UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM 11-K

For the fiscal year ended December 31, 2015

OR

[] TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from ______ to _____

Commission file number 0-33207

A. Full title of the plan and the address of the plan, if different from that of the issuer named below:

Great Plains Energy Incorporated
401(k) Savings Plan
(hereinafter referred to as the Plan)

B. Name of issuer of the securities held pursuant to the Plan and the address of its principal executive office:

Great Plains Energy Incorporated
1200 Main Street

Kansas City, Missouri 64105

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| Note: | All other schedules required by Section 2520.103-10 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security | |

EXHIBITS

Exhibit No. Description

23.1 Consent of Independent Registered Public Accounting Firm – Mayer Hoffman McCann P.C.

Report of Independent Registered Public Accounting Firm

Participants and Administrative Committee Great Plains Energy Incorporated 401(k) Savings Plan

We have audited the accompanying statements of net assets available for benefits of the Great Plains Energy Incorporated 401(k) Savings Plan (the "Plan") as of December 31, 2015 and 2014, and the related statement of changes in net assets available for benefits for the year ended December 31, 2015. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Plan is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of the Plan as of December 31, 2015 and 2014, and the changes in net assets available for benefits for the year ended December 31, 2015, in conformity with accounting principles generally accepted in the United States of America.

The supplemental information in the accompanying Form 5500, Schedule H, Part IV, Line 4i-Schedule of Assets (Held at End of Year) as of December 31, 2015, has been subjected to audit procedures performed in conjunction with the audit of the Plan's financial statements. The supplemental information is presented for the purpose of additional analysis and is not a required part of the financial statements but includes supplemental information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. The supplemental information is the responsibility of the Plan's management. Our audit procedures included determining whether the supplemental information reconciles to the financial statements or the underlying accounting and other records, as applicable and performing procedures to test the completeness and accuracy of the information presented in the supplemental information. In forming our opinion on the supplemental information in the accompanying schedule, we have evaluated whether the supplemental information, including its form and content, is presented in conformity with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. In our opinion, the supplemental information is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

/s/ Mayer Hoffman McCann P.C.

Kansas City, Missouri June 27, 2016

STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS DECEMBER 31, 2015 AND 2014

| | 2015 | 2014 |
|---|----------------------|----------------------|
| ASSETS: PARTICIPANT-DIRECTED INVESTMENTS—at fair value (Note 3) | \$ 501,423,926 | \$ 513,305,134 |
| NOTES RECEIVABLE FROM PARTICIPANTS EMPLOYER CONTRIBUTION RECEIVABLE | 9,652,514 351,293 | 9,746,889 232,276 |
| CASH CONTRIBUTION RECEIVABLE | 138,612 | 11,529 |
| NET ASSETS AVAILABLE FOR BENEFITS | \$ 511,566,345 | \$ 523,295,828 |

See notes to financial statements.

STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS YEAR ENDED DECEMBER 31, 2015

| Additions: | | |
|---|----|--------------|
| Investment income: | | |
| Net depreciation in fair value of investments | \$ | (23,797,662) |
| Dividends | | 22,870,387 |
| Interest | | 273 |
| Net investment loss | | (927,002) |
| Contributions: | | |
| Employer contributions | | 8,978,004 |
| Participant contributions | | 23,488,682 |
| Rollovers | | 959,502 |
| Total contributions | _ | 33,426,188 |
| Interest income on notes receivable from participants | | 506,827 |
| Total additions | | 33,006,013 |
| Deductions: | | |
| Benefits paid to participants | | 44,329,162 |
| Deemed distributions of note receivable | | 30,954 |
| Administrative expenses | | 375,380 |
| Total deductions | | 44,735,496 |
| DECREASE IN NET ASSETS | | (11,729,483) |
| NET ASSETS AVAILABLE FOR BENEFITS | | |
| Beginning of year | | 523,295,828 |
| End of year | \$ | 511,566,345 |

NOTES TO FINANCIAL STATEMENTS AS OF DECEMBER 31, 2015 AND 2014 AND FOR THE YEAR ENDED DECEMBER 31, 2015

1. PLAN DESCRIPTION

The following description of the Great Plains Energy Incorporated 401(k) Savings Plan (the Plan) is provided for general information purposes only. Participants should refer to the Plan document for more complete information.

