FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

| OMB APPROVAL             |           |  |  |  |  |  |  |  |  |  |
|--------------------------|-----------|--|--|--|--|--|--|--|--|--|
| OMB Number:              | 3235-0287 |  |  |  |  |  |  |  |  |  |
| Estimated average burden |           |  |  |  |  |  |  |  |  |  |

0.5

hours per response:

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| 1. Name and Address of Reporting Person* <u>CHESSER MICHAEL J</u>                |  |        |  |   |       |   | 2. Issuer Name <b>and</b> Ticker or Trading Symbol GREAT PLAINS ENERGY INC [ GXP ] |   |        |                                    |               |   |  |                  |                                    |                   |   | p of Reporting Person(s) to I<br>plicable)<br>ctor 10% (  |  |   |   |
|--|--|--------|--|---|-------|---|--|---|--------|------------------------------------|---------------|---|--|------------------|------------------------------------|-------------------|---|---|--|---|---|
| (Last) (First) (Middle) 1201 WALNUT ST.  |  |        |  |   |       | 3. Date of Earliest Transaction (Month/Day/Year) 05/05/2009 |  |   |        |                                    |               |   |  |                  | X                                  | belov             | ,   | Other (specify below) utive Officer   |  |   |   |
| (Street) KANSAS CITY MO 64106  (City) (State) (Zip)                              |  |        |  |   |       | 4. If   | 4. If Amendment, Date of Original Filed (Month/Day/Year)                           |   |        |                                    |               |   |  |                  |                                    | Indiv<br>ne)<br>X | vidual or Joint/Group Filing (Check Applicable<br>Form filed by One Reporting Person<br>Form filed by More than One Reporting<br>Person |   |  |   |   |
| Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned |  |        |  |   |       |   |  |   |        |                                    |               |   |  |                  |                                    |                   |   |   |  |   |   |
| 1. Title of Security (Instr. 3)  2. Transac Date (Month/Date)                    |  |        |  |   |       |   | Execution Date   |   |        | 3.<br>Transa<br>Code (<br>8)       |               | 4. Securities Acquired (A)<br>Disposed Of (D) (Instr. 3, 5) |  |                  |                                    | nd                | Securi<br>Benefi<br>Owned   | . Amount of<br>ecurities<br>eneficially<br>Owned Following<br>Reported                          |  | nership<br>Direct<br>Indirect<br>tr. 4) | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |
|  |  |        |  |   |       |   | Code   | v | Amount |                                    | (A) or<br>(D) | Price   | Price  |                  | Transaction(s)<br>(Instr. 3 and 4) |                   |   | (1130. 4)   |  |   |   |
| Common Stock   |  |        |  |   |       |   |  |   |        |                                    |               |   |  |                  |                                    |                   | 1,596(1)  |   |  | I                                       | ESP<br>401-K  |
| Common   | 5/2009   | /2009  |  |   | A     |   | 74,640 <sup>(2)</sup> A  |   | \$0    | (2)                                | 206,594(3)    |   | 1  | D                |                                    |                   |   |   |  |   |   |
|  | Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) |        |  |   |       |   |  |   |        |                                    |               |   |  |                  |                                    |                   |   |   |  |   |   |
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3)                              | 2.<br>Conversion<br>or Exercis<br>Price of<br>Derivative<br>Security   | n Date | 3. Transaction<br>Date<br>(Month/Day/Year) | 3A. Deeme<br>Execution<br>if any<br>(Month/Da | Date, | 4.<br>Transaction<br>Code (Instr.<br>8)                     |  |   |        | 6. Date E<br>Expiratio<br>(Month/D | n Date        | е   | 7. Title and<br>Amount of<br>Securities<br>Underlying<br>Derivative<br>Security (Instrand 4) |                  |                                    | Deriv<br>Secu     | rice of<br>ivative<br>curity<br>tr. 5)  | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction (Instr. 4) | Ownershi<br>Form:<br>Direct (D)<br>or Indirec<br>(I) (Instr. 4 | nership<br>rm:<br>ect (D)<br>Indirect   | Beneficial<br>Ownership<br>(Instr. 4)                             |
|  |  |        |  |   |       | Code  | Code V   |   | (D)    | Date<br>Exercisa                   |               | Expiration<br>Date  | Title  | Nun<br>of<br>Sha |                                    |                   |   |   |  |   |   |

## Explanation of Responses:

- 1. Amount includes 309 shares acquired between February 6, 2009, and May 5, 2009, from automatic payroll deduction/investment and participation in the Company's 401-K Plan.
- 2. Awards of restricted stock pursuant to the Company's Long-Term Incentive Plan.
- 3. Amount includes 1,062 shares acquired between February 6, 2009, and May 5, 2009, by reinvestment of stock dividends through the Company's Dividend Reinvestment Direct Stock Purchase Plan.

## Remarks:

Michael J. Chesser

05/07/2009

\*\* Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- \* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).
- \*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.