

## UNDERGROUND LINE DESIGN MARCH 24 - 26, 2008

- Date: Monday - Wednesday, March 24 - 26, 2008
- Time: 9:00 a.m. - 4:30 p.m.
- Registration Deadline: February 25, 2008
- Fee: \$825 per person
- Participants will be billed following the completion of the course.
- Location: Colorado Rural Electric Association headquarters  
5400 North Washington Street, Denver, Colorado
- Cancellation Policy: Cancellations received on or before the registration deadline will not be charged. Cancellations received after the deadline may be billed 25 percent of the registration fee.
- Confirmation: A minimum of ten people must be registered for the course to be held. A letter will be faxed to all participants confirming their registration in the course.
- To Register: Contact Liz Fiddes at the CREA office (303) 455-2700 ext. 103, or e-mail at [liz@coloradorea.org](mailto:liz@coloradorea.org)
- Audience: This course is designed for staking technicians, field personnel, powerline workers, designers, engineers, and operation managers
- Instructor: Freddie Hutchens, Power Delivery Associates

## UNDERGROUND LINE DESIGN

This three-day seminar teaches the concepts of designing underground distribution. Participants will learn the components, applications, variations of engineering subdivisions and the NESC requirements for preparing underground layouts. Discussions will entail easements and utility corridors, construction methods, mapping of distribution and safety related issues. Calculations will involve evaluation of electrical load and designing underground installations. Several case studies will be presented where the group will discuss options for design. An open forum for discussion and brainstorming of problem solving techniques will allow participants to view the various engineering logic involved with designing underground distribution.

NESC Requirements for Underground Facilities • Easements and Utility Corridors •  
Construction Methods • Pulling Tensions • Joint Trench and Conduit Systems •  
Mapping and Marking • Material and Equipment • Safety Issues • Electrical Load  
Calculation • Transformer Sizing • Underground Design Issues