



SUPPLEMENTAL INVESTOR INFORMATION

First Quarter 2010

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NOTE:

The financial data and statistics in this document reflect the financial position and operating results of Great Plains Energy, its electric utility segment and Kansas City Power & Light Company (KCP&L) and KCP&L Greater Missouri Operations Company (GMO), its utility subsidiaries, through March 31, 2010. Independent auditors have not audited any of the financial and operating statements. This document has been prepared primarily for security analysts and investors in the hope that it will serve as a convenient and useful reference document. The format of this document may change in the future as we continue to try to meet the needs of security analysts and investors. This document is not intended for use in connection with any sale, offer to sell, or solicitation of any offer to buy securities.

GREAT PLAINS ENERGY INCORPORATED
Consolidated Statements of Income
(Unaudited)

Three Months Ended March 31	2010	2009
Operating Revenues	(millions, except per share amounts)	
Electric revenues	\$ 506.9	\$ 419.2
Operating Expenses		
Fuel	101.8	87.6
Purchased power	65.5	57.2
Transmission of electricity by others	5.6	6.0
Utility operating and maintenance expenses	151.2	140.9
Depreciation and amortization	82.2	69.0
General taxes	38.1	34.7
Other	0.5	2.9
Total	444.9	398.3
Operating income	62.0	20.9
Non-operating income	16.1	12.8
Non-operating expenses	(1.6)	(0.9)
Interest charges	(46.5)	(37.3)
Income (loss) before income tax (expense) benefit and loss from equity investments	30.0	(4.5)
Income tax (expense) benefit	(9.7)	26.3
Loss from equity investments, net of income taxes	-	(0.1)
Net income	20.3	21.7
Preferred stock dividend requirements	0.4	0.4
Earnings available for common shareholders	\$ 19.9	\$ 21.3
Average number of basic common shares outstanding	134.9	119.2
Basic and diluted earnings per common share	\$ 0.15	\$ 0.18
Cash dividends per common share	\$ 0.2075	\$ 0.2075

The Notes to the Consolidated Financial Statements in the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2010, should be read in conjunction with this financial information.

GREAT PLAINS ENERGY INCORPORATED
Consolidated Balance Sheets
(Unaudited)

	March 31 2010	Decmeber 31 2009
(millions, except share amounts)		
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 6.3	\$ 65.9
Funds on deposit	5.0	4.4
Receivables, net	189.7	230.5
Accounts receivable pledged as collateral	95.0	-
Fuel inventories, at average cost	85.4	85.0
Materials and supplies, at average cost	127.8	121.3
Deferred refueling outage costs	16.6	19.5
Refundable income taxes	13.4	13.5
Deferred income taxes	39.8	36.8
Assets held for sale	18.8	19.4
Derivative instruments	1.2	1.5
Prepaid expenses and other assets	15.4	14.7
Total	614.4	612.5
Utility Plant, at Original Cost		
Electric	8,915.0	8,849.0
Less-accumulated depreciation	3,841.1	3,774.5
Net utility plant in service	5,073.9	5,074.5
Construction work in progress	1,576.7	1,508.4
Nuclear fuel, net of amortization of \$112.1 and \$106.0	73.4	68.2
Total	6,724.0	6,651.1
Investments and Other Assets		
Affordable housing limited partnerships	13.1	13.2
Nuclear decommissioning trust fund	117.8	112.5
Regulatory assets	841.6	822.2
Goodwill	169.0	169.0
Derivative instruments	9.9	7.9
Other	94.7	94.4
Total	1,246.1	1,219.2
Total	\$ 8,584.5	\$ 8,482.8

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GREAT PLAINS ENERGY INCORPORATED
Consolidated Balance Sheets
(Unaudited)

