

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): January 13, 2010

Commission File Number	Registrant, State of Incorporation, Address and Telephone Number	I.R.S. Employer Identification Number
001-32206	GREAT PLAINS ENERGY INCORPORATED (A Missouri Corporation) 1200 Main Street Kansas City, Missouri 64105 (816) 556-2200 NOT APPLICABLE (Former name or former address, if changed since last report)	43-1916803
000-51873	KANSAS CITY POWER & LIGHT COMPANY (A Missouri Corporation) 1200 Main Street Kansas City, Missouri 64105 (816) 556-2200 NOT APPLICABLE (Former name or former address, if changed since last report)	44-0308720

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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This combined Current Report on Form 8-K is being filed by Great Plains Energy Incorporated (Great Plains Energy) and Kansas City Power & Light Company (KCP&L). KCP&L is a wholly owned subsidiary of Great Plains Energy and represents a significant portion of its assets, liabilities, revenues, expenses and operations. Thus, all information contained in this report relates to, and is filed by, Great Plains Energy. Information that is specifically identified in this report as relating solely to Great Plains Energy, such as its financial statements and all information relating to Great Plains Energy's other operations, businesses and subsidiaries, including KCP&L Greater Missouri Operations Company (GMO), does not relate to, and is not filed by, KCP&L. KCP&L makes no representation as to that information. Neither Great Plains Energy nor GMO has any obligation in respect of KCP&L's debt securities and holders of such securities should not consider Great Plains Energy's or GMO's financial resources or results of operations in making a decision with respect to KCP&L's debt securities. Similarly, KCP&L has no obligation in respect of securities of Great Plains Energy or GMO.

Item 8.01 Other Events

KCP&L has a 55% ownership interest, and GMO has an 18% ownership interest, in Iatan No. 2, an estimated 850MW coal-fired electric generating unit currently under construction. Great Plains Energy and KCP&L have previously announced a late summer 2010 anticipated in-service date for Iatan No. 2. Due to construction delays and unusually cold weather, Great Plains Energy and KCP&L currently anticipate that the in-service date of Iatan No. 2 will shift approximately two months into the fall of 2010.

The shift in the expected in-service date will likely cause approximately the same movement in the effective dates of rates to be set in KCP&L's pending Kansas rate case and KCP&L's and GMO's anticipated Missouri rate cases, which had been originally projected to be October 17, 2010 and early first quarter 2011, respectively.

Additionally, as the Iatan No. 2 project moves into the startup phase, KCP&L has commenced a cost and schedule reforecast process for Iatan No. 2. The results will be disclosed when the process is completed, which is currently projected to be in the second half of the first quarter of 2010. While Great Plains Energy and KCP&L presently believe there will be no material increase in the estimated construction cost range of Iatan No. 2 or material impact on 2010 earnings, there is no assurance regarding the impact of the currently expected delay, the results of the cost and schedule reforecast process or the effects of the actual cost and in-service date of Iatan No. 2 on Great Plains Energy's and KCP&L's results of operations, financial position and cash flows. Great Plains Energy expects to issue 2010 earnings guidance in late February 2010.

Forward-Looking Statements:

Statements made in this report that are not based on historical facts are forward-looking, may involve risks and uncertainties, and are intended to be as of the date when made. Forward-looking statements include, but are not limited to, the outcome of regulatory proceedings, cost estimates of the Comprehensive Energy Plan and other matters affecting future operations. In connection with the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, the registrants are providing a number of important factors that could cause actual results to differ materially from the provided forward-looking information. These important factors include: future economic conditions in regional, national and international markets and their effects on sales, prices and costs, including, but not limited to, possible further deterioration in economic conditions and the timing and extent of any economic recovery; prices and availability of electricity in regional and national wholesale markets; market perception of the energy industry, Great Plains Energy, KCP&L and GMO; changes in business strategy, operations or development plans; effects of current or proposed state and federal legislative and regulatory actions or developments, including, but not limited to, deregulation, re-regulation and

restructuring of the electric utility industry; decisions of regulators regarding rates KCP&L and GMO can charge for electricity; adverse changes in applicable laws, regulations, rules, principles or practices governing tax, accounting and environmental matters including, but not limited to, air and water quality; financial market conditions and performance including, but not limited to, changes in interest rates and credit spreads and in availability and cost of capital and the effects on nuclear decommissioning trust and pension plan assets and costs; impairments of long-lived assets or goodwill; credit ratings; inflation rates; effectiveness of risk management policies and procedures and the ability of counterparties to satisfy their contractual commitments; impact of terrorist acts; increased competition including, but not limited to, retail choice in the electric utility industry and the entry of new competitors; ability to carry out marketing and sales plans; weather conditions including, but not limited to, weather-related damage and their effects on sales, prices and costs; cost, availability, quality and deliverability of fuel; ability to achieve generation planning goals and the occurrence and duration of planned and unplanned generation outages; delays in the anticipated in-service dates and cost increases of additional generating capacity and environmental projects; nuclear operations; workforce risks, including, but not limited to, retirement compensation and benefits costs; the ability to successfully integrate KCP&L and GMO operations and the timing and amount of resulting synergy savings; and other risks and uncertainties.

This list of factors is not all-inclusive because it is not possible to predict all factors. Other risk factors are detailed from time to time in Great Plains Energy's and KCP&L's most recent quarterly report on Form 10-Q or annual report on Form 10-K filed with the Securities and Exchange Commission. Any forward-looking statement speaks only as of the date on which such statement is made. Great Plains Energy and KCP&L undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

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/ Michael W. Cline
Michael W. Cline
Vice President-Investor Relations and Treasurer

KANSAS CITY POWER & LIGHT COMPANY

/s/ Michael W. Cline
Michael W. Cline
Vice President-Investor Relations and Treasurer

Date: January 13, 2010.
