

This preliminary prospectus supplement relates to an effective registration statement under the Securities Act of 1933, as amended, but is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not offers to sell these securities and are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Filed Pursuant to Rule 424(b)(5)
Registration No. 333-159131

SUBJECT TO COMPLETION, DATED MAY 11, 2009

**Preliminary Prospectus Supplement
(To Prospectus Dated May 11, 2009)**

10,000,000 Shares



GREAT PLAINS ENERGY

Great Plains Energy Incorporated

Common Stock

We are offering 10,000,000 shares of common stock. The shares are listed on the New York Stock Exchange, or NYSE, under the symbol "GXP." The last reported sale price on the NYSE of our common stock on May 8, 2009 was \$15.15 per share.

Concurrently with this offering of common stock, we are offering, by means of a separate prospectus supplement, 5,000,000 Equity Units (or 5,750,000 Equity Units if the underwriters of that offering exercise in full their option to purchase additional Equity Units). This offering of common stock and the Equity Units offering are not contingent on one another. See "Concurrent Equity Units Offering" in this prospectus supplement.

Investing in our common stock involves risks. See "Risk factors" beginning on page S-7 in this prospectus supplement and beginning on page 3 of the accompanying prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	<u>Per Share</u>	<u>Total</u>
Public offering price	\$	\$
Underwriting discount	\$	\$
Proceeds, before expenses, to Great Plains Energy Incorporated	\$	\$

If the underwriters sell more than 10,000,000 shares of common stock in this offering, the underwriters have a 30-day option from the date of this prospectus supplement to purchase up to an additional 1,500,000 shares from us on the same terms and conditions and at the public offering price less the underwriting discount.

The underwriters expect to deliver the shares of common stock against payment therefor on or about May , 2009.

Joint Book-Running Managers

Goldman, Sachs & Co.

J.P.Morgan

Joint Lead Manager

Wachovia Securities

Senior Co-Manager

KeyBanc Capital Markets

Co-Managers

Edward Jones

Mitsubishi UFJ Securities

Scotia Capital

May , 2009

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering. The second part is the accompanying prospectus dated May 11, 2009, which we refer to as the “accompanying prospectus.” The accompanying prospectus contains a description of the securities we may offer under the registration statement of which this prospectus supplement and the accompanying prospectus form a part and gives more general information, some of which may not apply to this offering of common stock.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus or in any written communication from us or any underwriter specifying the final terms of this offering. We have not, and the underwriters have not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the underwriters are not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Before you invest in our common stock, you should carefully read the registration statement (including the exhibits thereto) of which this prospectus supplement and the accompanying prospectus form a part, this prospectus supplement, the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and accompanying prospectus. The incorporated documents are described in this prospectus supplement under “Where You Can Find More Information.”

Unless the context otherwise requires or as otherwise indicated, when we refer to “Great Plains Energy,” the “Company,” “we,” “us” or “our” in this prospectus or when we otherwise refer to ourselves in this prospectus, we mean Great Plains Energy Incorporated and its subsidiaries, unless the context clearly indicates otherwise.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, and proxy statements and other information with the Securities and Exchange Commission (the “SEC”) through the SEC’s Electronic Data Gathering, Analysis and Retrieval system and these filings are publicly available through the SEC’s website (<http://www.sec.gov>). You may read and copy such material at the SEC’s Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

The SEC allows us to “incorporate by reference” into this prospectus supplement the information we file with it. This means that we can disclose important information to you by referring you to the documents containing the information. The information we incorporate by reference is considered to be included in and an important part of this prospectus supplement and should be read with the same care. Information that we file later with the SEC that is incorporated by reference into this prospectus supplement will automatically update and supersede this information. We are incorporating by reference into this prospectus supplement the following documents that we have filed with the SEC and any subsequent filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”) (excluding information deemed to be furnished and not filed with the SEC) until the offering of the securities described in this prospectus supplement is completed:

- Our Annual Report on Form 10-K for the year ended December 31, 2008, filed with the SEC on February 27, 2009;
- Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2009, filed with the SEC on May 11, 2009;
- Our Current Report on Form 8-K/A dated August 13, 2008 and filed with the SEC on August 14, 2008 (only with respect to the historical audited financial statements of Aquila, Inc. (now known as KCP&L

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Greater Missouri Operations Company, or “GMO”) listed in Item 9.01(a) and set forth in Exhibit 99.1 thereto); and

- Our Current Reports on Form 8-K dated January 27, 2009 and filed with the SEC on January 28, 2009; February 10, 2009 (Item 8.01 only) and filed with the SEC on February 10, 2009; February 9, 2009 and filed with the SEC on February 13, 2009; March 6, 2009 and filed with the SEC on March 12, 2009; March 18, 2009 (Item 8.01 only) and filed with the SEC on March 19, 2009; March 19, 2009 and filed with the SEC on March 24, 2009; April 16, 2009 and filed with the SEC on April 22, 2009; April 21, 2009 and filed with the SEC on April 21, 2009; April 24, 2009 and filed with the SEC on April 30, 2009; and May 11, 2009 (reporting Items 8.01 and 9.01) and filed with the SEC on May 11, 2009.

Our website is www.greatplainsenergy.com. Information contained on our website is not incorporated herein except to the extent specifically so indicated. We make available, free of charge, on or through our website, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. In addition, we make available on or through our website all other reports, notifications and certifications filed electronically with the SEC. You may obtain a free copy of our filings with the SEC by writing or telephoning us at the following address: Great Plains Energy Incorporated, 1201 Walnut Street, Kansas City, Missouri 64106-2124 (Telephone No.: 816-556-2200), Attention: Corporate Secretary, or by contacting us on our website.

PROSPECTUS SUPPLEMENT SUMMARY

You should read the following summary in conjunction with the more detailed information in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference.

Our Company

Great Plains Energy Incorporated, a Missouri corporation incorporated in 2001 and headquartered in Kansas City, Missouri, is a public utility holding company and does not own or operate any significant assets other than the stock of its subsidiaries. Our wholly-owned direct subsidiaries with operations or active subsidiaries are as follows:

- Kansas City Power & Light Company (“KCP&L”) is an integrated, regulated electric utility that provides electricity to customers primarily in the states of Missouri and Kansas. KCP&L has one wholly owned subsidiary, Kansas City Power & Light Receivables Company.
- GMO is an integrated, regulated electric utility that primarily provides electricity to customers in the state of Missouri. GMO also provides regulated steam service to certain customers in the St. Joseph, Missouri area. GMO wholly owns MPS Merchant Services, Inc., which has certain long-term natural gas contracts remaining from its former non-regulated trading operations. Great Plains Energy acquired GMO on July 14, 2008.
- Great Plains Energy Services Incorporated (“Services”) obtains certain goods and third-party services for us and our subsidiaries. On December 16, 2008, Services employees were transferred to KCP&L.
- KLT Inc. is an intermediate holding company that primarily holds investments in affordable housing limited partnerships.

Our principal executive offices are located at 1201 Walnut Street, Kansas City, Missouri 64106-2124, and our telephone number is (816) 556-2200.

Recent Developments

On May 11, 2009 we announced that our earnings for the three months ended March 31, 2009, were \$21.3 million, or \$0.18 per share, including income of \$16.2 million from GMO. The \$16.2 million income from GMO includes a \$16.0 million tax benefit due to the settlement of GMO’s 2003-2004 tax audit in the first quarter of 2009. Earnings in 2009 were negatively impacted by lower retail and wholesale revenues partially offset by lower purchased power expense and higher allowance for funds used during construction at KCP&L. For the same period in 2008, our earnings were \$47.1 million, or \$0.55 per share, including income of \$52.9 million from the discontinued operations of Strategic Energy. In addition, for the three months ended March 31, 2008, our corporate and other activities recognized a \$13.7 million after tax loss for the change in fair value of interest rate hedges. See “Summary Consolidated Financial Data.”

The Offering

Issuer	Great Plains Energy Incorporated
Common Stock Offered	10,000,000 shares
Option to Purchase Additional Shares	We have granted the underwriters a 30-day option to purchase a maximum 1,500,000 of additional shares of our common stock on the same terms and conditions and at the initial price to public less the underwriting discount set forth on the cover page of this prospectus supplement.
Approximate Number of Shares of Common Stock Outstanding Immediately After the Offering	133,548,465 shares (1)
Concurrent Equity Units Offering	Concurrently with this offering of common stock, we are offering, by means of a separate prospectus supplement, 5,000,000 Equity Units (or 5,750,000 Equity Units if the underwriters of that offering exercise in full their option to purchase additional Equity Units). This offering of common stock and the Equity Units offering are not contingent on one another. See “Concurrent Equity Units Offering” in this prospectus supplement.
Listing	New York Stock Exchange
Symbol	GXP
Recent Dividend	Our Board of Directors declared a quarterly dividend of \$0.2075 per share on our common stock payable June 19, 2009 to shareholders of record on May 29, 2009. See “Price Range of Common Stock and Dividends” beginning on page S-11 of this prospectus supplement.
Use of Proceeds	The net proceeds from this offering, after deducting underwriting discounts and estimated expenses of the offering, are expected to be approximately \$ million (or approximately \$ million if the underwriters exercise in full their option to purchase additional shares of our common stock). In addition, we expect to receive net proceeds, after deducting underwriting discounts and commissions and estimated offering expenses, of approximately \$ million from our concurrent Equity Units offering (or approximately \$ million if the underwriters of that offering exercise in full their option to purchase additional Equity Units). We intend to use the net proceeds from both of these offerings to repay all or a portion of the short-term borrowings under our revolving credit facility and to make contributions of capital to KCP&L and GMO for general corporate purposes, principally for repayment of all or a portion of KCP&L’s outstanding commercial paper, and repayment of all or a portion of the short-term borrowings under GMO’s revolving credit facilities. Pending any specific application, we may invest the

net proceeds from the offerings in short-term marketable securities. See “Use of Proceeds” on page S-8 of this prospectus supplement.

Risk Factors

See “Risk Factors” in this prospectus supplement and the accompanying prospectus and other information incorporated by reference in this prospectus supplement and the accompanying prospectus for a discussion of factors you should carefully consider before deciding to invest in shares of our common stock.

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- (1) The number of shares outstanding after the offering is based on our shares outstanding as of May 8, 2009 and assumes that the underwriters’ over-allotment option is not exercised. If the underwriters exercise their over-allotment option in full, we will issue and sell an additional 1,500,000 shares. See “Underwriting” herein.

Summary Consolidated Financial Data

The following consolidated summary financial data for the years ended December 31, 2006 through December 31, 2008 have been derived from our audited consolidated financial statements and related notes, incorporated by reference in this prospectus supplement and the accompanying prospectus. The income statement data for the year ended December 31, 2008 includes GMO's results of operations from the date of its acquisition, July 14, 2008. See note 2 to the consolidated financial statements incorporated by reference from our Annual Report on Form 10-K for the year ended December 31, 2008 and Exhibits 99.1 and 99.2 to our Form 8-K dated May 11, 2009 and filed with the SEC on May 11, 2009, for further information relating to the acquisition of GMO, including pro forma financial information. The following summary consolidated financial data for the three months ended March 31, 2009 and March 31, 2008 have been derived from our unaudited consolidated financial statements and related notes, incorporated by reference in this prospectus supplement and the accompanying prospectus. The information set forth below is qualified in its entirety by reference to, and therefore, should be read together with, the relevant management's discussion and analysis of financial condition and results of operations, financial statements and related notes and other financial information incorporated by reference herein.

