

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): June 7, 2010

<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) 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	<b>KANSAS CITY POWER &amp; LIGHT COMPANY</b> (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 7.01 Regulation FD Disclosure**

Representatives of Great Plains Energy will participate in meetings with investors during the period of June 7, 2010 through June 30, 2010. A copy of the investor handout to be used in such meetings is attached as Exhibit 99.1 hereto. The investor handout contains information regarding KCP&L. Accordingly, information in the investor handout relating to KCP&L is also being furnished on behalf of KCP&L.

The information under Item 7.01 and in Exhibit 99.1 hereto is being furnished and shall not be deemed filed for the purpose of Section 18 of the Securities Exchange Act of 1934, as amended. The information under Item 7.01 and Exhibit 99.1 hereto shall not be incorporated by reference into any registration statement or other document pursuant to the Securities Act of 1933, as amended, unless otherwise indicated in such registration statement or other document.

**Item 9.01 Financial Statements and Exhibits**

(d) Exhibits

**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/ Lori A. Wright  
Lori A. Wright  
Vice President and Controller

**KANSAS CITY POWER & LIGHT COMPANY**

/s/ Lori A. Wright  
Lori A. Wright  
Vice President and Controller

Date: June 7, 2010.

**Exhibit Index**

Exhibit No.	Title
99.1	Investor handout (furnished and not deemed filed for the purpose of Section 18 of the Securities Exchange Act of 1934, as amended).

# Great Plains Energy Investor Presentation June 2010



June 2010 Investor Presentation

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# Company Representatives

**Mike Chesser**  
**Chairman and**  
**Chief Executive Officer**

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

**Ellen Fairchild**  
**Senior Director Investor Relations**  
**and Assistant Secretary**  
**816-556-2083**  
**[ellen.fairchild@kcpl.com](mailto:ellen.fairchild@kcpl.com)**

# Forward Looking Statement

Statements made in this presentation 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 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, 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.

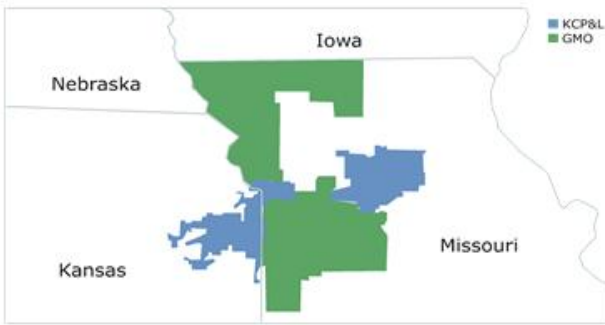
This list of factors is not all-inclusive because it is not possible to predict all factors. Other risk factors are detailed from time to time in Great Plains Energy's and KCP&L's most recent quarterly report on Form 10-Q and annual report on Form 10-K filed with the Securities and Exchange Commission. 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.



June 2010 Investor Presentation

# Solid Vertically Integrated Midwest Utility

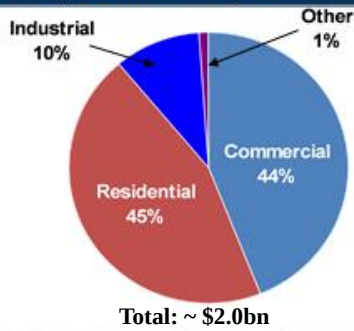
## Service Territories: KCP&L and GMO



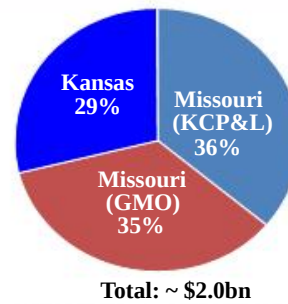
## Business Highlights

- Solid Midwest electric utility - KCP&L brand
- Transformational events in 2008 to focus business model on fully regulated utility operations
  - Sale of Strategic Energy
  - Acquisition of Aquila
- Company attributes post-acquisition
  - ~822,000 customers / 3,200+ employees
  - ~6,000 MW of primarily low-cost baseload generation
  - 5-year projected synergies of ~\$740 million
  - ~\$8.5bn in assets and \$4.4bn in rate base at 2009YE

