466
*	Pepco Holdings, Inc.	Common Stock		414,330
*	Participant Loans	Various loans ranging from 5.60% to 9.00% maturing January 2005 through February 2017		1,537,975
	Cash	Cash		<u>5,002</u>
				<u>\$ 55,409,620</u>

* Party-in-interest, for which a statutory exemption exists.

Atlantic Electric 401(k) Savings and Investment Plan - B**EIN#: 52-2297449, PLAN#: 003****Schedule H - Line 4(j)****Schedule of Reportable Transactions*****Ended December 30, 2004**

- * Non-participant directed transactions or series of transactions in excess of 5 percent of the current value of the Plan's assets as of the beginning of the Plan year as defined in Section 2520.103-6 of the Department of Labor Rules and Regulations for Reporting and Disclosure under ERISA.

Identity of Party Involved	Description of Assets	Purchase Price	Selling Price	Historical Cost	Current Value of Asset on Transaction Date	Historical Gain/ Loss
T. Rowe Price	TRP Stable Value Fund					
	Purchases	\$ 4,460,252	\$ -	\$ 4,460,252	\$ 4,460,252	\$ -
	Sales	(4,429,225)	(4,429,225)	(4,429,225)	(4,429,225)	-

Exhibits:

Exhibit 23 Consent of Independent Registered Public Accounting Firm - Filed herewith.

SIGNATURE

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

ATLANTIC ELECTRIC 401(K) SAVINGS
AND INVESTMENT PLAN - B

By: /s/ D. R. Wraase
Dennis R. Wraase, Chairman
Administrative Board

Date: June 28, 2005

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-96673) of Pepco Holdings, Inc. of our report dated June 24, 2005 relating to the financial statements of the Atlantic Electric 401(k) Savings and Investment Plan-B, which appears in this Form 11-K.

/s/ PRICEWATERHOUSECOOPERS LLP
Washington, DC
June 24, 2005