PUBLIC UTILITY DISTRICT NO. 1 OF
GRAYS HARBOR COUNTY, WASHINGTON

POSITION TITLE:	Substation Engineer Level III
REPORTS TO:	Substation/Automation/Planning Supervisor
SUPERVISES:	None
UNION AFFILIATION:	I.B.E.W. System Engineers
PURPOSE OF POSITION:	Performs complex electrical engineering work required for the planning, design, construction, oversight, and support of the substations and SCADA and substation automation system. This position requires knowledge of the principals, practices and procedures, including materials, equipment and techniques, used in professional level work in the field of electrical engineering.

DUTIES AND RESPONSIBILITIES

A) DESIGN AND MAINTENANCE

1) Perform routine and complex electrical engineering design, construction oversight, software implementation and maintenance, and analysis for substation, protective relaying, SCADA, and substation automation system projects.
2) Preparation of specifications for contractor bids and equipment and software purchases on substation, SCADA, and substation automation system construction projects.
3) Coordinate projects and other activities and work with contractors and consulting engineers on design, construction and specifications of substation and SCADA and substation automation system projects as assigned.
4) Preparation of substation equipment specifications for circuit breakers, protective relaying, transformers, switchgear, communications, steel, switches, SCADA, substation automation etc.
5) Perform substation, SCADA, and substation automation equipment bid evaluations and provide recommendations for purchases.
6) Evaluate, prepare, and recommend transmission and distribution system protection coordination schemes.
7) Conduct fault studies for proper application of fuses, reclosers and substation relay settings.
8) Conduct substation, transmission, and distribution system analysis, studies for power flows, voltage, power factor, and system stability to optimize the operation of the substation, transmission and distribution systems.
9) Perform economic evaluations and cost estimating for substation, ~~and~~ SCADA and substation automation system projects and operation.
10) Prepare long range plans and construction work plans.
11) Monitor progress of construction projects.
12) Recommend for approval contractor change orders and payments.
13) Provide recommendations in establishing or revising construction standards.

14) Coordinate and review work submitted by consultants and suppliers as assigned.
15) Review and prepare substation, ~~and~~ SCADA and substation automation equipment installation, maintenance, and testing procedures.
16) Provide instruction and answers to questions concerning design issues.
17) Cooperate with other departments to design, implement and maintain communication protocols (software) for data interfaces to intelligent devices for use with SCADA and substation automation systems.

B) GENERAL ENGINEERING

1) Provide electrical engineering support to other departments.
2) Develop and update computer analysis programs or tracking systems for appropriate projects.
3) Provide technical assistance to substation operations and dispatch to troubleshoot and correct problems in substations, SCADA and substation automation system.
4) Prepare information for permits on substation construction and operation.
5) Serve as a technical expert in an electrical engineering specialty area.

C) OTHER

1) Participate in presentations, special projects, and assignments as directed.
2) Perform other duties as assigned.

QUALIFICATIONS

KNOWLEDGE, SKILLS AND ABILITIES

Thorough knowledge of applicable laws, codes, standards, and accepted safety practices relating to electrical utility work.

Demonstrated ability to read, interpret, and design protective relay and control schemes, one-line and three-line diagrams, and wiring diagrams.

Demonstrated knowledge of power system studies, substation, SCADA and substation automation system design.

Demonstrated ability to perform complex power system fault analysis and protective device coordination studies.

Thorough knowledge and understanding of electrical engineering principles, practices, and procedures relating to substation, SCADA and substation automation systems.

Knowledge of engineering fundamentals, drawings, designing and mathematics.

Knowledge in the operation of personal computers and office equipment.

Ability to observe all health and safety regulations and use safety equipment when necessary.

Demonstrated ability to communicate effectively orally and in writing with all levels of the organization, contractors, and customers.

Demonstrated ability to complete assignments in a timely and accurate manner.

Demonstrated ability to solve complex problems and work independently, with limited supervision.

Performance at this level requires developmental experience gained at the Substation Engineer II level or equivalent work experience.

EDUCATION AND EXPERIENCE

Bachelor of Science Degree in Electrical Engineering from an accredited college or university; or other combinations of education and/or experience which provides the necessary skills to perform electrical engineering work on electrical power systems.

Minimum of 8 years of relevant experience

OTHER REQUIREMENTS

Must possess a valid Washington State driver's license (out of state residents have 30 days from date of hire to obtain a valid Washington State driver's license) and qualify for the District's auto liability insurance.

WORKING CONDITIONS

Work is performed in an office and in the field. Individual may be exposed to conditions and hazards from brush, obstacles, debris, holes, fences, and open trenches associated with construction sites and/or rural areas of service; and to conditions and hazards associated with decrepit buildings. Individual is exposed to electrical high voltage lines. Individual may be exposed to aggressive animals. This position may necessitate working beyond normal business hours. Overnight travel may be required.

PHYSICAL ACTIVITIES

This position requires periods of frequent sitting, standing, walking, lifting (50 pounds or less), crouching, bending, and travel to perform construction site inspection and reconnaissance activities in all types of weather conditions. These responsibilities could not be fulfilled by individuals with severe restrictions in mobility, sight, hearing, or speech.