



UNION JOB DESCRIPTION

TITLE: System Operator Apprentice

DEFINITION:

Assists with the operation of the District's transmission and primary distribution system within the Energy Control Center, ensuring delivery of continuous, efficient and safe electric power to all District customers in coordination with other Northwest Utilities. Attends formal classes to supplement on-the-job-training. The System Operator Apprentice (SOA) reports to and is under the direction of a System Operator (SO), Energy Control General Foreman or Energy Control Superintendent.

DISTINGUISHING CHARACTERISTICS:

This is a minimum 5000-hour, 2.5-year apprenticeship program approved by the Joint Apprentice Training Committee (JATC). SOAs will receive and must attend a minimum of 144 hours of related/supplemental instruction on non-paid status per year. This is a progressive position with time requirements and with more responsibility assigned as experience is gained. The JATC determines if the incumbent may progress to the next step, based on satisfactory job performance, classroom progress, step tests, final examination, and evaluations and recommendation by the ECC Sub-Committee.

The SOA will not normally be eligible or scheduled for overtime, and will work a 40-hour workweek unless otherwise specified. The SOA may be used during system disturbances and outage events, per the ECC Subcommittee as deemed necessary. The SOA will be required to go on shifts at the discretion of the ECC Sub-committee, as approved by the JATC at no additional cost to the District.

ESSENTIAL JOB FUNCTIONS:

FIRST SIX (6) MONTHS (Step 1 – First 1000 hours):

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As outlined in the SOA training program, this not less than 6-month, minimum 1000-hour step will cover basic orientation and the SOA will gain knowledge of the responsibilities of the Energy Control Center as follows:

- Office Functions
- Office Equipment
- Office Orientation
- Map Boards
- Record Keeping Procedures
- Customer Management Systems
- Office Procedures
- Operations Center Field Training
- Forms and Logs
- Customer Outage Procedures
- Emergency and Security Procedures
- Circuit Maps

- System Operations Training Material
- Customer Service Field Training
- Communications
- System Overview
- Attend District core classes, acquiring required employment skills
- Introduction and review of Safety procedures and rules, including WAC 296-24, 296-45, 296-54, 296-62, and 296-155 (Electrical Workers Safety Rules), and the District Accident Prevention Manual

SECOND SIX (6) MONTHS (Step 2 – Next 1000 hours):

ESSENTIAL JOB FUNCTIONS:

As outlined in the SOA training program, this not less than 6-month, minimum 1000-hour step will expose the SOA to power system equipment and the SOA will gain knowledge of the responsibilities of the Energy Control Center as follows:

- Supervisory Control and Data Acquisition – SCADA
- Complete any required District core classes
- Reclosers
- Switching Procedures
- Safety Laws and Tagging Procedures
- Communications Field Training
- System Load
- System Operations Training Material
- 24-Hour Procedures
- Switching Procedures & Safety
- SCADA in the field
- Field Maps
- Voltage Control
- Tagging Procedures
- Field Training
- Substation Field Trip
- System Considerations

THIRD SIX (6) MONTHS (Step 3 – Next 1000 hours):

ESSENTIAL JOB FUNCTIONS:

As outlined in the SOA training program, this not less than 6-month, minimum 1000-hour step will provide the SOA with the fundamentals of the basic power system and the SOA will gain knowledge of the responsibilities of the Energy Control Center as follows:

- Substation Operation
- Customer Metering
- System Protection

- Overhead Secondary Systems
- Substation Alarms
- Secondary System Field Training
- Substation & Meter Departments
- Henry M. Jackson Hydroelectric Project
- System Operations Training Material
- Underground Secondary Systems
- Distribution Substations
- Overhead Primary System Switching
- Battery Maintenance
- Substation Field Trip
- Field trip to Jackson Powerhouse and Dam
- Substation SCADA RTU
- Overhead Transmission and Distribution Equipment
- System Design and Construction – Field Training
- Underground Distribution Equipment and Loads
- Underground Residential Distribution (URD) Circuits
- Underground Design and Construction Field Training

FOURTH SIX (6) MONTHS (Step 4 – Next 1000 hours):

ESSENTIAL JOB FUNCTIONS:

As outlined in the SOA training program, in this not less than 6-month, minimum 1000-hour step, the SOA will learn to respond appropriately to abnormal and emergency events in the power system and the SOA will gain knowledge of the responsibilities of the Energy Control Center as follows:

- Fault Isolating Devices
- System Review
- Isolating Devices Field Training
- System Protection – Relay Types
- Jackson Project SCADA Control
- System Protection Field Training
- SCADA and RTU Maintenance
- System Protection – Relay Coordination
- System Operations Training Material
- System Configurations
- Isolating Devices – Load Breaks
- Automatic Load Transfer
- Isolating Devices Field Training
- Everett Cogeneration Project
- Switching Procedures
- Voltage Control

- BPA Substation Field Training
- Voltage Regulation Equipment

FIFTH SIX (6) MONTHS (Step 5 – Next 1000 hours):

ESSENTIAL JOB FUNCTIONS:

As outlined in the SOA training program, in this not less than 6-month, minimum 1000-hour step, the SOA will learn to respond appropriately to abnormal and emergency events in the power system and the SOA will gain knowledge of the responsibilities of the Energy Control Center as follows:

- Planned Service Interruptions
- System Operator Responsibilities
- Emergency Operations
- SCADA and Distribution Automation
- System Operations Training Material
- Computer Support of SCADA
- Power Scheduling
- Voltage Transformation
- Foreign Utilities Field Trip
- Transformer Design
- Communications Systems
- Field Training – Major Customers
- Voltage Collapse Procedures
- Transformer Applications
- Line Apparatus Shop
- Major Customers

SELECTION PROCESS:

Successful completion of such selection tests as approved by the Joint Apprentice Training Committee large committee and administered by the District.

MINIMUM QUALIFICATIONS:

Knowledge of:

- AC/DC Theory.
- High Voltage Electrical Systems.

Ability to:

- Report to Energy Control Center (or other District designated location) for regular work shift and/or overtime call outs.
- Work rotating shifts, including weekdays and weekends as part of apprenticeship program.
- Communicate both verbally and in writing and work effectively with all levels of the organization, other utilities and customers.
- Handle work under varying and emergency situations.
- Attend apprenticeship classes and expectations as required by the JATC.
- Effectively manage and prioritize simultaneous assignments and tasks.
- Learn and apply skills learned in the Energy Control Apprentice Program in a competent manner.
- Learn to read, interpret and apply related complex procedures and methods.

Education/Experience:

- High School diploma or equivalent.

Age:

- Applicants for apprenticeship shall be at least 18-years-old.

Preferred Qualifications:

- Two (2) years electric utility experience (i.e., line crew, substation, metering, engineering)

WORKING CONDITIONS:

- Work is performed in an office environment with some driving required.
- System Operators work rotating shifts including nights, weekends and holidays.
- System Operators are subject to 24-hour call-out.
- Incumbents perform repetitive movements from use of a computer and mouse.
- Incumbents are required to remain at console stations for extended periods of time.
- Incumbents are required to use color perception to accurately distinguish various colors of alarms, schematics, etc.
- Frequent contact with the general public.
- Must be able to work extended hours as conditions dictate.