## 2009 Revenue by Customer Segment



## 2009 Revenue by Utility Jurisdiction



# Strong Platform for Long-Term Growth

## 100% Regulated Electric Utility Operations Focus

- Strong Midwest electric utilities focused on regulated operations in Missouri and Kansas
- Diversified customer base includes ~822,000 residential, commercial, and industrial customers
- ~6,000 Megawatts of generation capacity
- Low-cost generation mix: 80% coal, 17% nuclear (Wolf Creek), 2% natural gas/oil and 1% wind in 2009

## Attractive Platform for Long-Term Earnings Growth

- Growth and stability in earnings driven by sizable regulated investments as part of the Comprehensive Energy Plan (“CEP”)
  - Wind and environmental retrofit components of CEP in place; Iatan 2 baseload coal plant targeted for completion later this year
- Anticipated growth beyond 2010 driven by additional environmental capex, transmission opportunities and wind

## Focused Regulatory Approach

- Successful outcomes in 2006, 2007 and 2008 rate cases in Missouri and Kansas
- Combined annual rate increases from 2008 cases of \$59mm in Kansas and \$159mm in Missouri; new rates effective August 1<sup>st</sup> in Kansas and September 1<sup>st</sup> in Missouri
- \$55mm rate increase for KCP&L Kansas filed in 12/09; \$190 million rate increase for KCP&L MO and GMO filed 6/10

## Stable and Improving Financial Position

- Cash flow and earnings heavily driven by regulated operations and cost recovery mechanisms
- Ample liquidity currently available under \$1.4bn credit facilities
- Sustainable dividend and pay-out, right-sized to fund growth and to preserve liquidity
- Recent shift in outlook from Negative to Stable at Moody’s and S&P





# Strong Track Record of Execution

## Comprehensive Energy Plan

	Project description	Comments
Wind	<ul style="list-style-type: none"> <li>• 100 MW plant in Spearville, KS</li> <li>• Began construction in 2005</li> </ul>	<ul style="list-style-type: none"> <li>ü Completed in Q3 2006</li> <li>ü In rate base from 1/1/2007</li> <li>ü No regulatory disallowance</li> </ul>
LaCygne Environmental	<ul style="list-style-type: none"> <li>• Selective Catalytic Reduction (SCR) unit at LaCygne 1</li> </ul>	<ul style="list-style-type: none"> <li>ü Completed in Q2 2007</li> <li>ü In rate base from 1/1/2008</li> <li>ü No regulatory disallowance</li> </ul>
Iatan 1 Environmental	<ul style="list-style-type: none"> <li>• Air Quality Control System at Iatan 1</li> </ul>	<ul style="list-style-type: none"> <li>ü Completed in Q2 2009</li> <li>ü In rate base starting 3Q 2009 (KS 08/1 &amp; MO 9/1)</li> <li>ü No regulatory disallowance in 2009 MO and KS cases; capped exposure in 2010 cases</li> </ul>
Iatan 2	<ul style="list-style-type: none"> <li>• Construction of Iatan 2 super-critical coal plant (850 MW; 73% GXP ownership share)<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>ü On track for completion Q4 2010</li> <li>ü Expected in Kansas rates in Q4 2010 / 1Q 2011; Missouri rates in Q2 2011</li> </ul>

Great Plains Energy has effectively executed all elements of its Comprehensive Energy Plan to date and has received constructive regulatory treatment

<sup>1</sup> Includes post-combustion environmental technologies including an SCR system, wet flue gas desulphurization system and fabric filter to control emissions

# Focused Regulatory Approach

Rate Case Outcomes						
Rate Jurisdiction	Amount Requested	Amount Approved	Effective Date	Rate Base	Return on	Rate-making Equity Ratio
KCP&L - Missouri	\$55.8	\$50.6	1/1/2007	\$1,270	11.25%	53.69%
KCP&L - Missouri	\$45.4	\$35.3	1/1/2008	\$1,298	10.75%	57.62%
KCP&L - Missouri	\$101.5	\$95.0	9/1/2009	\$1,496 <sup>1</sup>	n/a <sup>4</sup>	46.63%
KCP&L - Kansas	\$42.3	\$29.0	1/1/2007	\$1,000 <sup>1</sup>	n/a <sup>2</sup>	n/a
KCP&L - Kansas	\$47.1	\$28.0	1/1/2008	\$1,100 <sup>1</sup>	n/a <sup>3</sup>	n/a
KCP&L - Kansas	\$71.6	\$59.0	8/1/2009	\$1,270 <sup>1</sup>	n/a <sup>4</sup>	50.75%
GMO - MPS	\$94.5	\$45.2	6/1/2007	\$918	10.25%	48.17%
GMO - MPS	\$66.0	\$48.0	9/1/2009	\$1,188 <sup>1</sup>	n/a <sup>5</sup>	45.95%
GMO - L&P	\$24.4	\$13.6	6/1/2007	\$186	10.25%	48.17%
GMO - L&P	\$17.1	\$15.0	9/1/2009	\$286 <sup>1</sup>	n/a <sup>5</sup>	45.95%

