

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): February 24, 2011

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))
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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 February 24, 2011, Great Plains Energy issued a press release announcing its results for the fourth quarter and year ended December 31, 2010. 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

<u>Exhibit No.</u>	<u>Description</u>
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99.1	Press release issued by Great Plains Energy Incorporated on February 24, 2011.
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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: February 24, 2011

Exhibit Index

Exhibit No.	Description
99.1	Press release issued by Great Plains Energy Incorporated on February 24, 2011.

GREAT PLAINS ENERGY REPORTS FULL-YEAR AND FOURTH QUARTER RESULTS FOR 2010***Weather a Key Driver of Improved 2010 Earnings***

Kansas City, Mo. (February 24, 2011) — Great Plains Energy (NYSE: GXP) today announced full-year 2010 earnings of \$210.1 million or \$1.53 per share of common stock outstanding, compared with full-year 2009 earnings of \$148.5 million or \$1.14 per share. The improved results were driven by favorable weather and new retail rates that took effect in the third quarter of 2009.

In addition to delivering stronger earnings, Great Plains Energy marked a successful year in 2010 with several key accomplishments, the most significant of which was the completion of the Iatan 2 generating station. The Company also delivered higher performance in its generation fleet, maintained top-tier customer satisfaction, expanded its renewable energy portfolio and improved its credit profile.

“As we reflect on our achievements in 2010, the completion of our 850 megawatt Iatan 2 power plant stands out,” stated Mike Chesser, Chairman and CEO of Great Plains Energy. “Over the past five years KCP&L planned and executed the Comprehensive Energy Plan (“CEP”), the largest investment program in our Company’s history. Despite headwinds from the most challenging economic environment in three generations, we stayed the course and kept our focus on the Plan. Bringing Iatan 2 into service on time in the summer of 2010 marked the completion of the CEP’s construction activities.”

Chesser continued, “Iatan 2 was one of the most significant construction projects in recent Missouri history and is among the most efficient and technologically advanced power plants in the United States. This state-of-the-art unit will serve the growing energy needs of the Kansas City region for generations to come.”

“The Company also achieved several key operational milestones last year,” Chesser said. “In 2010, our business and residential customer satisfaction results ranked among the top tier of utilities in the Midwest Large segment of the J.D. Power and Associates industry reports. On the supply side, our coal units achieved the best availability since 2004, despite considerable weather-related challenges. We increased our commitment to renewable energy by increasing our existing

wind generation assets by approximately 50 percent. Additionally, our strong efforts to maintain our credit quality and financial flexibility were rewarded with a shift in our outlooks from “Negative” to “Stable” at Standard & Poor’s and Moody’s in 2010.”

The completion of the construction phase of the CEP was the latest in a series of accomplishments to transform the Company. In 2008, to position itself to face mounting industry challenges and succeed in the coming decades, Great Plains Energy streamlined and enhanced its business model with the sale of subsidiary Strategic Energy and the acquisition of Aquila, Inc.

Great Plains Energy Full-Year:

GREAT PLAINS ENERGY INCORPORATED
Consolidated Earnings and Earnings Per Share
Year Ended December 31
(Unaudited)

	Earnings		Earnings per Great Plains Energy Share	
	2010	2009	2010	2009
	(millions)			
Electric Utility	\$ 235.3	\$ 157.8	\$ 1.72	\$ 1.22
Other	(23.4)	(5.9)	(0.17)	(0.05)
Income from continuing operations	211.9	151.9	1.55	1.17
Strategic Energy discontinued operations	-	(1.5)	-	(0.01)
Net income	211.9	150.4	1.55	1.16
Less: Net income attributable to noncontrolling interest	(0.2)	(0.3)	-	-
Net income attributable to Great Plains Energy	211.7	150.1	1.55	1.16
Preferred dividends	(1.6)	(1.6)	(0.02)	(0.02)
Earnings available for common shareholders	\$ 210.1	\$ 148.5	\$ 1.53	\$ 1.14

Key drivers influencing full-year 2010 reported earnings compared to 2009 include the following:

§ A \$77.5 million increase in Electric Utility segment net income primarily due to a \$234.7 million improvement in gross margin (a non-GAAP financial measure described in Attachment A) partially offset by a \$61.4 million increase in other operating expenses, a \$29.4 million increase in depreciation and amortization and a \$59.7 million increase in income tax expense; and

§ A \$17.4 million decrease in Other category results, which was primarily attributable to a \$16 million tax benefit in 2009.

