

THE CITY OF LOS ANGELES



CIVIL SERVICE COMMISSION

CLASS SPECIFICATION

05/10/12**ELECTRIC DISTRIBUTION MECHANIC, 3879**

Summary of Duties: Entry-level Electric Distribution Mechanics receive extensive on-the-job, classroom, and home-study instruction and training, and works under close supervision assisting journey-level Electric Distribution Mechanics in the construction, maintenance and repair of overhead and underground electric transmission, subtransmission, distribution, communication, and utilitarian street lines, cables and equipment; or as a journey-level Electric Distribution Mechanic, performs skilled mechanical and electrical work in connection with the construction, maintenance, and repair of overhead and underground electric transmission, subtransmission, distribution, communication, and utilitarian street light lines, cables, and equipment; and performs related duties.

Distinguishing Features: Employees initially employed as Electric Distribution Mechanics are appointed to positions which are designated as temporary training positions under Civil Service Rule 5.30. As trainees, they receive extensive on-the-job, classroom, and home-study instruction and training to acquire the knowledge, skills, and abilities required to perform all phases of journey-level duties. Trainees are supervised by an Electric Distribution Mechanic Supervisor with the close guidance of a journey-level Electric Distribution Mechanic. Employment as a trainee is limited to four years during which time the trainee is expected to successfully complete an extensive course curriculum and qualify for promotion to a journey-level Electric Distribution Mechanic position.

An employee of this class is normally assigned tasks requiring the incumbent to work above ground on pads, poles, and towers or in stations below ground in substructures. Electric Distribution Mechanics are responsible for performing skilled mechanical and electrical work on both underground and overhead cables, lines, and equipment. An Electric Distribution Mechanic may work in a crew under the direct supervision of an Electric Distribution Mechanic Supervisor, or may work independently and report directly to a Transmission and Distribution District Supervisor. At the journey-level, Electric Distribution Mechanics perform highly skilled tasks on energized and/or de-energized low-voltage and high-voltage lines, cables, and related equipment. Some positions may act as lead over a group of skilled craft workers. Some incumbents in the class of Electric Distribution Mechanic may perform the more difficult and hazardous underground and overhead work.

Example of Duties: An Electric Distribution Mechanic:

- Working from diagrams, blueprints, and oral instructions, an Electric Distribution Mechanic constructs, maintains, and repairs high-voltage energized and de-energized overhead and underground electric transmission, subtransmission, and distribution lines, cables, and equipment;
- Sets poles;
- Removes, inspects, installs, and replaces transformers, cables, wires, switches, guy

lines, potheads, trifurcators, insulators, and other types of equipment in substructures and on pads and poles;

- Repairs, reroutes, and removes underground cable and overhead line service installations;
- Performs rigging necessary for installation or removal of cables, lines, and equipment;
- Installs and removes conduit on poles and buildings;
- Pulls wire and cable and makes necessary connections;
- Installs and removes temporary jumpers;
- Works on energized overhead lines and equipment up to 46-kilovolt (kV), energized underground cable and equipment up to 5-kV and de-energized overhead and underground lines and cable of all voltage levels;
- Connects 34.5-kV and 138-kV oil-filled underground cables under pressure;
- Splices stop joints and normal joints;
- Connects and disconnects equipment and splices high-voltage de-energized and energized cables;
- Inspects, tests, and washes insulators on energized lines;
- Constructs, maintains, tests, and repairs energized lines carrying up to 7.5-kV by hand using rubber gloves;
- Uses live line tools to perform work on energized circuits above 7.5-kV;
- Uses proper procedures to ensure safe working conditions using live line tools and equipment;
- Performs switching activities on energized overhead and underground lines, cable, circuits, and equipment up to 46-kV;
- Assists a senior worker in switching energized underground circuits and equipment up to 7.5-kV;
- Performs other operations to ensure safe working conditions using live line tools and equipment;
- Inspects energized and de-energized high-voltage cables and lines;
- Performs various pressure tests on cable spans to detect the presence of air or leaks;
- Treats joints, potheads, and trifurcators with vacuum pump;
- Installs, inspects, repairs, and replaces blowers, vents, meters, and sump pumps in substructures;
- Lays out arrangement of equipment to be installed;
- Installs, calibrates, and tests oil and gas reservoir level relay alarm systems;
- Patrols and inspects power and communication lines, and street lighting circuits for conditions that might lead to line outages;
- Locates, isolates, and corrects trouble and restores lines, cables, and circuits to service;
- Responds to trouble calls and makes repairs when possible or notifies dispatcher of estimated amount of personnel, materials, and equipment needed to make repairs;
- Performs emergency tree trimming;
- Clears wires for house moving;
- Inspects roads, trails, culverts, and other rights-of-way for encroachments and violations and for damage due to storms and fires;
- Prepares routine and periodic reports, requisitions, job instructions, and work records as required, such as daily vehicle inspection reports, material requisitions, clearance

