

## ELECTRIC SUBSTATION TECHNICIAN

### JOB DESCRIPTION

**Classification Responsibilities:** An Electric Substation Technician performs skilled and semiskilled electrical and mechanical work in the repair, maintenance, monitoring, modification, and testing of gas driven internal combustion engines that power electric generators. Duties include collection and monitoring emissions control data and troubleshooting engines, generators, and switchgear. Electric Substation Technicians may assist electric metering or electric distribution staff or other areas within the Electric unit with construction, maintenance, and/or repair work on an as-needed basis. This class is also responsible for performing related duties as required.

**Distinguishing Features:** Electric Substation Technicians generally work independently on a day-to-day basis. Work is physically demanding and employees must be capable of frequent lifting and carrying of heavy (50 - 75 pounds) equipment and materials such as: engine parts, mufflers, drums of oil, welder, and batteries with the aid of a cart or other assistance, as well as considerable bending, stooping, and climbing associated with the repair and maintenance of electric generators. Employees in this class are expected to exercise initiative and independent judgment when performing tasks. Electric Substation Technicians are required to use appropriate safety equipment and follow safety procedures in performing assignments. Employees in this class are subject to emergency call-out and are expected to work overtime and stand-by as needed. Employees in this class report directly to the Electric Substation Supervisor, who reviews work through meetings, conferences, reports, and overall results achieved. This class is FLSA nonexempt.

### QUALIFICATIONS

**Employee Values:** All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

**Minimum Qualifications Required.** Any combination of training, education, and experience equivalent to graduation from high school or GED. A minimum of six months of full-time work experience involving outdoor exposure and physical exertion.

**Special Requirements.** Must possess a valid Arizona Driver's License by hire date. Must reside within the City of Mesa Electric Utility call-out area (example: within an 18-mile radius of Main Street and Center Street intersection) within one year after hire date.

**Substance Abuse Testing.** Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment or pre-placement alcohol, drug and/or controlled substance testing as outlined in City policy and procedures.

**Preferred/Desirable Qualifications.** Experience with a public or private utility system is highly desirable. Completion of a trade school in combustion engines or engine or general mechanic experience is preferred.

## ESSENTIAL FUNCTIONS

**Communication:** Communicates with coworkers, vendors, other City employees, and supervisors in order to follow verbal and/or written directions and instruction, and to establish and maintain effective working relationships.

**Manual/Physical:** Moves objects, tools, and equipment (up to 75 pounds) with aid to assist for distances of up to 50 feet to load and/or unload, and equipment and materials at job site. Operates a 1-ton truck, 2-ton flatbed, and 2-ton boom truck in order to perform maintenance on substation transformers and generation equipment. Operates a light truck requiring a standard Arizona Driver's License to load and unload equipment. Uses hand tools and precision measuring devices. Cleans work area, all hand and/or power tools, and/or equipment around generation site for next use. Ensures maintenance of tools. Performs maintenance and repairs on internal combustion engines. Operates a variety of equipment such as: welders, torches, engine hoists, jacks, and related equipment. Uses various tools such a wrenches, micrometers, wheeler pullers, test gauges, and circuit testers. Maintains inventory of supplies and equipment. Paints equipment as necessary. Disposes of chemicals in a safe and environmentally responsible manner. Isolates and tags equipment to be worked on in accordance with lockout/tag out procedures. Performs routine inspections of all on-site equipment and reports conditions of the equipment in a timely manner. Meets scheduling and attendance requirements. Takes readings of substation instruments. Operates transformer tap changers to transfer power from one area to another of the distribution system. Assists the Substation Electrician with installation, repair, and maintenance of substation equipment.

**Mental:** Understands verbal and/or written instructions. Comprehends and makes inferences from written material. Reads operating reports and diagnoses possible causes of problems. Maintains accurate repair and maintenance records of work performed. Learns job-related material through on-the-job training and in classroom settings.

### **Knowledge and Abilities:**

Knowledge of:

basic electricity concepts and blueprints;  
combustion engines, hydraulics, and electrical systems;  
use and care of shop tools, test instruments, and equipment;  
safety equipment and procedures used when working on and around generators; and  
the tools, equipment, materials, and supplies needed for installing, maintaining, and repairing generators.

Ability to:

perform a variety of tasks as part of a team;  
follow established procedures for maintaining and repairing generators;  
follow verbal and written directions and instructions;  
follow safety rules and be aware of the safety of others in the area;  
use all equipment associated with the repair, maintenance, monitoring, modification, and testing of gas driven combustion engines that power electric generators;

perform the physical requirements of the job;  
perform basic arithmetic calculations involving fractions, decimals, and percentages;  
work independently in the proper performance of operating duties during emergencies;  
read charts, diagrams, drawings, and blueprints; and  
establish and maintain effective working relationships with coworkers and management.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

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EEO-Tech

JOB FCTN-TRA

Increments 183-200

PAY GRADE: 51

IND-7539

SWORN-No