

SmartGrid demonstration fact sheet



KCP&L's SmartGrid demonstration will introduce advanced technologies in Kansas City's urban core.

Within the Green Impact Zone and surrounding areas, KCP&L will deploy a fully integrated SmartGrid demonstration of the latest technologies to show how the advanced utility of the future will work. KCP&L's project will invest approximately \$48.1 million and deliver meaningful benefits to the 14,000 customers in this area.

Through this demonstration, KCP&L will gain knowledge about customer needs, energy-efficiency measures, storage capabilities, supply and delivery and the applications customers find most useful. This information will reduce outages and shorten service interruptions, reduce energy delivery costs and enhance information flow for all of KCP&L's service territory. In addition to significant infrastructure and technology upgrades, KCP&L will provide all homes and businesses an advanced two-way interactive meter and offer many homes in the community an energy management system, the Energy Optimizer programmable thermostat, energy audits, weatherization and other energy-efficiency upgrades.

The SmartGrid demonstration improvements will enhance service for the entire Midtown area through improved service reliability, reduced energy delivery costs, more efficient energy consumption, an improved carbon footprint and better information flow.

KCP&L SmartGrid focus

- **Smart Generation** Cost-effective solutions, such as rooftop solar systems and battery storage. These resources will be used to add renewable energy while reducing and shortening system outages.
- **Smart Distribution** KCP&L has already implemented smart applications like automated meter reading, smart switches and smart capacitors. Improved customer delivery and service quality will result from future advanced technologies. This also allows for the ability to communicate with customers on prices and conditions of the system.
- **Smart Consumption** Educating customers and giving them the tools to manage their electricity usage and costs are essential components to the success of the project. KCP&L will focus on updating the area's metering system to accommodate smart appliances, time-of-use pricing options and advanced residential and commercial energy management systems. KCP&L will work with schools to educate children about energy efficiency and collaborate with community organizations to train and recruit workers from the urban core in green technologies.

Program Highlights

- Installation of neighborhood hybrid electric vehicle charging stations.
- Demonstrations of rooftop solar technology at selected commercial buildings, government facilities and residences.
- Installation of smart technologies that monitor and manage energy usage; and Energy Optimizer, a programmable thermostat with advanced features.
- Installation of advanced meters capable of delivering real-time usage information and price signals.
- Installation of more efficient heat-pump water heaters and other high-efficiency appliances in selected homes.
- Collaboration with community organizations to train and recruit workers from the urban core in green technologies.