General - The Plan is a defined contribution plan covering all full-time and part-time employees of Kansas City Power & Light Company (KCP&L), sponsored by Great Plains Energy Incorporated (the Company). The Plan provides that employees are eligible to make elective contributions to the Plan as soon as administratively possible after date of hire. The Company serves as the administrator of the Plan. On August 29, 2014, JPMorgan Retirement Plan Services LLC, the Recordkeeper for the Plan, sold their recordkeeping business to Great-West Life and Annuity Insurance Company. The newly formed entity became Great-West Financial Retirement Plan Services LLC with a branded name of Empower Retirement. Effective July 1, 2015, Great-West Trust Company, LLC. replaced J.P. Morgan Chase as the trustee for the Plan. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974, as amended (ERISA).

An Employee Stock Ownership Plan (ESOP) component was added to the Plan on January 1, 2002. The ESOP component consists of the portion of the Plan that is invested in Great Plains Energy Incorporated common stock (Company Stock). Adding this component gives participants the option of receiving a direct cash distribution of any dividends paid on such Company Stock held in participant elective contribution accounts and, if they are 100% vested as of the dividend record date, their Company match accounts. Dividends paid on Company stock are automatically reinvested, unless cash distribution was elected.

Plan Amendments - The Plan was amended on December 18, 2014, effective January 1, 2015, to clarify that contributions made to either a Health Savings Account or Health Reimbursement Account by the Company not elected by the employee are not considered as compensation for the Plan purposes. In addition, the Plan was amended to include adjustable installment payments.

In 2015 the Plan was amended, effective January 1, 2016, so that any eligible participant who was not already contributing at least 6% of compensation would be "re-enrolled" in the Plan as of the first pay date in the following year. If an eligible participant is contributing but at a rate of less than 6% they will be re-enrolled at a rate that will bring them to a total deferral of 6% of compensation. Such Automatic Deferral Election will be treated as a pre-tax Elective Contribution except to the extent that the participant has in effect a prior Roth Contribution election in which case the participant will be deemed to have made an equivalent Roth Contribution election and the remainder of the participant's Automatic Deferral Election will be treated as a pre-tax Elective Contribution. No Automatic Deferral Election will apply for a Plan Year to a participant who has specifically elected not to have Elective Contributions made (or who has specifically elected to have such Elective Contributions made at a different percentage) on or after October 1 of the prior Plan Year.

Eligibility - Prior to the effective date of the January 1, 2008 restatement of the Plan, non-union employees who were hired prior to September 1, 2007 could elect to continue to participate under the existing (Old Program) plan provisions (provisions prior to January 1, 2008) or under modified plan provisions (New Program). All union employees hired before October 1, 2013 participate in the Old Program. Effective January 1, 2014, newly hired or rehired non-union employees participate in the "New Program Plus" feature of the Plan. Effective October 1, 2013, newly hired or rehired union employees participate under the Cash Balance Matching program.

Contributions - Under the Old Program, each year participants may contribute between 2% and 40% of their annual compensation as defined in the Plan. Effective January 1, 2008, the New Program allowed New Program participants to make salary deferrals up to 75% of annual compensation. Contributions under the Old Program and New Program are subject to statutory limitations. Under either program, participants who have attained age 50 and whose contributions meet the IRS maximum deferral limit (or plan maximum as defined by the Plan, if less), may elect to make catch-up contributions. Participants direct the investment of their contributions into various investment options offered by the Plan. Participants can make their contributions on either a pre-tax or post-tax (Roth) basis. Participants may change their contribution percentage as often as they would like and such changes are effective as soon as administratively possible, generally within one or two pay periods.

