

Smart Communities In Focus

Spotlight: Kansas City, MO



Kansas City's smart community effort is aided through its partnerships with Kansas City Power & Light Company (KCP&L), Bridj, Cisco, Exergonix, Ford, Kansas City Area Transportation Authority, Kansas City Streetcar Authority, Sensity, Sprint, and Xaqt.

Kansas City's Goals

- Improve delivery of city services
- Improve transportation and connectivity of East Side
- Support connected and autonomous vehicles
- Increase info sharing, mobility, and accessibility

Smart communities are built on smarter energy infrastructure and leverage the power of data and technology to improve sustainability, spur economic development, help drive efficiencies, and enhance the overall quality of life for their citizens. This summary focuses on specific opportunities where communities and electric companies can collaborate to make communities smarter, including projects that advance: Smart Street Lighting, Smart Transportation, Smart Buildings, Distributed Energy Resources, and Data Analytics and Intelligent Services.

What Makes Kansas City Smart?



Smart Street Lighting—Saves energy, improves safety, and reduces traffic congestion.

- Kansas City is piloting 125 dimmable LED streetlights by Sensity.
- Kansas City has installed 122 video sensors along the streetcar route to track congestion. Shotspotter technology to detect, record, and triangulate the location of a gunshot is being considered as a future upgrade.



Smart Transportation—*Improves safety and mobility, reduces carbon footprint, and provides greater access to services.*

- KCP&L installed approximately 900 electric vehicle charging stations, including fast DC chargers, and plans to partner with the city of Kansas City to incorporate automatic billing and optimal time/rate charging control.
- The Kansas City Streetcar Authority installed a 2-mile electric “smart” streetcar downtown, and uses the system as a laboratory for future innovation.
- The Kansas City Area Transportation Authority and Ford partnered on a pilot project to test on-demand ride sharing commuter shuttle service.



Distributed Energy Resources—*Improve sustainability, efficiency, and reliability.*

- KCP&L matched \$23M of federal funding to demonstrate a microgrid in a 2-square-mile area with 14,000 commercial and residential customers. The is part of the Green Impact Zone SmartGrid Demonstration.
- The demonstration includes smart meters, smart substation technologies, and a 1-megawatt, 1-megawatt-hour battery, inverter, and ground mount solar array. The Exergonix lithium polymer battery is connected to the energy grid, and lets KCP&L test how energy storage systems can shave peak load on a circuit, enable volt/VAR control, and support circuit islanding.



Data Analytics and Intelligent Services—*Increase efficiency, improve city services, and enhance quality of life.*

- Kansas City developed an open-access portal with live maps provided by Xaqt, now online and available to the public, which shows streetcar locations, available parking, and traffic conditions.
- Kansas City and Sprint partnered to develop free public WiFi across 50 downtown blocks, and will extend it to 180,000 more residents.
- Kansas City and Cisco partnered to develop 25 interactive kiosks showing entertainment, dining options, and city services.

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