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): September 2, 2005

PECO II, Inc.

(Exact name of registrant as specified in its charter)

Ohio 000-31283 34-1605456 (State or other (Commission (I.R.S. Employer

jurisdiction of File Number) Identification No.)

incorporation)

1376 State Route 598, Galion, Ohio
(Address of principal executive offices)

44833
(Zip Code)

Registrant s telephone number, including area code: (419) 468-7600

(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 (see General Instruction A.2. below):

- " 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 1.01. Entry into a Material Definitive Agreement.

On September 2, 2005, PECO II, Inc. (the Company) entered into a Purchase Agreement (the Agreement) with J/H Real Estate of Galion, Ltd. (Purchaser), effective as of August 31, 2005, to sell the Company s new Galion manufacturing building (the Property) for a purchase price of \$2.35 million. A copy of the Agreement is attached as Exhibit 10.1 hereto, and is incorporated herein by reference.

Under the Agreement, Purchaser has the right to terminate the Agreement and not purchase the Property if a Phase I or Phase II environmental report demonstrates any environmental problems or dangers with respect to the Property. In addition, the transaction is contingent upon Purchaser receiving satisfactory financing and upon appropriate state and local tax incentives.

The closing date for the sale of the Property shall take place on or before November 3, 2005. Purchaser shall have the right for entry into the property on October 1, 2005.

Item 9.01. Financial Statements and Exhibits.

(c) Exhibits.

Exhibit No.	Description
10.1	Purchase Agreement, effective as of August 31, 2005, between the Company and J/H Real Estate of Galion, Inc.
99.1	Press Release, dated September 8, 2005.

SIGNATURE

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.

PECO II, Inc.

Date: September 8, 2005 By: /s/ Sandra A. Frankhouse

Sandra A. Frankhouse

Chief Financial Officer, Treasurer and Secretary

EXHIBIT INDEX

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