

ELECTRONIC SYSTEMS SUPERINTENDENT

DEFINITION

Under general direction, assigns and supervises the activities of the Electric Systems of the Construction and Maintenance Division of the Electric Utility Department; performs a variety of professional office and field work relating to construction and maintenance of electric utility systems, substations, communication network, metering and control systems; provides administrative direction and technical assistance and training to division staff, and does related work as required.

DISTINGUISHING CHARACTERISTICS

This is a supervisory level position directly responsible for the activities of the Substation Maintenance Section and the Metering Section. The Electronic Systems Superintendent is distinguished from the Electrical Technician and the Metering Technician and Electricians in that the incumbent must possess a thorough technical and working knowledge of power substations, electric systems, protection systems, reliability compliance, communications, metering and control systems, their components, devices and functions including computer and computer-based SCADA, digital fault recorder, modem, telemetry, intelligent electronic devices (IED), fiber optics, remote terminal units, programmable logic controllers, multiplexers, digital substation technology, microprocessor-based test and process control equipment, system hardware, software and network components, network protocols and integration, single-phase and multi-phase configuration.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Assistant Electric Utility Director or designee. Supervises lower level personnel as assigned.

EXAMPLES OF DUTIES

Duties may include, but are not limited to, the following:

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Directs, trains, evaluates, and coordinates the construction, maintenance, troubleshooting, repair and operation of power substations and meters.

Performs pre- and post-inspections of electrical construction and maintenance tasks.

Specifies special materials and equipment needed for all phases of substation and metering work within the city.

Participates in the design of electrical systems for power substations and municipal facilities; reviews and comments on plans and specifications submitted by contractors and consultant engineer.

Recommends and implements safety procedures, training and guidelines; Acquires necessary protective gear, tools and devices to enhance personnel and equipment safety; implements the hazardous materials handling, recordkeeping and coordination internally and with governing agencies;

Directs, trains, and evaluates technical staff in the maintenance, calibration, troubleshooting, and repair of power substation equipment, municipal electric facilities, SCADA systems, process control and instrumentation devices, metering, and other computer and electronic-based systems.

Interacts with customers when solving power quality and metering problems.

Participates in budget preparation; implements the Division's policies, procedures, and practices.

Performs other duties related to the operation of the department and the City including additional duties that enable the department and City to meet the diverse needs of its community.

MINIMUM QUALIFICATIONS:

Knowledge of:

Fundamentals of electrical theory, including solid state circuitry.

Methods, materials, and tools used in construction, maintenance and repair of power substations, transformers, circuit breakers, surge arresters, battery systems, capacitor banks & associated controls, generator & appurtenances, protective relays and devices, SCADA systems, motor controllers, process control and instrumentation devices, metering, security and alarm systems and solid state and micro-processor systems.

Instrumentation, specialized testing equipment and precision tools; detailed analysis of power outages and protective device indications

Power equipment diagnostic testing and interpretation of test results; Effective grounding system, ground potential rise, synchronizing systems, load shedding & reclosing control systems, phase shifters, different HV/MV bus configurations, parallel system operations, power quality analysis, instrument transformers, three-phase & single-phase power systems;

Electrical and environmental codes, laws, and safety rules associated with power substation and other high and medium voltage work.

Reliability standards applicable to distribution substation equipment;

Principles of supervision, training, and performance evaluation; record keeping and reporting procedures.

Safe work practices and procedures.

Ability to:

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Plan, organize and supervise the day-to-day activities of the Substation Maintenance Section and the Metering Section Division; supervise, train and evaluate subordinates.

Work independently.

Prepare clear, concise and complete technical documents, reports and correspondence; communicate clearly and concisely; maintain work and operational records and prepare technical reports.

Use tools, equipment, and software employed in the course of work in the Substations and the office; Work safely in a 60kV environment;

Participate with various City departments and outside agencies in the planning and design of electric facilities; establish and maintain effective working relationships with those contacted in the course of work.

EDUCATION AND EXPERIENCE

Any combination equivalent to education and experience that would likely provide the required knowledge and abilities would be qualifying. A typical combination is:

Education:

Equivalent to completion of high school.

Experience:

Attainment of journey level status through apprentice training as an Apprentice Electrician (usually 48 month's experience), and, three (3) years of experience at journey level Electrical Technician or Electrician status which includes the construction,

maintenance, troubleshooting and repair of power substations, two (2) years of which were in a lead capacity.

LICENSES AND CERTIFICATES:

Possession of a valid Driver's License (Class C) issued from the California Department of Motor Vehicles.