<sup>1</sup> Rate Base amounts are approximate amounts since the cases were black box settlements

<sup>2</sup> Iatan 2 AFUDC calculation was set at 8.5%

<sup>3</sup> Iatan 2 AFUDC calculation was set at 8.3%

<sup>4</sup> Iatan 2 AFUDC calculation was set at 8.25%

<sup>5</sup> Iatan 2 AFUDC calculation was set at 10.2%

# Steps to In-Service Date for Iatan 2

- Hydrostatic Tests (completed 10/07/09)
- Air Flow Draft Tests (completed 2/25/10)
- First Fire on Oil (completed 3/29/10)
- Steam Blows (completed early June)

q First Fire on Coal

q Synchronization

q Provisional Acceptance

# Iatan 2 Reforecast

	Total Project (850 MW)		GPE Share (618 MW)	
	Low	High	Low	High
<b>Current</b>				
Estimated Cost of Iatan 2 <sup>1</sup>	\$ 1,680 <sup>2</sup>	\$ 1,720 <sup>2</sup>	\$ 1,222	\$ 1,251
<b>Previous</b>				
Estimated Cost of Iatan 2 <sup>1</sup>	\$ 1,587 <sup>2</sup>	\$ 1,652 <sup>2</sup>	\$ 1,153	\$ 1,201
Increase / (Decrease)	\$ 93	\$ 68	\$ 69	\$ 50

<sup>1</sup>Excluding Allowance for Funds Used During Construction ("AFUDC") and common facilities that were identified at the time of the start-up of the Iatan 1 environmental project that will be used by both Iatan 1 and Iatan 2

<sup>2</sup>Derived from KCP&L and Great Plains Energy disclosed amounts

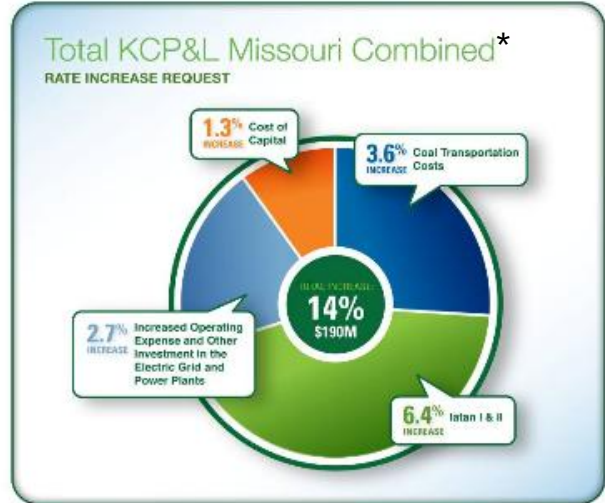
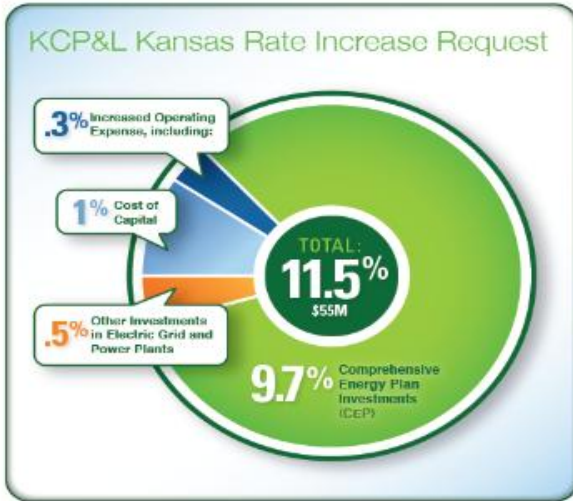
- Currently anticipate a fourth quarter 2010 in-service date for Iatan 2
- New cost estimate range for GXP share is a \$69 million (6%) increase to the low end and a \$50 million (4%) increase to the high end