The Plan currently offers investment options which include 26 mutual funds, one money market fund, Company stock, two common/collective trust funds and a self-directed brokerage account. One of the Plan's mutual fund investment options was eliminated and an additional mutual fund option was added in 2015. Participants may purchase shares of stocks, bonds, or mutual funds not offered by the Plan through the brokerage account option. Prior to January 1, 2010, matching contributions were invested in Great Plains Energy Incorporated common stock unless the participant made an affirmative election for a different investment option(s). The Plan was amended effective January 1, 2010 to direct matching contributions into a target date mutual fund based on the participant's normal retirement age unless the employee makes an affirmative election for a different investment option(s). Employee contributions are also invested in a target date fund based on the participant's age unless the participant makes an affirmative election for a different investment option(s).

Effective January 1, 2008, New Program participants became eligible for matching contributions immediately upon participation after hire; Old Program participants continued to be eligible for matching contributions after completing one year of service. The Company contributes 50% of the employee's elective contributions that do not exceed 6% of annual compensation, as defined in the Plan under the Old Program. Under the New Program, the Company contributes up to 100% of the first 6% of annual compensation, as defined in the Plan. For employees participating in the New Program Plus, the Company matches 100% of the first 6% of total pay such employees contribute and makes an additional annual non-elective contribution equal to 4% of such employees' eligible compensation as defined in the Plan. The Company matching contribution vests immediately and the annual non-elective contribution and associated earnings vest after three years of service. To be eligible for the annual non-elective Company contribution, New Program Plus employees must be credited with at least 1,000 hours in a Plan year and must either be employed at the end of the Plan year (December 31) or have terminated employment during the Plan year due to retirement, death or permanent and total disability. Eligible employees will receive the annual Company contribution without regard to whether they have made contributions from their pay to the Plan. In addition, Union employees hired or rehired on/after October 1, 2013 will be eligible to receive an immediate Company matching contribution equal to 75% of the first 6% of compensation contributed by the employee (under the Cash Balance Matching program). The 75% match will be subject to the current six-year graded vesting schedule.

Under the Old Program and the Cash Balance Matching Program, compensation is defined as base pay and, depending on bargaining status, shift differentials and some overtime. Under the New Program and New Program Plus, compensation is defined as base, commissions, annual incentive, and overtime pay. Also effective January 1, 2014, union employees are eligible to make an election to contribute a portion of their overtime pay to the Plan. Union employees may make separate deferral elections for their base pay and overtime pay and the elections may be for different amounts. Contributions to the Plan from overtime pay are not matched by the Company. The Plan was also amended to modify the definition of "spouse", in order to conform to guidance issued by the Internal Revenue Service and the Department of Labor following the Supreme Court's decision in U.S. v. Windsor to recognize same-sex marriages which are legally valid in the state of celebration. A temporary employee shall be eligible to participate immediately following the date he or she has been credited with at least one thousand (1,000) Hours of

Service during a 12-month period beginning on his or her first date of employment or any anniversary thereof.

All employees hired on or after January 1, 2008 are automatically enrolled in the Plan at a 6% contribution level, unless they opt out or make an affirmative election for a different deferral rate. Employees have a 30-day notice period in which to opt-out or modify the automatic enrollment. Automatically enrolled participants have 90 days after the first employee contribution to withdraw funds that have been automatically contributed, without penalty.

Contributions are subject to certain Internal Revenue Code (IRC) limitations.

Subsequent to December 31, 2015, employer contributions of \$351,293 attributable to the 2015 plan year were credited to participant accounts. These contributions were contributed by the Company in cash and Company Stock based upon participant elections, and are therefore presented as a receivable on the statement of net assets available for benefits as of December 31, 2015. Included in the contribution receivable was \$177,545 as a non-elective contribution for those participants in the New Program Plus program. Subsequent to December 31, 2014, employer contributions of \$232,276 attributable to the 2014 plan year were credited to participant accounts. These contributions were funded by the Company in cash and Company Stock, and are therefore presented as a receivable on the statement of net assets available for benefits as of December 31, 2014.

Participant Accounts - Each participant's account is credited with the participant's contributions and allocations of the Company's contributions, Plan earnings, and charged with an allocation of administrative expenses as applicable. Allocations are based on participant earnings or account balances, as defined. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account.

