
Rappahannock: How One Co-op Handled Its Radio Upgrade

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Decision-makers at Rappahannock Electric Cooperative in Fredericksburg, VA, had three main reasons for replacing the 1950s technology of their analog radio system. First, having only two frequencies meant crew dispatch across 16 mainly rural counties during a major outage was nearly impossible. Second, the co-op had big dead spots in radio service. The FCC narrowbanding mandate was the third driver.

"If we waited too long, we knew it would be a huge bottleneck," says Gary Schwartz, director of SCADA, load management and telecommunication. "So we decided to do it early on."

After hiring a consultant to guide them through the maze of vendor and technology choices, Rappahannock was on air by July 2008 with an MPT-1327 trunking system manufactured by Tait Electronics. The hybrid system is digital from dispatch to its six transmitter sites and analog from the transmitter tower to each of its 150 vehicles. Rappahannock opted to lease 220 MHz frequencies from NRTC, which means that NRTC takes care of the 10-year licensing arrangements.

"Our biggest hurdle was training crews to use the new system," Schwartz says. "We had multiple training sessions in addition to on-the-job training."

Rappahannock's first big test of its new radio system came when 12,000 customers lost power during a three-day snowstorm in early March.

"We were very happy with the reliability," Schwartz says. "The system performed just as we wanted it to. We were able to split the fleet and tell trucks to report to specific dispatch centers."

Rappahannock invested in the new radio equipment as a voice system, he explains, but the co-op is also experimenting with transmitting automatic vehicle location (AVL) data.

"That's still a work in progress because sometimes the data can interrupt voice," Schwartz explains. "If we can make data transmission work without interrupting the voice capabilities, then we'll do it. Hopefully we'll be successful but the jury is still out."

Contributor

Elizabeth McGowan

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