	Three Months Ended		Year Ended December 31,		
	March 31, 2009	2008	2008	2007	2006
(\$ in millions; except per share data)					
Income Statement Data:					
Operating revenues	\$ 419.2	\$ 297.6	\$1,670.1	\$1,292.7	\$1,140.4
Operating expenses	398.3	278.5	1,395.1	1,036.2	880.7
Operating income	<u>\$ 20.9</u>	<u>\$ 19.1</u>	<u>\$ 275.0</u>	<u>\$ 256.5</u>	<u>\$ 259.7</u>
Income (loss) from continuing operations	\$ 21.7	\$ (5.4)	\$ 119.5	\$ 120.9	\$ 136.7
Income (loss) from discontinued operations, net of Income taxes	—	52.9	35.0	38.3	(9.1)
Net income	<u>\$ 21.7</u>	<u>\$ 47.5</u>	<u>\$ 154.5</u>	<u>\$ 159.2</u>	<u>\$ 127.6</u>
Per Share Data:					
Average number of basic common shares outstanding	119.2	85.9	101.1	84.9	78.0
Average number of diluted common shares outstanding	119.3	85.9	101.2	85.2	78.2
Basic earnings (loss) per common share					
Continuing operations	\$ 0.18	\$ (0.07)	\$ 1.16	\$ 1.14	\$ 1.74
Discontinued operations	—	0.62	0.35	0.45	(0.12)
Basic earnings per common share	<u>\$ 0.18</u>	<u>\$ 0.55</u>	<u>\$ 1.51</u>	<u>\$ 1.86</u>	<u>\$ 1.62</u>
Diluted earnings (loss) per common share					
Continuing operations	\$ 0.18	\$ (0.07)	\$ 1.16	\$ 1.40	\$ 1.73
Discontinued operations	—	0.62	\$ 0.35	\$ 0.45	\$ (0.12)
Diluted earnings per common share	<u>\$ 0.18</u>	<u>\$ 0.55</u>	<u>\$ 1.51</u>	<u>\$ 1.85</u>	<u>\$ 1.61</u>
Cash dividends declared per common share	<u>\$0.2075</u>	<u>\$ 0.415</u>	<u>\$ 1.66</u>	<u>\$ 1.66</u>	<u>\$ 1.66</u>
Cash Flow Data:					
Cash flows from operating activities	\$ 3.5	\$ 75.9	\$ 437.9	\$ 332.2	\$ 308.9
Cash flows from investing activities	(318.8)	(193.8)	(579.1)	(547.0)	(475.7)
Cash flows from financing activities	337.5	136.6	135.2	220.1	125.5
Other Financial Data:					
Depreciation and amortization	\$ 69.0	\$ 52.2	\$ 238.3	\$ 183.8	\$ 160.5
Amortization of:					
Nuclear fuel	4.4	3.3	14.5	16.8	14.4
Other	(3.9)	2.2	(1.9)	7.4	9.4
Utility capital expenditures	303.1	182.1	1,023.7	511.5	475.9

RISK FACTORS

An investment in our common stock is subject to various risks. These risks should be considered carefully with the information provided elsewhere and incorporated by reference in this prospectus supplement and the accompanying prospectus before deciding to invest in our common stock. In addition to the risk factors set forth below, please read the information included or incorporated by reference under “Risk Factors” and “Cautionary Statements Regarding Certain Forward-Looking Information” in the accompanying prospectus, our Annual Report on Form 10-K for the year ended December 31, 2008 and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2009 for a description of additional uncertainties associated with our business, results of operations and financial condition and the forward-looking statements included or incorporated by reference in this prospectus supplement and the accompanying prospectus. As used in this section, “we,” “our,” “us” and the “Company” refer to Great Plains Energy Incorporated and not to any of its subsidiaries.

Risks Related to Our Common Stock

We may be unable to, or may choose not to, continue to pay dividends on our common stock at current rates or at all.

Any future payments of cash dividends will depend on our financial condition, our capital requirements and earnings, and the ability of our operating subsidiaries to distribute cash to us, as well as other factors that our Board of Directors may consider.

The price of our common stock recently has been volatile. This volatility may affect the price at which you could sell your common stock, and the sale of substantial amounts of our common stock could adversely affect the price of our common stock.

The market price for our common stock has varied between a high of \$29.29 (in January 2008) and a low of \$10.20 (in March 2009) during the period from January 1, 2008 through May 8, 2009. This volatility may affect the price at which you could sell our common stock, and the sale of substantial amounts of our common stock could adversely affect the price of our common stock. Our stock price may continue to be volatile and subject to significant price and volume fluctuations in response to market and other factors, including: the other risk factors discussed in our Annual Report on Form 10-K for the year ended December 31, 2008; variations in our quarterly operating results from our or securities analysts’ or investors’ expectations; downward revisions in securities analysts’ estimates; and announcement by us or our competitors of significant acquisitions, joint ventures, capital commitments or other material developments.

In addition, the sale or availability for sale of substantial amounts of our common stock could adversely impact its price. Concurrently with this offering of common stock, we are offering, by means of a separate prospectus supplement, 5,000,000 Equity Units (or 5,750,000 Equity Units if the underwriters of that offering exercise in full their option to purchase additional Equity Units). Each Equity Unit will have a stated amount of \$50 and will consist of a contract to purchase shares of our common stock and, initially, a 1/20 or 5% undivided beneficial ownership interest in \$1,000 principal amount of our % subordinated notes due 2042. Pursuant to the purchase contracts, we will have an obligation to deliver, on or prior to June 15, 2012, a maximum of shares of our common stock (or shares of our common stock if the underwriters of that offering exercise in full their option to purchase additional Equity Units), subject to anti-dilution adjustments as provided in the purchase contracts, which will cause our existing shareholders’ ownership to be diluted.

As of March 31, 2009, we had outstanding approximately 123,154,726 shares of our common stock and options to purchase approximately 414,280 shares of our common stock (of which all were exercisable as of that date). We also had outstanding approximately 207,999 performance shares as of March 31, 2009, under which up to 415,998 shares of common stock could be issued, depending upon achievement of specified goals and approximately 20,705 director deferred share units.

We expect that we will need to raise additional capital, and raising additional funds by issuing securities or with additional debt financing may cause dilution to existing stockholders or restrict our operations.

We expect that we will need to raise additional capital in the future. We may raise additional funds through public or private equity offerings or debt financings. Additional issuance of equity securities could dilute the value of shares of our common stock and cause the market price of our common stock to decline. Any new debt financing we enter into may involve covenants that restrict our operations more than our current outstanding debt and credit facilities. These restrictive covenants could include limitations on additional borrowings, specific restrictions on the use of our assets as well as prohibitions or limitations on our ability to create liens, pay dividends, receive distributions from our subsidiaries, redeem our stock or make investments. These factors could hinder our access to capital markets and limit or delay our ability to carry out our capital expenditure program.

USE OF PROCEEDS

We estimate that our net proceeds from our sale of our common stock in this offering, after deducting underwriting discounts and commissions and estimated offering expenses, to be approximately \$ (or approximately \$ if the underwriters of this offering exercise in full their options to purchase additional shares).

In addition, we expect to receive net proceeds, after deducting underwriting discounts and commissions and estimated offering expenses, of approximately \$ million from our concurrent Equity Units offering (or approximately \$ if the underwriters of that offering exercise in full their option to purchase additional Equity Units).

We intend to use the net proceeds from both of these offerings to repay all or a portion of the short-term borrowings under our revolving credit facility and to make contributions of capital to KCP&L and GMO for general corporate purposes, principally for repayment of all or a portion of KCP&L's outstanding commercial paper and repayment of all or a portion of the short-term borrowings under GMO's revolving credit facilities. As of April 30, 2009, we had \$8.0 million of outstanding cash borrowings under our revolving credit facility with a weighted-average interest rate of 0.95%; KCP&L had \$229.6 million of commercial paper outstanding at a weighted-average interest rate of 2.773%; and GMO had \$252.0 million of outstanding cash borrowings under its \$400 million revolving credit facility with a weighted-average interest rate of 1.73% and \$36.8 million of outstanding cash borrowings under its \$50 million revolving credit facility with a weighted-average interest rate of 2.50%. Pending any specific application, we may invest the net proceeds from the offerings in short-term marketable securities.

This offering of common stock is not contingent upon our concurrent offering of Equity Units.

CONCURRENT EQUITY UNITS OFFERING

Concurrently with this offering of common stock, we are offering, by means of a separate prospectus supplement, 5,000,000 Equity Units (or 5,750,000 Equity Units if the underwriters of that offering exercise in full their option to purchase additional Equity Units). Each Equity Unit will have a stated amount of \$50 and will consist of a contract to purchase shares of our common stock and, initially, a 1/20 or 5% undivided beneficial ownership interest in \$1,000 principal amount of our % subordinated notes due 2042. Pursuant to the purchase contracts, we will have an obligation to deliver, on or prior to June 15, 2012, a maximum of shares of our common stock (or shares of our common stock if the underwriters of that offering exercise in full their option to purchase additional Equity Units), subject to anti-dilution adjustments as provided in the purchase contracts. This offering of common stock and the Equity Units offering are not contingent on one another.

We estimate that our net proceeds from our sale of Equity Units in the concurrent offering will be approximately \$, after deducting underwriting discounts and commissions and estimated offering expenses (or approximately \$ if the underwriters of that offering exercise in full their option to purchase additional Equity Units).

Because the closing of this common stock offering is not contingent upon the closing of the Equity Units offering, you should not assume that the sale of the Equity Units will take place.

CAPITALIZATION AND SHORT-TERM DEBT

The following table sets forth our consolidated capitalization as of March 31, 2009, and as adjusted to give effect to:

- the issuance and sale of the shares of \$150 million of our common stock offered hereby (assuming the underwriters' option to purchase additional shares is not exercised) and the application of the proceeds from such sale, after underwriting commissions and estimated expenses of this offering, as described under "Use of Proceeds"; and
- the issuance and sale of the common stock as described in the bullet point above and also the issuance and sale of an aggregate of \$250 million of the Equity Units in the concurrent offering (assuming the underwriters' option to purchase additional Equity Units in that offering is not exercised) and the application of proceeds from the sale of our common stock and the Equity Units in such concurrent offerings, after underwriting commissions and estimated expenses of each offering.

The following table assumes (i) proceeds from the sale of our common stock, after underwriting commissions and estimated expenses, of approximately \$144.3 million (or \$166.0 million if the underwriters exercise their overallotment option in full) and (ii) proceeds from the sale of the Equity Units, after underwriting commissions and estimated expenses, of approximately \$240.8 million (or \$276.9 million if the underwriters exercise their overallotment option in full). The table also assumes that the notes that are a component of Equity Units will bear interest at a rate of 10% per year and that contract adjustment payments will be paid on the Equity Units at the rate of 2% per year. These figures are for illustrative purposes only.

Because the closing of this common stock offering is not contingent upon the closing of the Equity Units offering, you should not assume that the sale of Equity Units, as reflected in the third column below, will take place. See "Concurrent Equity Units Offering" in this prospectus supplement. This table should be read in conjunction with our consolidated financial statements and related notes incorporated by reference in this prospectus supplement and the accompanying prospectus. See "Where You Can Find More Information" in this prospectus supplement.

	March 31, 2009		
	<u>Actual</u>	<u>As Adjusted for the Common Stock Offering</u> (\$ in millions)	<u>As Adjusted for the Common Stock and Equity Units Offering</u>
Short-term debt (includes current maturities)	\$ 564.7	\$ 420.4	\$ 179.6
Long-term debt:			
% Subordinated Notes due June 15, 2042 (component of concurrent Equity Units offering)(1)	\$ —	\$ —	\$ 250.0
Unamortized discount	—	—	—
Total consolidated KCP&L long-term debt	1,776.5	1,776.5	1,776.5
Total consolidated GMO long-term debt	1,141.1	1,141.1	1,141.1
Total Great Plains Energy Incorporated long-term debt	100.0	100.0	100.0
Unamortized discount	(0.4)	(0.4)	(0.4)
Total debt	\$3,017.2	\$ 3,017.2	\$ 3,267.2
Less current debt	(70.5)	(70.5)	(70.5)
Total long-term debt	<u>\$2,946.7</u>	<u>\$ 2,946.7</u>	<u>\$ 3,196.7</u>

	March 31, 2009		
	<u>Actual</u>	<u>As Adjusted for the Common Stock Offering</u> (\$ in millions)	<u>As Adjusted for the Common Stock and Equity Units Offering</u>
Shareholders' equity:			
Total Common Shareholders' Equity(2)	\$2,600.8	\$ 2,745.1	\$ 2,726.1(3)
Total Preferred Shareholders' Equity	39.0	39.0	39.0
Total shareholders' equity	<u>\$2,639.8</u>	<u>\$ 2,784.1</u>	<u>\$ 2,765.1</u>
Total capitalization and short-term debt	<u>\$6,151.2</u>	<u>\$ 6,151.2</u>	<u>\$ 6,141.4</u>

- (1) The "As Adjusted" amounts will be \$0 and \$287.5 for "As Adjusted for the Common Stock Offering" and "As Adjusted for the Common Stock and Equity Units Offering," respectively, if the underwriters exercise their overallotment options in each offering in full.
- (2) The "As Adjusted" amounts will be \$2,766.8 and \$2,745.0 for "As Adjusted for the Common Stock Offering" and "As Adjusted for the Common Stock and Equity Units Offering," respectively, if the underwriters exercise their overallotment options in each offering in full.
- (3) Reflects an adjustment of \$13.1 representing the present value of the contract adjustment payments payable with the purchase contracts included in the Equity Units being offered concurrently with this offering and \$5.9 representing that portion of the expenses of the Equity Units offering allocated to Shareholders' Equity.

PRICE RANGE OF COMMON STOCK AND DIVIDENDS

Our common stock is listed on the New York Stock Exchange under the symbol "GXP." The following table sets forth the high and low sale prices, as reported in the consolidated transaction reporting system and adjusted for historical stock dividends and dividends declared per share of our common stock. As of March 31, 2009, there were 123,154,726 shares of our common stock outstanding.

Calendar Year:	Common Stock(a)		Dividends Declared on Common Stock
	Low	High	
2007:			
First Quarter	\$30.42	\$32.67	\$ 0.4150
Second Quarter	28.82	33.18	0.4150
Third Quarter	26.99	29.94	0.4150
Fourth Quarter	28.32	30.45	0.4150
2008:			
First Quarter	\$24.35	\$28.85	\$ 0.4150
Second Quarter	24.67	26.76	0.4150
Third Quarter	21.92	26.20	0.4150
Fourth Quarter	17.09	22.43	0.4150
2009:			
First Quarter	\$ 11.17	\$20.34	\$ 0.2075
Second Quarter (through May 8, 2009)	13.44	15.15	0.2075

(a) Based on closing stock prices.