	March 31 2010	December 31 2009
LIABILITIES AND CAPITALIZATION		
(millions, except share amounts)		
Current Liabilities		
Notes payable	\$ 309.5	\$ 252.0
Collateralized note payable	95.0	-
Commercial paper	204.0	186.6
Current maturities of long-term debt	138.6	1.3
Accounts payable	210.8	315.0
Accrued taxes	50.4	27.9
Accrued interest	71.0	72.5
Accrued compensation and benefits	34.8	45.1
Pension and post-retirement liability	4.6	4.6
Derivative instruments	2.4	0.3
Other	52.1	53.0
Total	<u>1,173.2</u>	<u>958.3</u>
Deferred Credits and Other Liabilities		
Deferred income taxes	402.1	381.9
Deferred tax credits	144.2	140.5
Asset retirement obligations	134.7	132.6
Pension and post-retirement liability	448.5	440.4
Regulatory liabilities	242.3	237.8
Derivative instruments	5.7	0.5
Other	145.7	145.1
Total	<u>1,523.2</u>	<u>1,478.8</u>
Capitalization		
Great Plains Energy common shareholders' equity		
Common stock-250,000,000 shares authorized without par value		
135,827,383 and 135,636,538 shares issued, stated value	2,316.3	2,313.7
Retained earnings	520.9	529.2
Treasury stock-305,989 and 213,423 shares, at cost	(7.1)	(5.5)
Accumulated other comprehensive loss	(48.2)	(44.9)
Total	<u>2,781.9</u>	<u>2,792.5</u>
Noncontrolling interest	1.2	1.2
Cumulative preferred stock \$100 par value		
3.80% - 100,000 shares issued	10.0	10.0
4.50% - 100,000 shares issued	10.0	10.0
4.20% - 70,000 shares issued	7.0	7.0
4.35% - 120,000 shares issued	12.0	12.0
Total	<u>39.0</u>	<u>39.0</u>
Long-term debt	<u>3,066.0</u>	<u>3,213.0</u>
Total	<u>5,888.1</u>	<u>6,045.7</u>
Commitments and Contingencies		
Total	<u>\$ 8,584.5</u>	<u>\$ 8,482.8</u>

The Notes to the Consolidated Financial Statements in the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2010, should be read in conjunction with this financial information.

GREAT PLAINS ENERGY INCORPORATED
Consolidated Statements of Cash Flows
(Unaudited)

Three Months Ended March 31	2010	2009
Cash Flows from Operating Activities		(millions)
Net income	\$ 20.3	\$ 21.7
Adjustments to reconcile income to net cash from operating activities:		
Depreciation and amortization	82.2	69.0
Amortization of:		
Nuclear fuel	6.1	4.4
Other	(1.9)	(3.9)
Deferred income taxes, net	4.7	(23.2)
Investment tax credit amortization	(0.5)	(0.6)
Loss from equity investments, net of income taxes	-	0.1
Other operating activities	(119.7)	(64.0)
Net cash from operating activities	(8.8)	3.5
Cash Flows from Investing Activities		
Utility capital expenditures	(176.9)	(303.1)
Allowance for borrowed funds used during construction	(9.7)	(9.6)
Payment to Black Hills for asset sale working capital adjustment	-	(7.7)
Purchases of nuclear decommissioning trust investments	(65.8)	(12.8)
Proceeds from nuclear decommissioning trust investments	64.9	11.8
Other investing activities	(2.6)	2.6
Net cash from investing activities	(190.1)	(318.8)
Cash Flows from Financing Activities		
Issuance of common stock	1.6	52.6
Issuance of long-term debt	-	406.8
Issuance fees	-	(3.8)
Repayment of long-term debt	(1.1)	(1.3)
Net change in short-term borrowings	74.9	(90.0)
Net change in collateralized short-term borrowings	95.0	-
Dividends paid	(28.5)	(25.2)
Other financing activities	(2.6)	(1.6)
Net cash from financing activities	139.3	337.5
Net Change in Cash and Cash Equivalents	(59.6)	22.2
Cash and Cash Equivalents at Beginning of Year	65.9	61.1
Cash and Cash Equivalents at End of Period	\$ 6.3	\$ 83.3

The Notes to the Consolidated Financial Statements in the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2010, should be read in conjunction with this financial information.