# Rate Case Update

- KCP&L Kansas electric service case filed December 2009
  - \$55.2 million or an 11.5% annual increase request
  - ROE: 11.25%
  - Equity ratio: 46.17%
  - Rate base: \$1.795 billion
- KCP&L Kansas - Interveners' Direct Testimony to be filed in early June
- Missouri - Filed KCP&L and GMO cases June 2010

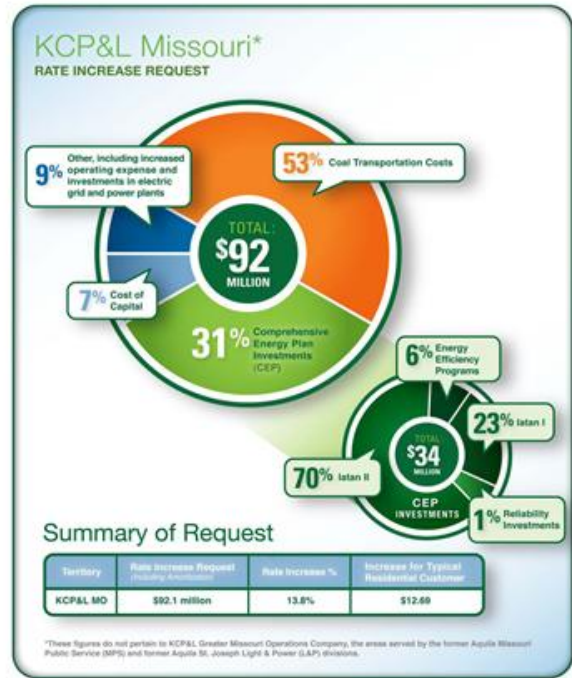
# 2010 Rate Case Summary

Rate Case	Case Number	File Date	Traditional	Rate Base	Return on Equity	Rate-making Equity Ratio	Rate of Return	Effective Date
KCP&L - KS	10-KCPE-415-RTS	12/17/2009	\$55.2	\$1,794.8	11.25%	46.174%	9.166%	12/1/2010
KCP&L - MO	ER-2010-0355	6/4/2010	\$92.1	\$2,122.8	11.00%	46.158%	9.040%	5/4/2011
GMO - MPS	ER-2010-0356	6/4/2010	\$75.8	\$1,468.7	11.00%	46.158%	8.997%	5/4/2011
GMO - L&P	ER-2010-0356	6/4/2010	\$22.1	\$422.0	11.00%	46.158%	8.997%	5/4/2011



\* Includes Kansas City Power and Light and KCP&L Greater Missouri Operations (GMO)

# KCP&L KS and MO Rate Cases



# KCP&L GMO Rate Cases





# Drivers of Change



# Sustainable Resource Strategy

## Change Creates Opportunity

**Transmission &  
Distribution  
Opportunities**

**Generation Fleet  
Optimization  
Opportunities**

**Opportunities  
Resulting from  
SmartGrid  
Technologies**

# 2010 - 2012 Capital Expenditures

	2010	2011	2012
		(millions)	
Generating facilities (excluding Iatan No. 2)	\$ 152.0	\$ 152.8	\$ 138.3
Distribution and transmission facilities	192.8	238.0	275.7
General facilities	15.6	23.7	48.9
Nuclear fuel	30.9	21.5	19.8
Environmental	16.4	189.1	189.9
Iatan No. 2 <sup>(a)</sup>	243.9	54.1	-
<b>Total utility capital expenditures</b>	<b>\$ 651.6</b>	<b>\$ 679.2</b>	<b>\$ 672.6</b>

<sup>(a)</sup> Includes \$183.5 million and \$40.7 million of expenditures pursuant to KCP&L's Comprehensive Energy Plan in 2010 and 2011, respectively. Includes \$60.4 million and \$13.4 million of expenditures at GMO in 2010 and 2011, respectively.

The majority of our expected environmental spend is related to our LaCygne units for a scrubber and baghouse on Unit 1 (already has an SCR, installed in 2007), as well as an SCR, scrubber, baghouse, and low NOx burners for Unit 2.

