SAFETY PROFESSIONALS
CONFERENCE 2017

Electrical Transmission & Distribution Partnership
-Continuing Education Modules

James McGowan-Director, Safety Training
Quanta Services Inc.
Chairman, ET&D Partnership Task Team II
The Partnership

A formal collaboration of industry stakeholders working together to improve safety for workers in the electric line construction industry.
Task Team Development

• Task Teams formed
  • Task Team I-Data
  • Task Team II-Training
  • Task Team III-Best Practices
  • Task Team IV-Communication

• Look at various aspects of the Power Transmission & Distribution business

• Questioning attitude
  • Why, seemingly in spite of all the effort and resources dedicated toward safety is the industry still experiencing injuries and fatalities?
Training Development

• Task Team Two was formed to develop standardized training that can be used by the industry to help deliver a constant message

• Development of an Industry Specific OSHA 10hr program commonly referred to as the OSHA ET&D 10hr Program

• Development of an Industry Leadership course designed to provide Safety Leadership training to frontline supervisors commonly referred to as the OSHA 20hr program
ETD 10-Hour Course

• Accredited by OSHA
• Designed to address the issues found by Task Team I data analysis
• Tailored toward the T&D work sector
• Uses relevant examples
• Current contact time 12 hours and 15 minutes

Course Topics

<table>
<thead>
<tr>
<th>Intro to OSHA</th>
<th>Trenching &amp; Excavations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Safety</td>
<td>Rigging &amp; Lifting</td>
</tr>
<tr>
<td>Grounding &amp; Bonding</td>
<td>Job Briefings</td>
</tr>
<tr>
<td>Fall Protection</td>
<td>Confined/Enclosed Spaces</td>
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</table>

Originally designed to retake the entire course every 5 years
ETD Supervisory Leadership Skills Outreach Training (20-Hour)

• Accredited by OSHA
• Provides instruction on Supervisory Leadership Skills
• Educate supervisors within the T&D sector on safety management
• Target group:
  • Foremen
  • General foremen
  • Field supervisors

### Course Topics

<table>
<thead>
<tr>
<th></th>
<th>On the Front Line</th>
<th>Effective Safety Meetings</th>
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<tbody>
<tr>
<td>START</td>
<td></td>
<td></td>
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<tr>
<td>Listen Up/Speak Up</td>
<td></td>
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<tr>
<td>Pre-Job Briefings</td>
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<tr>
<td>Skills Assessments</td>
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<td>Job Hazard Analysis</td>
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Continuing Education Modules

• In 2015 the Partnership began to develop continuing education modules
• Released quarterly
• Topics initially based on the ET&D 10-Hour modules
• Recently added Human Performance modules to enhance the process
Continuing Education Modules

2015 Topics
• Grounding & Bonding
• Insulate & Isolate
• Fall Protection
• Lifting & Rigging
Continuing Education Modules

2016 Topic
• Job Briefings
• Personal Protective Equipment
• Trenching & Excavation
• Confined & Enclosed Spaces

Human Performance Topics
• Stop Work Authority
• Peer Coaching
• Listen Up/Speak Up
• Active Caring & Coaching
Continuing Education Modules

• PowerPoint Based
• Designed to be delivered in class or on-the-job
• Generally divided into three, 15 to 20 minute sessions
• Distributed with a presenter guide
• Also distributed with a one to two page handout
Something New

• Currently developing a pilot eLearning module for the Trenching & Excavation module
• Upon approval should be released 3rd quarter 2016
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Electrical Transmission & Distribution Partnership

Chairman – Task Team 3 – Mike McClure CHST, STS, SGE
Regional Safety Manager
MYR Group Inc.
History of the Partnership

- Began 2004 with 6 members
- Currently 17 members covering over 80% of industry
Executive Committee

Steering Committee

Task Team 1
  Data

Task Team 2
  Training

Task Team 3
  Best Practices

Task Team 4
  Communications
Task Team 3 – Best Practices

A process or method that can be applied throughout the electrical industry that will assist the ET&D Partnership companies in reducing the frequency of incidents

• Administrative Controls
• Pre-Use Inspection RPE
• Cradle to Cradle
• I & I Live Line Tool Method
• Safety at Heights
• Information Transfer

• Job Briefings
• Qualified Observer
• Lock to Lock
• I & I Rubber Glove Method
• RPE for Live Line Tool Method
Development Guidelines for Best Practices

• Feasible to perform
• Currently done in industry
• Implementation obstacles
• Can all partners comply
• Repeatable
• Objectively measureable
Job Briefings

• Enhanced Procedure for Briefing

• Critical Steps Identified

• Debrief at Conclusion
Current Planning
Current Planning
Reality
Future Planning
Information Transfer

• New BP

• Outline for Exchanging Information with Host Employer
**Information Transfer Form**

**Purpose:** To ensure contractor request information from host employer

Nominal voltages of lines and equipment crews will be exposed to:

<table>
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<tr>
<th>Nominal Voltage (kV)</th>
<th>Maximum-per-Unit Transient Overvoltage</th>
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Assumed Maximum Switching Transient Voltages:

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Minimum Approach Distances:

<table>
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<tr>
<th>Voltage Between Phases</th>
<th>Phase to Ground M.A.D.</th>
<th>Phase to Phase M.A.D.</th>
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Arc Flash Clothing Requirements:

<table>
<thead>
<tr>
<th>Work Location (i.e., Overhead Distribution Lines)</th>
<th>Distance to Exposed Energized Parts (i.e., Less than 6 ft)</th>
<th>Hazardous Category &amp; Clothing &amp; Required (i.e., Cat 1-4</th>
<th>&amp; electrical</th>
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Presence of hazardous induced voltages: Yes ☐ No ☐

Presence of Protective Grounding and Equipment Grounding Conductors:

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<td>The locations of circuits and equipment, including electric supply lines, communication lines, and fire-protective signaling circuits.</td>
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Known Conditions:

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<th>Condition of Grounds (i.e., defective Substation grounds or grounding conductors, if known, are identified by the presence of a field test, or in the Substation test book.)</th>
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<tr>
<td>Environmental Conditions Related to Safety (i.e., any known environmental conditions related to safety are noted in the work package presented at the time of request for proposal.)</td>
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<tr>
<td>Conditions of Poles and Structures (typical pole tags and meanings any additional information needed)</td>
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Unanticipated hazardous conditions found during contractor’s work:

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De-Energized Work Plan

• Proposed BP

• Outlines Best Grounding Practices

• Establishes Requirements for EPZ

• Establishes Requirements for Barricading
Future Best Practices

• HEC (Human External Cargo)

• HPI (Human Performance Initiatives)

• Tracking of SIFI (Actual and Potential)

• Expansion of Safety at Heights
More Information

• [WWW.POWERLINESAFETY.ORG](http://WWW.POWERLINESAFETY.ORG)

• Download the ET&D APP