

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): August 18, 2006

<b>Commission File Number</b>	<b>Registrant, State of Incorporation, Address and Telephone Number</b>	<b>I.R.S. Employer Identification Number</b>
001-32206	<b>GREAT PLAINS ENERGY INCORPORATED</b> (A Missouri Corporation) 1201 Walnut Street Kansas City, Missouri 64106 (816) 556-2200  NOT APPLICABLE (Former name or former address, if changed since last report)	43-1916803

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:

- 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))

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**Item 7.01 Regulation FD Disclosure**

Great Plains Energy Incorporated (Great Plains Energy) will host an investor and analyst conference discussing Strategic Energy, L.L.C., a wholly-owned subsidiary of Great Plains Energy, on August 23, 2006, starting at 10:00 a.m. Eastern time. Interested parties may access the live conference presentation over the internet through the investor relations section of Great Plains Energy's website, [www.greatplainsenergy.com](http://www.greatplainsenergy.com). Once the conference is completed, the webcast will be available for replay on the investor relations section of the company's website for approximately 90 days. Conference slides will also be archived on the same section of the website shortly after the conclusion of the conference. Information contained on the website is not incorporated by reference herein.

The information in this report is being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section. The information in this report shall not be incorporated by reference into any registration statement or other document pursuant to the Securities Act of 1933, except as shall be expressly set forth by specific reference in such filing.

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**SIGNATURES**

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.

**GREAT PLAINS ENERGY INCORPORATED**

/s/ Terry Bassham

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Terry Bassham  
Executive Vice President- Finance & Strategic Development and Chief Financial  
Officer

Date: August 18, 2006