2010 results included dilution of \$0.09 per share, as average shares of common stock outstanding increased five percent mainly due to the full-year effect of new shares issued in May 2009.

Great Plains Energy Fourth Quarter:

GREAT PLAINS ENERGY INCORPORATED
Consolidated Earnings and Earnings Per Share
Three Months Ended December 31
(Unaudited)

	Earnings (Loss)		Earnings (Loss) per Great Plains Energy Share	
	2010	2009	2010	2009
	(millions)			
Electric Utility	\$ 2.5	\$ 23.7	\$ 0.02	\$ 0.17
Other	(7.3)	(8.8)	(0.06)	(0.06)
Income (loss) from continuing operations	(4.8)	14.9	(0.04)	0.11
Strategic Energy discontinued operations	-	0.8	-	0.01
Net income (loss)	(4.8)	15.7	(0.04)	0.12
Less: Net income attributable to noncontrolling interest	(0.1)	(0.1)	-	-
Net income (loss) attributable to Great Plains Energy	(4.9)	15.6	(0.04)	0.12
Preferred dividends	(0.4)	(0.4)	-	(0.01)
Earnings (loss) available for common shareholders	\$ (5.3)	\$ 15.2	\$ (0.04)	\$ 0.11

Key items reflected in the earnings decline of \$20.5 million or \$0.15 per share compared to the 2009 quarter included the following:

- § An after-tax loss of about \$8 million, or \$0.06 per share, in the Electric Utility segment from the impact of regulatory disallowances of certain costs related to the Iatan 1 environmental retrofit project and Iatan 2; and
- § An after-tax loss of approximately \$7 million or \$0.05 per share in the Other category due to an after-tax write-down of affordable housing investments.

Great Plains Energy's liquidity remains strong. As of December 31, 2010, approximately \$924 million of available capacity remained on the Company's \$1.25 billion of revolving credit facilities.

Electric Utility Segment Full-Year:

The Electric Utility segment consists of Kansas City Power & Light ("KCP&L") and the regulated utility operations of KCP&L Greater Missouri Operations ("GMO"). Full-year 2010 net income was \$235.3 million or \$1.72 per share compared to \$157.8 million or \$1.22 per share in 2009.

Key drivers influencing the segment results include the following:

- § A \$234.7 million, or 17 percent, increase in gross margin. Retail revenue increased (a) approximately \$150 million from the full-year impact of new retail rates which became effective in August 2009 in Kansas and September 2009 in Missouri; and (b) about \$105 million due to favorable weather;
- § An increase in pre-tax other operating expenses of \$61.4 million driven by:
 - o Higher plant operating and maintenance expenses of approximately \$18 million;
 - o Recognition of a \$16.8 million loss representing KCP&L and GMO's combined share of the impact of disallowed construction costs for the Iatan 1 environmental

retrofit and Iatan 2 projects. The Company recorded \$4.0 million of this loss in the third quarter, reflecting the Company's own recommended disallowance of construction costs. The Kansas Corporation Commission excluded these and certain other construction costs related to the projects from KCP&L's Kansas jurisdictional rate base in its November 2010 rate order. The Company determined it is probable that the Missouri Public Service Commission would disallow those costs as well in KCP&L's and GMO's pending rate cases; therefore, in accordance with accounting rules, KCP&L's Missouri jurisdictional portion and GMO's portion of these costs were recognized as a loss in addition to the KCP&L Kansas jurisdictional portion;

- o Approximately \$5 million due to other accounting effects of the KCC November rate order; and
- o Approximately \$15 million due to higher general taxes.

