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FOR IMMEDIATE RELEASE

KCP&L TO RECEIVE STIMULUS GRANT FOR KANSAS CITY SMARTGRID DEMONSTRATION

Kansas City, Mo. (November 24, 2009) — Kansas City Power & Light Company (“KCP&L”), a subsidiary of Great Plains Energy Incorporated, (NYSE: GXP), is pleased to announce that the company has received a grant of just under \$24 million to help fund a fully integrated SmartGrid demonstration project in the Green Impact Zone and Midtown areas of Kansas City, Mo. The grant was funded as part of the American Recovery and Reinvestment Act passed earlier this year. It is part of the Department of Energy’s (DOE’s) Office of Electricity and Energy efforts to modernize and strengthen the security and reliability of the nation’s energy infrastructure.

“KCP&L has a long history of innovation, and we’re proud to have this opportunity to continue developing new tools and programs for customers,” stated Mike Chesser, KCP&L Chairman and CEO. “This project is one step on the road to creating the model for the electric utility of the future. It represents a tremendous opportunity for us to collaborate with our customers by providing them better service and far more control over their energy usage.”

Unlike the traditional “one-way” electrical grid, the “two-way” SmartGrid will allow customers to better manage their electricity consumption by providing access to actual and predictive usage information, digital tools and innovative programs. The project will ultimately help KCP&L identify and improve beneficial energy-efficiency measures, electricity storage capabilities,

sustainable energy technology and electricity delivery systems. Customers should realize many benefits as a result, including improved service reliability, reduced outages and energy delivery costs.

“The Green Impact Zone is an exciting project that will provide an excellent opportunity to learn the potential for investments in SmartGrid technologies, energy efficiency and weatherization, distributed generation and demand response programs,” said PSC Chairman Robert M. Clayton III. “The Missouri Public Service Commission will watch, with great interest, this project as it moves forward and the lessons to be learned from it, including best practices and what investments bring the most cost-effective return. Congressman Cleaver, MARC, KCP&L and the other participants should be commended for their leadership and vision for Kansas City.”

“We are grateful that the Department of Energy saw the unique importance of this project that seeks to make a series of comprehensive technology investments in areas that are in the greatest need. The Green Impact Zone SmartGrid initiative will complement other efforts to weatherize homes and create jobs in the urban core, while providing a platform for us to expand SmartGrid technology to other parts of our system,” Chesser added. “I would like to thank Congressman Cleaver for his vision in creating the Green Impact Zone and we look forward to partnering with the community to complete this project.”

KCP&L’s SmartGrid demonstration project will be located in Kansas City’s Midtown urban core, bounded by Main St. on the west, Swope Parkway on the east, 37th St. on the north and 52nd St. on the south. It overlays the innovative Green Impact Zone that Congressman Emanuel Cleaver II announced last spring, but also extends beyond it to other area Midtown homes and businesses to gather a larger sampling of customer needs and preferences.

“Typically, ‘green’ investments have been reserved for those who can afford the upfront cost. In neighborhoods like these, where the median income is less than \$20,000 a year, ‘greening’ is simply not possible,” said Congressman Cleaver. “This plan removes that burden and reduces utility bills for those who need it most. We owe a debt of gratitude to KCP&L for taking the lead on this initiative and pulling together the right resources and partners to make the Green Impact Zone SmartGrid a reality. When you combine the SmartGrid with the job training, neighborhood stabilization and infrastructure investments also targeted here, ‘green’ is no longer an academic concept for someone else — it becomes a means to change people’s lives right here in our urban core.”

The total project is expected to cost more than \$48 million, half of which is being paid for with stimulus funding through the U.S. Department of Energy. KCP&L, working with a coalition of SmartGrid industry partners, is planning to contribute an additional \$24 million on the five-year project. Current project partners include Siemens, OATI, Landis+Gyr, Intergraph, GridPoint and Kokam America Inc. (Dow Kokam), who will provide equipment, technical expertise and in-kind financial support. The project is also receiving the support of The Electric Power Research Institute (EPRI), an independent, non-profit company that performs research, development and design in the electricity sector for the benefit of the public.

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About KCP&L:

Headquartered in Kansas City, Mo., Great Plains Energy Incorporated (NYSE: GXP) is the holding company of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, two of the leading regulated providers of electricity in the Midwest. Kansas City Power & Light and KCP&L Greater Missouri Operations use KCP&L as a brand name. More information about the companies is available on the Internet at: www.greatplainsenergy.com or www.kcpl.com.

Forward-Looking Statements:

Statements made in this release that are not based on historical facts are forward-looking, may involve risks and uncertainties, and are intended to be as of the date when made. Forward-looking statements include, but are not limited to, the outcome of regulatory proceedings, cost estimates of the Comprehensive Energy Plan and other matters affecting future operations. In connection with the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, the registrants are providing a number of important factors that could cause actual results to differ materially from the provided forward-looking information. These important factors include: future economic conditions in regional, national and international markets and their effects on sales, prices and costs, including, but not limited to, possible further deterioration in economic conditions and the timing and extent of any economic recovery; prices and availability of electricity in regional and national wholesale markets; market perception of the energy industry, Great Plains Energy, KCP&L and GMO; 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 KCP&L and GMO can charge for electricity; adverse changes in applicable laws, regulations, rules, principles or practices governing tax, accounting and environmental matters including, but not limited to, air and water quality; financial market conditions and performance including, but not limited to, changes in interest rates and credit spreads and in availability and cost of capital and the effects on nuclear decommissioning trust and pension plan assets and costs; impairments of long-lived assets or goodwill; credit ratings; inflation rates; effectiveness of risk management policies and procedures and the ability of counterparties to satisfy their contractual commitments; impact of terrorist acts; increased competition including, but not limited to, retail choice in the electric utility industry and the entry of new competitors; ability to carry out marketing and sales plans; weather conditions including, but not limited to, weather-related damage and their effects on sales, prices and costs; cost, availability, quality and deliverability of fuel; ability to achieve generation planning goals and the occurrence and duration of planned and unplanned generation outages; delays in the anticipated in-service dates and cost increases of additional generating capacity and environmental projects; nuclear operations; workforce risks, including, but not limited to, retirement compensation and benefits costs; the ability to successfully integrate KCP&L and GMO operations 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. Other risk factors are detailed from time to time in Great Plains Energy's and KCP&L's most recent quarterly report on Form 10-Q and annual report on Form 10-K filed with the Securities and Exchange Commission. Any forward-looking statement speaks only as of the date on which such statement is made. Great Plains Energy and KCP&L undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.