

# OpenADR: Success Stories



## OATI and KCP&L Leverage OpenADR to Achieve Smart Grid Success

Utilizing a grant from the United States Department of Energy (DOE), Kansas City Power & Light (KCP&L) is investing in a multi-million dollar Smart Grid project in a number of Kansas City neighborhoods. For this bold initiative, KCP&L implemented OATI webDistribute, a next-generation demand-side management solution from Open Access Technology International, Inc. (OATI). The OATI webDistribute software ensures the KCP&L SmartGrid Demonstration project possesses the tools necessary to enhance the electric grid in the city's urban core. With support from OATI, the Smart Grid system strives to reduce delivery costs, improve reliability, and optimize energy usage in Kansas City.

*“We improved electrical service for the entire SmartGrid Demonstration project area through improved reliability, quicker outage response times, more efficient electricity delivery, and a reduced carbon footprint.”*

One of the primary objectives of the project is to demonstrate inter-operability between a wide variety of disparate vendor, legacy, and third-party systems and applications. From the outset, OATI and KCP&L understood that the key to successfully tying together more than a dozen systems of



varying vintages and proprietary vendor APIs required the proper communications standards and message payload protocols. Given both companies' status as early-stage members of the OpenADR Alliance — and their participation in developing the OpenADR 2.0 standards — adopting the standard was a natural fit.

The OpenADR 2.0 standard is used in the interface between OATI webDistribute and KCP&L's Home Energy Management Portal (HEMP). The OpenADR standard was also adopted for scheduling and dispatching a 1 MW battery storage facility through interfaces between OATI webDistribute and the KCP&L Distribution Management System (DMS). All inter-system interfaces are routed through KCP&L's Enterprise System Bus (ESB).

The standard provided the functionality and flexibility to support the interface between the systems, all using web services. As of June 2013, the interface between OATI and HEMP has been developed, implemented, tested, and demonstrated to the DOE. KCP&L now has the ability to effectively use Demand Response and other distributed load and generation assets to deal with operational and reliability issues of the distribution grid with surgical precision. With this level of success, OATI and KCP&L are committed to incorporating future versions of the OpenADR specification into project development. Initial lab and field testing has been successful, and production use is scheduled for summer 2014.

The KCP&L SmartGrid Demonstration project benefits approximately 14,000 KCP&L customers in several of Kansas City's urban neighborhoods. In addition to providing next-generation Smart Grid technologies to help modernize the city's urban core, the SmartGrid Demonstration project engages customers and evaluates the technical, operational, and business model feasibility of implementing a variety of advanced technical solutions. Innovative upgrades and the use of OATI webDistribute improve electrical service for the entire SmartGrid Demonstration project area through improved reliability, quicker outage response times, more efficient electricity delivery, and a reduced carbon footprint.



***More information on the  
OpenADR Alliance go to  
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