



Mesh Radio Overcomes a Mountain of Obstacles for Arizona Co-op

S&C Featured Solution: SpeedNet™ Radio

Location: Mt. Lemmon area, Arizona

Customer Challenge

Trico Electric, a non-for-profit cooperative serving more than 38,000 customers in southern Arizona wanted to automate a crucial line on their overhead system, located in the remote Mt. Lemmon vicinity.

A popular skiing and hiking destination, Mt. Lemmon's geography and limited communication options naturally present service repair challenges. Pair these obstacles with adverse weather conditions, and it could take all day for a crew to access the line, potentially resulting in costly repairs and danger to crews.

S&C Electric Company and Trico Electric knew that automating this line would be difficult but crucial to area reliability and service. Traditional line-of-sight microwave communication requires several repeaters and prohibits system expansion. Trico needed a cost-effective, flexible solution to accommodate growth, withstand extreme weather and integrate existing serial and new Ethernet devices.

S&C Solution

Trico was familiar with S&C's PME Pad-Mounted Gear because it was already applied on their underground distribution system. They were unaware, however, of the variety of communications options S&C offers in support of underground and overhead distribution automation.

SpeedNet Radios were subsequently installed, and the substation RTU now monitors hard-to-reach reclosers on the line near Mt. Lemmon.

S&C offers a variety of communications options for underground and overhead distribution automation, including SpeedNet Radios.



"S&C listened to us and suggested their mesh-communicating SpeedNet Radio. It was a perfect fit for our needs"

– Chris Fleenor, technical lead, Trico

After Trico searched for nearly two years to support hard-to-reach reclosers, S&C experts deployed mesh network in record time.



Results

With the help of S&C's Communications Systems team, Trico ended their nearly two-year search for a properly designed network. S&C deployed a mesh network in just one month to support the hard-to-reach reclosers.

"I was initially concerned about the system's speed given the non-line-of-sight situation," says Fleenor, "But, the SpeedNet radios have performed better than I expected. I like that S&C is focused and experienced in distribution automation and committed to communications solutions. We plan to expand this system and will consider S&C for other projects in the future."

"We are now taking advantage of intelligent equipment we already had," says Fleenor. "Real-time access makes the system perform to its fullest capabilities."

The S&C SpeedNet mesh radio platform is ideal for difficult applications that require cost-effective flexibility. The robust wireless mesh infrastructure, specifically designed for distribution automation, quickly extended coverage at the Mt. Lemmon site.

"Trico's goals of reaching important SCADA devices, keeping crews safe and avoiding long truck rolls are now realized."

- Chris Fleenor, technical lead, Trico

*Recloser and radio installed on utility poles.
The antenna is on top of the pole on the left,
and the recloser is on the pole on the right.*

