Distributech 2014
Abstract: Enabling Demand Response, Energy Efficiency & Customer Engagement with Broadband Communications
Target Conference Tracks: Demand Response & Energy Efficiency & Residential Customer Strategies

**Leveraging the reliability and capacity of fiber to deliver timely, relevant and actionable energy management that enhance people’s lives and reduce energy costs**

Habersham EMC, a Southeastern rural electric cooperative, is one of many utilities around the country deploying high-speed gigabit fiber networks to enhance demand response and energy efficiency programs for its customers as electric loads on the smart grid continue to increase. Progressive utilities are extending fiber-to-the-premise (FTTP) to deliver affordable and reliable Internet, plus value-added services including VoIP, video and energy management to generate additional revenue.

Habersham and technology partners, White-Rodgers, Jetlun and EnerSphere Communications are piloting an internet-based Demand Response solution utilizing cloud-based technology and intelligent energy devices to enable Habersham’s FTTP customers to monitor energy consumption, control in-premise devices and reduce costs. Load control, thermostat, panel meter and other devices communicate energy usage to a gateway, which transmits data to an energy management and analytics platform.

Customers access a web-based portal from a PC and mobile devices to monitor and control temperature settings on multiple thermostats, plus on/off control of virtually any device/appliance to conserve energy and reduce costs. Customers receive automated notifications for DR events via email or text messaging and choose how much control the utility has for cycling systems.

The Utility does not need to replace current meter technology to monitor and control major energy consuming devices by premise, substation and system-wide to project load, shift and reduce peak demand. Web-based portal allows utility to rapidly execute DR events, optimize device combinations, pre-cool/heat homes, cycle systems, plus monitor, measure and verify the results in one-minute intervals, while measuring customer response to the event. Pilot objectives are 3kW load control per premise with minimal customer impact. Results will be used to validate ROI projections and payback period versus new combustion turbine generating facilities.
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Presenter: Curt Arulf, Jr.

Biography

Curt completed a Bachelor of Science Degree in Chemical Engineering from Purdue University. Shortly after graduating he began his career with General Electric working as a Process/Project Engineer at the Lexan Plant in Mt. Vernon, Indiana. His primary responsibilities included process monitoring of the Phenol Recovery operations in the BPA plant and the design and implementation of cost saving projects and process improvements.

From GE, Curt accepted a job offer from Pee Dee Electric Cooperative in Darlington, SC in 1985 as Manager of Engineering. His duties included oversight of all electric facility design work. He was promoted to Vice President of Economic Development.

After 10 years with Pee Dee Electric Cooperative, Curt accepted a position as the Economic Development Director of Butler County, Ohio, which gave him the opportunity to relocate to his hometown of Cincinnati, Ohio. While at Butler County, he facilitated new business development of $900 million in 5 years with over 4,000 jobs created.

A new opportunity presented itself to Curt and he took a position with Firstar Bank (now US Bank) as Commercial Loan Officer, where he was responsible for acquiring new commercial loans and he made a career move to self employment, aligning himself with World Financial Corporation as financial planner and mortgage loan officer.

The utility industry was still in his blood and he returned to Pee Dee Electric Cooperative as the Vice President of Engineering and Operations.

After 2 additional years with Pee Dee Electric he moved to Fayetteville, NC and worked for the Public Works Commission (PWC) of Fayetteville, NC as Capital Construction Manager. PWC is North Carolina’s largest municipal electric system with 75,000 customers. At PWC, he managed all overhead and underground construction crews.

Curt joined Habersham EMC as Manager of Engineering in 2008 and is currently Vice President of Engineering and Operations, responsible for the design and construction of electric facilities and the fiber optic network.

Curt lives in Cornelia, GA, is originally from Cincinnati, Ohio and has 3 children.