On May 8, 2009, the last reported sale price of our common stock in the consolidated transaction reporting system was \$15.15. As of March 31, 2009, there were approximately 30,050 holders of record of our common stock.

On May 5, 2009, our Board of Directors declared a quarterly dividend of \$0.2075 per share on our common stock payable June 19, 2009 to shareholders of record on May 29, 2009.

MATERIAL U.S. FEDERAL TAX CONSIDERATIONS TO NON-U.S. HOLDERS

The following summary describes material U.S. federal income and certain estate tax considerations of the purchase, ownership and disposition of our common stock by a Non-U.S. Holder (as defined below) as of the date hereof. This summary is included herein for general information purposes only and does not address all aspects of U.S. federal income and estate taxes, the effect of federal alternative minimum tax, or any foreign, state and local tax consequences that may be relevant to such Non-U.S. Holders in light of their personal circumstances. Special rules may apply to certain Non-U.S. Holders, such as financial institutions, insurance companies, tax-exempt organizations, hybrid entities, certain former citizens or residents of the United States, "controlled foreign corporations," "passive foreign investment companies," corporations that accumulate earnings to avoid U.S. federal income tax, broker-dealers, traders in securities, pass-through entities or Non-U.S. holders that hold the common stock as part of a "straddle," "hedge," "conversion transaction," "synthetic security," or other integrated investment. Furthermore, the discussion below is based upon the provisions of the Internal Revenue Code of 1986, as amended (the "Code"), and U.S. Treasury regulations, rulings and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked or modified, perhaps retroactively, so as to result in U.S. federal income and estate tax consequences different from those discussed below. This discussion is limited to Non-U.S. Holders that acquire our common stock pursuant to this offering and that hold our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment purposes).

If a partnership (or other entity treated as a partnership or a pass-through entity for U.S. federal income tax purposes) holds our common stock, the U.S. federal tax treatment of a partner (or other equity holder of such entity) will generally depend on the status of the partner (or other equity holder of such entity) and the activities of the partnership (or such other entity). These persons should consult their tax advisors.

As used herein, a “U.S. Holder” is a beneficial owner of our common stock that, for U.S. federal income tax purposes, is (i) an individual citizen or resident of the United States, (ii) a corporation (or other entity treated as a corporation) created or organized in or under the laws of the United States or any political subdivision thereof, (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source, or (iv) a trust if it (1) is subject to the primary supervision of a court within the United States and one or more United States persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a United States person. As used herein, a “Non-U.S. Holder” is a beneficial owner of our common stock (other than a partnership or an entity treated as a partnership or a pass-through entity for U.S. federal income tax purposes) that is not a U.S. Holder.

This summary is for general purposes only. This summary is not intended to be, and should not be construed to be, legal or tax advice to any particular beneficial owner of our common stock. Persons considering the purchase, ownership or disposition of common stock should consult their own tax advisors concerning the U.S. federal income and estate tax consequences in light of their particular situations as well as any consequences arising under the laws of any other taxing jurisdiction, the effect of any change in applicable tax law, and their entitlement to benefits under an applicable tax treaty.

Dividends

Distributions of cash or other property on our common stock will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those distributions exceed our current and accumulated earnings and profits, the distributions will constitute a return of capital and first reduce the Non-U.S. Holder’s basis in its common stock, but not below zero, and then will be treated as gain from the sale of stock.

Dividends paid to a Non-U.S. Holder of our common stock generally will be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. However, dividends that are effectively connected with the conduct of a trade or business by a Non-U.S. Holder within the United States, and, where an income tax treaty applies, are attributable to a U.S. permanent establishment of a Non-U.S. Holder, are not subject to U.S. withholding tax, but instead are subject to U.S. federal income tax on a net income basis at the applicable graduated individual or corporate tax rates. Certain certification and disclosure requirements must be satisfied for effectively connected income to be exempt from withholding. Any such effectively connected dividends received by a corporation may be subject to an additional “branch profits tax” at a 30% rate or such lower rate as may be specified by an applicable income tax treaty.

A Non-U.S. Holder of our common stock who wishes to claim the benefit of an applicable treaty (including any applicable reduction in withholding tax rate), and avoid U.S. federal backup withholding as discussed below for dividends paid on our common stock will be required, prior to the payment of dividends (a) to provide a properly completed Internal Revenue Service (“IRS”) Form W-8BEN (or successor form) and certify under penalties of perjury that such holder is not a United States person or (b) if the common stock is held through certain foreign intermediaries, to satisfy the relevant certification requirements of applicable U.S. Treasury regulations. Special certification and other requirements apply to certain Non-U.S. Holders that are entities rather than individuals.

A Non-U.S. Holder of our common stock that is eligible for a reduced rate of U.S. withholding tax pursuant to an applicable income tax treaty may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

Gain on Disposition of Common Stock

A Non-U.S. Holder generally will not be subject to U.S. federal income tax with respect to gain recognized on a sale or other disposition of our common stock (including gain arising from distributions that are not dividends) unless (i) the gain is effectively connected with a trade or business of the Non-U.S. Holder in the United States, and, where an income tax treaty applies, is attributable to a U.S. permanent establishment of the Non-U.S. Holder, (ii) in the case of a Non-U.S. Holder who is an individual, such holder is present in the United States for 183 or more days in the taxable year of the sale or other disposition and certain other conditions are met, or (iii) our common stock constitutes a “U.S. real property interest” by reason of our status as a “U.S. real property holding corporation” for U.S. federal income tax purposes at any time during the shorter of (a) the period during which the Non-U.S. Holder holds our common stock or (b) the 5-year period ending on the date the Non-U.S. Holder disposes of our common stock (the “Testing Period”).

A Non-U.S. Holder described in clause (i) above will be subject to tax on the net gain derived from the sale at the applicable graduated U.S. federal income tax rates, and, if it is a corporation, may also be subject to the branch profits tax at a rate equal to 30% of its effectively connected earnings and profits (subject to certain adjustments) or at such lower rate as may be specified by an applicable income tax treaty. An individual Non-U.S. Holder described in clause (ii) above will be subject to a flat 30% tax (unless an applicable income tax treaty provides for an exemption or a lower rate) on the gain derived from the sale, which tax may be offset by certain U.S. source capital losses (even though the individual is not considered a resident of the United States).

Although the matter is not free from doubt, we intend to take the position that we are currently a “U.S. real property holding corporation” for U.S. federal income tax purposes. However, as long as our common stock continues to be “regularly traded on an established securities market,” such as the New York Stock Exchange, such common stock will be treated as a U.S. real property interest only in the hands of a Non-U.S. Holder that owns, or has owned, directly or indirectly, within the relevant Testing Period, more than 5% of our common stock outstanding. If, however, a Non-U.S. Holder owns (directly or indirectly) more than 5% of our outstanding common stock during the relevant Testing Period, the Non-U.S. Holder generally will be subject to U.S. federal income tax on its net gain derived from the disposition of its common stock as though the Non-U.S. Holder were engaged in a business in the United States and the gain or loss were effectively connected with such business.

Information Reporting and Backup Withholding

We must report annually to the IRS and to each Non-U.S. Holder the amount of dividends paid to such holder and the tax withheld with respect to such dividends, regardless of whether withholding was required. Copies of the information returns reporting such dividends and withholding may also be made available to the tax authorities in the country in which the Non-U.S. Holder resides under the provisions of an applicable income tax treaty or information exchange agreement.

A Non-U.S. Holder will be subject to backup withholding (currently, at a rate of 28%) and additional information reporting on reportable payments unless applicable certification requirements are met.

Information reporting and, depending on the circumstances, backup withholding, will apply to the proceeds of a sale of common stock within the United States or conducted through U.S.-related financial intermediaries unless the beneficial owner certifies under penalties of perjury that it is a Non-U.S. Holder (and the payor does not have actual knowledge or reason to know that the beneficial owner is a United States person) or the holder otherwise establishes an exemption.

Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against such holder’s U.S. federal income tax liability provided the required information is timely furnished to the IRS.

Federal Estate Tax

Unless an applicable estate tax or other treaty provides otherwise, shares of our common stock held by an individual who at the time of death is not a citizen or resident of the United States will be included in such holder’s gross estate for U.S. federal estate tax purposes, and, therefore, may be subject to U.S. federal estate

tax. The test for whether an individual is a resident of the United States for U.S. federal estate tax purposes differs from the test used for U.S. federal income tax purposes. Some individuals, therefore, may be non-U.S. holders for U.S. federal income tax purposes, but not for U.S. federal estate tax purposes, or vice versa.

UNDERWRITING

Subject to the terms and conditions of the underwriting agreement, the underwriters named below, for whom Goldman, Sachs & Co. and J.P. Morgan Securities Inc. are acting as representatives, have severally agreed to purchase from us, and we have agreed to sell, the following respective numbers of shares of our common stock listed opposite their names below at the public offering price less the underwriting discount set forth on the cover page of this prospectus supplement:

<u>Underwriter</u>	<u>Number of Shares</u>
Goldman, Sachs & Co.	
J.P. Morgan Securities Inc.	
Wachovia Capital Markets, LLC	
KeyBanc Capital Markets Inc.	
Edward D. Jones & Co., L.P.	
Mitsubishi UFJ Securities (USA), Inc.	
Scotia Capital (USA) Inc.	
Total	<u>10,000,000</u>

The underwriting agreement provides that the obligations of the underwriters to purchase the shares of common stock are subject to the approval of legal matters by counsel and to other conditions. The underwriters are obligated to purchase all the shares of our common stock being offered (other than shares of common stock covered by the option described below) if any are purchased. The underwriting agreement also provides that if one or more underwriters default, the purchase commitments of non-defaulting underwriters may be increased or the offering of the common stock may be terminated.

Concurrently with this offering of our common stock, we are offering, by means of a separate prospectus supplement, 5,000,000 Equity Units, plus up to an additional 5,750,000 Equity Units if the underwriters of that offering exercise in full their option to purchase additional Equity Units. This offering of our common stock is not contingent upon our offering of Equity Units.

We have been advised by the representatives that the underwriters propose to offer the shares of common stock directly to the public at the public offering prices set forth on the cover page of this prospectus supplement and to selling group members at that price less a selling concession of \$ per share. The underwriters and selling group members may allow a discount of \$ per share to other broker/dealers. After the initial public offering the representatives may change the public offering price, selling concession and discount to broker/dealers.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act of 1933, as amended, and to contribute to payments the underwriters may be required to make because of any of those liabilities.

We have granted to the underwriters an option to purchase up to an additional 1,500,000 shares of common stock at the public offering price less the underwriting discounts and commissions. The underwriters may exercise this option at any time and from time to time, in whole or in part, within 30 days of the date of this prospectus supplement, with certain limitations. To the extent the option is exercised, each underwriter must purchase a stated amount of additional shares approximately proportionate to that underwriter's initial purchase commitment.

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The following table shows the underwriting discount and commissions that we will pay to the underwriters. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares of our common stock.

	<u>No Exercise of Option</u>	<u>Full Exercise of Option</u>
Per Share	\$	\$
Total	\$	\$

We estimate that our total expenses for this offering, net of underwriting discounts and commissions, will be approximately \$500,000.

We have agreed, except as set forth below, not to sell or transfer any of our common stock for 90 days after the date of this prospectus supplement without first obtaining the written consent of the representatives. Specifically, we have agreed not to directly or indirectly:

- offer, pledge, sell or contract to sell any common stock;
- sell any option or contract to purchase any common stock;
- purchase any option or contract to sell any common stock;
- grant any option, right or warrant to sell any common stock;
- lend or otherwise dispose of or transfer any common stock;
- file a registration statement related to common stock; or
- enter into a swap or other agreement or transaction that transfers, in whole or in part, the economic consequence of ownership of common stock, whether any such swap or transaction is to be settled by delivery of any common stock, in cash or otherwise.

This lockup provision applies to common stock and to securities convertible into or exchangeable or exercisable for or repayable with common stock, including Equity Units, purchase contracts and other similar securities.

This agreement does not apply to (1) the common stock offered hereby, (2) the concurrent Equity Units offering or the shares of common stock underlying the Equity Units, (3) common stock or securities convertible into or exchangeable or exercisable for or repayable with common stock issuable upon exercise of an option or warrant or conversion of a security outstanding on the date of this prospectus supplement and (4) shares of our common stock or options for shares of our common stock issued pursuant to or sold in connection with any of our and our subsidiaries' existing employee benefit plans, long-term incentive plans, dividend reinvestment or direct stock purchase plans, employee savings (401(k)) plans and executive compensation plans (or the filing of a registration statement related to any such plan).

Our directors and certain of our officers have agreed not to sell or transfer any of our common stock for 90 days after the date of this prospectus supplement without first obtaining the written consent of the representatives. Specifically, they have agreed not to directly or indirectly:

- offer, pledge, sell or contract to sell any common stock;
- sell any option or contract to purchase any common stock;
- purchase any option or contract to sell any common stock;
- grant any option, right or warrant to sell any common stock;
- lend or otherwise dispose of or transfer any common stock;
- file a registration statement related to common stock; or

- enter into a swap or other agreement or transaction that transfers, in whole or in part, the economic consequence of ownership of common stock whether any such swap or transaction is to be settled by delivery of common stock, in cash or otherwise.

