

**VIA EDGAR AS A "CORRESPONDENCE"**

William Thompson  
Accounting Branch Chief  
Division of Corporation Finance  
Securities and Exchange Commission  
100 F Street, NE  
Mail Stop #3561  
Washington, DC 20549

RE: Great Plains Energy Incorporated and Kansas City Power & Light Company  
Form 10-K for Fiscal Year ended December 31, 2010, filed February 25, 2011 (the "2010 10-K")  
File Nos. 001-32206 and 000-51873

Dear Mr. Thompson:

Great Plains Energy Incorporated ("Great Plains Energy") and Kansas City Power & Light Company ("KCP&L", and collectively with Great Plains Energy, the "Company"), are submitting this letter in response to the written comments of the staff (the "Staff") of the Securities and Exchange Commission (the "Commission") contained in your letter dated December 30, 2011 (the "Comment Letter"), with respect to the filing referenced above.

The Company has responded to all of the Staff's comments. The Company's responses are set forth below, with the headings and numbered items of this letter corresponding to the headings and numbered items contained in the Comment Letter. For the convenience of the Staff, each of the comments from the Comment Letter is restated in italics prior to the Company's response. Capitalized terms used but not defined in this letter shall have the meanings given to such terms in the referenced filings.

All page number references in the Company's responses correspond to the page numbers included in the referenced filing.

**Form 10-K for the Year Ended December 31, 2010**  
**Financial Statements and Supplementary Data, page 53**

7. Goodwill and Intangible Assets, page 83

1. *We note that your regulated electric utility operations are considered a reporting unit for assessment of impairment of goodwill as they are included within the same operating segment and have similar economic characteristics. Please tell us the operating segments identified in accordance with ASC 280-10-50-1 through 9 and the components within your operating segments. Given that a reporting unit is defined in ASC 350-20-35 as an operating segment or one level below an operating segment, please tell us in detail your basis in GAAP for aggregating utility operations into a single reporting unit for purposes of goodwill impairment testing. Please discuss the guidance in paragraphs 33 through 38 of ASC 350-20-35 to the extent necessary.*

**Response:** Great Plains Energy has identified one operating segment in accordance with ASC 280-10-50-1 through 9 based on its method of internal reporting, which segregates reportable segments based on products and services, management responsibility and regulation. The one operating segment is electric utility, consisting of KCP&L and KCP&L Greater Missouri Operations Company's (GMO) regulated utility operations. Michael J. Chesser, Chairman and CEO of Great Plains Energy, is its Chief Operating Decision Maker (CODM). Discrete financial information for each of KCP&L and GMO is not regularly reviewed by the CODM, such information is not provided to the Board of Directors of Great Plains Energy and the CODM does not separately allocate resources to each of KCP&L and GMO.

ASC 350-20-35-34 and 35 states the following:

“A component of an operating segment is a reporting unit if the component constitutes a business for which discrete financial information is available and segment management, as that term is defined in paragraph 280-10-50-7, regularly reviews the operating results of that component. However two or more components of an operating segment shall be aggregated and deemed a single reporting unit if the components have similar economic characteristics.” ASC 350-20-55-6 and 7 state, “Evaluating whether two components have similar economic characteristics is a matter of judgment that depends on specific facts and circumstances. That assessment should be more qualitative than quantitative. In determining whether the components of an operating segment have similar economic characteristics, all of the factors in paragraph 280-10-50-11 should be considered. However, every factor need not be met in order for two components to be considered economically similar. In addition, the determination of whether two components are economically similar need not be limited to consideration of the factors described in that paragraph. In determining whether components should be combined into one reporting unit based on their economic similarities, factors that should be considered in addition to those in that paragraph include but are not limited to, the following:

- a. The manner in which an entity operates its business and the nature of those operations.
- b. Whether goodwill is recoverable from the separate operations of each component business or from two or more component businesses working in concert.
- c. The extent to which the component businesses share assets and other resources, as might be evidenced by extensive transfer pricing mechanisms.
- d. Whether the components support and benefit from common research and development projects.