Vesting - Participants are immediately vested in their voluntary contributions plus actual earnings thereon. If the employee participates in the Old Program or the Cash Balance Matching Program, vesting in the Company matching contribution portion of their accounts plus earnings thereon is based on years of continuous service. A participant is partially vested after two years and 100% vested after six years of credited service. Employees participating in the New Program are immediately vested in the Company matching contributions. A New Program Plus employee will be immediately vested in the Company matching contributions and will vest in non-elective Company contributions once he or she completes three years of credited service. Participants who retire after age 55, die or become totally or permanently disabled while an employee of the Company are considered 100% vested in the Company matching contributions, regardless of their length of service.

Notes Receivable from Participants - The Plan allows participants to borrow up to the lesser of one-half of the vested amount of their participant account, or \$50,000 reduced by the excess of the participant's highest loan balance that existed during the one year period ending on the day before the date a new loan is made over the outstanding balance of any loan on the date a new loan is made. The minimum loan amount is \$1,000. Loans for the acquisition of the participant's primary residence must be repaid within 15 years. All other loans must be repaid within 5 years. Interest is charged at prevailing market rates plus 2% at the time the loan is funded and is fixed over the life of the loan. Participants pay a one-time loan origination fee at the time the loan is executed. The loans are secured by the balance in the participant's account. Principal and interest is paid ratably through payroll deductions.

Payment of Benefits - If the value of the participant's account balance is \$1,000 or less, payment shall be made to the participant as soon as practicable following termination of employment in a single lump sum distribution unless the participant directs the Plan to roll his or her account balance to another qualified plan or IRA. In all other cases, at the election of the participant in a manner prescribed by the Management Administrative Committee or its designee, distribution of account balances may be deferred until April 1 following the calendar year in which the participant reaches age 70 1/2, or may be

paid in a single lump sum distribution, one or more partial payments of \$1,000 each, or in a series of monthly or annual installments. Participants may also elect to have their vested account balances rolled over to another qualified plan or to an IRA. In the absence of a written directive from the participant as to the manner of payment upon reaching age 70 1/2, if the value of the participant's account balance is greater than \$1,000, payment shall be made in annual installments over a period of five years.

Forfeited Accounts - At December 31, 2015 and 2014, there were \$7,772 and \$58,153 in forfeited non-vested accounts, respectively. These accounts will be used to pay expenses for administering the Plan or to reduce future matching contributions and/or New Program Plus contributions at the end of the plan year in which they became forfeitures. Forfeitures in the amount of \$15,288 were used to pay 2015 administrative expenses. Forfeitures of \$50,716 were used to reduce contributions during the plan year ended December 31, 2015.

New Accounting Standards - In May 2015, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2015-07, "Fair Value Measurement (Topic 820): Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)." Currently, investments valued using the practical expedient are categorized within the fair value hierarchy. There is diversity in how certain investments measured at net asset value with future redemption dates should be categorized within the fair value hierarchy which this update addresses. If an investment has its fair value measured at net asset value per share (or its equivalent) using the practical expedient, it should not be categorized in the fair value hierarchy. Removing these types of investments from the fair value hierarchy chart eliminates the diversity in classification of these investments and ensures that all investments categorized in the fair value hierarchy are classified consistently. Investments that calculate net asset value per share (or its equivalent) without the use of the practical expedient will continue to be included in the fair value hierarchy. For public business entities, the amendments will be effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2015, with early adoption permitted. The Plan has adopted the provisions of ASU 2015-07 early as permitted and has retrospectively applied the guidance to disclosures as of December 31, 2014 in these financial statements. The adoption did not have a material effect on the statement of net assets available for benefits, statement of changes in net assets available for benefits or the disclosures in the financial statements.

