

**CLASS SPECIFICATION**

3/22/2012

WIND PLANT TECHNICIAN, 3826**Summary of Duties:**

Under direct supervision, performs maintenance, repair, and troubleshooting of mechanical/electrical/hydraulic equipment and control systems in wind generating plants; regular preventative maintenance and repair activities on wind turbine generators including lubrication, alignments, and torque checks; attends regular safety meetings; adheres to departmental safety and environmental policies; ensures that plant activities are performed in compliance with governmental rules and regulations, Los Angeles Department of Water and Power (LADWP) policies and procedures, and accepted industry standards; and performs other related duties.

Distinguishing Features:

Wind Plant Technician Trainees will work under the direction of and assist journey-level Wind Plant Technicians in various aspects of maintenance of wind generating plants. Trainees will receive extensive on the job and classroom training to acquire the knowledge, skills, and abilities required to perform all aspects of journey-level duties. Trainees will be required to successfully complete an intensive course curriculum and qualify for promotion to the journey-level. Positions at this level are designated as temporary training positions in accordance with Civil Service Rule 5.30. Employment is limited to four years during which time the trainee is expected to qualify for promotion.

A Wind Plant Technician may act as lead-worker and trainer to other Wind Plant Technicians and Trainees.

Incumbents must be able to work outdoors in inclement weather, climb ladders without assistance, and work at heights greater than 100 feet from the ground surface. Extensive travel may be periodically required as part of the employee's schedule. Since the wind turbines are on a 250+ foot tower, employees must be able to climb this distance up a ladder several times a day. Once up the tower, incumbents will need the physical strength to pull up tools and parts weighing as much as 35 pounds using a pull rope, and to perform or assist in rescue operations for an employee unable to exit the generator nacelle and descend on his/her own power. Employees must also be able to work in adverse outdoor weather conditions with summer time temperatures above 100° F and winter temperatures of -10° F. Some mechanical components are irregularly shaped and may weigh up to 75 pounds.

Examples of Duties:

- Inspects, tests, maintains, repairs, replaces, troubleshoots, and installs low voltage mechanical/electrical/hydraulic equipment and control systems in wind turbine generating plants including: tower, foundation, nacelle, hub, and blade bolts; torque

and tension tower bolts; generators; gear boxes; shaft couplings; yaw and pitch motors and gears; power and control cables and terminations; brake assemblies; climb assist and fall protection equipment; various types of bearings; AC/DC frequency converters; turbine blades; ladders; platforms; valves; oil-filled equipment; pumps; various types of filters; transformers; switchgear; power cables; protective relays; programmable logic controllers; related metering and monitoring systems; un-interruptible power supplies; batteries; wind speed sensors; meters; contactors; circuit breakers; fuses; capacitors; vent fans; lighting systems; heating/air conditioning systems; carbon brushes; and alarm systems;

- Performs rigging for lifting heavy materials;
- Performs switching operations in turbine switchgear;
- Follows established lock out tag out procedures;
- Maintains accurate equipment and operations logs, service reports, and prepares time reports;
- Uses a computerized maintenance management system to record inspections, repairs, materials, labor, and special conditions for all equipment;
- Responsible for handling, storing, and disposing of hazardous substances, monitoring accumulation sites, labeling containers, observing hazardous waste storage areas for unusual occurrences, and maintaining hazardous waste storage areas in clean and orderly fashion in accordance with Cal/OSHA and LADWP safety standards;
- Measures critical parts using micrometers;
- Checks wiring diagrams for correct installation, operation, and indication of control circuits;
- Levels and aligns shafts and mechanical equipment when fine alignments and close tolerances are required as it relates to wind turbine generators;
- Analyzes problems; and makes necessary repairs and adjustments on metering, monitoring, and control equipment required to interface with power line carriers and control computers related to wind turbine generators; and
- May occasionally be assigned to other duties for training purposes or emergencies, and perform other related duties.

Qualifications:

Knowledge of:

- Principles and processes of wind turbine generators;
- Hazards involved and safety precautions required in working near and on wind turbine generators;
- Working with low voltage equipment, in confined spaces and at heights; and
- Fundamentals of electricity as related to its generation and transmission.

Ability to:

- Read and understand technical drawings, electrical diagrams, control circuit diagrams, logic diagrams, schematics, schedules, and technical manuals;
- Use electrical diagnostic and troubleshooting tools;
- Understand, interpret, effectively communicate, and follow a variety of instructions in written, oral, diagram, schedule, or computer form;
- Work in confined spaces in all types of weather;
- Effectively use computer software programs such as Excel, Word, Outlook, Maximo, maintenance management systems, SCADA, HMI systems, and Wind Park diagnostic and operation systems;
- Maintain, understand, interpret, and revise equipment prints, files, drawings, schematics, and manuals;
- Use hand and power tools safely and effectively;
- Deal tactfully and effectively with supervisors, co-workers, and the public;
- Start and stop the turbine and change appropriate control parameters;
- Perform scheduled maintenance, general service, troubleshoot, and repair integrated systems involved with wind turbines;
- Work around low and medium voltage;
- Solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists;
- Analyze an emergency situation and to adopt a quick, effective, and reasonable course of action;
- Prepare and maintain service and repair records;
- Prepare reports on work performed and materials used;
- Safely and properly rig for lifting heavy materials, generators, gear boxes, shaft couplings, yaw and pitch motors and gears;
- Work efficiently both independently and in a team environment;
- Perform manual work and use hand tools associated with routine maintenance activities of a wind turbine generator;
- Follow written and oral instructions and established procedures;
- Read precision recording instruments and keep records;
- Detect irregularities in the operation and functioning of machinery and equipment by inspection or review of operating records and reports; and
- Communicate effectively with others.

Minimum Requirements:

1. One year of full-time paid experience performing preventative maintenance and repair activities on wind turbine generators; **or**
2. One year of full-time paid hydraulic, electrical, or mechanical experience working in wind plant maintenance and operations, power plant maintenance and operations, or high voltage transmission, receiving, and distribution operations and maintenance.

License: A valid California driver's license and a good driving record are required.

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

Physical Requirements:

Strength to perform average lifting of 35 pounds and occasionally up to 75 pounds; ability to climb wind turbine towers several times a day; body agility and equilibrium involved in activities as climbing and balancing under precarious conditions; back, leg, and arm coordination involved in activities such as stooping, kneeling, crouching, and crawling; arm, hand, and finger dexterity with both hands involved in activities such as reaching, manipulating, feeling, and climbing ladders; ability to stand and walk for prolonged periods of time; good speaking ability; good hearing ability; visual acuity including depth perception, field of vision, and the ability to distinguish between colors.

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 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 limitation.

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.