The fact that a component extensively shares assets and other resources with other components of the operating segment may be an indication that the component either is not a business or it may be economically similar to those other components.”

Great Plains Energy performed an analysis based upon the above guidance and concluded that the KCP&L and GMO components of the electric utility segment should be aggregated as one reporting unit for goodwill impairment testing purposes, due to the fact that the components have similar economic characteristics. The similar economic characteristics are demonstrated by the following:

- The components are both integrated, regulated electric utilities that provide electricity to customers; they operate in neighboring service territories; and they have the same regulator, the Public Service Commission of the State of Missouri, for their Missouri operations. KCP&L is also regulated by The State Corporation Commission of the State of Kansas.
- The components are operated and branded as one company - KCP&L. Customers in GMO service territories receive invoices under the name KCP&L and all service truck and service center signage reads KCP&L.
- The synergies realized from the acquisition of GMO on July 14, 2008, have been recognized as a result of the two components working in concert as the KCP&L and GMO entities are economically interdependent sharing resources such as employees, IT and a corporate office.

15. Commitments and Contingencies, page 103

Remediation, page 111

2. *We note that you accrued estimated losses for environmental remediation expenses at a former KCP&L MGP site and for the future investigation and remediation of certain GMO MGP sites, PCB sites and retained liabilities. We also note that your estimate related to GMO MGP sites, PCB sites and retained*

*liabilities could change materially after further investigation, and could also be affected by the actions of environmental agencies and the financial viability of other potentially responsible parties. Please tell us your consideration of disclosing an estimate of the possible loss or range of loss in excess of amounts accrued for these matters or that such an estimate cannot be made. Refer to ASC 450-20-50-4.*

**Response:** The Company will include the following disclosure in future filings, beginning with the 2011 Form 10-K, assuming no changes in facts, to include a statement that the possible loss in excess of the amount accrued is not estimable in accordance with the disclosure required by ASC 450-20-50-4. The new disclosure is noted in bold and italicized.

At [end of applicable period], Great Plains Energy had \$2.1 million accrued for the future investigation and remediation of certain additional GMO identified MGP sites, PCB sites and retained liabilities. This estimate was based upon review of the potential costs associated with conducting investigative and remedial actions at identified sites, as well as the likelihood of whether such actions will be necessary. This estimate could change materially after further investigation, and could also be affected by the actions of environmental agencies and the financial viability of other potentially responsible parties; ***however, given the uncertainty of these items the possible loss or range of loss in excess of the amount accrued is not estimable.***

16. Legal Proceedings, page 114

3. *We note your disclosure that you are unable to predict the outcome of the Iatan Levee litigation. Please tell us your consideration of disclosing an estimate of the possible loss or range of loss or that such an estimate cannot be made. Refer to ASC 450-20-50-4.*

**Response:** At the time of filing the 2010 Form 10-K, the Company could not estimate the possible loss or range of loss because the plaintiffs had not yet informed the Company of an amount for damages claimed. Subsequent to the filing of the 2010 Form 10-K, the Company has been able to estimate that the possible loss is immaterial (approximately \$1 million). The Company does not plan to disclose this matter in future filings.

\* \* \* \* \*

The Company acknowledges that: it is responsible for the adequacy and accuracy of the disclosures in its filings; staff comments or changes to disclosure in response to comments do not foreclose the Commission from taking any action with respect to the filings; and the Company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please telephone the undersigned at (816) 556-2506 if you have any questions or need any additional information.

Very truly yours,  
/s/ Lori A. Wright

Vice President and Controller  
Great Plains Energy and KCP&L

cc: Michael J. Chesser  
Chairman of the Board and Chief Executive Officer  
Great Plains Energy and KCP&L

Terry Bassham  
President and Chief Operating Officer  
Great Plains Energy and KCP&L

James C. Shay  
Senior Vice President – Finance and Strategic Development  
and Chief Financial Officer Great Plains Energy and KCP&L