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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

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**FORM 8-A/A**

**Amendment No. 1**

**FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES  
PURSUANT TO SECTION 12(b) OR 12(g) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

**Great Plains Energy Incorporated**

(Exact Name of Registrant as Specified in Its Charter)

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**Missouri**

(State of Incorporation  
or Organization)

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**43-1916803**

(IRS Employer  
Identification No.)

**1201 Walnut Street  
Kansas City, Missouri 64106-2124**

(Address of Principal Executive Offices) (Zip Code)

Securities to be registered pursuant to Section 12(b) of the Act:

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Title of Each Class To Be So Registered

Corporate Units (consisting of stock purchase  
contracts and subordinated notes)

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Name of Each Exchange On Which  
Each Class Is To Be Registered

New York Stock Exchange

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A.(c), please check the following box.

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A.(d), please check the following box.

Securities Act registration statement file number to which this form relates: 333-159131.

Securities to be registered pursuant to Section 12(g) of the Act:

None  
(Title of Class)

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This Registration Statement on Form 8-A/A, Amendment No. 1, amends and restates the Registration Statement on Form 8-A filed with the Securities and Exchange Commission on May 15, 2009, in order to incorporate the definitive agreements included as Exhibits 4.1, 4.2 and 4.3 hereto.

### **Item 1. Description of Registrant's Securities to be Registered**

The securities being registered pursuant to this Registration Statement on Form 8-A consist of Corporate Units, each of which is comprised of (i) a stock purchase contract, pursuant to which the holder will agree to purchase and the Registrant will agree to sell a number of shares of the Registrant's common stock, with settlement on June 15, 2012, and (ii) a 1/20, or 5%, undivided beneficial ownership interest in each of the Registrant's 10.00% Subordinated Notes due June 15, 2042. The information required by this Item 1 is incorporated by reference to the descriptions of Corporate Units appearing under the captions "Description of the Equity Units," "Description of the Purchase Contracts," "Certain Provisions of the Purchase Contract and Pledge Agreement" and "Description of the Notes" in the Prospectus Supplement, dated May 12, 2009, filed with the Securities and Exchange Commission (the "SEC") on May 13, 2009 pursuant to Rule 424(b), pursuant to the Registrant's effective Registration Statement on Form S-3, filed with the SEC on May 11, 2009 (File No. 333-159131).

### **Item 2. Exhibits**

- 3.1 Articles of Incorporation of Great Plains Energy Incorporated as amended effective May 7, 2009 (Exhibit 3.1.1 to Form 10-Q for the quarter ended March 31, 2009).
- 3.2 By-laws of Great Plains Energy Incorporated, as amended December 2, 2008 (Exhibit 3.1 to Form 8-K dated December 8, 2008).
- 4.1 Subordinated Indenture, dated as of May 18, 2009, between Great Plains Energy Incorporated and The Bank of New York Mellon Trust Company, N.A., as Trustee (Exhibit 4.1 to Form 8-K dated May 12, 2009).
- 4.2 Supplemental Indenture No. 1, dated as of May 18, 2009, between Great Plains Energy Incorporated and The Bank of New York Mellon Trust Company, N.A., as Trustee (Exhibit 4.2 to Form 8-K dated May 12, 2009).
- 4.3 Purchase Contract and Pledge Agreement, dated as of May 18, 2009, among Great Plains Energy Incorporated and The Bank of New York Mellon Trust Company, N.A., as purchase contract agent, collateral agent, securities intermediary and custodial agent (Exhibit 4.3 to Form 8-K dated May 12, 2009).
- 4.4 10.00% Subordinated Note due June 15, 2042 (included in Exhibit 4.2).
- 4.5 Specimen of certificate evidencing Corporate Units (included in Exhibit 4.3).
- 4.6 Specimen of certificate evidencing Treasury Units (included in Exhibit 4.3).

**SIGNATURES**

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

GREAT PLAINS ENERGY INCORPORATED

Date: May 18, 2009

By: /s/ Terry Bassham  
Terry Bassham  
Executive Vice President- Finance & Strategic  
Development and Chief Financial Officer

**EXHIBIT INDEX**

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