This lockup provision applies to common stock and to securities convertible into or exchangeable or exercisable for or repayable with common stock.

Notwithstanding the foregoing, this lockup provision will not prohibit our directors and officers from effecting transfer or distributions of shares of common stock as a bona fide gift or gifts or to any family member or to a trust, the beneficiaries of which are exclusively such director or officer or family member of such director or officer, provided that, in the case of any such transfer or distribution, (1) the representatives receive a signed lockup agreement from each donee, distributee or transferee, (2) such transfer shall not involve a disposition for value, (3) such transfer or distributions are not required to be reported in any public report or filing with the SEC, or otherwise and (4) such director or officer or donee, distributee or transferee does not otherwise voluntarily effect any public filing or report regarding such transfers or distributions.

In connection with the offering, the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate covering transactions and penalty bids in accordance with Regulation M under the Exchange Act.

- Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum.
- Over-allotment transactions would involve sales by the underwriters of shares of common stock in excess of the number of shares of common stock the underwriters are obligated to purchase, which would create a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares of common stock over-allotted by the underwriters would not be greater than the number of shares of common stock that they may purchase in the over-allotment option. In a naked short position, the number of shares of common stock involved would be greater than the number of shares of common stock in the over-allotment option. The underwriters may close out any short position by either exercising their over-allotment option and/or purchasing shares of common stock in the open market.
- Syndicate covering transactions would involve purchases of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters would consider, among other things, the price of shares of common stock available for purchase in the open market as compared to the price at which they may purchase shares of common stock through the over-allotment option. If the underwriters sell more shares of common stock than could be covered by the over-allotment option (a naked short position) that position could only be closed out by buying shares of common stock in the open market. A naked short position would be more likely to be created if the underwriters are concerned that there may be downward pressure on the price of our common stock in the open market after pricing that could adversely affect investors who purchase in the offering.
- Penalty bids would permit the representatives to reclaim a selling concession from a syndicate member when the shares of common stock originally sold by the syndicate member are purchased in a stabilizing transaction or a syndicate covering transaction to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stocks. As a result the price of the common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on The New York Stock Exchange or otherwise. The underwriters are not required to engage in these transactions and these transactions, if commenced, may be discontinued at any time.

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State), each underwriter has represented and agreed that with effect from

and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the Relevant Implementation Date) it has not made and will not make an offer of shares of common stock to the public in that Relevant Member State prior to the publication of a prospectus in relation to the shares of common stock which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that it may, with effect from and including the Relevant Implementation Date, make an offer of shares of common stock to the public in that Relevant Member State at any time:

(a) to legal entities which are authorised or regulated to operate in the financial markets or, if not so authorised or regulated, whose corporate purpose is solely to invest in securities;

(b) to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000 and (3) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts;

(c) to fewer than 100 natural or legal persons (other than qualified investors as defined in the Prospectus Directive) subject to obtaining the prior consent of the representatives for any such offer; or

(d) in any other circumstances which do not require the publication by the Company of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer of shares of common stock to the public” in relation to any shares of common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares of common stock to be offered so as to enable an investor to decide to purchase or subscribe the shares of common stock, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State and the expression Prospectus Directive means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

Each underwriter has represented and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act of 2000 of the United Kingdom, as amended (the “FSMA”)) received by it in connection with the issue or sale of the shares of common stock in circumstances in which Section 21(1) of the FSMA would not apply to the Company; and

(b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of common stock in, from or otherwise involving the United Kingdom.

The shares of common stock may not be offered or sold by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), or (ii) to “professional investors” within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a “prospectus” within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), and no advertisement, invitation or document relating to the securities may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares of common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

This prospectus supplement has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus supplement and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares of common stock may not be circulated

or distributed, nor may the securities be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the “SFA”), (ii) to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares of common stock are subscribed or purchased under Section 275 by a relevant person which is: (a) a corporation (which is not an accredited investor) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an accredited investor, shares, debentures and units of shares and debentures of that corporation or the beneficiaries’ rights and interest in that trust shall not be transferable for 6 months after that corporation or that trust has acquired the securities under Section 275 except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA; (2) where no consideration is given for the transfer; or (3) by operation of law.

The shares of common stock have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (the “Financial Instruments and Exchange Law”) and each underwriter has agreed that it will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Law and any other applicable laws, regulations and ministerial guidelines of Japan.

Affiliates of certain of the underwriters are lenders under revolving credit agreements entered into separately with Great Plains Energy and KCP&L in May 2006 and with GMO in 2008. In connection with the Great Plains Energy and KCP&L arrangements, JPMorgan Chase Bank, N.A., an affiliate of J.P. Morgan Securities Inc., acted as syndication agent and lender, each of The Bank of Tokyo-Mitsubishi UFJ, Ltd., Chicago Branch, an affiliate of Mitsubishi UFJ Securities (USA), Inc., and Wachovia Bank N.A., an affiliate of Wachovia Capital Markets, LLC, acted as a co-documentation agent and lender and each of KeyBank National Association, an affiliate of KeyBanc Capital Markets Inc. and The Bank of Nova Scotia, an affiliate of Scotia Capital (USA) Inc., acted as a lender. In connection with the GMO arrangement, JPMorgan Chase Bank, N.A., an affiliate of J.P. Morgan Securities Inc., acted as a co-documentation agent and lender, Union Bank, N.A., an affiliate of Mitsubishi UFJ Securities (USA), Inc., acted as syndication agent and lender and each of Wachovia Bank N.A., an affiliate of Wachovia Capital Markets, LLC and The Bank of Nova Scotia, an affiliate of Scotia Capital (USA) Inc., acted as a lender. Union Bank, N.A., an affiliate of Mitsubishi UFJ Securities (USA), Inc., also acted as agent and lender under a revolving credit agreement entered into with GMO in 2005. The Bank of Tokyo-Mitsubishi UFJ Ltd., New York Branch, an affiliate of Mitsubishi UFJ Securities (USA), Inc., acted as agent under a receivables sale agreement with KCP&L. Also, affiliates of certain of the underwriters participate in the commercial paper program of KCP&L and may from time to time hold KCP&L’s commercial paper. As a result, more than 10% of the net offering proceeds may be paid to underwriters or affiliates and, accordingly, the offering will be made in reliance upon Rule 5110(h) of the Conduct Rules of the Financial Industry Regulatory Authority, Inc. The underwriters and their affiliates have provided and in the future may continue to provide investment banking, commercial banking and other financial services, including the provision of credit facilities, to us and our affiliates in the ordinary course of business for which they have received and will receive customary compensation.

LEGAL MATTERS

Certain legal matters in connection with the offering of our common stock will be passed upon for us by Mark English, Assistant General Counsel and Assistant Secretary and Dewey & LeBoeuf LLP, New York,

New York. Certain legal matters will be passed upon for the underwriters by Davis Polk & Wardwell, Menlo Park, California.

At May 1, 2009, Mr. English owned beneficially a number of shares of the Company's common stock, including restricted stock, and performance shares which may be paid in shares of common stock at a later date based on the Company's performance, which represented less than 0.1% of the total outstanding common stock.

EXPERTS

The consolidated financial statements, and the related financial statement schedules, incorporated by reference in this prospectus from the Great Plains Energy Incorporated and subsidiaries Annual Report on Form 10-K for the year ended December 31, 2008, and the effectiveness of Great Plains Energy Incorporated and subsidiaries internal control over financial reporting have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference (which reports (1) express an unqualified opinion on the consolidated financial statements and financial statement schedules and include an explanatory paragraph regarding the adoption of new accounting standards, and (2) express an unqualified opinion on the effectiveness of internal control over financial reporting). Such consolidated financial statements and financial schedules have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

The consolidated financial statements of Aquila, Inc. as of December 31, 2007 and 2006, and for each of the years in the three-year period ended December 31, 2007, have been incorporated by reference herein and in the registration statement, in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing. The audit report refers to the adoption of Financial Accounting Standards Board (FASB) Interpretation No. 48, Accounting for Uncertainty in Income Taxes — an interpretation of FASB Statement No. 109, Accounting for Income Taxes, and FASB Staff Position (FSP) AUG AIR-1, Accounting for Planned Major Maintenance Activities.

Great Plains Energy Incorporated has agreed to indemnify and hold KPMG LLP harmless against and from any and all legal costs and expenses incurred by KPMG LLP in successful defense of any legal action or proceeding that arises as a result of KPMG LLP's consent to the incorporation by reference of its audit report on Aquila, Inc.'s past financial statements incorporated by reference in this registration statement.

PROSPECTUS

Great Plains Energy Incorporated

Senior Debt Securities
Subordinated Debt Securities
Common Stock
Warrants
Stock Purchase Contracts
Stock Purchase Units

Great Plains Energy Incorporated (“Great Plains Energy”) may offer and sell, from time to time, these securities in one or more offerings. We may offer the securities simultaneously or at different times, in one or more separate series, in amounts, at prices and on terms to be determined at or prior to the time or times of sale.

This prospectus provides you with a general description of these securities. We will provide specific information about the offering and the terms of these securities in one or more supplements to this prospectus. The supplements may also add, update or change information contained in this prospectus. This prospectus may not be used to offer and sell our securities unless accompanied by a prospectus supplement. You should read this prospectus and the related prospectus supplements before you invest in these securities.

The common stock of Great Plains Energy Incorporated is listed on the New York Stock Exchange under the symbol “GXP.”

Our principal executive offices are located at 1201 Walnut Street, Kansas City, Missouri 64106-2124 and our telephone number is (816) 556-2200.

Investing in these securities involves risks. You should carefully consider the information referred to under the heading “Risk Factors” beginning on page 3 of this prospectus.

We may offer and sell these securities through one or more underwriters or agents. We will set forth in the related prospectus supplement the name of the underwriters or agents, the discount or commission received by them from us as compensation, our other expenses for the offering and sale of these securities and the net proceeds we receive from the sale. See “Plan of Distribution.”

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is May 11, 2009.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement filed with the Securities and Exchange Commission, or SEC, using a “shelf” registration process. By using this process, we may, from time to time, sell any combination of the securities described in this prospectus in one or more offerings. We may offer any of the following securities: senior debt securities or subordinated debt securities, each of which may be convertible into our common stock, common stock, stock purchase contracts and stock purchase units. We may also offer warrants to purchase shares of our common stock.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide you with a supplement to this prospectus that will describe the specific terms of that offering. The prospectus supplement may also add, update or change the information contained in this prospectus. If there is any inconsistency between the information in this prospectus and the prospectus supplement, you should rely on the information in the prospectus supplement. The registration statement we filed with the SEC includes exhibits that provide more detail on descriptions of the matters discussed in this prospectus. Before you invest in our securities, you should carefully read the registration statement (including the exhibits) of which this prospectus forms a part, this prospectus, the applicable prospectus supplement and the documents incorporated by reference into this prospectus. The incorporated documents are described under “Where You Can Find More Information.”

You should rely only on the information contained or incorporated by reference in this prospectus and any prospectus supplement, or in any free writing prospectus. We have not, and the underwriters have not, authorized anyone to provide you with different information and neither we nor the underwriters of any offering of securities will authorize anyone else to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the underwriters are not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus, any prospectus supplement and the documents incorporated by reference is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Unless the context otherwise requires or as otherwise indicated, when we refer to “Great Plains Energy,” the “Company,” “we,” “us” or “our” in this prospectus or when we otherwise refer to ourselves in this prospectus, we mean Great Plains Energy Incorporated and its subsidiaries, unless the context clearly indicates otherwise.

CAUTIONARY STATEMENTS REGARDING CERTAIN FORWARD-LOOKING INFORMATION

This prospectus and the documents incorporated or deemed incorporated by reference as described under the heading “Where You Can Find More Information” contain forward-looking statements that are not based on historical facts. In some cases, you can identify forward-looking statements by use of the words “may,” “should,” “expect,” “plan,” “anticipate,” “estimate,” “predict,” “potential,” or “continue.” Forward-looking statements include, but are not limited to, statements regarding the outcome of regulatory proceedings, cost estimates for our Comprehensive Energy Plan and other matters affecting future operations. These forward-looking statements are based on assumptions, expectations, and assessments made by our management in light of their experience and their perception of historical trends, current conditions, expected future developments and other factors they believe to be appropriate. Any forward-looking statements are not guarantees of our future performance and are subject to risks and uncertainties, including those discussed under the heading “Risk Factors” in this prospectus, in any prospectus supplement, and in our other SEC filings. These risks and uncertainties could cause actual results, developments and business decisions to differ materially from those contemplated or implied by forward-looking statements. Consequently, you should recognize these statements for what they are and we caution you not to rely upon them as facts. We claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995 for all forward-looking statements. We disclaim any duty to update the forward-looking statements, which apply only as of the date of this prospectus. Some of the factors that may cause actual results, developments and business

decisions to differ materially from those contemplated by these forward-looking statements include the following:

- 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 and the Company;
- 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 subsidiaries of the Company 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;
- credit ratings;
- inflation rates;
- effectiveness of risk management policies and procedures and the ability of counterparties to satisfy their contractual commitments;
- impact of terrorist acts;
- increased competition including, but not limited to, retail choice in the electric utility industry and the entry of new competitors;
- ability to carry out marketing and sales plans;
- weather conditions including, but not limited to, weather-related damage and their effects on sales, prices and costs;
- cost, availability, quality and deliverability of fuel;
- ability to achieve generation planning goals and the occurrence and duration of planned and unplanned generation outages;
- delays in the anticipated in-service dates and cost increases of additional generating capacity and environmental projects;
- nuclear operations;
- workforce risks including, but not limited to, retirement compensation and benefits costs;
- the ability to successfully integrate the operations of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company and the timing and amount of resulting synergy savings; and
- other risks and uncertainties.