Great Plains Energy Incorporated
Electric Utility Segment
(Unaudited)

Electric Utility Results

Three Months Ended March 31	2010	2009
	(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)
Gross margin ^(a)	334.0	268.4
Other operating expenses	(189.0)	(175.2)
Depreciation and amortization	(82.2)	(69.0)
Operating income	62.8	24.2
Non-operating income and expenses	9.9	11.7
Interest charges	(36.2)	(34.3)
Income tax (expense) benefit	(11.6)	5.8
Net income	\$ 24.9	\$ 7.4

Electric Utility Gross Margin

Three Months Ended March 31	Revenues and Costs		%	MWhs Sold		%
	2010	2009		Change	2010	
Retail revenues	(millions)			(thousands)		
Residential	\$ 204.7	\$ 168.8	21	2,539	2,291	11
Commercial	182.3	157.3	16	2,624	2,550	3
Industrial	40.4	35.5	14	745	729	2
Other retail revenues	4.2	3.9	10	25	29	(6)
Fuel recovery mechanism under (over) recovery	13.6	11.8	16	NA	NA	NA
Total retail	445.2	377.3	18	5,933	5,599	6
Wholesale revenues	49.7	28.7	73	1,323	813	63
Other revenues	12.0	13.2	(8)	NA	NA	NA
Operating revenues	506.9	419.2	21	7,256	6,412	13
Fuel	(101.8)	(87.6)	16			
Purchased power	(65.5)	(57.2)	15			
Transmission of electricity by others	(5.6)	(6.0)	(8)			
Gross margin ^(a)	\$ 334.0	\$ 268.4	24			

^(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 to management and the Board of Directors. The Company's definition of gross margin may differ from similar terms used by other companies.

Electric Utility Generation

Three Months Ended March 31	2010	2009	%
Net MWhs Generated by Fuel Type	(thousands)		
Coal	4,834	3,904	24
Nuclear	1,100	1,201	(8)
Natural gas and oil	10	25	(60)
Wind	88	102	(14)
Total Generation	6,032	5,232	15

Electric Utility Customers at March 31, 2010

Residential	726,500
Commercial	96,200
Industrial	2,300
Other	400
Total retail customers	825,400

Electric Utility Statistics

Three Months Ended March 31	2010	2009
Average non-firm wholesale price per MWh	\$ 34.90	\$ 30.86
Average purchased power price per MWh	\$ 37.15	\$ 32.90
Purchased power MWhs	1,645,704	1,548,897
Heating degree days	2,928	2,548
Equivalent availability - coal plants	78 %	64 %
Capacity factor - coal plants	71 %	58 %
Equivalent availability - nuclear	92 %	100 %
Capacity factor - nuclear	93 %	100 %
Equivalent availability - total GPE (coal and nuclear)	80 %	69 %
Capacity factor - total GPE (coal and nuclear)	74 %	64 %

Kansas City Power & Light Company
(Unaudited)

KCP&L Results

Three Months Ended March 31	2010	2009
	(millions)	
Operating revenues	\$ 335.6	\$ 277.5
Fuel	(61.5)	(52.7)
Purchased power	(27.3)	(24.4)
Transmission of electricity by others	(2.9)	(2.9)
Gross margin ^(a)	243.9	197.5
Other operating expenses	(139.9)	(131.0)
Depreciation and amortization	(63.5)	(51.6)
Operating income	40.5	14.9
Non-operating income and expenses	8.0	8.1
Interest charges	(21.7)	(17.2)
Income tax (expense) benefit	(7.6)	2.6
Net income	\$ 19.2	\$ 8.4

KCP&L Gross Margin

Three Months Ended March 31	Revenues and Costs		%	MWhs Sold		%
	2010	2009		Change	2010	
Retail revenues	(millions)			(thousands)		
Residential	\$ 122.3	\$ 98.5	24	1,461	1,310	12
Commercial	134.3	115.2	17	1,859	1,809	3
Industrial	26.3	23.5	12	448	450	(1)
Other retail revenues	3.0	2.6	16	23	23	1
Kansas ECA under (over) recovery	1.0	4.8	(79)	NA	NA	NA
Total retail	286.9	244.6	17	3,791	3,592	6
Wholesale revenues	43.8	27.3	61	1,178	777	51
Other revenues	4.9	5.6	(13)	NA	NA	NA
Operating revenues	\$ 335.6	\$ 277.5	21	4,969	4,369	14
Fuel	(61.5)	(52.7)	17			
Purchased power	(27.3)	(24.4)	12			
Transmission of electricity by others	(2.9)	(2.9)	(2)			
Gross margin ^(a)	\$ 243.9	\$ 197.5	24			

^(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. KCP&L'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 KCP&L'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 to management and the Board of Directors. The Company's definition of gross margin may differ from similar terms used by other companies.