In July 2015, the FASB issued ASU No. 2015-12, *Plan Accounting: Topic 960*, *Defined Benefit Pension Plans; Topic 962*, *Defined Contribution Pension Plans; Topic 965*, *Health and Welfare Benefit Plans* which amends ASC Topics 960, 962 and 965. ASU 2015-12 includes three parts. Part I simplifies the presentation and disclosure requirements related to the measurement of fully benefit-responsive investment contracts. Fully benefit-responsive investments are measured, presented and disclosed at contract value. A reconciliation of contract value to fair value, when those amounts differ, on the face of the financial statements will no longer be required. Part II simplifies the information disclosed regarding plan investments measured at fair value. It eliminates the disclosures of investments with a fair value equal to or greater than 5% of net assets available for benefits, the net appreciation (depreciation) in fair value of investments by general type, and the disaggregation of investments by class. Part III defines the benefit plan measurement dates when such dates do not coincide with period end dates. The amendments are effective for reporting periods beginning after December 15, 2015. Earlier application is permitted. Part III does not have any impact on the Plan. The Plan has adopted the provisions of Parts I and II of ASU 2015-12 early as permitted and has retrospectively applied the guidance to disclosures as of December 31, 2014 in these financial statements. The adoption did not have a material effect on the statement of net assets available for benefits, statement of changes in net assets available for benefits or the disclosures in the financial statements.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting - The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP).

Use of Estimates - The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of net assets available for benefits and changes therein and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Risks and Uncertainties - The Plan utilizes various investment instruments, including common stock, mutual funds, a brokerage account and common/collective trust funds. Investment securities, in general, are exposed to various risks, such as interest rate, credit, and overall market volatility. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the fair value of investment securities will occur in the near term and such changes could materially affect participant accounts and the amounts reported in the financial statements.

Investment Valuation and Income Recognition - The Plan's investments are reported at fair value. Fair value of a financial instrument is the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date.

Purchases and sales of investments are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date. Net depreciation includes the Plan's gains and losses on investments bought and sold as well as held during the year.

Management fees and operating expenses charged to the Plan for the Plan's investments are deducted from income earned on a daily basis and are not separately reflected. Consequently, investment management fees and operating expenses are reflected as a reduction of investment income for such investments.

Administrative Expenses - Administrative expenses of the Plan are paid by either the Plan or the Company, as provided in the Plan document and governing contract. Investment-related expenses are included in net depreciation in fair value of investments.

Payment of Benefits - Benefit payments to participants are recorded when paid.

3. FAIR VALUE OF INVESTMENTS

ASC 820, *Fair Value Measurements and Disclosures*, provides a framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value, as follows: Level 1, which refers to securities valued using unadjusted quoted prices from active markets for identical assets; Level 2, which refers to securities not traded on an active market but for which observable market inputs are readily available; and Level 3, which refers to securities valued based on significant unobservable inputs. Assets are classified in their entirety based on the lowest level of input that is significant to the fair value measurement.

Asset Valuation Techniques - Valuation techniques maximize the use of relevant observable inputs and minimize the use of unobservable inputs. The following is a description of the valuation methodologies used. There have been no changes in the methodologies used at December 31, 2015 and 2014.

Common Stocks - Valued at the closing price reported on the active market on which the individual securities are traded.

Mutual Funds - Valued at the daily closing price as reported by the fund. Mutual funds held by the Plan are open-ended mutual funds that are registered with the Securities and Exchange Commission. These funds are required to publish their daily net asset value and to transact at that price. The mutual funds held by the Plan are deemed to be actively traded.

Common/Collective Trust Funds - Valued at the net asset value of units of a bank collective trust or its equivalent. The net asset value as provided by the trust is used as a practical expedient to estimate fair value. The net asset value is based on the fair value of the underlying investments held by the trust less its liabilities. This practical expedient is not used when it is determined to be probable that the trust will sell the investment for an amount different than the reported net asset value. Participant transactions (purchases and sales) may occur daily. If the Plan were to initiate a full redemption of a collective trust, the investment advisor generally reserves the right to temporarily delay withdrawal from the trust in order to ensure that securities liquidations will be carried out in an orderly business manner.

