

ENERGY AUTOMATION



Case Study

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The GridPlex Energy and Utility Services portal delivers real-time information to utilities and customers to better manage the use, distribution and cost of energy.
www.gridplexnetworks.com

About GridPlex Networks

GridPlex provides advanced automation products and technology for the conservation of energy and water for utilities and sustainable communities. The Company has developed a package of hardware, software and services designed for wide-scale mass-deployment, including applications for utilities, commercial and residential consumer, public safety organizations and green communities.

IBM AND CENTERPOINT ENERGY OPEN HOUSTON DEMONSTRATION LAB TO PROMOTE UTILITY SMART GRID AND COMMUNITY BROADBAND DEPLOYMENT

THE PROJECT

IBM was contracted by CenterPoint Energy to help convert the first floor of the utility's South Houston field office into a state-of-the-art Smart Grid and Broadband Technology Demonstration Lab. The Lab's purpose is to showcase the benefits of a "Smart Grid" deployment for the customers and stakeholders of the Houston-based energy utility – providing Utility Applications including AMR Meter Data display, Demand Response and Grid Monitoring, as well as Internet access, Voice over IP, a Community Network, and other communications, automation and emergency services.

The systems demonstrated at the CenterPoint Lab are unique in that the advanced "Smart Grid" utility services, as well as communications, operate over the Utility's power lines serving as a distribution network. CenterPoint, like many electric utilities, is testing various "Smart Grid" application, with the Demo Lab as the focal point of those tests, to prepare for future deployments.

CenterPoint contracted IBM Global Services to integrate the system for their network, and IBM came to Broadband Energy (GridPlex*) to implement the complex task of combining Demand Response, Automated Meter Reading, Load control and HVAC automation, in addition to developing innovative services to maximize consumer use of the system. The completed system clearly demonstrates many new benefits that can be delivered by a "Smart Grid" to the Community.



CenterPoint Energy Houston, TX

About CenterPoint Energy

CenterPoint Energy serves approximately 5 million metered electric and natural gas customers, and is one of the largest publicly-traded combined electricity and natural gas delivery companies in the US. CenterPoint provides wholesale electricity, transmission and distribution services for the entire Houston metro area, is the third largest energy employer in Houston, and the third largest natural gas delivery company in the nation.

THE SOLUTION

* The system was originally provided by Broadband Energy Networks, whose technology and IP assets were acquired by GridPlex in March 2009. The system included what is now the GridPlex C2k1 UNI-PLEX Automation Computer as the central core of the System, combining it with Smart Meters, Communicating Thermostats, Lighting Controls, remote-controllable Cameras and Air Quality monitors. The UNI-PLEX Network Operating System, IOCS – an open platform using XML and .Net Web Services – constantly monitors and controls the C2k Automation Computer, along with all of the local devices in the network.

Utility Applications are implemented by the same C2k-equipped network, enabling CenterPoint to monitor and control Demand-side conditions on its local grid. The resulting automated network permits CenterPoint to test, demonstrate and deploy applications for Demand Response, Energy Management, Life Safety and Security in commercial facilities, buildings and homes.

The secure, online Utility Services portal displays and analyzes Energy Information and related critical data, for end-use customers as well as for the Utility, viewed over a secure Internet link, inside or outside the Lab. GridPlex engineers developed and supplied the software applications and services for Energy Management, Life Safety Monitoring and Remote Camera Security in the Lab.



The C2k1 UNI-PLEX Automation Computer, manages the complete system