

OMB APPROVAL	
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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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* NELSON WILLIAM C (Last) (First) (Middle) C/O GREAT PLAINS ENERGY INCORPORATED 1200 MAIN STREET (Street) KANSAS CITY MO 64105 (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol GREAT PLAINS ENERGY INC [GXP]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner Officer (give title below) Other (specify below)
	3. Date of Earliest Transaction (Month/Day/Year) 06/01/2010	
	4. If Amendment, Date of Original Filed (Month/Day/Year)	6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	06/01/2010		A		3,223	A	\$0	18,009 ⁽¹⁾	D	

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date					
Equity Units ⁽²⁾	(3)(4)							06/15/2012 ⁽³⁾⁽⁵⁾	06/15/2012 ⁽³⁾	Common Stock	(3)(4)	1,000	D	

Explanation of Responses:

- Amount includes 615 shares acquired from May 20, 2009, through June 1, 2010, through participation in the Company's Dividend Reinvestment and Direct Stock Purchase Plan.
- Each Equity Unit Consists of a purchase contract and a 5% undivided beneficial ownership interest in the issuer's 10.00% subordinated note due 2042.
- The purchase contract obligates the reporting person to purchase, and obligates the issuer to sell, on June 15, 2012, for \$50 in cash, a number of newly issued shares of common stock equal to the "settlement rate." The settlement rate is calculated as follows: (a) if the applicable market value of the common stock is equal to or greater than \$16.80 per share, the settlement rate will be 2.9762 shares of common stock; (b) if the applicable market value of the common stock is less than \$16.80 but greater than \$14.00, the settlement rate will be the number of shares of common stock equal to \$50, divided by the applicable market value; and (c) if the applicable market value of the common stock is less than or equal to \$14.00, the settlement rate will be 3.5714 shares of common stock.
- The applicable market value of the common stock is the average of the closing price per share of the issuer's common stock on each of the 20 consecutive trading days ending on the third trading day immediately preceding the purchase contract settlement date.
- Subject to certain conditions, the reporting person may have the right to settle the purchase contract in cash on or prior to the seventh business day immediately preceding the purchase contract settlement date.

Remarks:

Executed on behalf of William C. Nelson 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.