VR2 Pioneer Electric Case Study

Kansas Co-op Fights Ice with VR2® Conductor

Southwire Company, LLC's VR2 dual-conductor vibration resistant conductors beat the twisted-pair installation problem

Pioneer Electric Cooperative in Ulysses, Kansas, knows about ice and the challenges it can bring to electrical transmission and distribution. Ulysses is in a heavy ice-loading zone, and the winds blowing steadily across the plains bring big problems of aeolian vibration and ice galloping. So, Pioneer turned to Southwire's patented VR2® dual-conductor vibration-resistant conductors.

Mike Haney of Pioneer Electric recounts, "In a terrible winter storm in 2006, we lost 3,800 poles and over a thousand miles of conductors, but no twisted-pair conductors hit the ground."

Project: New overhead transmission line in ice-prone region

Product Used: Southwire's VR2 in sizes ranging from 4/0 to #2 AWG

In Service Date: Spring 2009

"We've been using twisted-pair conductors since 1991, and we know the architecture is highly resistant to galloping."

– Mike Haney, operations supervisor for Pioneer Electric

Southwire®

VR2® Vibration Resistant Cable

VR2 Goes Up Easily

Traditional twisted-pair conductors can separate and sag apart during installation. "You can spend thousands of dollars in labor jacking out the bagging that occurs," says Haney.

The team at Pioneer Electric installed their first runs of Southwire's dual-conductor VR2 in the Spring of 2009.

"All twisted-pair is not the same," Haney says. "The way Southwire's dual-conductor VR2 is constructed, the conductors stay together during installation making it much easier to handle. That's important."

Pioneer has now installed over nine million feet of VR2, in sizes from twin 4/0 AWG conductors to twin #2 AWG conductors with operating voltages of typically 13.2 kV.

Get Long Lengths and Large Conductors

"Southwire can deliver VR2 in industry-leading sizes and run lengths," says Stephen Spruell, Southwire Director of Product Development. The larger sizes bring VR2's ice galloping and vibration resistant benefits to high-capacity grid applications. Longer run lengths squeeze installation costs by reducing multiple-reel handling time. And, VR2 cable can be strung to the maximum allowable tension limits without additional vibration protection.

To learn more about Southwire's patented VR2 design, go to southwire.com/VR2

Non-VR2® cables fall to the weight of ice and force of wind. Photo taken by Ross Riley

Southwire's VR2® cable holds up against the elements. VR2 cable shown at the left side of the photo.

Southwire Company, LLC. • One Southwire Drive • Carrollton, GA 30119 • www.southwire.com • 866.777.5775