The following tables set forth by level within the fair value hierarchy a summary of the Plan's investments measured at fair value on a recurring basis at December 31, 2015 and 2014.

| | Total December 31, 2015 | | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | τ | Significant Inobservable Inputs (Level 3) |
|--|----------------------------|----|---|---|----|--|
| Great Plains Energy Incorporated | | | | | | |
| Common Stock | \$ 62,008,153 | | \$ 62,008,153 | \$ _ | \$ | _ |
| Mutual Funds | 355,831,753 | | 355,831,753 | _ | | |
| Self-directed brokerage account ^(a) | 11,242,453 | | 11,242,453 | _ | | |
| Total Investment measured at fair value | 429,082,359 | _ | 429,082,359 | _ | | _ |
| Common/collective trust funds measured at Net Asset Value | 72,341,567 | | | | | |
| Total Investments | \$ 501,423,926 | _ | | | | |
| | Total December 31, 2014 | _ | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable puts (Level 2) | ı | Significant Unobservable Inputs (Level 3) |
| Great Plains Energy Incorporated | | | | | | |
| Common Stock | \$ 69,184,131 | \$ | 69,184,131 | \$ | \$ | |
| Mutual funds | 358,470,667 | | 358,470,667 | | | |
| Self-directed brokerage account ^(a) | 11,671,544 | | 11,671,544 | | | _ |
| Total Investment measured at fair value | 439,326,342 | \$ | 439,326,342 | \$ _ | \$ | _ |
| Common/collective trust funds measured at Net Asset Value | 73,978,792 | | | | | |
| Total Investments | \$ 513.305.134 | | | | | |

(a) The brokerage account is invested in a variety of classes of common stocks, mutual funds and exchange-traded funds as directed by participants.

Transfers Between Levels - The availability of observable market data is monitored to assess the appropriate classification of financial instruments within the fair value hierarchy. Changes in economic conditions or model-based valuation techniques may require the transfer of financial instruments from

one fair value level to another. In such instances, the transfer is reported at the beginning of the reporting period.

We evaluate the significance of transfers between levels based upon the nature of the financial instrument and size of the transfer relative to total net assets available for benefits. For the years ended, December 31, 2015 and 2014, there were no transfers between levels.

The valuation methods as described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, although the Plan believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

4. RELATED PARTIES AND PARTIES-IN-INTEREST TRANSACTIONS

JP Morgan and Empower Retirement served as recordkeeper of the Plan and JPMorgan Chase Bank N.A. served as trustee of the Plan. Effective July 1, 2015, Great West Trust Company LLC (Great-West) became the trustee of the Plan. Plan investments at December 31, 2015 and 2014 include units in two mutual funds in which JP Morgan serves as the advisor and administrator, a self-directed brokerage account managed by JP Morgan, and shares of Company stock. In July 2015, the self-directed brokerage accounts transferred over to Great-West as the trustee of the Plan. Therefore, these transactions qualify as exempt party-in-interest transactions. Fees incurred by the plan for the investment management services are included in net depreciation in fair value of the investment, as they are paid through revenue sharing, rather than a direct payment. Direct fees totaling \$316,165 and \$35,485 were paid to JP Morgan Chase Bank and Empower, respectively, in 2015.

As of December 31, 2015 and 2014, respectively, the Plan held 2,270,529 and 2,435,203 shares of common stock of Great Plains Energy Incorporated, the sponsoring employer. During the year ended December 31, 2015, the Plan recorded dividend income from the Company Stock of \$2,338,161.

5. PLAN TERMINATION

Although it has not expressed any intent to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to the provisions of ERISA. In the event of Plan termination, the participants would become 100% vested in all Company contributions.

6. FEDERAL INCOME TAX STATUS

The Internal Revenue Service has determined and informed the Company by a letter dated January 21, 2015, that the Plan and related trust are designed in accordance with applicable sections of the IRC. Although the Plan has been amended since receiving the determination letter, the Plan administrator and the Plan's tax counsel believe that the Plan is designed, and is currently being operated, in compliance with the applicable requirements of the Internal Revenue Code and, therefore, believe that the Plan is qualified, and the related trust is tax-exempt.

GAAP requires plan management to evaluate tax positions taken by the Plan and recognize a tax liability (or asset) if the Plan has taken an uncertain position that more likely than not would not be sustained upon examination by the IRS. The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any open tax periods.

