

## Jefferson Energy Generates Improved Operations with Motorola PassPort

Jefferson Energy Cooperative replaced its 30-year old VHF radio system with the Motorola PassPort Trunking solution for better coverage, great capacity and new functionality.

### BACKGROUND

For over 60 years, Jefferson Energy has kept the lights on in homes throughout their service area of 11 counties located in eastern Georgia. With reliable electrical power, uncompromised customer service, and a portfolio of unique offerings like satellite Internet and home security, Jefferson Energy's 34,000 members have come to expect only the best.

### CHALLENGE

#### **Expand capacity to enhance field communications, improve efficiency.**

As a nonprofit organization, Jefferson energy is highly cognizant of not only sustaining a high level of customer service, but also maintaining tight focus on running a cost effective, highly efficient operation. However, with an aging VHF conventional two-way radio system that demanded increasing maintenance, and an expanding operation that had outgrown the system, Jefferson Energy found it harder to comply with those goals.

"Our old system often had interference from other utilities using the same frequency band." Says Billy Faulk, Technical Systems Engineer, Jefferson Energy Cooperative. "And because of the way the old system worked, field personnel had to relay messages to each other through Dispatch, adding delays and compromising field productivity."

Capacity was another critical issue. Since the old system was installed 30 years ago, the co-op's membership has grown by 261 percent, putting much greater demand on both the co-op and the communications system. "We have a lot more meter readers today than we did back then," Faulk says. "They are heavy radio users, which meant that the system was often busy and unavailable to our field Techs, engineers, and linemen."

And finally, because dispatchers didn't always know exactly where service vehicles were at any given time, coordinating restoral response was often challenging and a truck might be dispatched to an outage 20 miles away, even though another truck might have been closer. Jefferson Energy began looking for a trunking solution that would give them greater network capacity, improved performance, and enhanced feature capability, such as Automatic Vehicle Location (AVL).

### SOLUTION

#### **Motorola PassPort trunking system proves to be the best choice.**

After researching and carefully evaluating several alternatives, Jefferson Energy turned to Mobile Communications of Gwinnett, a Motorola authorized dealer and service center with locations throughout Georgia and South Carolina. Mobile Communications proposed Motorola PassPort, an advanced analog trunking system that would provide better capacity, improved coverage, and key features such as Emergency, Priority Access and vehicle location.

“We worked closely with them to understand their challenges, then designed a comprehensive system that would not service their immediate needs, but would also position them for the future.” Says Kenn Hadermann, Area Manager, Mobile Communications. “Motorola PassPort is capable of providing the technology and number of channels necessary for voice and data communications. Jefferson Energy can deploy what they need today and scale to enhanced functionality when they’re ready.

During the implementation, Mobile Communications performed extensive engineering path studies and range coverage studies to ensure that the heavily wooded terrain would not compromise coverage. “Our engineers performed path studies and coverage testing throughout the territory to find out what it would take to further improve network performance,”

With implementation complete and acceptance signed off in mid September 2007, Jefferson Energy’s Motorola Passport trunking system now includes three sites with three repeaters at each site that can easily support the 112 field subscriber radios on the network. The network transmitter sites are interconnected and wirelessly linked back to headquarters with a Motorola Canopy wireless broadband network, using fiber for backup. With some of Jefferson Energy’s radio sites in remote locations, wireless connectivity alternatives would have required expensive and time-consuming trenching. The Canopy wireless network provides a quicker and significantly lower cost connectivity solution, for both the initial installation and on-going operating costs.

## BENEFITS

### **PassPort to improved operations**

When Jefferson Energy set out to transition its aging VHF system to a UHF trunked network, the goal was to improve overall field operations through enhanced radio communications. Each functional group is now segmented onto their own ID group for privacy and bandwidth efficiency. Operations uses remote desk sets to easily monitor and communicate with their individual teams. The PassPort system also offers wider area coverage, automatic roaming, efficient channel expansion, and a host of features that improve operational efficiency. But perhaps the greatest benefits are improved system performance and network reliability. During a recent tornado, the system performed flawlessly and provided storm restoral personnel with uninterrupted communications.

The Motorola PassPort trunked system has enabled the co-op to achieve their original goals and more, including:

**Enhanced capacity**—Private Select Call enables field personnel to place radio calls without going through Dispatch, increasing the speed of response and providing greater privacy and increased

capacity. “This boosts spectrum usage and ensures that communications are available to any field employee who needs it.” Faulk says.

**Increased Productivity** – “With AVL (Automatic Vehicle Location), we’ve interfaced the vehicle location information into our Outage Management System so dispatchers can see a graphical representation of power outages and – on the same screen – the location of the nearest field service vehicles.” Faulk says.

**Reduced cost** – When the VHF system was busy, field personnel turned to their cell phones. That strategy was expensive and not always reliable due to lack of cell sites located in the more rural areas. Jefferson Energy can add telephone interconnect in the future to minimize cell phone usage and bridge the coverage gap.

**Ease of maintenance** – Programming and fleet management is easy with PassPort. “It literally takes us less than three minutes to add a new radio and vehicle number,” Faulk says.

Expanding coverage: cooperation among the cooperatives

With its new Motorola PassPort system in place, Jefferson Energy is now reaching out to neighboring cooperatives to use the system to expand and strengthen coverage at the edges of their territories.

“One of the benefits of PassPort is the ability to collaborate with other co-ops.” says Faulk. “For example, if we work with a neighboring co-op to add a site that will cover their service territory, as well as increase the coverage where our signal starts to get weak, we will both benefit from the expansion. We would improve our coverage at almost no cost and the other co-op would improve their radio operations immediately and at a significantly lower cost than building their own new radio network.”

That collaboration strategy not only expands radio coverage, it also enables seamless communications with neighboring co-ops and with public safety agencies for more efficient storm restoral coordination.

For Jefferson Energy Cooperative, the Motorola PassPort system has enabled them to increase operational efficiency, attain greater return on investment, and most importantly, achieve highly reliable communications for their entire fleet of field personnel.