This list of factors is not all-inclusive because it is not possible to predict all factors. You should also carefully consider the information contained under the heading “Risk Factors” in this prospectus, any prospectus supplement, and in our other SEC filings.

GREAT PLAINS ENERGY INCORPORATED

Great Plains Energy Incorporated, a Missouri corporation incorporated in 2001 and headquartered in Kansas City, Missouri, is a public utility holding company and does not own or operate any significant assets other than the stock of its subsidiaries. Our wholly owned direct subsidiaries with operations or active subsidiaries are as follows:

- Kansas City Power & Light Company (“KCP&L”) is an integrated, regulated electric utility that provides electricity to customers primarily in the states of Missouri and Kansas. KCP&L has one wholly owned subsidiary, Kansas City Power & Light Receivables Company (“Receivables Company”).
- KCP&L Greater Missouri Operations Company (“GMO”) is an integrated, regulated electric utility that primarily provides electricity to customers in the state of Missouri. GMO also provides regulated steam service to certain customers in the St. Joseph, Missouri area. GMO wholly owns MPS Merchant Services, Inc., which has certain long-term natural gas contracts remaining from its former non-regulated trading operations. Great Plains Energy acquired GMO on July 14, 2008.
- Great Plains Energy Services Incorporated (“Services”) obtains certain goods and third-party services for us and our subsidiaries. On December 16, 2008, Services employees were transferred to KCP&L.
- KLT Inc. is an intermediate holding company that primarily holds investments in affordable housing limited partnerships.

RISK FACTORS

Investing in our securities involves risks. Our business is influenced by many factors that are difficult to predict, involve uncertainties that may materially affect actual results and are often beyond our control. You should carefully consider the information under the heading “Risk Factors” in:

- any prospectus supplement relating to any securities we are offering;
- our annual report on Form 10-K for the fiscal year ended December 31, 2008, which is incorporated by reference into this prospectus; and
- documents we file with the SEC after the date of this prospectus and which are deemed incorporated by reference into this prospectus.

RATIO OF EARNINGS TO FIXED CHARGES

The following table shows our ratio of earnings to fixed charges for the periods indicated:

Three Months Ended	Fiscal Years Ended December 31,				
March 31, 2009	2008	2007	2006	2005	2004
(a)	2.26	2.53	3.50	3.09	2.77

(a) A \$4.5 million deficiency in earnings caused the ratio of earnings to fixed charges to be less than a one-to-one coverage.

For purposes of computing the ratios of earnings to fixed charges: (i) earnings consist of income before deducting net provisions for income taxes, adjustments for minority interests in subsidiaries and equity investment losses, and fixed charges; and (ii) fixed charges consist of interest on debt, amortization of debt discount, premium and expense, and the estimated interest component of lease payments and rentals.

USE OF PROCEEDS

Unless we inform you otherwise in a supplement to this prospectus, we anticipate using any net proceeds received by us from the issuance of any of the offered securities for general corporate purposes, including, among others:

- repayment of debt;
- repurchase, retirement or refinancing of other securities;
- funding of construction expenditures;
- investments in subsidiaries; and
- acquisitions.

Pending such uses, we may also invest the proceeds in certificates of deposit, United States government securities or certain other short-term interest-bearing securities. If we decide to use the net proceeds from a particular offering of securities for a specific purpose, we will describe that in the related prospectus supplement.

DESCRIPTION OF DEBT SECURITIES

General. The senior debt securities and the subordinated debt securities, which we refer to collectively as the debt securities, will represent unsecured obligations of Great Plains Energy Incorporated exclusively, and not the obligation of any of our subsidiaries. We may issue one or more series of debt securities directly to the public or as part of a stock purchase unit from time to time. We expect that each series of senior debt securities or subordinated debt securities will be issued as a new series of debt securities under one of two separate indentures, as each may be amended or supplemented from time to time. We will issue the senior debt securities in one or more series under the senior indenture that we have entered into with The Bank of New York Mellon Trust Company, N.A., as successor trustee. We will issue the subordinated debt securities in one or more series under a subordinated indenture between a trustee and us. The senior indenture, the form of the subordinated indenture and the form of any supplemental indenture or other instrument establishing the debt securities of a particular series are filed as exhibits to, or will be subsequently incorporated by reference in, the registration statement of which this prospectus is a part. Each indenture has been or will be qualified under the Trust Indenture Act of 1939 (“Trust Indenture Act”). The following summaries of certain provisions of the senior indenture, the subordinated indenture and the applicable debt securities do not purport to be complete and are subject to, and qualified in their entirety by, all of the provisions of the senior indenture or the subordinated indenture, as the case may be, and the applicable debt securities. We may also sell hybrid or novel securities now existing or developed in the future that combine certain features of the debt securities and other securities described in this prospectus.

We may authorize the issuance and provide for the terms of a series of debt securities by or pursuant to a resolution of our Board of Directors or any duly authorized committee thereof or pursuant to a supplemental indenture or to a company order, as described in the indentures. There will be no requirement under either the senior indenture or the subordinated indenture that our future issuances of debt securities be issued exclusively under either indenture. We will be free to employ other indentures or documentation containing provisions different from those included in either indenture or applicable to one or more issuances of senior debt securities or subordinated debt securities, as the case may be, in connection with future issuances of other debt securities. The senior indenture and the subordinated indenture will provide that the applicable debt securities will be issued in one or more series, may be issued at various times, may have differing maturity dates and may bear interest at differing rates. We need not issue all debt securities of one series at the same time and, unless otherwise provided, we may reopen a series, without the consent of the holders of the senior debt securities or the subordinated debt securities of that series, as the case may be, for issuances of additional senior debt securities or subordinated debt securities of that series, as applicable. One or more series of the debt securities may be issued with the same or various maturities at par, above par or at a discount. Debt securities bearing no interest or interest at a rate which, at the time of issuance, is below the market rate

(“Original Issue Discount Securities”) will be sold at a discount (which may be substantial) below their stated principal amount. Federal income tax consequences and other special considerations applicable to any such Original Issue Discount Securities will be described in the prospectus supplement relating thereto. Unless otherwise described in the applicable prospectus supplement, neither indenture described above will limit the aggregate amount of debt, including secured debt, we or our subsidiaries may incur. Both indentures will also permit us to merge or consolidate or to transfer our assets, subject to certain conditions (see “— Consolidation, Merger and Sale or Disposition of Assets” below).

Ranking. The debt securities will be direct unsecured obligations of Great Plains Energy Incorporated exclusively, and not the obligation of any of our subsidiaries. The senior debt securities will rank equally with all of Great Plains Energy Incorporated’s unsecured and unsubordinated debt and the subordinated debt securities will be junior in right of payment to our Senior Indebtedness (including senior debt securities), as described under the heading “— Subordination.” At March 31, 2009, Great Plains Energy Incorporated had approximately \$1,405.1 million of outstanding Senior Indebtedness (as defined below) (including guarantees of \$1,297.1 million of GMO indebtedness) and no subordinated indebtedness.

Great Plains Energy Incorporated is a holding company that derives substantially all of its income from its operating subsidiaries. As a result, our cash flows and consequent ability to service our debt, including the debt securities, are dependent upon the earnings of our subsidiaries and distribution of those earnings to us and other payments or distributions of funds by our subsidiaries to us, including payments of principal and interest under intercompany indebtedness. Our operating subsidiaries are separate and distinct legal entities and will have no obligation, contingent or otherwise, to pay any dividends or make any other distributions (except for payments required pursuant to the terms of intercompany indebtedness) to us or to otherwise pay amounts due with respect to the debt securities or to make specific funds available for such payments. Furthermore, except to the extent we have a priority or equal claim against our subsidiaries as a creditor, the debt securities will be effectively subordinated to debt at the subsidiary level because, as the common shareholder of our subsidiaries, we will be subject to the prior claims of creditors of our subsidiaries. At March 31, 2009, our subsidiaries had approximately \$3,296.9 million of aggregate outstanding debt (including debt guaranteed by Great Plains Energy Incorporated).

Provisions of a Particular Series. The prospectus supplement applicable to each issuance of debt securities will specify, among other things:

- the title and any limitation on aggregate principal amount of the debt securities;
- the original issue date of the debt securities;
- the date or dates on which the principal of any of the debt securities is payable;
- the fixed or variable interest rate or rates, or method of calculation of such rate or rates, for the debt securities, and the date from which interest will accrue;
- the terms, if any, regarding the optional or mandatory redemption of any debt securities, including the redemption date or dates, if any, and the price or prices applicable to such redemption;
- the denominations in which such debt securities will be issuable;
- the period or periods within which, the price or prices at which and the terms and conditions upon which any debt securities may be repaid, in whole or in part, at the option of the holder thereof;
- our obligation, if any, to redeem, purchase, or repay the debt securities pursuant to any sinking fund or analogous provision or at the option of a holder thereof and the period or periods within which, the price or prices at which, and the terms and conditions upon which the debt securities shall be redeemed, purchased, or repaid pursuant to such obligation;
- whether the debt securities are to be issued in whole or in part in the form of one of more global securities and, if so, the identity of the depository for such global security or global securities;
- the place or places where the principal of, and premium, if any, and interest, if any, shall be payable;

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- any addition, deletion or modification to the events of default applicable to that series of debt securities and the covenants for the benefit of the holders of that series;
- any restrictions on the declaration of dividends or the requirement to maintain certain asset ratios or the creation and maintenance of reserves;
- any remarketing features of the debt securities;
- any collateral, security, assurance, or guarantee for the debt security;
- if other than the principal amount thereof, the portion of the principal amount of the debt securities payable upon declaration of acceleration of the maturity of the debt securities;
- the securities exchange(s), if any, on which the debt securities will be listed;
- the terms, if any, pursuant to which debt securities may be converted into or exchanged for shares of our capital stock or other securities;
- any interest deferral or extension provisions;
- the applicability of or any change in the subordination provisions for a series of debt securities;
- the terms of any warrants we may issue to purchase debt securities; and
- any other terms of the debt securities not inconsistent with the provisions of the applicable indenture.

Subordination. The subordinated debt securities will be subordinate and junior in right of payment to all of our Senior Indebtedness, as defined below.

In the event:

- of any bankruptcy, insolvency, receivership or other proceedings or any dissolution, winding-up, liquidation or reorganization, whether voluntary or involuntary, of Great Plains Energy Incorporated,
- that a default shall have occurred with respect to the payment of principal of or interest on or other monetary amounts due and payable on any Senior Indebtedness, and such default continues beyond any applicable grace period and shall not have been cured, waiver or ceased to exist, or
- any other default has occurred and continues without cure or waiver (after the expiration of any applicable grace period) pursuant to which the holders of Senior Indebtedness are permitted to accelerate the maturity of such Senior Indebtedness,

then all Senior Indebtedness must be paid, or provision for such payment be made, in full before the holders of the subordinated debt securities are entitled to receive or retain any payment (including redemption and sinking fund payments).

In addition, upon the maturity of the principal of any Senior Indebtedness by lapse of time, acceleration or otherwise, all matured principal of and interest and premium, if any, on such Senior Indebtedness, must be paid in full before any payment of principal of, premium, if any, or interest on, the subordinated debt securities may be made or before any subordinated debt securities can be acquired by Great Plains Energy Incorporated.

Upon the payment in full of all Senior Indebtedness, the rights of the holders of the subordinated debt securities will be subrogated to the rights of the holders of Senior Indebtedness to receive payments or distributions applicable to Senior Indebtedness until all amounts owing on the subordinated debt securities are paid in full. If provided in the applicable prospectus supplement, limited subordination periods may apply in the event of non-payment defaults relating to Senior Indebtedness in situations where there has not been an acceleration of Senior Indebtedness.

