

UNITED STATES
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): October 28, 2010

Commission File Number	Exact Name of Registrant as Specified in its Charter, State of Incorporation, Address of Principal Executive Offices and Telephone Number	I.R.S. Employer Identification No.
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))

This combined Current Report on Form 8-K is being furnished 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 furnished 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 furnished 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 2.02 Results of Operations and Financial Condition

On October 28, 2010, Great Plains Energy issued a press release announcing its results for the third quarter and year to date ended September 30, 2010 and increasing its 2010 earnings guidance. A copy of the press release is attached as Exhibit 99.1.

The press release contains information regarding KCP&L. Accordingly, information in the press release relating to KCP&L is also being furnished on behalf of KCP&L.

The information under this Item 2.02 and in Exhibit 99.1 hereto is being furnished and shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended or otherwise subject to the liabilities of that section. The information under this Item 2.02 and Exhibit 99.1 hereto shall not be deemed incorporated by reference into any registration statement or other document pursuant to the Securities Act of 1933, as amended, unless otherwise expressly indicated in such registration statement or other document.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits

Exhibit No. Description

99.1 Press release issued by Great Plains Energy Incorporated on October 28, 2010

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrants have duly caused this report to be signed on their 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: October 28, 2010

Exhibit Index

Exhibit Description
No.

99.1 Press release issued by Great Plains Energy Incorporated on October 28, 2010

**GREAT PLAINS ENERGY REPORTS THIRD QUARTER
2010 RESULTS**

Warm Summer Weather Drives Increase in 2010 EPS Guidance

Kansas City, Mo. (October 28, 2010) — Great Plains Energy (NYSE: GXP) today announced third quarter 2010 earnings of \$131.6 million or \$0.96 per share of common stock outstanding, compared with third quarter 2009 earnings of \$78.7 million or \$0.58 per share. Much warmer weather than in the 2009 third quarter and new retail rates that took effect in the third quarter of 2009 were primary drivers of the improved results.

The Company also announced an increase in its 2010 earnings guidance range to \$1.52 to \$1.62 per share from the previous level of \$1.30 to \$1.50 per share. The revised guidance is primarily due to cumulative positive impacts from weather for the first nine months of the year. Other contributing factors include lower-than-projected fuel and transmission costs for the year-to-date.

“We achieved a very significant milestone when the new Iatan 2 coal plant came on-line this summer as initially promised and ahead of our most recent projection,” commented Mike Chesser, Chairman and CEO. “We have now completed the construction phase of a project that was six years in the making and created thousands of jobs in the state of Missouri. All parties involved in Iatan 2, including our project team, contractors, suppliers and countless other contributors are to be congratulated on this outstanding result. Iatan 2 is truly a state-of-the-art asset that will serve our region for generations to come.”

Chesser continued, “At the same time, our investment in Iatan 2 is one of the largest in our Company’s history. In the coming months, we will complete our Comprehensive Energy Plan by continuing to work diligently to obtain a reasonable return on this major capital investment as part of our current rate cases. Constructive outcomes in these proceedings are critical to our ability to deliver value to shareholders, strengthen our credit profile to allow for new investments that position our Company effectively for the future, and continue to deliver reliable, affordable, environmentally responsible energy to our customers.”

GREAT PLAINS ENERGY INCORPORATED
Consolidated Earnings and Earnings Per Share
Three Months Ended September 30
(Unaudited)

	Earnings		Earnings per Great Plains Energy Share	
	2010	2009	2010	2009
	(millions)			
Electric Utility	\$ 136.2	\$ 83.9	\$ 0.99	\$ 0.62
Other	(4.2)	(5.5)	(0.03)	(0.04)
Income from continuing operations	132.0	78.4	0.96	0.58
Strategic Energy discontinued operations	-	0.8	-	0.01
Net income	132.0	79.2	0.96	0.59
Less: Net income attributable to noncontrolling interest	-	(0.1)	-	-
Net income attributable to Great Plains Energy	132.0	79.1	0.96	0.59
Preferred dividends	(0.4)	(0.4)	-	(0.01)
Earnings available for common shareholders	\$ 131.6	\$ 78.7	\$ 0.96	\$ 0.58

Great Plains Energy Third Quarter:

Improved third quarter 2010 earnings compared to 2009 were attributable to an approximate \$52 million increase in net income in the Company's Electric Utility segment, which includes Kansas City Power & Light ("KCP&L") and the regulated utility operations of KCP&L Greater Missouri Operations ("GMO"). Electric Utility's gross margin (a non-GAAP financial measure described in Attachment A) increased approximately \$110 million, partially offset by increases of about \$12 million in operating expenses and \$8 million in depreciation and amortization, as well as a reduction of approximately \$7 million in non-operating income.

