

TEGG CTE/T Training Agenda

Week 1	
Monday	
Monday – Wk1 8:00am – 8:30am	Introductions <ul style="list-style-type: none"> • General Introduction
Monday – Wk1 8:30am – 9:00am	Building Walkthrough <ul style="list-style-type: none"> • Logistics • Short Walkthrough/Week Preview
Monday – Wk1 9:00am – 11:30am	Energized Testing Point Point Discussion <ul style="list-style-type: none"> • Class Material
Monday – Wk1 11:30am – 12:30pm	Lunch/Team Building
Monday – Wk1 12:30pm – 1:30pm	Energized Testing Power Point Wrap up
Monday – Wk1 1:30pm – 3:00pm	Energized Testing Hands On <ul style="list-style-type: none"> • Training Lab Exercise Open Panels
Monday – Wk1 3:00pm – 5:00pm	Final Quiz / Wrap Up
Tuesday	
Tuesday – Wk1 8:00am – 10:00am	Drawing Recognition <ul style="list-style-type: none"> • One Line & Three Line Diagrams
Tuesday – Wk1 10:00am – 11:30am	Data Collection <ul style="list-style-type: none"> • Recognize and interpret device numbers, ratings such as those for transformers, circuit breakers, disconnects, switches, etc. as defined by IEEE and NEMA • Nameplate Data
Tuesday – Wk1 11:30am – 12:30pm	Lunch/Team Building

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Tuesday – Wk1 12:30pm – 1:00pm	Data Collection - Continued <ul style="list-style-type: none"> • Recognize and interpret device numbers, ratings such as those for transformers, circuit breakers, disconnects, switches, etc. as defined by IEEE and NEMA Nameplate Data
Tuesday – Wk1 1:00pm – 5:00pm	Lockout / Tagout <ul style="list-style-type: none"> • LOTO Systems – Equipment Isolations • Live Dead Live
Wednesday	
Wednesday – Wk1 8:00am – 11:30am	Behavior of Insulation Material While Under Electrical Stress <ul style="list-style-type: none"> • Constructions Characteristics of Insulation Systems • Insulation-Resistance Test Sets and Tests: Operational Principles, Basic Constructions, Applications, and Methods • Evaluating Insulation-Resistance Tests • Dielectric Test Sets – AC and DC • Evaluate AC and DC voltage with Stand Tests • Low Resistance Test Sets • Evaluate Primary Circuit Resistance Tests • Evaluate Terminal-To-Terminal Resistance Tests
Wednesday – Wk1 11:30am – 12:30pm	Lunch/Team Building
Wednesday – Wk1 12:30pm – 5:00pm	Lab Exercise <ul style="list-style-type: none"> • Participants are organized into laboratory teams and each team performs an activity at each work station in sequence. • Secondary Current Injection Testing of an RMS Digitrip using an Amptector/Digitrip Tester • Insulation Resistance Tests for a Dry-Type Transformer • Insulation Resistance Tests for an Air-Magnetic Power Circuit Breaker • Primary Circuit Resistance Measurements for a Medium-Voltage Power Circuit Breaker • Vacuum-Integrity and Voltage Withstand Tests for a Vacuum-Interrupter Circuit Breaker • Transformer Turns Ratio Test

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Thursday	
Thursday – Wk1 8:00am – 10:00am	Fundamental Operational Principles <ul style="list-style-type: none"> • Standardized Terminal Markings • Dry-Type Transformers: Construction Characteristics • Dry-Type Transformers: Inspections and Tests • Liquid-Immersed Transformers: Construction Characteristics • Liquid-Immersed Transformers: Inspections and Tests • Insulation Resistance Measurements • Power-Factor of Insulation Measurements using Doble M4000 • Transformer Winding, Bulk Bushings, Condenser Bushings • Turns Ratio Tests • Inspection of Gas Pressure, Oil Temperature, Winding Temperature, Liquid Level, Primary and Secondary Pressure-Relief Devices, Cooling Fans, Oil Boosters • Interpreting Gas-in-Oil Analysis Reports
Thursday – Wk1 10:00am – 11:30am	Current Injection Tests – Trip Unit and Relay Testing <ul style="list-style-type: none"> • Exercises • Current Injection Tests: Purpose and Applications • Current injection test sets: Operational Principles and Construction Types • Time-Overcurrent Characteristics of Circuits Breakers having solid-state trip units • Time-Overcurrent Characters of Electro-mechanical Protective Relays • Evaluating Current Injection Tests
Thursday – Wk1 11:30am – 12:30pm	Lunch/Team Building
Thursday – Wk1 12:30pm – 1:30pm	Surge Arrestors, Capacitors and Maintenance
Thursday – Wk1 1:30pm – 2:30pm	Grounding Awareness <ul style="list-style-type: none"> • Applying Grounds • Sizing and Inspecting Grounds
Thursday – Wk1 2:30pm – 5:00pm	Grounding Continued / Neutrals

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Friday	
Friday – Wk1 8:00am – 11:30am	Switchgear – Training Room <ul style="list-style-type: none"> • Classifications for Switchgear and Switchgear Components • Nameplate Ratings for Circuit Breakers and Switchgear Assemblies • Maintenance of Switchgear Enclosures and Enclosure Components • Maintenance of Power Circuit Breakers • Molded-Case Circuit Breaker Maintenance
Friday – Wk1 11:30am – 12:30pm	Lunch/Team Building
Friday – Wk1 12:30pm – 5:00pm	Switchgear – Laboratory Exercises <p>participants are organized into laboratory teams and each team performs an activity at each work station in sequence:</p> <ul style="list-style-type: none"> • Inspection of Magnum DS Circuit Breaker and Test of Digitrip 1150+ • Magnum DS LV Power Circuit Breaker – Measurements of Insulation Resistance and Primary Circuit Resistance • Verifying the Performance of a Zone Interlocking Scheme In a Magnum DS Assembly • Functional Testing of Arc-Flash Reduction Maintenance Mode – Digitrip 520MC • Magnum DS Switchgear, Circuit Breaker Racking, Hoisting, Phase-Displacement Checks at the Bus Tie • Interlocks and Controls – VacClad-W Switchgear • Door Interlocks of an Arc-Resistant VC-W Assembly, MR2 Motorized Remote Racking Device, Closure Measurement • Testing and Inspecting Medium-Voltage Control-Power and Instrument Transformers • Inspection of Ampgard Medium Voltage, FVNR, Type SJA • Inspection of an MSB Switch

TEGG CTE/T Training Agenda

Week 2	
Monday	
Monday – Wk2 8:00am – 12:00pm	Ultrasound Training
1:00 - 4:30pm	TEGGPro Software Training
Tuesday thru Thursday	
Tuesday, Wednesday, Thursday 8:00am – 5:00pm	Infrared ANST Level 1
Friday	
Friday – Wk2 8:00am – 2:00pm	NFPA70E Chapter 1 – Lockout/Tagout 70B Arc Flash Labels/Calculations PPE Selection