As defined in the subordinated indenture, the term “Senior Indebtedness” means:

(1) obligations (other than non-recourse obligations, the indebtedness issued under, and subject to the subordination provisions of, the subordinated indenture and other obligations which are either effectively by their terms or expressly made subordinate to or *pari passu* with the subordinated debt securities) of, or

guaranteed (except to the extent our payment obligations under any such guarantee are effectively by their terms or expressly made subordinate to or *pari passu* with the subordinated debt securities) or assumed by, us for

- borrowed money (including both senior and subordinated indebtedness for borrowed money (other than the subordinated debt securities and other indebtedness which is effectively by its terms or expressly made subordinate to or *pari passu* with the subordinated debt securities)); or
- the payment of money relating to any lease which is capitalized on our balance sheet in accordance with generally accepted accounting principles as in effect from time to time;

(2) indebtedness evidenced by bonds, debentures, notes or other similar instruments issued by us (other than such instruments that are effectively by their terms or expressly made subordinate to or *pari passu* with the subordinated debt securities),

and in each case, amendments, renewals, extensions, modifications and refundings of any such indebtedness or obligations with Senior Indebtedness, whether existing as of the date of the subordinated indenture or subsequently incurred by us.

However, trade accounts payable and accrued liabilities arising in the ordinary course of business will not be Senior Indebtedness.

The subordinated indenture will not limit the aggregate amount of Senior Indebtedness that we may issue. At March 31, 2009, the outstanding Senior Indebtedness of Great Plains Energy Incorporated totaled approximately \$1,405.1 million (including guarantees of \$1,297.1 million of GMO indebtedness).

Registration, Transfer and Exchange. Unless otherwise indicated in the applicable prospectus supplement, each series of debt securities will initially be issued in the form of one or more global securities, in registered form, without coupons, as described under “Book-Entry System.” The global securities will be registered in the name of a depository, or its nominee, and deposited with, or on behalf of, the depository. Except in the circumstances described under “Book-Entry System,” owners of beneficial interests in a global security will not be entitled to have debt securities registered in their names, will not receive or be entitled to receive physical delivery of any debt securities and will not be considered the registered holders thereof under the applicable indenture.

Debt securities of any series will be exchangeable for other debt securities of the same series of any authorized denominations and of a like aggregate principal amount and tenor. Subject to the terms of the applicable indenture and the limitations applicable to global securities, debt securities may be presented for exchange or registration of transfer-duly endorsed or accompanied by a duly executed instrument of transfer-at the office of any transfer agent we may designate for such purpose, without service charge but upon payment of any taxes and other governmental charges, and upon satisfaction of such other reasonable requirements as are described in the applicable indenture.

Unless otherwise indicated in the applicable prospectus supplement, the transfer agent will be the trustee under the applicable indenture. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

Payment and Paying Agents. Principal of and interest and premium, if any, on debt securities issued in the form of global securities will be paid in the manner described under “Book-Entry System” or as otherwise set forth in the applicable prospectus supplement.

Unless otherwise indicated in the applicable prospectus supplement, the principal of and any premium and interest on debt securities of a particular series in the form of certificated securities will be payable at the office of the applicable trustee or at the authorized office of any paying agent or paying agents upon presentation and surrender of such debt securities. We may at any time designate additional paying agents or rescind the designation of any paying agent or approve a change in the office through which any paying agent

acts, except that we will be required to maintain a paying agent in each place of payment for the debt securities of a particular series. Unless otherwise indicated in the applicable prospectus supplement, interest on the debt securities of a particular series, other than interest at maturity, that are in the form of certificated securities will be paid by check payable in clearinghouse funds mailed to the person entitled thereto at such person's address as it appears on the register for such debt securities maintained by the applicable trustee. All monies we pay to a trustee or a paying agent for the payment of the principal of, and premium or interest, if any, on, any debt security which remain unclaimed at the end of two years after such principal, premium or interest shall have become due and payable will be repaid to us, and the holder of such debt security thereafter may look only to us for payment thereof. However, any such payment shall be subject to escheat pursuant to state abandoned property laws.

Redemption. Any terms for the optional or mandatory redemption of the debt securities will be set forth in the applicable prospectus supplement. Unless otherwise indicated in the applicable prospectus supplement, debt securities that are redeemable by us will be redeemable only upon notice by mail not less than 30 nor more than 60 days prior to the date fixed for redemption, and, if less than all the debt securities of a series are to be redeemed, the particular debt securities to be redeemed will be selected by such method as shall be provided for any particular series, or in the absence of any such provision, by the trustee in such manner as it shall deem fair and appropriate.

Any notice of redemption at our option may state that such redemption will be conditional upon receipt by the trustee or the paying agent or agents, on or prior to the date fixed for such redemption, of money sufficient to pay the principal of and premium, if any, and interest on, such debt securities and that if such money has not been so received, such notice will be of no force and effect and we will not be required to redeem such debt securities.

Consolidation, Merger and Sale or Disposition of Assets. We may, without the consent of the holders of any debt securities, consolidate with or merge into any other corporation or sell, transfer or otherwise dispose of our properties as or substantially as an entirety to any person, provided that:

- the successor or transferee corporation or the person which receives such properties pursuant to such sale, transfer or other disposition is a corporation organized and existing under the laws of the United States of America, any state thereof or the District of Columbia;
- the successor or transferee corporation or the person which receives such properties pursuant to such sale, transfer or other disposition assumes by supplemental indenture the due and punctual payment of the principal of and premium and interest, if any, on all the debt securities outstanding under each indenture and the performance of every covenant of each indenture to be performed or observed by us;
- we have delivered to the trustees for such debt securities an officer's certificate and an opinion of counsel as will be provided in each of the indentures; and
- immediately after giving effect to the transaction, no event of default (see "— Events of Default") or event that, after notice or lapse of time, or both, would become an event of default, shall have occurred and be continuing.

Upon any such consolidation, merger, sale, transfer or other disposition of our properties (except transfers related to a lease of our properties) as or substantially as an entirety, the successor corporation formed by such consolidation or into which we are merged or the person to which such sale, transfer or other disposition is made shall succeed to, and be substituted for, and may exercise every right and power of, us under the applicable indenture with the same effect as if such successor corporation or person had been named as us therein, and we will be released from all obligations under the applicable indenture.

Modification. Without the consent of any holder of debt securities, the trustee for such debt securities and we may enter into one or more supplemental indentures for any of the following purposes:

- to supply omissions, cure any ambiguity or inconsistency or correct or supplement any defective or inconsistent provision, which actions, in each case, are not inconsistent with the applicable indenture or prejudicial to the interests of the holders of debt securities of any series in any material respect;

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- to change or eliminate any provision of the applicable indenture, provided that any such change or elimination will become effective with respect to such series only when there is no debt security of such series outstanding created prior to the execution of such supplemental indenture which is entitled to the benefit of such provision, or such change or elimination is applicable only to debt securities of such series issued after the effective date of such change or elimination;
- to establish the form or terms of debt securities of any series as permitted by the applicable indenture;
- to evidence the assumption of our covenants in the applicable indenture and the debt securities by any permitted successor;
- to grant to or confer upon the trustee for any debt securities for the benefit of the holders of such debt securities, any additional rights, remedies, powers or authority;
- to permit the trustee for any debt securities to comply with any duties imposed upon it by law;
- to specify further the duties and responsibilities of, and to define further the relationship among, the trustee for any debt securities, any authenticating agent and any paying agent, and to evidence the succession of a successor trustee as permitted under the applicable indenture;
- to add to our covenants for the benefit of the holders of all or any series of outstanding debt securities, to add to the security of all debt securities, to surrender any right or power conferred upon us by the applicable indenture or to add any additional events of default with respect to all or any series of outstanding debt securities; and
- to make any other change that is not prejudicial to the holders of any debt securities.

The senior indenture provides that, except as provided above, the consent of the holders of a majority in aggregate principal amount of the senior debt securities of all series then outstanding, considered as one class, is required for the purpose of adding any provisions to, or changing in any manner, or eliminating any of the provisions of, the senior indenture pursuant to one or more supplemental indentures or of modifying or waiving in any manner the rights of the holders of the senior debt securities; provided, however, that if less than all of the series of senior debt securities outstanding are directly affected by a proposed supplemental indenture, then the consent only of the holders of a majority in aggregate principal amount of the outstanding senior debt securities of all series so directly affected, considered as one class, will be required.

The subordinated indenture will provide that, except as provided above, the consent of the holders of (i) a majority in aggregate principal amount of debt securities of all series then outstanding under the subordinated indenture that are subject to the subordination provision of the subordinated indenture, considered as one class and (ii) a majority in aggregate principal amount of debt securities of all series then outstanding under the subordinated indenture that are not subject to the subordination provision of the subordinated indenture, considered as one class, is required for the purpose of adding any provisions to, or changing in any manner, or eliminating any of the provisions of, the subordinated indenture pursuant to one or more supplemental indentures or of modifying or waiving in any manner the rights of the holders of the debt securities issued under the subordinated indenture; provided, however, that if less all series of debt securities outstanding under the subordinated indenture are directly affected by a proposed supplemental indenture, then the consent only of the holders of (i) a majority in aggregate principal amount of outstanding debt securities issued under the subordinated indenture of all series so directly affected that are subject to the subordination provisions of the subordinated indenture, considered as one class, and (ii) a majority in aggregate principal amount of outstanding debt securities issued under the subordinated indenture of all series so directly affected that are not subject to the subordination provisions of the subordinated indenture, considered as one class, will be required.

Notwithstanding the foregoing, no such amendment or modification may, without the consent of each holder of outstanding debt securities affected thereby:

- change the maturity date of the principal of any debt security;
- reduce the principal amount of, or premium payable on, any debt security;

- reduce the rate of interest or change the method of calculating such rate, or extend the time of payment of interest, on any debt security;
- change the coin or currency of any payment of principal of, or any premium or interest on any debt security;
- change the date on which any debt security may be redeemed;
- adversely affect the rights of a holder to institute suit for the enforcement of any payment of principal of or any premium or interest on any debt security; or
- modify the foregoing requirements or reduce the percentage of outstanding debt securities necessary to modify or amend the applicable indenture or to waive events of default.

A supplemental indenture which changes or eliminates any covenant or other provision of the applicable indenture or any other supplemental indenture which has expressly been included solely for the benefit of one or more series of debt securities, or which modifies the rights of the holders of debt securities of such series with respect to such covenant or provision, will be deemed not to affect the rights under the applicable indenture of the holders of the debt securities of any other series.

Events of Default. Unless specifically deleted in a supplemental indenture or company order under which a series of debt securities is issued, or modified in any such supplemental indenture or company order, each of the following will constitute an event of default under the senior indenture or the subordinated indenture with respect to senior debt securities or subordinated debt securities, as the case may be, of any series:

- failure to pay principal of or premium, if any, on any debt security of such series, as the case may be, within one day after the same becomes due and payable;
- failure to pay interest on the debt securities of such series within 30 days after the same becomes due and payable;
- failure to observe or perform any of our other covenants or agreements in the applicable indenture (other than a covenant or agreement solely for the benefit of one or more series of debt securities other than such series) for 60 days after written notice to us by the trustee or to us and the trustee by the holders of at least 33% in aggregate principal amount of the outstanding debt securities of such series;
- certain events of bankruptcy, insolvency, reorganization, assignment or receivership; or
- any other event of default specified in the applicable prospectus supplement with respect to debt securities of a particular series.

Additional events of default with respect to a particular series of debt securities may be specified in a supplemental indenture or resolution of the Board of Directors establishing that series.

No event of default with respect to the debt securities of a particular series necessarily constitutes an event of default with respect to the debt securities of any other series issued under the applicable indenture.

If an event of default with respect to any series of debt securities occurs and is continuing, then either the trustee for such series or the holders of a majority in aggregate principal amount of the outstanding debt securities of such series, by notice in writing, may declare the principal amount of and interest on all of the debt securities of such series to be due and payable immediately; provided, however, that if an event of default occurs and is continuing with respect to more than one series of debt securities under a particular indenture, the trustee for such series or the holders of a majority in aggregate principal amount of the outstanding debt securities of all such series, considered as one class, may make such declaration of acceleration and not the holders of the debt securities of any one of such series.

At any time after an acceleration with respect to the debt securities of any series has been declared, but before a judgment or decree for the payment of the money due has been obtained, the event or events of default giving rise to such acceleration will be waived, and the acceleration will be rescinded and annulled, if:

- we pay or deposit with the trustee for such series a sum sufficient to pay all matured installments of interest on all debt securities of such series, the principal of and premium, if any, on the debt securities of such series which have become due otherwise than by acceleration and interest thereon at the rate or rates specified in such debt securities, interest upon overdue installments of interest at the rate or rates specified in such debt securities, to the extent that payment of such interest is lawful, and all amounts due to the trustee for such series under the applicable indenture; and
- any other event or events of default with respect to the debt securities of such series, other than the nonpayment of the principal of and accrued interest on the debt securities of such series which has become due solely by such acceleration, have been cured or waived as provided in the applicable indenture.

However, no such waiver or rescission and annulment shall extend to or shall affect any subsequent default or impair any related right.

Subject to the provisions of the applicable indenture relating to the duties of the trustee in case an event of default shall occur and be continuing, the trustee generally will be under no obligation to exercise any of its rights or powers under the applicable indenture at the request or direction of any of the holders unless such holders have offered to the trustee reasonable security or indemnity satisfactory to it. Subject to such provisions for the indemnification of the trustee and certain other limitations contained in the applicable indenture, the holders of a majority in aggregate principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or of exercising any trust or power conferred on the trustee, with respect to the debt securities of that series; provided, however, that if an event of default occurs and is continuing with respect to more than one series of debt securities, the holders of a majority in aggregate principal amount of the outstanding debt securities of all those series, considered as one class, will have the right to make such direction, and not the holders of the debt securities of any one series. Any direction provided by the holders shall not be in conflict with any rule of law or with the senior indenture or the subordinated indenture, as the case may be, and will not involve the trustee in personal liability in circumstances where reasonable indemnity would not, in the trustee's sole discretion, be adequate and the trustee may take any other action it deems proper that is not inconsistent with such direction.

