

## **POWER GENERATION SYSTEM SUPERVISOR**

### **DEFINITION**

Under general supervision, plans, schedules, and supervises the operation, maintenance and repair activities of the power generation facility at the City's Wastewater Treatment Plant.

### **SUPERVISION RECEIVED/EXERCISED**

This classification receives supervision from the Chief of Wastewater Facilities Maintenance. This class exercises supervision of Power Generation Operator/Mechanics and other assigned staff.

### **DISTINGUISHING CHARACTERISTICS**

Power Generation System Supervisor is a first-line supervisory class in the Wastewater Management Division. Reporting to the Chief of Wastewater Facilities Maintenance, the incumbent plans, schedules and supervises the operation, maintenance and repair activities of the power generation facility. This class is distinguished from Chief of Wastewater Facilities Maintenance in that the incumbent of the latter directs the overall activities of the maintenance sections. This class differs from Wastewater Treatment Maintenance Supervisor in that incumbents of the latter are responsible respectively for the maintenance activities of wastewater treatment at the plant. It differs from Power Generation Operator/Mechanic in that incumbents of the latter perform journey-level assignments in operating, maintaining and repairing combustion and steam turbines, dual-fuel/clean-burn gas engines generating electric power and related auxiliary equipment.

### **EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES**

*(may include, but not limited to, the following:)*

Supervises the operation of the power generation facility including the work activities of employees engaged in operating, maintaining and repairing large combustion and steam turbine driven generators, dual-fuel/clean-burn gas engine-driven generators, boilers, waste gas flares, methane gas conditioning system, heat recovery units, and gas compressors and auxiliary equipment.

Plans, schedules, assigns, directs and evaluates the work of subordinate employees.

Maintains power and natural gas contracts with other utilities, marketers, brokers, the California Independent System operator, and the California Power Exchange.

Monitors and assesses energy market developments and price trends and assists in managing the Wastewater Management Facility's power and natural gas resource portfolio.

Forecasts the Wastewater Management Facility's total system and retail electric load; develops resource plans to supply this load and meet other wholesale commitments; prepares cost projections for power and natural gas purchases.

Coordinates all shut downs and repairs to ensure that other sections continue to operate at optimum efficiency; directs and supervises major repairs and overhaul of engines and equipment.

Evaluates, keeps records and makes reports about the overall operating efficiency of the power generation facility, and prepares and directs the preparation of necessary reports, logs, and other data.

Monitors compliance with air pollution regulations, taking corrective action as required, and keeping superiors informed as to compliance or lack thereof; utilizes plant computer system for monitoring and controlling plant operation activities and producing records and reports.

Conducts regular inspections of all phases of power facility operations and keeps superiors informed.

Instructs subordinate personnel in the safe operation and maintenance of engine-driven generators, boilers, waste gas flares, methane gas conditioning system, heat recovery units, air and gas compressors, and auxiliary equipment.

Conducts periodic safety training, inspections and drills in the facility particularly with regard to employee work procedures, potential emergency situations, and hazards accompanying explosive gases, flammable or toxic liquids, and high pressure steam.

Maintains inventory control of expendable supplies and replacement equipment parts, ordering supply replacements as required.

Assists with budget preparation and monitors allocations to ensure that operations are kept within budget.

As required, performs the duties of power generation operator/mechanics.

Performs related duties as required.

### **JOB RELATED ESSENTIAL QUALIFICATIONS:**

#### **Knowledge of:**

The operation, maintenance, and servicing of large dual-fuel/clean-burn engines, generators, boilers, waste gas flares, methane gas conditioning system, heat recovery units, air and gas compressors and related auxiliary equipment.

The safety rules, codes, procedures and precautions relating to large stationary engines and auxiliary equipment, including explosive gases, flammable or toxic liquids, moving machinery parts, and high pressure steam components.

The layout, equipment, instrumentation and functions of an electrical generation, transmission and distribution system.

The principles, procedures and practices of manual and automatic switching operations of generating equipment.

The methods, tools and equipment used in repairing and overhauling combustion and steam turbines, dual-fuel/clean-burn engines, generators, boilers, waste gas flares, methane gas conditioning system, heat recovery units, and air and gas compressor units.

Modern supervisory principles and practices.

Air pollution regulations.

**Skill to:**

Operate and maintain combustion and steam turbines, dual-fuel/clean-burn engines, generators, boilers, waste gas flares, methane gas conditioning system, heat recovery units, and auxiliary equipment and making the necessary timely adjustments to meet various operating needs.

Operate office equipment, a computer, and a variety of word processing, bookkeeping, and software applications.

**Ability to:**

Supervise, train and instruct subordinates engaged in the operation, maintenance and repair of large combustion and steam turbines, dual-fuel engines, generators, boilers, waste gas flares, methane gas and auxiliary equipment.

Evaluate potential resource arrangements with other utilities/agencies, and participate in the development of strategic business plans related to energy supplies.

Interface and maintain compliance with regulatory agencies such as the Federal Energy Regulatory Commission, California Public Utilities Commission and California Energy Commission.

Learn new procedures and readily adapt to changing technology.

Recognize abnormal operating functioning and take appropriate action.

Keep necessary written records and communicate effectively orally and in required reports.

**MINIMUM QUALIFICATIONS**

Four years of increasingly responsible experience in the operation, maintenance and repair of mechanical and electrical equipment similar to that used in a combustion and high pressure steam turbine-driven electrical power generating plant. Additional supervisory experience with an electric utility in power system dispatch, operations, resource planning, government relations and/or utility contracts administration is desirable.

**NECESSARY SPECIAL REQUIREMENTS**

Possession of a valid California Driver's License may be required at time of appointment.

APPROVED: \_\_\_\_\_  
Director of Personnel Services

DATE: \_\_\_\_\_

ATS:GAK:LD:sas:09/24/99  
Revised:TJM:SCM:wgm:3/12/15