Great Plains Energy continued to maintain a strong liquidity position during the quarter. As of September 30, 2010, approximately \$965 million of available capacity remained on the Company's \$1.25 billion of three-year revolving credit facilities, which were completed in August 2010 and replaced \$1.40 billion of facilities that would have matured in 2011. Also in August, Great Plains Energy issued \$250 million of three-year senior notes at a rate of 2.75%. Proceeds were loaned on an intercompany basis to GMO, which used the funds to repay outstanding short-term debt.

Great Plains Energy Year-to-Date:

For the first nine months of 2010, earnings were \$215.4 million or \$1.57 per share, compared to \$133.3 million or \$1.04 per share for the same period last year.

GREAT PLAINS ENERGY INCORPORATED
Consolidated Earnings and Earnings Per Share
Year to Date September 30
(Unaudited)

	Earnings		Earnings per Great Plains Energy Share	
	2010	2009	2010	2009
	(millions)			
Electric Utility	\$ 232.8	\$ 134.1	\$ 1.70	\$ 1.05
Other	(16.1)	2.9	(0.12)	0.02
Income from continuing operations	216.7	137.0	1.58	1.07
Strategic Energy discontinued operations	-	(2.3)	-	(0.02)
Net income	216.7	134.7	1.58	1.05
Less: Net income attributable to noncontrolling interest	(0.1)	(0.2)	-	-
Net income attributable to Great Plains Energy	216.6	134.5	1.58	1.05
Preferred dividends	(1.2)	(1.2)	(0.01)	(0.01)
Earnings available for common shareholders	\$ 215.4	\$ 133.3	\$ 1.57	\$ 1.04

Key drivers for the first nine months of 2010 compared to the previous year included the following:

- An approximate \$99 million increase in Electric Utility segment net income primarily due to a nearly \$240 million improvement in gross margin partially offset by an almost \$41 million increase in operating expenses and an approximate \$28 million increase in depreciation and amortization; and
- A \$19 million decrease in Other category results, attributable primarily to a \$16 million tax benefit at GMO in 2009 and after-tax interest expense from the Equity Units issued by Great Plains Energy in May 2009.

Average shares of common stock outstanding increased 7 percent to 136.8 million shares primarily as a result of shares issued in the 2009 public offering, which resulted in dilution of \$0.12 per share.

Electric Utility Segment Third Quarter:

Quarterly net income for the Electric Utility segment was \$136.2 million or \$0.99 per share compared to \$83.9 million or \$0.62 per share in 2009.

Key drivers influencing the segment results included the following:

- A \$109.8 million, or 26 percent, increase in gross margin. Revenues increased by \$141.1 million due to a nearly \$75 million impact from warmer weather (discussed below) and \$52 million from a full quarter's impact of new retail rates which became effective on August 1, 2009 in Kansas and September 1, 2009 in Missouri;
- An increase in operating expense of \$12.1 million primarily driven by higher general taxes of \$5.2 million and a \$4.0 million pre-tax loss representing KCP&L's and GMO's combined share of the cost of a temporary auxiliary boiler at Iatan 2. KCP&L supported a recommended disallowance of this cost in its Kansas rate case post-hearing brief filed in September 2010;
- An increase in depreciation and amortization of \$7.4 million largely resulting from additional regulatory amortization pursuant to KCP&L's 2009 rate cases, commencement of depreciation on Iatan 2 (Kansas jurisdiction only), and normal plant additions; and

- A decrease in non-operating income of \$7.0 million, principally due to a lower equity component of Allowance for Funds Used During Construction as a result of reduced Construction Work in Progress.

Retail megawatt hour (MWh) sales increased approximately 14 percent in the 2010 quarter. The higher sales were entirely attributable to warmer weather, as weather-normalized sales were essentially flat compared to the 2009 period:

- Cooling degree days in the region were 73 percent higher than the unseasonably cool third quarter of 2009 and about 19 percent higher than normal. Weather drove an increase of about \$75 million in retail revenues compared to the 2009 quarter.
 - o Compared to normal, the positive revenue impact from weather in the 2010 quarter was approximately \$30 million; and
- On a weather-normalized basis, a 1 percent gain in the residential segment was more than offset by 1.1 percent declines in both the commercial and industrial segments, leaving overall sales essentially unchanged.