- bid sheets, switching instructions, labor sheets, and worksheets as required;
- Installs and operates emergency equipment such as fault locators, fault finders, transformer trailers, special test apparatus, etc. as necessary to locate and clear trouble and to restore service;
- Drives and operates automotive equipment as required; and
- May act as a lead worker over other Electric Distribution Mechanics, journey-level workers, and trainees and helpers.

May occasionally be assigned to other duties for training purposes or to meet technological changes or emergencies.

Qualifications: Incumbents must have the following knowledge and abilities:

Knowledge of:

- Principles of electricity as related to electric transmission, subtransmission, and distribution systems;
- Hazards involved and necessary safety precautions and devices to be observed when working on or near energized power lines, cables, or equipment in substructures, stations, and on pads, poles and towers;
- Methods, materials, tools, equipment, and hardware used in overhead line work and underground cable work;
- Effective safety principles and practices, including administration of first aid;
- Work techniques and proper use of rubber gloves, live line tools, hot sticks, and associated procedures;
- Installation and maintenance of transformers and related equipment;
- Types of overhead, transmission, and distribution circuits;
- Rigging and types of knots commonly used in line and cable work;
- Types, sources, and remedies of cable and line trouble including on primary and transmission lines;
- Procedures for taking out line clearances; and
- Provisions of State laws and Department of Water and Power standards and regulations regarding underground cable construction and overhead line construction and clearances.

The ability to:

- Use tools, materials, and equipment employed in the installation, maintenance, and repair of overhead and underground facilities;
- Wipe cable joints, splice a variety of cable, and install and connect related electrical equipment;
- Climb and work safely on poles in the installation of a variety of lines and equipment;
- Read and interpret electrical plans and wiring diagrams;
- Understand and follow written and oral instructions;
- Use a computer to make routine reports and keep routine records; and
- Splice specialized types of oil and gas-filled cable.

Physical ability to:

- Climb up poles to electrical and communication lines and down ladders into underground vaults in order to perform electrical and mechanical repair and maintenance; and
- Use tools, materials and equipment employed in installation, maintenance, and repair weighing an average of 50 pounds and up to 100 pounds.

Minimum Requirements:

1. A pole climbing proficiency certificate issued by an accredited lineman's college or by the Department of Water and Power, Power System Safety and Training; **and**
2. Six months of full-time paid experience assisting or working on an overhead and/or underground Electrical Distribution or Transmission Construction, Maintenance, or Electric Trouble crew and assisting with and/or performing high-voltage line work in and on high-voltage power poles, transmission towers, and underground electric substructures. Six months experience must be specific to assisting with and/or performing work at voltages of 4.16-kV and above, **or**
3. Eighteen months of full-time paid experience performing line clearance tree-trimming; **or**
4. Eighteen months of full-time paid training and experience chipping around energized 4.8-kV and 34.5-kV electrical conduit systems.

License & Certification:

A valid California driver's license may be required. Some positions may require a Class A or B driver's license.

Because this class has been designated as Safety Sensitive in accordance with City Policy, a drug and alcohol screening test may be required prior to appointment.

Physical Requirements:

Strength to perform average lifting up to 50 pounds and occasionally over 100 pounds; good speaking and hearing ability; and good eyesight.

Persons with disabilities may be able to perform the essential duties of this class with reasonable accommodation. Reasonable accommodation will be evaluated on an individual basis and will depend, in part, on the specific requirements for the job, the limitations related to the disability, and the ability of the hiring department to reasonably accommodate the limitations.

As provided in Civil Service Commission Rule 2.5 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory and not restrictive. It is not intended to declare what all of the duties and responsibilities of any position shall be.