KCP&L Generation

Three Months Ended March 31	2010	2009	%
Net MWhs Generated by Fuel Type	(thousands)		
Coal	3,476	2,720	28
Nuclear	1,100	1,201	(8)
Natural gas and oil	10	4	140
Wind	88	102	(14)
Total Generation	4,674	4,027	16

KCP&L Customers at March 31, 2010

Residential	452,000
Commercial	58,100
Industrial	2,100
Other	100
Total retail customers	512,300

KCP&L Statistics

Three Months Ended March 31	2010	2009
Average non-firm wholesale price per MWh	\$ 34.31	\$ 30.96
Average purchased power price per MWh	\$ 45.94	\$ 37.45
Purchased power - MWh	546,042	572,689
Heating degree days	2,928	2,548
Equivalent availability - coal plants	75 %	61 %
Capacity factor - coal plants	71 %	56 %
Equivalent availability - nuclear	92 %	100 %
Capacity factor - nuclear	93 %	100 %

KCP&L Greater Missouri Operations Company (GMO)

Utility Operations

(Unaudited)

GMO Utility Results

Three Months Ended March 31	2010	2009
	(millions)	
Operating revenues	\$ 171.3	\$ 141.7
Fuel	(40.3)	(34.9)
Purchased power	(38.2)	(32.8)
Transmission of electricity by others	(2.7)	(3.1)
Gross margin ^(a)	90.1	70.9
Other operating expenses	(49.1)	(44.2)
Depreciation and amortization	(18.7)	(17.4)
Operating income	22.3	9.3
Non-operating income and expenses	1.9	3.6
Interest charges	(14.5)	(17.1)
Income tax (expense) benefit	(4.0)	3.2
Net income	\$ 5.7	\$ (1.0)

GMO Utility Gross Margin

Three Months Ended March 31	Revenues and Costs		%	MWhs Sold		%
	2010	2009	Change	2010	2009	Change
Retail revenues	(millions)			(thousands)		
Residential	\$ 82.4	\$ 70.3	17	1,078	981	10
Commercial	48.0	42.1	14	765	741	3
Industrial	14.1	12.0	17	297	279	7
Other retail revenues	1.2	1.3	(4)	2	6	(31)
Fuel recovery mechanism under (over) recovery	12.6	7.0	80	NA	NA	NA
Total retail	158.3	132.7	19	2,142	2,007	7
Wholesale revenues	5.9	1.4	NM	145	36	NM
Other revenues	7.1	7.6	(5)	NA	NA	NA
Operating revenues	\$ 171.3	\$ 141.7	21	2,287	2,043	12
Fuel	(40.3)	(34.9)	16			
Purchased power	(38.2)	(32.8)	17			
Transmission of electricity by others	(2.7)	(3.1)	(14)			
Gross margin ^(a)	\$ 90.1	\$ 70.9	27			

^(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. GMO'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. 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 GMO'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 to management and the Board of Directors. The Company's definition of gross margin may differ from similar terms used by other companies

GMO Generation

Three Months Ended March 31	2010	2009	% Change
Net MWhs Generated by Fuel Type	(thousands)		
Coal	1,358	1,184	15
Natural gas and oil	-	21	(100)
Total Generation	1,358	1,205	13

GMO Utility Customers at March 31, 2010

Residential	274,500
Commercial	38,100
Industrial	200
Other	300
Total retail customers	313,100

GMO Utility Statistics

Three Months Ended March 31	2010	2009
Average non-firm wholesale price per MWh	\$ 39.82	\$ 35.89
Average purchased power price per MWh	\$ 32.79	\$ 30.23
Purchased power - MWh	1,099,662	976,208
Heating degree days	2,928	2,548
Equivalent availability - coal plants	86 %	72 %
Capacity factor - coal plants	72 %	63 %