Safety & Switching for Electrical Networks

TE186

Course Overview:

A substation is a part of an electrical generation, transmission, and distribution system. Substations transform voltage from high to low, or the reverse, or perform any of several other important functions. Between the generating station and consumer, electric power may flow through several substations at different voltage levels. Substations may be owned and operated by an electrical utility, or may be owned by a large industrial or commercial customer. Generally substations are unattended, relying on SCADA for remote supervision and control.
A substation may include transformers to change voltage levels between high transmission voltages and lower distribution voltages, or at the interconnection of two different transmission voltages. The word substation comes from the days before the distribution system became a grid. As central generation stations became larger, smaller generating plants were converted to distribution stations, receiving their energy supply from a larger plant instead of using their own generators. The first substations were connected to only one power station, where the generators were housed, and were subsidiaries of that power station.

Course Objective:

-Appreciate the inherent dangers associated with work on or near high
-voltage apparatus
-Understand the statutory duties and obligations placed on organizations and individuals by looking at relevant legislation and regulations
-Describe the key safety procedures required for work on or near high
-voltage equipment
-Identify the main operational features on a range of high voltage switchgear
-Understand safety documentation
-Enroll on the High Voltage System Operations

Course Outline:

-Safety Practices Regulations Review
-Power System Safety Protection
-Workers' Compensation Board Regulations
-Occupational Safety And Health Standards.
-Switching On The Distribution System
-Switching Procedures
-Electrical Symbols
-Nema Numbers And Alarms
-Switching On The Transmission System

Who Should Attend:

Personnel who are being considered for authorization and who are required to develop an understanding of operational practices and or have responsibility for, or are directly involved in the implementation of high voltage safety procedures.

Training Language:

EN / AR

Training Methodology:

-Presentation & Slides
-Audio Visual Aids
-Interactive Discussion
-Participatory Exercise
-Action Learning
-Class Activities
-Case Studies
-Workshops
-Simulation