The holders of a majority in aggregate principal amount of the outstanding debt securities of any series may waive any past default or event of default under the applicable indenture on behalf of all holders of debt securities of that series with respect to the debt securities of that series, except a default in the payment of principal of or any premium or interest on such debt securities. No holder of debt securities of any series may institute any proceeding with respect to the applicable indenture, or for the appointment of a receiver or a trustee, or for any other remedy, unless such holder has previously given to the trustee for such series written notice of a continuing event of default with respect to the debt securities of such series, the holders of a majority in aggregate principal amount of the outstanding debt securities of all series in respect of which an event of default has occurred and is continuing, considered as one class, have made written request to the trustee for such series to institute such proceeding and have offered reasonable indemnity, and the trustee for such series has failed to institute such proceeding within 60 days after such notice, request and offer. Furthermore, no holder of debt securities of any series will be entitled to institute any such action if and to the extent that such action would disturb or prejudice the rights of other holders of those debt securities.

Notwithstanding the foregoing, each holder of debt securities of any series has the right, which is absolute and unconditional, to receive payment of the principal of and premium and interest, if any, on such debt securities when due and to institute suit for the enforcement of any such payment, and such rights may not be impaired without the consent of that holder of debt securities.

The trustee, within 90 days after the occurrence of a default actually known to the trustee with respect to the debt securities of any series, is required to give the holders of the debt securities of that series notice of such default, unless cured or waived, but, except in the case of default in the payment of principal of, or premium, if any, or interest on the debt securities of that series, the trustee may withhold such notice if it determines in good faith that it is in the interest of such holders to do so. We will be required to deliver to the trustees for the debt securities each year a certificate as to whether or not, to the knowledge of the officers signing such certificate, we are in compliance with all conditions and covenants under the applicable indenture, determined without regard to any period of grace or requirement of notice under such indenture.

Conversion Rights. Any resolution of the Board of Directors or supplemental indenture establishing a series of debt securities may provide for conversion rights. We will describe in the applicable prospectus supplement the particular terms and conditions, if any, on which debt securities may be convertible into other securities. These terms will include the conversion rate, the conversion period, provisions as to whether conversion will be at our option or the option of the holder, events requiring an adjustment of the conversion rate and provisions affecting conversion in the event of the redemption of the debt securities. If we issue convertible debt securities, we will need to supplement the indenture to add applicable provisions regarding conversion.

Defeasance. Unless the applicable prospectus supplement states otherwise, we may elect either:

(1) to defease and be discharged from any and all obligations in respect of the debt securities of any series then outstanding under the applicable indenture (except for certain obligations to register the transfer or exchange of the debt securities of such series, replace stolen, lost or mutilated debt securities, maintain paying agencies and hold monies for payment in trust); or

(2) to be released from the obligations of the senior indenture with respect to the senior debt securities of any series or the subordinated indenture with respect to the subordinated debt securities of any series under any covenants applicable to the debt securities of such series which are subject to covenant defeasance as described in the applicable indenture, supplemental indenture or other instrument establishing such series.

In the case of either (1) or (2), the following conditions, among others, must be met:

- we will be required to deposit, in trust, with the applicable trustee money or U.S. government obligations, which through the payment of interest on those obligations and principal of those obligations in accordance with their terms will provide money, in an amount sufficient, without reinvestment, to pay all the principal of, premium, if any, and interest on the notes of such series on the dates payments are due (which may include one or more redemption dates designated by us),
- no event of default or event which with the giving of notice or lapse of time, or both, would become an event of default under the applicable indenture must have occurred and be continuing on the date of the deposit, and 91 days must have passed after the deposit has been made and, during that period, certain events of default must not have occurred and be continuing as of the end of that period,
- the deposit must not cause the applicable trustee to have any conflicting interest with respect to our other securities,
- we must have delivered an opinion of counsel to the effect that the holders will not recognize income, gain or loss for federal income tax purposes (and, in the case of paragraph (1) above, such opinion of counsel must be based on a ruling of the Internal Revenue Service or other change in applicable federal income tax law) as a result of the deposit or defeasance and will be subject to federal income tax in the same amounts, in the same manner and at the same times as if the deposit and defeasance had not occurred, and
- we must have delivered an officer's certificate to the trustee as provided in the applicable indenture.

We may exercise our defeasance option under paragraph (1) with respect to notes of any series notwithstanding our prior exercise of our covenant defeasance option under paragraph (2). If we exercise our defeasance option

under paragraph (1) for debt securities of any series, payment of the debt securities of such series may not be accelerated because of a subsequent event of default. If we exercise our covenant defeasance option for debt securities of any series, payment of the debt securities of such series may not be accelerated by reference to a subsequent breach of any of the covenants noted under paragraph (2) above. In the event we fail to comply with our remaining obligations with respect to the debt securities of any series under the applicable indenture after exercising our covenant defeasance option and the debt securities of such series are declared due and payable because of the subsequent occurrence of any event of default, the amount of money and U.S. government obligations on deposit with the applicable trustee may be insufficient to pay amounts due on the debt securities of such series at the time of the acceleration resulting from that event of default. However, we will remain liable for those payments.

Resignation or Removal of Trustee. The trustee may resign at any time upon written notice to us specifying the day upon which the resignation is to take effect and such resignation will take effect immediately upon the later of the appointment of a successor trustee and such specified day. The trustee may be removed at any time with respect to debt securities of any series by an instrument or concurrent instruments in writing filed with the trustee and signed by the holders, or their attorneys-in-fact, of a majority in aggregate principal amount of that series of debt securities then outstanding. In addition, so long as no event of default or event which, with the giving of notice or lapse of time or both, would become an event of default has occurred and is continuing, we may remove the trustee upon notice to the holder of each debt security outstanding and the trustee, and appointment of a successor trustee.

Concerning the Trustee for Senior Debt Securities. As of March 31, 2009, The Bank of New York Mellon Trust Company, N.A., which is the trustee under the senior indenture, and its affiliates were the trustees for \$100.0 million of our unsecured debt, and \$1,378.7 million of KCP&L's secured and unsecured debt (including Environmental Improvement Revenue Refunding debt issued by certain governmental entities), under several separate indentures. In addition, an affiliate of The Bank of New York Mellon Trust Company, N.A. is one of the lenders under separate credit agreements with us, KCP&L and GMO and is the trustee under a KCP&L nuclear decommissioning fund trust. Affiliates of The Bank of New York Mellon Trust Company, N.A. also perform other services for, and transact other banking business with our affiliates and us in the normal course and may do so in the future. Each indenture will provide that our obligations to compensate the trustee and reimburse the trustee for expenses, disbursements and advances will be secured by a lien prior to that of the applicable debt securities upon the property and funds held or collected by the trustee as such, except funds held in trust for the benefit of holders of particular debt securities.

Governing Law. The senior indenture is, and any senior debt securities will be, governed by New York law. The subordinated indenture and any subordinated debt securities will be governed by New York law.

DESCRIPTION OF COMMON STOCK

General. The following descriptions of our common stock and the relevant provisions of our Articles of Incorporation and by-laws are summaries and are qualified by references to our Articles of Incorporation and by-laws which have been previously filed with the SEC and are exhibits to this registration statement, of which this prospectus is a part, as well as the applicable Missouri General and Business Corporation Law.

Under our Articles of Incorporation, we are authorized to issue 262,962,000 shares of stock, divided into classes as follows:

- 390,000 shares of Cumulative Preferred Stock with a par value of \$100;
- 1,572,000 shares of Cumulative No Par Preferred Stock with no par value;
- 11,000,000 shares of Preference Stock with no par value; and
- 250,000,000 shares of Common Stock with no par value.

At May 1, 2009, 390,000 shares of Cumulative Preferred Stock and 123,201,106 shares of common stock were outstanding. No shares of Cumulative No Par Preferred Stock or Preference Stock are currently

outstanding but such shares may be issued from time to time in accordance with the Articles of Incorporation. The voting powers, designations, preferences, rights and qualifications, limitations, or restrictions of any series of Preference Stock are set by our Board of Directors when it is issued.

Dividend Rights and Limitations. The holders of our common stock are entitled to receive such dividends as our Board of Directors may from time to time declare, subject to any rights of the holders of our preferred and preference stock. Our ability to pay dividends depends primarily upon the ability of our subsidiaries to pay dividends or otherwise transfer funds to us.

Except as otherwise authorized by consent of the holders of at least two-thirds of the total number of shares of the total outstanding shares of Cumulative Preferred Stock and Cumulative No Par Preferred Stock, we may not pay or declare any dividends on common stock, other than dividends payable in common stock, or make any distributions on, or purchase or otherwise acquire for value, any shares of common stock if, after giving effect thereto, the aggregate amount expended for such purposes during the 12 months then ended (a) exceeds 50% of net income available for dividends on Preference Stock and common stock for the preceding 12 months, in case the total of Preference Stock and common stock equity would be reduced to less than 20% of total capitalization, or (b) exceeds 75% of such net income in case such equity would be reduced to between 20% and 25% of total capitalization, or (c) except to the extent permitted in subparagraphs (a) and (b), would reduce such equity below 25% of total capitalization.

Subject to certain limited exceptions, no dividends may be declared or paid on common stock and no common stock may be purchased or redeemed or otherwise retired for consideration (a) unless all past and current dividends on Cumulative Preferred Stock and Cumulative No Par Preferred Stock have been paid or set apart for payment and (b) except to the extent of retained earnings (earned surplus).

Voting Rights. Except as otherwise provided by law and subject to the voting rights of the outstanding Cumulative Preferred Stock, Cumulative No Par Preferred Stock, and Preference Stock, the holders of our common stock have the exclusive right to vote for all general purposes and for the election of directors through cumulative voting. This means each shareholder has a total vote equal to the number of shares they own multiplied by the number of directors to be elected. These votes may be divided among all nominees equally or may be voted for one or more of the nominees either in equal or unequal amounts. The nominees with the highest number of votes are elected.

The consent of specified percentages of holders of outstanding shares of Cumulative Preferred Stock and Cumulative No Par Preferred Stock is required to authorize certain actions which may affect their interests; and if, at any time, dividends on any of the outstanding shares of Cumulative Preferred Stock and Cumulative No Par Preferred Stock shall be in default in an amount equivalent to four or more full quarterly dividends, the holders of outstanding shares of all preferred stock, voting as a single class, shall be entitled (voting cumulatively) to elect the smallest number of directors necessary to constitute a majority of the full Board of Directors, which right shall continue in effect until all dividend arrearages shall have been paid.

Liquidation Rights. In the event of any dissolution or liquidation of Great Plains Energy Incorporated, after there shall have been paid to or set aside for the holders of shares of outstanding Cumulative Preferred Stock, Cumulative No Par Preferred Stock, and Preference Stock the full preferential amounts to which they are respectively entitled, the holders of outstanding shares of common stock shall be entitled to receive pro rata, according to the number of shares held by each, the remaining assets available for distribution.

Miscellaneous. The outstanding shares of common stock are, and the shares of common stock sold hereunder will be, upon payment for them, fully paid and nonassessable. The holders of our common stock are not entitled to any preemptive or preferential rights to subscribe for or purchase any part of any new or additional issue of stock or securities convertible into stock. Our common stock does not contain any sinking fund provisions, redemption provisions or conversion rights.

Transfer Agent and Registrar. Computershare Trust Company, N.A. acts as transfer agent and registrar for our common stock.

Business Combinations. The affirmative vote of the holders of at least 80% of the outstanding shares of common stock is required for the approval or authorization of certain business combinations with interested shareholders; provided, however, that such 80% voting requirement shall not be applicable if:

- the business combination shall have been approved by a majority of the continuing directors; or
- the cash or the fair market value of the property, securities, or other consideration to be received per share by holders of the common stock in such business combination is not less than the highest per-share price paid by or on behalf of the acquiror for any shares of common stock during the five-year period preceding the announcement of the business combination.

Listing. The common stock of Great Plains Energy Incorporated is listed on the New York Stock Exchange under the symbol “GXP.”

DESCRIPTION OF STOCK PURCHASE CONTRACTS AND STOCK PURCHASE UNITS OR WARRANTS FOR STOCK

We may issue stock purchase contracts, including contracts obligating holders to purchase from us, and obligating us to sell to the holders shares of our common stock at a future date or dates. We may fix the price and the number of shares of common stock subject to the stock purchase contract at the time we issue the stock purchase contracts or we may provide that the price and number of shares of common stock will be determined by reference to a specific formula set forth in the stock purchase contracts. The stock purchase contracts may be issued separately or as part of units, often known as stock purchase units, consisting of a stock purchase contract and:

- our senior debt securities or subordinated debt securities,
- debt obligations of third parties, including U.S. treasury securities,

securing the holders’ obligations to purchase the common stock under the stock purchase contracts. The stock purchase contracts may require us to make periodic payments to the holders of the stock purchase units or vice versa, and these payments may be unsecured or prefunded on some basis. The stock purchase contracts may require holders to secure their obligations under those contracts in a specified manner and, in certain circumstances, we may deliver newly issued prepaid stock purchase contracts, often known as prepaid securities, upon release to a holder of any collateral securing such holder’s obligation under the original stock purchase contract.

