Module HVOP
High Voltage Operations

High Voltage Operations
HVOP (28 h)

Aim: The aim of this module is to enable participants, through theoretical and practical training, to be prepared to operate and make safe high voltage equipment and systems, under a documented safe system of work.

PROGRAM: HVOP High Voltage Operations

1. Introduction to the training
2. Human factors, safety mindset and attitude
   2.1 The role of human factors in safe operations
   2.2 Holistic integration of human factors into all topics
3. Wind farm HV systems and equipment
   3.1 HV systems in the wind farm from WTG to grid
   3.2 Definition and designations of HV
   3.3 HV equipment and technologies overview
   3.4 Circuit Breakers, Disconnectors, Earth Switches
   3.5 Using Single Line Diagrams
   3.6 Hazards and safety of HV versus LV
   3.7 Environmental conditions affecting HV versus LV
4. Hazards, risks and controls of working with HV equipment
   4.1 The principles of bolted connections
   4.2 Basement housed HV equipment
   4.3 HV cable hazards and risks
   4.4 Earthing protection
   4.5 Operating under different conditions
   4.6 Recognising signs of deranged or in distress equipment
5. Safety and control measures in HV environments
   5.1 Five Basic Safety Rules / The Golden Five Rules
   5.2 Establishing an Electrically Safe Work Condition
6. Regulations, standards, guidelines and company HV rules
   6.1 Legislation, industry standards and guidelines, company rules for HV work
7. SSOW for HV operations and communications
   7.1 SSOW for HV operations
   7.2 Effective communications in HV operations
   8. Duties, roles and responsibilities for HV Operations
   8.1 Duties, roles and responsibilities for HV operations
9. Tools and PPE for High Voltage working
   9.1 Typical HV tools, functions, safe use and control
   9.2 PPE for high voltage working
10. Fundamentals and principles for operating High Voltage systems under a SSOW
   10.1 Roles and responsibilities in controlled HV environment
   10.2 Applying the Five Safety Rules / The Golden Five
   10.3 Documentation to ensure safe control of HV Operations
   10.4 Executing work under documents written by an SAP
11. HV Switching: Scenario based practical activities
   11.1 Safe Practices and Principles of switching including team communications and the Hierarchy of Switching
   11.2 Performing initial energisation at commissioning and reenergisation following repairs
   11.3 Working with remote operation centre/stations
   11.4 Carry out actions within a HV safety document or switching orders
   11.5 Identify critical to safety intervention points and notify appropriate authorities of improper operation
   11.6 Scenario based practical activities - HV Switching
   12. Tools, equipment and methods for confirming Absence of Voltage
   12.1 HV tools and PPE for confirming absence of voltage
   12.2 Methods for confirming absence of voltage - Primary and Secondary, or additional methods
   12.3 Prove - Test - Prove / Hot - Cold - Hot
   13. Applying HV Isolations and Earth
   13.1 Applying HV Isolations and Earth
   13.2 Scenario based practical activities - HV Isolations and Earth
   14. Safe control during HV testing
   14.1 Sanction for test
   14.2 Awareness of testing types, tools, equipment and devices
   14.3 Safe control of HV equipment during testing activity
   15. Written knowledge test
   15.1 Assessment of knowledge by written test
   16. Training review

HVOP Module (High Voltage Operations)

Duration: 28 hours (3.5 days)
HVOP Program : Sections 1 to 16
Maximum students: 12 people per Edition.
Prerequisites: Solid foundation in low-voltage electrical work; ability to work with LV hazards; electrical workplace experience. Completed training equivalent to GWO BTT Electrical and GWO CoHE Electrical.
Certificate validity: Enduring qualification if you're actively working (under supervision) and progressing toward authorised person. Goal: obtain authorisation in ~3 years; otherwise retraining per company policy/regulations. Once authorised, the training is not normally repeated.

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