7. NET ASSET VALUE (NAV) PER SHARE

The following table for December 31, 2015 and 2014 sets forth a summary of the Plan's investments with a reported NAV.

| Investment | Fair Value – December 31, 2015* | Fair Value – December 31, 2014* | Redemption Frequency | Other Redemption Restrictions | Redemption Notice Period |
|---|------------------------------------|------------------------------------|-------------------------|-------------------------------------|------------------------------------|
| SSgA S&P 500 Index Non- Lending Fund Class C (a) | \$37,102,088 | \$36,322,985 | Daily | None | None |
| Morley Stable Value 20 II Fund ^(b) | 35,239,479 | 37,655,807 | Daily ^(b) | None | Within 12 months ^(b) |
| Total | \$72,341,567 | \$ 73,978,792 | | | |

^{*}The fair value of the investments has been estimated using the net asset value of the investment.

- (a) Equity index fund strategy that seeks to replicate the movements of the Standard & Poor's (S&P) 500 Index, regardless of market conditions.
- (b) The fund strategy seeks current income while maintaining stability of invested principal. The fund invests in synthetic guaranteed investment contracts, U.S. Treasury and agency securities, and cash and cash equivalents, including money market instruments. The Plan is required to give notice 12 months in advance of a partial or total liquidation of the investment. The fund trustee may grant a redemption earlier than 12 months, in its discretion, if it determines the redemption is not detrimental to the best interest of the fund and plans participating therein. Redemptions for benefit payments and participant-directed investment transfers will be executed within 30 days if reasonably possible.

8. RECONCILIATION OF FINANCIAL STATEMENTS TO FORM 5500

The following is a reconciliation of net assets available for benefits as of December 31, 2015 and 2014, as reflected in the financial statements to Form 5500:

| | 2015 | 2014 |
|--|-------------------|-------------------|
| Net assets available for benefits per the financial statements | \$ 511,566,345 | \$ 523,295,828 |
| Adjusted from contract value to fair value for fully | | |
| benefit-responsive investment contract | | 375,230 |
| Net assets available for benefit per Form 5500 | \$ 511,566,345 | \$ 523,671,058 |

The following is a reconciliation of the decrease in net assets as reflected in the financial statements to the net loss per the Form 5500 for the year ended December 31, 2015:

| Net decrease in net assets per the financial statements | \$ (11,729,483) |
|---|--------------------|
| Change in adjustment from contract value to fair value | |
| for fully benefit-responsive investment contract | (375,230) |
| Net loss per Form 5500 | \$ (12,104,713) |

9. SUBSEQUENT EVENTS

The Company monitors significant events occurring after the statement of net assets available for benefits date and prior to the issuance of the financial statements to determine the impact, if any, of events on the financial statements issued. All subsequent events of which the Company is aware were evaluated through the filing date of this Form 11-K.