The applicable prospectus supplement will describe the terms of the stock purchase contracts or stock purchase units, including, if applicable, collateral or depository arrangements. The description in the applicable prospectus supplement will not contain all of the information you may find useful and reference will be made to the stock purchase contracts or stock purchase units and, if applicable, the collateral or depository arrangement relating to the stock purchase contracts or stock purchase units.

We may also issue warrants to purchase our common stock with the terms of such warrants and any related warrant agreement between us and a warrant agent being described in a prospectus supplement.

BOOK-ENTRY SYSTEM

Unless otherwise indicated in the applicable prospectus supplement, each series of debt securities will initially be issued in the form of one or more global securities, in registered form, without coupons. The global security will be deposited with, or on behalf of, the depository, and registered in the name of the depository or a nominee of the depository. Unless otherwise indicated in the applicable prospectus supplement, the depository for any global securities will be The Depository Trust Company, or DTC.

So long as the depository, or its nominee, is the registered owner of a global security, such depository or such nominee, as the case may be, will be considered the owner of such global security for all purposes under the applicable indenture, including for any notices and voting. Except in limited circumstances, the owners of

beneficial interests in a global security will not be entitled to have securities registered in their names, will not receive or be entitled to receive physical delivery of any such securities and will not be considered the registered holder thereof under the applicable indenture. Accordingly, each person holding a beneficial interest in a global security must rely on the procedures of the depository and, if such person is not a direct participant, on procedures of the direct participant through which such person holds its interest, to exercise any of the rights of a registered owner of such security.

Except as otherwise provided in any applicable prospectus supplement, global securities may be exchanged in whole for certificated securities only if the depository notifies us that it is unwilling or unable to continue as depository for the global securities or the depository has ceased to be a clearing agency registered under the Exchange Act and, in either case, we thereupon fail to appoint a successor depository within 90 days. We may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository), subject to DTC's procedures.

In any such case, we have agreed to notify the applicable trustee in writing that, upon surrender by the direct participants and indirect participants of their interest in such global securities, certificated securities representing the applicable securities will be issued to each person that such direct participants and indirect participants and the depository identify as being the beneficial owner of such securities.

The following is based solely on information furnished by DTC:

DTC will act as depository for the global securities. The global securities will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered global security certificate will be issued for each issue of the global securities, each in the aggregate principal amount of such issue and will be deposited with DTC. If, however, the aggregate principal amount of any issue of a series of debt securities exceeds \$500 million, one certificate will be issued with respect to each \$500 million of principal amount and an additional certificate will be issued with respect to any remaining principal amount of such series. DTC is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds securities that its direct participants deposit with DTC. DTC also facilitates the post-trade settlement among direct participants of sales and other securities transactions, in deposited securities through electronic computerized book-entry transfers and pledges between direct participants' accounts, thereby eliminating the need for physical movement of securities certificates.

Direct participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a direct participant, either directly or indirectly, which are referred to as indirect participants and, together with the direct participants, the participants. The rules applicable to DTC and its participants are on file with the SEC.

Purchases of global securities under the DTC system must be made by or through direct participants, who will receive a credit for the global securities on DTC's records. The ownership interest of each actual purchaser of each global security, or beneficial owner, is in turn to be recorded on the direct and indirect participants' records. Beneficial owners will not receive written confirmation from DTC of their purchase. Beneficial owners, however, are expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the direct or indirect participant through which the beneficial owner entered into the transaction. Transfers of ownership interests in the global securities are to be accomplished by entries made on the books of direct and indirect participants acting on behalf of beneficial

owners. Beneficial owners will not receive certificates representing their ownership interests in the global securities, except in the event that use of the book-entry system for the global securities is discontinued.

To facilitate subsequent transfers, all global securities deposited by direct participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of global securities with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual beneficial owners of the global securities; DTC's records reflect only the identity of the direct participants to whose accounts such global securities are credited which may or may not be the beneficial owners. The direct and indirect participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to direct participants, by direct participants to indirect participants, and by direct participants and indirect participants to beneficial owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial owners of global securities may wish to take certain steps to augment transmission to them of notices of significant events with respect to the global securities, such as redemptions, tenders, defaults, and proposed amendments to the security documents. For example, beneficial owners of global securities may wish to ascertain that the nominee holding the global securities for their benefit has agreed to obtain and transmit notices to beneficial owners, in the alternative, beneficial owners may wish to provide their names and addresses to the registrar and request that copies of the notices be provided directly to them.

If the global securities are redeemable, redemption notices shall be sent to DTC. If less than all of the global securities are being redeemed, DTC's practice is to determine by lot the amount of the interest of each direct participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the global securities unless authorized by a direct participant in accordance with DTC's procedures. Under its usual procedures, DTC mails an omnibus proxy to us as soon as possible after the record date. The omnibus proxy assigns Cede & Co.'s consenting or voting rights to those direct participants whose accounts the global securities are credited on the record date, identified in a listing attached to the omnibus proxy.

Principal, distributions, interest and premium payments, if any, on the global securities will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit direct participants' accounts upon DTC's receipt of funds and corresponding detail information from us or the trustee for such securities, on payable date in accordance with their respective holdings shown on DTC's records. Payments by participants to beneficial owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such participant and not of DTC, the trustee for such securities, or us, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal, distributions, interest and premium, if any, on any of the aforementioned securities represented by global securities to DTC is the responsibility of the appropriate trustee and us. Disbursement of such payments to direct participants shall be the responsibility of DTC, and disbursement of such payments to the beneficial owners shall be the responsibility of the participants.

The information in this section concerning DTC and DTC's book-entry system has been obtained from sources, including DTC, that we believe to be reliable, but we take no responsibility for the accuracy thereof.

The underwriters, dealers or agents of any of the securities may be direct participants of DTC.

None of the trustees, us or any agent for payment on or registration of transfer or exchange of any global security will have any responsibility or liability for any aspect of the records relating to or payments made on account of beneficial interests in such global security or for maintaining, supervising or reviewing any records relating to such beneficial interests.

PLAN OF DISTRIBUTION

We may sell the securities in one or more of the following ways from time to time: (i) to underwriters for resale to the public or to institutional investors; (ii) directly to institutional investors; or (iii) through agents to the public or to institutional investors. The prospectus supplement with respect to each series of securities will set forth the terms of the offering of such securities, including the name or names of any underwriters or agents, the purchase price of such securities, and the proceeds to us from such sale, any underwriting discounts or agency fees and other items constituting underwriters' or agents' compensation, any initial public offering price, any discounts or concessions allowed or reallocated or paid to dealers and any securities exchange on which such securities may be listed.

If underwriters participate in the sale, such securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The securities may be offered to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more of those firms. The specific managing underwriter or underwriters, if any, will be named in the prospectus supplement relating to the particular securities together with the members of the underwriting syndicate, if any.

Unless otherwise set forth in the applicable prospectus supplement, the obligations of the underwriters to purchase any series of securities will be subject to certain conditions precedent and the underwriters will be obligated to purchase all of such securities being offered, if any are purchased.

We may sell the securities directly or through agents we designate from time to time. The applicable prospectus supplement will set forth the name of any agent involved in the offer or sale of the securities in respect of which such prospectus supplement is delivered and any commissions payable by us to such agent. Unless otherwise indicated in the applicable prospectus supplement, any agent will be acting on a best efforts basis for the period of its appointment.

Underwriters and agents may be entitled under agreements entered into with us to indemnification against certain civil liabilities, including liabilities under the Securities Act of 1933, as amended. Underwriters and agents may engage in transactions with, or perform services for, us in the ordinary course of business.

Each series of securities will be a new issue of securities and will have no established trading market. Any underwriters to whom securities are sold for public offering and sale may make a market in such securities, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice. The securities may or may not be listed on a national securities exchange.

LEGAL MATTERS

Legal matters with respect to the securities offered under this prospectus will be passed upon for us by Mark English, Assistant General Counsel and Assistant Secretary and Dewey & LeBoeuf LLP. Davis Polk & Wardwell will pass on certain matters for the underwriters, dealers, purchasers, or agents. At May 1, 2009, Mr. English owned beneficially a number of shares of the Company's common stock, including restricted stock, and performance shares which may be paid in shares of common stock at a later date based on the Company's performance, which represented less than 0.1% of the total outstanding common stock.

EXPERTS

The consolidated financial statements, and the related financial statement schedules, incorporated by reference in this prospectus from the Great Plains Energy Incorporated and subsidiaries Annual Report on Form 10-K for the year ended December 31, 2008, and the effectiveness of Great Plains Energy Incorporated and subsidiaries internal control over financial reporting have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference (which reports (1) express an unqualified opinion on the consolidated financial statements and financial statement schedules and include an explanatory paragraph regarding the adoption of new accounting

standards, and (2) express an unqualified opinion on the effectiveness of internal control over financial reporting). Such consolidated financial statements and financial schedules have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

The consolidated financial statements of Aquila, Inc. as of December 31, 2007 and 2006, and for each of the years in the three-year period ended December 31, 2007, have been incorporated by reference herein and in the registration statement, in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing. The audit report refers to the adoption of Financial Accounting Standards Board (FASB) Interpretation No. 48, Accounting for Uncertainty in Income Taxes — an interpretation of FASB Statement No. 109, Accounting for Income Taxes, and FASB Staff Position (FSP) AUG AIR-1, Accounting for Planned Major Maintenance Activities.

Great Plains Energy Incorporated has agreed to indemnify and hold KPMG LLP harmless against and from any and all legal costs and expenses incurred by KPMG LLP in successful defense of any legal action or proceeding that arises as a result of KPMG LLP's consent to the incorporation by reference of its audit report on Aquila, Inc.'s past financial statements incorporated by reference in this registration statement.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, and proxy statements and other information with the SEC through the SEC's Electronic Data Gathering, Analysis and Retrieval system and these filings are publicly available through the SEC's website (<http://www.sec.gov>). You may read and copy such material at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

The SEC allows us to "incorporate by reference" into this prospectus the information we file with them. This means that we can disclose important information to you by referring you to the documents containing the information. The information we incorporate by reference is considered to be included in and an important part of this prospectus and should be read with the same care. Information that we file later with the SEC that is incorporated by reference into this prospectus will automatically update and supersede this information. We are incorporating by reference into this prospectus the following documents that we have filed with the SEC and any subsequent filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 (excluding information deemed to be furnished and not filed with the SEC) until the offering of the securities described in this prospectus is completed:

- Our Annual Report on Form 10-K for the year ended December 31, 2008, filed with the SEC on February 27, 2009;
- Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2009, filed with the SEC on May 11, 2009;
- Our Current Report on Form 8-K/A dated August 13, 2008 and filed with the SEC on August 14, 2008 (only with respect to the historical financial statements of Aquila, Inc. (now known as KCP&L Greater Missouri Operations Company, or "GMO") listed in Item 9.01(a) and set forth in Exhibit 99.1 thereto); and
- Our Current Reports on Form 8-K dated January 27, 2009 and filed with the SEC on January 28, 2009; February 10, 2009 (Item 8.01 only) and filed with the SEC on February 10, 2009; February 9, 2009 and filed with the SEC on February 13, 2009; March 6, 2009 and filed with the SEC on March 12, 2009; March 18, 2009 (Item 8.01 only) and filed with the SEC on March 19, 2009; March 19, 2009 and filed with the SEC on March 24, 2009; April 16, 2009 and filed with the SEC on April 22, 2009; April 21, 2009 and filed with the SEC on April 21, 2009; April 24, 2009 and filed with the SEC on April 30, 2009; and May 11, 2009 (reporting Items 8.01 and 9.01) and filed with the SEC on May 11, 2009.

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Our website is www.greatplainsenergy.com. Information contained on our website is not incorporated herein. We make available, free of charge, on or through our website, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. In addition, we make available on or through our website all other reports, notifications and certifications filed electronically with the SEC. You may obtain a free copy of our filings with the SEC by writing or telephoning us at the following address: Great Plains Energy Incorporated, 1201 Walnut Street, Kansas City, Missouri 64106-2124 (Telephone No.: 816-556-2200) Attention: Corporate Secretary, or by contacting us on our website.

10,000,000 Shares



GREAT PLAINS ENERGY

Great Plains Energy Incorporated

Common Stock

PROSPECTUS SUPPLEMENT

May , 2009

Joint Book-Running Managers

Goldman, Sachs & Co.

J.P.Morgan

Joint Lead Manager

Wachovia Securities

Senior Co-Manager

KeyBanc Capital Markets

Co-Managers

Edward Jones

Mitsubishi UFJ Securities

Scotia Capital