Generation fleet availability in the quarter was essentially on par with last year, as slightly lower coal fleet availability compared to 2009 (when 10 of the Company's 14 coal units achieved 90 percent availability or higher) was essentially offset by improved performance at the Wolf Creek nuclear unit.

	Three Months Ended	
	September 30	
	2010	2009
Equivalent Availability - Coal Fleet	85%	87%
Capacity Factor - Coal Fleet	80%	78%
Equivalent Availability - Wolf Creek	100%	93%
Capacity Factor - Wolf Creek	100%	95%
Equivalent Availability - Total GPE (Coal and Nuclear)	87%	88%
Capacity Factor - Total GPE (Coal and Nuclear)	83%	80%

Electric Utility Segment Year-to-Date:

Year-to-date net income for the Electric Utility segment was \$232.8 million or \$1.70 per share compared to \$134.1 million or \$1.05 per share in 2009.

The segment's gross margin improved nearly \$240 million, or about 23 percent, fueled by retail revenue increases of approximately \$149 million from new retail rates and about \$103 million from favorable weather. These benefits were partially offset by an approximate \$41 million increase in operating expenses due primarily to scheduled plant outages, higher general taxes and the Iatan 2 loss, as well as a roughly \$28 million increase in depreciation and amortization.

Retail MWh sales rose approximately 8 percent in the 2010 year-to-date period primarily as a result of favorable weather, which accounted for over 90 percent of the volume increase. In addition to the positive revenue impact compared to 2009 mentioned above, the incremental revenue effect of weather compared to normal levels was about \$61 million.

Weather-normalized retail MWh sales increased about 0.6 percent and contributed additional revenue of about \$6 million. Slightly improved economic conditions in the Kansas City region triggered an improvement in industrial MWh sales, up over 3 percent compared to the first three quarters of 2009. The residential sector also improved; MWh sales were about 1.5 percent higher than the 2009 period primarily due to strong gains of 3.5 percent in the first quarter mainly from increased reliance on electric heat. The sluggish economic recovery dampened results in the commercial segment, where MWh sales were 0.9 percent lower than 2009's first nine months.

Coal plant availability in 2010's first nine months improved significantly compared to the 2009 period when Iatan 1 was off-line until mid-April to complete an environmental upgrade and unit overhaul and Sibley 3 was out of service for roughly half of the first quarter to complete an environmental upgrade. In addition, these improved results reflect the benefits of a number of operational improvement programs in the Company's generation fleet.

	Year to Date September 30	
	2010	2009
Equivalent Availability - Coal Fleet	82%	77%
Capacity Factor - Coal Fleet	76%	69%
Equivalent Availability - Wolf Creek	97%	96%
Capacity Factor - Wolf Creek	99%	98%
Equivalent Availability - Total GPE (Coal and Nuclear)	85%	80%
Capacity Factor - Total GPE (Coal and Nuclear)	79%	73%

Other Category Third Quarter and Year-to-Date:

Results for the Other category primarily include unallocated corporate charges, GMO non-regulated operations, non-controlling interest and preferred dividends. For the 2010 third quarter, the Other category included a loss of \$4.6 million or \$0.03 per share compared to a loss of \$6.0 million or \$0.05 per share in 2009.

For the first nine months of 2010, the Other category reflected a loss of \$17.4 million or \$0.13 per share compared to earnings of \$1.5 million or \$0.01 per share in 2009. The 2010 year-to-date results reflect approximately \$7 million of additional after-tax interest expense from the Equity Units issued in May 2009, while results for the 2009 year-to-date period included a \$16.0 million tax benefit from a 2003-2004 tax audit settlement at GMO.

Regulatory Update

KCP&L filed a rate request in December 2009 with the Kansas Corporation Commission (“KCC”), requesting a revenue increase of \$55.2 million (adjusted to \$50.9 million as the net result of updates to the case, most notably a reduction in the requested return on equity), and KCP&L and GMO filed rate requests with the Missouri Public Service Commission in June 2010 requesting a total revenue increase of \$190 million. The KCC staff’s case filed in June recommended a rate reduction of \$9.1 million. The main differences between KCP&L’s and the KCC staff’s positions are return on equity, staff’s proposed disallowances of certain Iatan 2 costs, and depreciation rate differences.

