FORM 4

obligations may continue. See Instruction 1(b).

Check this box if no longer subject to Section 16. Form 4 or Form 5

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

OMB APPROVAL OMB Number: Estimated average burden hours per response: 0.5

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* Forsee Gary D | | | | | | 2. Issuer Name and Ticker or Trading Symbol GREAT PLAINS ENERGY INC [GXP] | | | | | | | | | ationship k all appli Directo | cable) | ng Per | son(s) to Iss | |
|---|---|--|--|--------|-----------|---|---|------|---|------|---|--|--|--|--|---|---|--|---|
| (Last) (First) (Middle) C/O GREAT PLAINS ENERGY INCORPORATED 1200 MAIN STREET | | | | ATED | 06/ | 3. Date of Earliest Transaction (Month/Day/Year) 06/01/2010 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | | | Officer (give title below) Other (specify below) 6. Individual or Joint/Group Filing (Check Applicable | | | | |
| (Street) KANSAS CITY MO 64105 | | | | | - | | | | | | | | | Line) X Form filed by One Reporting Person Form filed by More than One Reporting Person | | | | | |
| (City) | (S | tate) | (Zip) | | | | | | | | | | | | | | | | |
| | | Tab | le I - Nor | -Deriv | ative | Se | curitie | s Ac | quired, I | Disp | osed o | of, or B | enefic | ally | Owned | t k | | | |
| 1. Title of Security (Instr. 3) 2. Transar Date (Month/Date) | | | | | | ar) | 2A. Deemed Execution Date, if any (Month/Day/Year) | | 3. Transaction Code (Instr. 8) | | 4. Securities Acquired (A Disposed Of (D) (Instr. 3, 5) | | red (A) o | 4 and Securi Benefi | | es ally Following | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
| | | | | | | | | | | v | Amount | (A) (D) | or Prio | е | Transaction(s) (Instr. 3 and 4) | | | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| Common Stock | | | | | | | | | | | | | | 3, | 500 | | D | | |
| | | Т | able II - I (| | | | | | uired, Di , option: | | | , | | • | wned | | • | · | |
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deeme Execution if any (Month/Day | Date, | Code (Ins | | | | 6. Date Exe Expiration (Month/Day | Date | | 7. Title and Amount of Securities Underlying Derivative Secu (Instr. 3 and 4) | | 8. Price of Derivative Security (Instr. 5) | | 9. Number derivative Securities Beneficial Owned Following Reported Transactio (Instr. 4) | i illy | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | Beneficial Ownership ct (Instr. 4) |
| | | | | | Code | v | (A) | | Date Exercisable | | opiration | Title | Amount or Number of Shares | er | | | | | |
| Director Deferred Share | (1) | 06/01/2010 | | | A | | 3,223 | | (1) | | (1) | Common Stock | 3,22 | 3 | \$0 ⁽¹⁾ | 5,944 ⁽² | 2) | D | |

Explanation of Responses:

- 1. Director Deferred Share Units are granted under the Long-Term Incentive Plan. Each unit represents the right-to-receive one share of Great Plains Energy Common Stock, plus stock reflecting reinvested dividends. Units are converted to stock and distributed on the January 31 next following the date of termination of service on the Board.
- 2. Amount includes 57 Director Deferred Share Units accrued from November 4, 2009, through June 1, 2010, through dividend reinvestment.

Remarks:

Executed on behalf of Gary D.

Forsee by Mark G. English,

06/03/2010

attorney-in-fact

** 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.