§ An increase in depreciation and amortization of \$29.4 million resulting from additional regulatory amortization pursuant to KCP&L's 2009 rate cases, a full-year impact from the Iatan 1 environmental retrofit project, commencement of depreciation on Iatan 2 (Kansas jurisdiction only), and normal plant additions;

§ A decrease in non-operating income of \$14.6 million, principally due to a lower equity component of AFUDC;

§ A decrease in interest expense of \$7.9 million, primarily due to the impact of deferring carrying costs on Iatan 2 under Missouri construction accounting; and

§ An increase in income tax expense of \$59.7 million resulting from higher pretax income.

Retail megawatt-hour (MWh) sales rose approximately 6 percent for the full-year 2010 primarily as a result of favorable weather, which accounted for nearly 98 percent of the volume increase. The incremental revenue effect of weather compared to normal levels was about \$60 million.

Overall weather-normalized retail MWh sales were relatively flat for the year. Results were mixed across the segment's three customer categories compared to 2009, with industrial MWh sales up 3 percent, residential MWh sales up 0.1 percent and commercial MWh sales down 0.7 percent.

Coal plant availability in 2010 improved compared to 2009. In 2009, Iatan 1 was off-line until mid-April to complete an environmental upgrade and unit overhaul, Sibley 3 was out of service for roughly half of the first quarter to complete an environmental upgrade and the Wolf Creek nuclear unit had a 43-day planned refueling outage in the fourth quarter. In 2010, the only unit off-line for an extended period was LaCygne 1, where a planned maintenance outage to replace boiler cyclones, overhaul the turbine and complete other work began in mid-November. LaCygne 1 is expected to be offline until early March 2011. The improved results in 2010 also reflect the benefits of a number of operational improvement programs implemented at the Company's generating stations.

	Year Ended	
	December 31	
	2010	2009
Equivalent Availability - Coal Plants	82%	79%
Capacity Factor - Coal Plants	74%	71%
Equivalent Availability - Nuclear	93%	86%
Capacity Factor - Nuclear	94%	86%
Equivalent Availability - Coal and Nuclear	83%	80%
Capacity Factor - Coal and Nuclear	77%	73%

Electric Utility Segment Fourth Quarter

Quarterly net income for the Electric Utility segment was \$2.5 million or \$0.02 per share compared to \$23.7 million or \$0.17 per share in 2009.

Key drivers of the segment results include the following:

- A \$4.7 million decrease in gross margin. Retail revenue fell \$12.1 million primarily due to weaker weather-normalized residential MWh sales as described below;
- An increase in other operating expenses of \$20.7 million primarily driven by (a) an almost \$13 million pre-tax loss representing KCP&L and GMO's combined share of the impact of disallowed construction costs above the Company's recommendation for the Iatan 1 environmental retrofit and Iatan 2 projects; and (b) approximately \$5 million due to other accounting effects of the KCC November rate order;
- A decrease in non-operating income and expense of \$6.5 million, principally due to a lower equity component of Allowance for Funds Used During Construction as a result of reduced Construction Work in Progress; and
- A decrease in income tax expense of about \$10 million resulting from lower pre-tax income.

Overall retail MWh sales declined approximately 1 percent in the quarter compared to the 2009 period. On a weather-normalized basis, MWh sales fell 1.7 percent, as a 1.7 percent gain in the industrial category was more than offset by declines of 4.8 percent and 0.1 percent in the residential and commercial categories, respectively.

Generation fleet availability in the quarter was on par with last year, as slightly lower coal fleet availability compared to 2009 as a result of the LaCygne 1 maintenance outage which began in the fourth quarter 2010 was essentially offset by higher availability at the Wolf Creek nuclear unit, which had a refueling outage in the 2009 quarter.