A decision in the Kansas case is expected in November 2010 with new rates effective in December 2010; decisions in the Missouri cases are expected in the second quarter of 2011 with new rates effective in May 2011 for KCP&L and June 2011 for GMO. The outcome of the rate requests will likely be different than either the Company’s or staff’s positions. In the event that Iatan-related construction cost disallowances were approved by either commission, the amount of the disallowances would be recognized as a loss with a corresponding write-down of utility plant. Great Plains Energy’s earnings guidance does not reflect any possible disallowances beyond those already recognized that may result from current rate proceedings.

The Company has posted its 2010 Third Quarter Form 10-Q, as well as supplemental financial information related to the third quarter on its website, www.greatplainsenergy.com.

Earnings Webcast Information:

An earnings conference call and webcast is scheduled for **9:00 a.m. EDT Friday, October 29, 2010**, to review the Company's third quarter and year-to-date 2010 financial results and business outlook.

A live audio webcast of the conference call, presentation slides, supplemental financial information, and the earnings press release will be available on the investor relations page of Great Plains Energy's website at www.greatplainsenergy.com.

The conference call may be accessed by dialing 877-791-9323 (U.S./Canada) or 706-758-1332 (international) five to ten minutes prior to the scheduled start time. The confirmation code is 11638071. The call will also be webcast and may be accessed in a listen-only mode at www.greatplainsenergy.com.

A replay and transcript of the call will be available later in the day by accessing the investor relations section of the Company's website. A telephonic replay of the conference call will also be available through November 4, 2010 by dialing 800-642-1687 (U.S./Canada) or 706-645-9291 (international). The confirmation code is 11638071.

About The Companies:

Headquartered in Kansas City, Mo., Great Plains Energy Incorporated (NYSE: GXP) is the holding company of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, two of the leading regulated providers of electricity in the Midwest. Kansas City Power & Light and KCP&L Greater Missouri Operations use KCP&L as a brand name. More information about the companies is available on the Internet at: www.greatplainsenergy.com or www.kcpl.com.

Forward-Looking Statements:

Statements made in this release 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, Great Plains Energy and KCP&L 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 and KCP&L; 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 the companies 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 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, increased costs of retirement, healthcare and other benefits; the timing and amount of resulting synergy savings from the GMO acquisition; 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 quarterly reports on Form 10-Q and annual report on Form 10-K filed with the Securities and Exchange Commission. Each forward-looking statement speaks only as of the date of the particular statement. 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.

Great Plains Energy Contacts:

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Media: Katie McDonald, Director of Corporate Communications, 816-556-2365, katie.mcdonald@kcpl.com

Attachment A

Gross margin is a financial measure that is not calculated in accordance with generally accepted accounting principles (GAAP). Gross margin, as used by Great Plains Energy, is defined as operating revenues less fuel, purchased power and transmission of electricity by others. The Company's expense for fuel, purchased power and transmission of electricity by others, offset by wholesale sales margin, is subject to recovery through cost adjustment mechanisms, except for KCP&L's Missouri retail operations. As a result, operating revenues increase or decrease in relation to a significant portion of these expenses. Management believes that gross margin provides a more meaningful basis for evaluating the Electric Utility segment's operations across periods than operating revenues because gross margin excludes the revenue effect of fluctuations in these expenses. Gross margin is used internally to measure performance against budget and in reports for management and the Board of Directors. The Company's definition of gross margin may differ from similar terms used by other companies. A reconciliation to GAAP operating revenues is provided in the table below.

Great Plains Energy Incorporated
Reconciliation of Gross Margin to Operating Revenues
(Unaudited)

	Three Months Ended		Year to Date	
	September 30		September 30	
	2010	2009	2010	2009
	(millions)			
Operating revenues	\$ 728.8	\$ 587.7	\$ 1,787.7	\$ 1,487.4
Fuel	(127.3)	(118.1)	(333.2)	(302.5)
Purchased power	(68.0)	(46.1)	(171.4)	(140.9)
Transmission of electricity by others	(8.1)	(7.9)	(20.9)	(21.2)
Gross margin	<u>\$ 525.4</u>	<u>\$ 415.6</u>	<u>\$ 1,262.2</u>	<u>\$ 1,022.8</u>

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