

Barehanding 240 kV taught in Chance[®] live-line course

Lee County Electric Cooperative committed to efficiency in system operations and line maintenance safety

At Lee County Electric Cooperative (LCEC), 10 linemen recently received barehand/hot-stick training from Chance[®] Tool Demonstrator Randy Beckes. The two-week 80-hour contracted course covered barehand work on transmission lines energized up to 240 kV.

“Being able to work on energized lines will allow us to make more timely transmission line repairs, as well as repair issues detected during infrared and corona inspections before they cause an outage,” said Frank Sherkus, LCEC Transmission Coordinator/Project Manager.

The course covered training in electrical theory, tools and personal protective equipment used in barehand procedures. Approximately one-third of the training was classroom instruction on live-line tool usage, general work rules, basic rigging techniques and safety.

The balance of the course was spent in field hands-on sessions. There, the linemen became acclimated to the actual conditions of working barehand on



energized lines. This involved the use of a Chance[®] EHV Barehand Conductive Suit to place the worker at the same electrical potential as the conductor, somewhat akin to a bird on a wire.

“Once you become part of the energized conductor,” Sherkus said, “you have to be very aware of your clearances. You have to think about every move that you make.”



Lee County Electric Cooperative is one of the largest electric cooperatives in the U.S. with more than 6,000 miles of distribution and transmission lines and more than 300 employees.

Headquartered in N. Ft. Myers, Florida, and established in 1940, LCEC is a not-for-profit electric distribution cooperative. It serves a five-county area in Southwest Florida, including Cape Coral, North Fort Myers, Marco Island, Sanibel and Captiva Islands, Pine Island, Everglades City, Immokalee and parts of Lehigh Acres.



An ohmmeter test confirms the suit's low resistance and high conductivity for the job.

This refers to what the course teaches about how to properly approach, make and break contact with the energized conductor. Such techniques are essential to attaining the protection the conductive suit offers the lineworker.

Highly specialized training and clothing

The main objective of barehand work on EHV is to allow the lineman to get closer to his work. It replaces hand tools on the end of 16-foot-long Epoxiglas® insulated poles. The clothing is bonded to the conductor, placing the lineman within the field of electricity, not as a conductor himself, and allows him to work with his hands on the conductor hardware.

For work on voltages through 765 kV, the two-piece conductive suit is made of a blend of Nomex aramid flame-resistant fiber and microscopic stainless-steel fiber. This extremely strong and low-resistance material meets or exceeds IEC 895 Specification for conductive clothing. Conductive gloves, socks and boots complete the protective clothing.



LCEC transmission lineman makes connection to the line with a bonding clamp as instructed by Randy Beckes, Chance® Tool Demonstrator.



The barehand team learns about monitoring equipment that alerts voltage leakage on the insulated truck boom.

EHV barehanding in LCEC future plans

The benefits of barehanding obviously promote transmission line-maintenance efficiency and effectiveness without endangering the lineman and without interrupting customer service. To achieve those goals, LCEC not only engaged Chance/Hubbell Power Systems for this training, but later this year also plans to invest in an extended boom truck to permit barehand maintenance on transmission structures beyond their present reach. ■