GREAT PLAINS ENERGY INCORPORATED 401(k) SAVINGS PLAN EMPLOYER ID NO. 43-1916803, PLAN NO. 006

FORM 5500, SCHEDULE H, PART IV, LINE 4i - SCHEDULE OF ASSETS (HELD AT END OF YEAR) DECEMBER 31, 2015

| (a) | (b) | (c) | (d) | (e) |
|-----|---|--|-------|-------------------|
| | Identity of Issue, Borrower, Lessor or Similar Party | Description of Investment Including Maturity Date, Rate of Interest, Collateral, Par or Maturity Value | Cost | Current Value |
| * | Great Plains Energy Incorporated | Common Stock | \$ ** | \$ 62,008,153 |
| k | JPMorgan Large Cap Growth R6 Fund | Mutual Fund | ** | 41,518,361 |
| | SSgA S&P 500 Index Non-Lending Fund Class C | Common/Collective Trust Fund | ** | 37,102,088 |
| | Morley Stable Value 20 II Fund | Common/Collective Trust Fund | ** | 35,239,479 |
| | American Funds Fundamental Investors R5 Fund | Mutual Fund | ** | 28,433,225 |
| | Metropolitan West Total Return Bond Fund | Mutual Fund | ** | 26,240,941 |
| | Harbor International Instl Fund | Mutual Fund | ** | 25,197,809 |
| | American Century One Choice 2025 Instl Fund | Mutual Fund | ** | 22,543,701 |
| | Artisan Mid Cap Instl Fund | Mutual Fund | ** | 21,740,176 |
| | Vanguard Extended Market Index I Fund | Mutual Fund | ** | 19,400,515 |
| | Vanguard Inflation-Protection Securities Inv Fund | Mutual Fund | ** | 17,420,633 |
| | American Century One Choice 2020 Instl Fund | Mutual Fund | ** | 17,113,854 |
| | American Century One Choice 2035 Instl Fund | Mutual Fund | ** | 15,784,075 |
| | American Century One Choice 2030 Instl Fund | Mutual Fund | ** | 14,742,208 |
| | American Century One Choice Income Fund | Mutual Fund | ** | 14,400,731 |
| | MFS International Growth R4 Fund | Mutual Fund | ** | 13,181,244 |
| | T. Rowe Price Equity Income Fund | Mutual Fund | ** | 12,584,342 |
| | American Century Small Cap Value Instl Fund | Mutual Fund | ** | 11,375,215 |
| | American Century One Choice 2045 Instl Fund | Mutual Fund | ** | 9,672,247 |
| | American Century One Choice 2040 Instl Fund | Mutual Fund | ** | 9,591,617 |
| | Fidelity Low-Priced Stock Fund | Mutual Fund | ** | 7,799,116 |
| | ClearBridge Small Cap Growth Fund | Mutual Fund | ** | 5,860,891 |
| | Victory Established Value I Fund | Mutual Fund | ** | 5,400,003 |
| | American Century One Choice 2050 Instl Fund | Mutual Fund | ** | 4,809,452 |
| | Neuberger Berman High Income Bond Inv Fund | Mutual Fund | ** | 3,578,420 |
| | JPMorgan US Treasury Security Money Market Fund | Money Market Fund | ** | 3,137,425 |
| | Morgan Stanley Institutional Emerging Markets I Fund | Mutual Fund | ** | 2,955,118 |
| | Permanent Portfolio | Mutual Fund | ** | 499,785 |
| | Fidelity Advisor Strategic Income Instl Fund | Mutual Fund | ** | 464,299 |
| | American Century One Choice 2055 Instl Fund | Mutual Fund | ** | 386,350 |
| | CISC Brokerage Account | Brokerage Account | ** | 11,242,453 |
| | Participant Loans | Various participants, interest rates ranging from 5.25% to 10.25% maturing through 2028 | ** | 9,652,514 |
| | | | | \$ 511,076,440 |

^{*} Represents party-in-interest to the Plan.

^{**} Cost information is not required for participant-directed investments and, therefore, is not included.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Administrative Committee of the Great Plains Energy Incorporated 401(k) Savings Plan has duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

GREAT PLAINS ENERGY INCORPORATED 401(k) SAVINGS PLAN

By: /s/ Ellen E. Fairchild

Ellen E. Fairchild

By: /s/ Heather A. Humphrey

Heather A. Humphrey

By: /s/ Darrin R. Ives

Darrin R. Ives

By: /s/ Kevin T. Noblet

Kevin T. Noblet

By: /s/ Lori A. Wright

Lori A. Wright

June 27, 2016

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statements (No. 333-180327, 333-132828 and 333-147939) on Form S-8 of Great Plains Energy Incorporated of our report dated June 27, 2016, with respect to the statements of net assets available for benefits of the Great Plains Energy Incorporated 401(k) Savings Plan as of December 31, 2015 and 2014, the related statement of changes in net assets available for benefits for the year ended December 31, 2015, and the related supplemental schedule as of December 31, 2015, which report appears in this annual report on Form 11-K of the Great Plains Energy Incorporated 401(k) Savings Plan.

/s/ Mayer Hoffman McCann P.C.

Kansas City, Missouri June 27, 2016