

# Case Study

**Circuit Owner:** MEA, Palmer, AK

**Cable:** 15 kV, XLPE, #2 cable circuits

**Problem:** There were increasing failures in subdivisions in Eagle River, AK

**Solution:** Cable Rejuvenation—Sustained Pressure Rejuvenation (SPR) methods were utilized. The MEA crew was certified to perform the injection work.

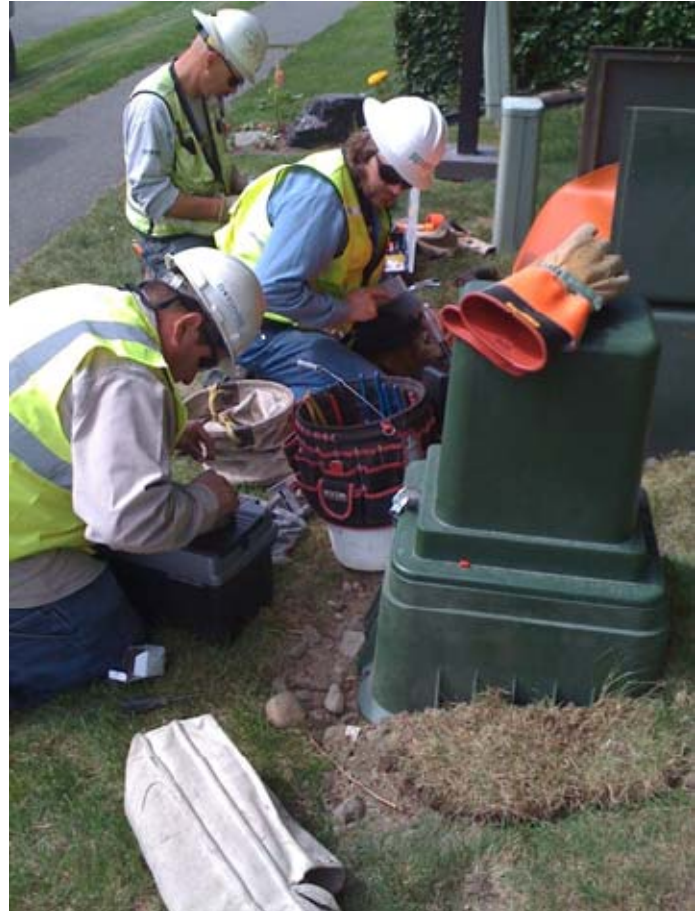
MEA had several older subdivisions in Eagle River, Alaska that were experiencing an increasing number of cable faults. These faults always increased in the colder weather when the frost level reached the depth of the buried cable. Eaglewood was a large, older, established subdivision, where the original cable was installed by the book: the cables were bedded in sand and proper cable separation was maintained.

These increasing failures were a significant problem, since the subdivision was right next to the substation—when there was a fault, not only did this subdivision go dark, but many customers further down the line also went out.

MEA knew that there were a lot of splices of unknown quality and remaining life. So, they decided to use the Novinium Sustained Pressure Rejuvenation (SPR) method to rejuvenate these cables and replace all of the splices.

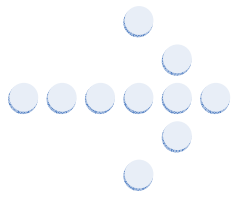
During the summer of 2010, MEA injected 22,000 feet of cable, about 75% of the Eaglewood subdivision, before the cold weather set in. The remainder will be completed in 2011. (In 2009, MEA had injected 8,000 feet of cable in the Eagle Glen subdivision. In almost 2 years since that work, there have been no failures in an area that had previously experienced significant failures.)

MEA wanted to have their line workers fully involved in the injection process. Novinium supplied one injection technician and equipment, and MEA provided one line crew.



## The Cable Injection Process

Novinium Injection Technician Rafael Vera provides training on the Novinium Rejuvenation Instructions (NRI) to Glen Durkee (middle), MEA's Crew Sub-Foreman, and Lineman Mike Nolan.



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## MEA Con't.

During the first few weeks, the Novinium technician trained and certified Glenn Durkee, the crew Sub-Forman. Once certified, Glenn then managed his crew and performed all of the injection tasks with only occasional oversight from Novinium.

Tim Barnum, MEA Line Superintendent, said, "Having the ability to have our line workers certified by Novinium expands our ability to use rejuvenation services year round. Winter is a slow period for us, and certification allows us to use slack time more effectively. Next year we want to get more linemen certified.

"If we can certify more linemen, we can start doing injection on all cable faults when they happen. It will also let us capitalize some of these repair costs. It takes only about 30 minutes extra to inject the cable when repairing a fault. However, it prevents that segment from re-faulting. Once you have the first fault in a segment, you usually get more faults in the same segment.

"This project also gave us a chance to clear growth away from our equipment, fix secondary pedestals that needed repair, and remove rust from transformers.

"We are very pleased with this project and that Glenn Durkee was certified as an Injection Technician by Novinium. We plan to expand the training next year."

This case study is based in part upon, "BRINGING INJECTION IN-HOUSE" in the April 2011 issue of RE Magazine, page S-1.



Tim Barnum, MEA Line Superintendent supervises his crew.



Neighbors watching the Novinium Rejuvenation Process