	Three Months Ended	
	December 31	
	2010	2009
Equivalent Availability - Coal Plants	81%	85%
Capacity Factor - Coal Plants	68%	78%
Equivalent Availability - Nuclear	79%	53%
Capacity Factor - Nuclear	80%	53%
Equivalent Availability - Coal and Nuclear	80%	80%
Capacity Factor - Coal and Nuclear	70%	75%

Other Category Full-Year and Fourth Quarter:

Results for the Other category primarily include unallocated corporate charges, GMO non-regulated operations, non-controlling interest and preferred dividends. For the full-year 2010, the Other category reflected a loss of \$25.2 million or \$0.19 per share compared to a loss of \$7.8 million or \$0.07 per share in 2009. The 2010 results reflect approximately \$7 million of additional after-tax interest expense from the Equity Units issued in May 2009 and an approximate \$7 million after-tax write-down of affordable housing investments, partially offset by a GMO interest refund from the Internal Revenue Service of almost \$2.4 million after-tax and a deferred tax credit of nearly \$4 million recognized upon the disposition of GMO's former headquarters. Results in 2009 included a \$16.0 million tax benefit from a 2003-2004 tax audit settlement at GMO.

For the 2010 fourth quarter, the Other category included a loss of \$7.8 million or \$0.06 per share compared to a loss of \$9.3 million or \$0.07 per share in 2009.

Regulatory Update

KCP&L and GMO filed separate rate requests with the Missouri Public Service Commission (MPSC) in June 2010. KCP&L's initially-requested increase of \$92.1 million was later adjusted to \$55.8 million as the net result of updates to the case, mainly (i) lower fuel and purchased power costs, as there is no fuel recovery mechanism; and (ii) increased deferred income taxes due to bonus depreciation. Similarly, GMO's initially-requested increase of \$97.9 million was adjusted to \$88.4 million as the net result of updates to the case. The MPSC staff ("Staff") filed its direct testimony in these cases in November 2010 and filed adjusted recommendations in February 2011. Staff proposed a return on equity range of 8.5% to 9.5% and revenue increase ranges of approximately \$2.2 million to \$17 million for KCP&L and approximately \$14.9 million to \$27.6 million for GMO. The revenue recommendations reflect Staff's proposed construction cost disallowances among other differences from KCP&L's and GMO's requests.

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 beyond those already recognized were approved by the MPSC, the amount of the disallowances would be recognized as a loss with a corresponding write-down of utility plant.

The Company has posted its 2010 Form 10-K, as well as supplemental financial information related to the fourth quarter and full-year performance on its website, www.greatplainsenergy.com.

Earnings Webcast Information:

An earnings conference call and webcast is scheduled for **9:00 a.m. EST Friday, February 25, 2011**, to review the Company's fourth quarter and full-year 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 webcast will be accessible only in a "listen-only" mode.

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 34329393.

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 March 4, 2011 by dialing 800-642-1687 (U.S./Canada) or 706-645-9291 (international). The confirmation code is 34329393.

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 capital projects 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; 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; the inherent uncertainties in estimating the effects of weather, economic conditions and other factors on customer consumption and financial results; 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 generation, transmission, distribution or other projects; the inherent risks associated with the ownership and operation of a nuclear facility including, but not limited to, environmental, health, safety, regulatory and financial risks; workforce risks, including, but not limited to, increased costs of retirement, health care and other benefits; 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 December 31		Year Ended December 31	
	2010	2009	2010	2009
		(millions)		
Operating revenues	\$ 467.8	\$ 477.6	\$ 2,255.5	\$ 1,965.0
Fuel	(97.5)	(103.0)	(430.7)	(405.5)
Purchased power	(42.4)	(42.8)	(213.8)	(183.7)
Transmission of electricity by others	(6.5)	(5.7)	(27.4)	(26.9)
Gross margin	\$ 321.4	\$ 326.1	\$ 1,583.6	\$ 1,348.9