We continue to monitor and evaluate the impact of potential environmental mandates on our other generating facilities, but have not included any potential costs in our capital expenditures table at this time.

No capital for wind is included in the 2010 to 2012 period. Our current view over the next three years is that any wind projects would be completed as purchase power agreements, or "PPAs".

# Positioned for Long-term Earnings Growth

- Complete Iatan 2
- Navigate rate case process with constructive outcomes
- Continue to deliver on GMO synergies and movement toward Tier 1 costs across the organization
- Evaluate future opportunities through Sustainable Resource Strategy and continue to advocate on behalf of our shareholders, customers, and communities

# Appendix

## 1Q 2010

### Financial Overview

**GREAT PLAINS ENERGY**  
**Consolidated Earnings and Earnings Per Share**  
**Three Months Ended March 31**  
(Unaudited)

	Earnings		Earnings per Great Plains Energy Share	
	2010	2009	2010	2009
	(millions)			
Electric Utility	\$ 24.9	\$ 7.4	\$ 0.18	\$ 0.06
Other	(4.6)	14.3	(0.03)	0.12
Net income	20.3	21.7	0.15	0.18
Preferred dividends	(0.4)	(0.4)	-	-
Earnings available for common shareholders	\$ 19.9	\$ 21.3	\$ 0.15	\$ 0.18

Electric utility's net income increased \$17.5 million primarily driven by an increase in gross margin\* due to new retail rates.

Other segment earnings decreased primarily as a result of a \$16 million benefit in the first quarter of 2009 from a 2003-04 tax audit settlement at GMO's non-utility operations.

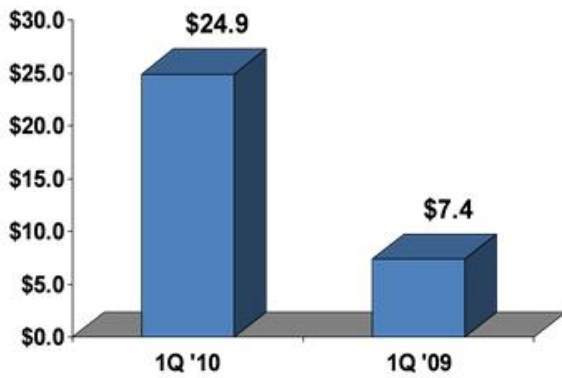
Increased number of shares outstanding primarily from the May 2009 equity offering resulted in \$0.02 per share dilution.

\*Gross margin is defined and reconciled to operating revenues at the end of the presentation

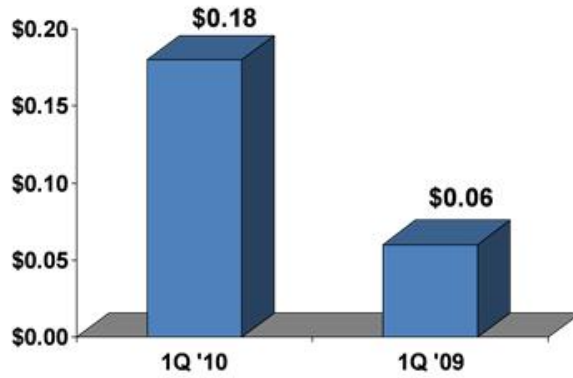
# Electric Utility First Quarter

(millions except where indicated)

## Earnings



## Earnings Per Share



### Key Earnings Drivers:

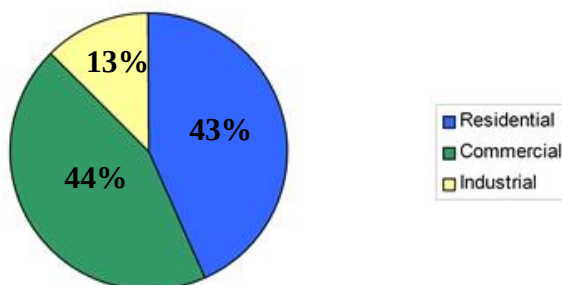
- + A \$65.6 million, or 24 percent, increase in gross margin primarily due to new retail rates
- Increased operating expense of \$13.8 million primarily due to a \$10.3 million increase in O&M expenses driven by planned plant outages; and
- Increased depreciation and amortization of \$13.2 million

