

## Generator Systems

This course provides a comprehensive overview of the emergency standby generator. The codes and standards for inspection, testing and maintenance are reviewed. The key components inherent in this system will be focused on to discuss typical problems and solutions. Anyone who works on or near power generation, transmission, or distribution systems should attend this course. Additionally, supervisors, managers, safety personnel, and those responsible for ensuring a safe work environment should attend this course.

Duration: 8 Hour Program

### **Codes and Standards**

Introduction and General Code Requirements  
Routine Maintenance and Operational Testing  
National Electrical Codes for Ground Fault Systems

### **Power system overview**

Voltage  
VAR Load  
KW Load

### **Function Design**

General Theory of Operation  
Air systems  
Fuel system  
Lubricating system  
Battery systems  
Prime Mover Controls  
Instruments  
Speed Control  
Relay Logic  
Advances and Retrofit  
Generator Control  
Voltage Regulation

### **System Operation**

Automated  
Manual  
Connecting to Load  
Paralleling  
System Monitoring

### **Maintenance & Troubleshooting**

Engine Control Problems  
Slow Start  
Hunting  
Load Response  
Generator Control Problems  
Regulation  
Industry Standards for Testing  
NETA  
System Documentation  
OEM Manuals  
Determining Spare Parts  
History  
Manufacturer's Recommendations  
Trouble Log

### **Case Studies**

Review of Participant's Problems  
Review of Previous Jobs and Case Studies