# Electric Utility Segment

## Weather Normalized Retail MWh Sales and Customer Growth Rates

	1Q 2010 Compared to 1Q 2009		
	Customers	Use/Customer	Change MWh Sales
Residential	0.4%	3.1%	3.5%
Commercial	0.0%	0.1%	0.1%
Industrial	-1.4%	3.7%	2.3%
<b>Weighted Average</b>	<b>0.3%</b>	<b>1.6%</b>	<b>1.9%</b>

## Retail MWh Sales by Customer Class - First Quarter 2010





# Current Credit Ratings

	Moody's	Standard & Poor's
<u>Great Plains Energy</u>		
Outlook	Stable	Stable
Corporate Credit Rating	-	BBB
Preferred Stock	Ba1	BB+
Senior Unsecured Debt	Baa3	BBB-
<u>KCP&amp;L</u>		
Outlook	Stable	Stable
Senior secured Debt	A3	BBB+
Senior Unsecured Debt	Baa2	BBB
Commercial Paper	P-2	A-2
<u>GMO</u>		
Outlook	Stable	Stable
Senior Unsecured Debt	Baa3	BBB

## Moody's March 12, 2010:

- Revised outlook on GXP, KCP&L and GMO to Stable from Negative
- Downgraded KCP&L's senior unsecured rating to Baa2 from Baa1
- Affirmed all other ratings

## S&P April 9, 2010:

- Revised outlook on GXP, KCP&L and GMO to Stable from Negative
- Raised short-term rating on KCP&L to A-2 from A-3
- Affirmed all long-term ratings

# Debt and Capital Structure

as of 3/31/2010

## Great Plains Energy Debt (\$ in millions)

	KCP&L		GMO <sup>(1)</sup>		GPE		Consolidated	
	Amount	Rate <sup>(2)</sup>	Amount	Rate <sup>(2)</sup>	Amount	Rate <sup>(2)</sup>	Amount	Rate <sup>(2)</sup>
Short-term Debt	\$299.0	0.70%	\$283.0	1.50%	\$26.5	0.68%	\$608.5	1.07%
Long-term Debt <sup>(3)</sup>	\$1,780.1	6.15%	\$1,037.4	9.88%	\$387.1	10.67%	\$3,204.6	7.85%
<b>Total</b>	<b>\$2,079.1</b>	<b>5.33%</b>	<b>\$1,320.4</b>	<b>8.08%</b>	<b>\$413.6</b>	<b>10.02%</b>	<b>\$3,813.1</b>	<b>6.77%</b>

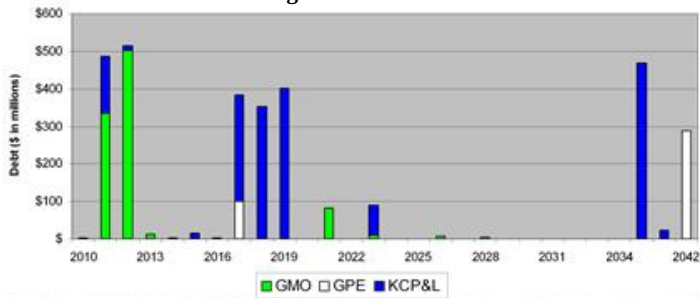
Secured debt = \$862.7 (23%), Unsecured debt = \$2,950.4 (77%)

(1) GPE guarantees substantially all of GMO's debt

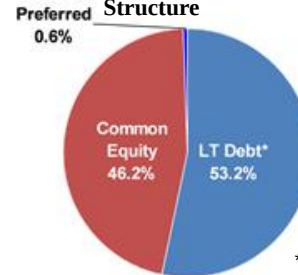
(2) Weighted Average Rates - excludes premium/discounts and fair market value adjustments

(3) Includes current maturities of long-term debt

### Long-term Debt Maturities



### Capital Structure



\*Includes current maturities

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

<b>Three Months Ended March 31</b>	<b>2010</b>	<b>2009</b>
	(millions)	
Operating revenues	\$ 506.9	\$ 419.2
Fuel	(101.8)	(87.6)
Purchased power	(65.5)	(57.2)
Transmission of electricity by others	(5.6)	(6.0)
<b>Gross margin</b>	<b>\$ 334.0</b>	<b>\$ 268.4</b>

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 above.

