

New York State Department of Civil Service

DIVISION OF CLASSIFICATION & COMPENSATION

Classification Standard

Occ. Code 7520100

Plant Utilities Engineer 1, Grade 14 7520100

Plant Utilities Engineer 2, Grade 16 7520200

Plant Utilities Engineer 3, Grade 19 7520300

Plant Utilities Engineer 4, Grade 21 7520400

Brief Description of Class Series

Plant Utilities Engineers are responsible for the safe and efficient operation of physical plants in State facilities at various State agencies. Positions operate, maintain, troubleshoot, repair, test, and calibrate mechanical and electrical equipment providing heat, hot water, ventilation, air-conditioning and electrical distribution; advise on renovations and replacement of equipment; and initiate energy conservation activities.

Distinguishing Characteristics

Plant Utilities Engineer 1: on an assigned shift, reports to a higher level Plant Utilities Engineer or other trades supervisor, and is responsible for the operation, repair, and maintenance of a variety of heating, ventilation, air conditioning, and mechanical equipment inside and outside of a physical plant; may supervise lower-level staff including Plant Utilities Assistants, Facility Operations Assistants, and contractors; may assume responsibility for physical plant operations on off hours; and may supervise other trades positions and contractors on a project or emergency basis.

Plant Utilities Engineer 2: supervises Plant Utilities Engineers 1 and/or other lower-level staff engaged in plant operations, maintenance, and repair activities. In large operations, positions report to a higher-level Plant Utilities Engineer, and may function as a shift supervisor over one or more plant operations functions; may assume responsibility for physical plant operations on off hours; and may supervise other trades positions and contractors on a project or emergency basis.

Plant Utilities Engineer 3: plans, directs, and coordinates the plant operations department in a moderately sized facility, or a major portion of a large and complicated plant utilities operation; supervises Plant Utilities Engineers 2 and other lower-level staff engaged in plant operations, maintenance, and repair activities; may supervise mechanical, electrical, and building operations, and other ancillary activities such as cleaning, plant security, and transportation in small facilities; may serve as an assistant to a Plant Utilities Engineer 4, or Plant Superintendent C.

Plant Utilities Engineer 4: oversees plant utilities departments in the largest facilities, and/or those with the most complicated equipment; may oversee the operation and maintenance of high voltage electrical distribution systems and equipment; and may serve as an assistant to a Plant Superintendent A or B.

Related Classes

Plant Utilities Assistants are semiskilled positions that perform lower-level tasks in the operation, maintenance, and repair of plant utilities equipment under direction of Plant Utilities Engineers.

Plant Superintendents manage the daily operations of plant utilities and maintenance departments at State facilities. Positions are administrative and managerial in nature and facilitate the centralization of all physical plant and facility maintenance activities to improve operational efficiency

Maintenance Supervisors oversee the activities of skilled trades, semiskilled, and unskilled positions engaged in maintenance, repair, rehabilitation, and construction activities at State facilities.

Illustrative Tasks

Plant Utilities Engineer 1

Operates, maintains, and repairs steam and hot water boilers, water supply and return systems, electronic and pneumatic combustion and heating, ventilation, and air conditioning (HVAC) control systems, forced or induced draft fan systems, chiller systems, and other refrigeration equipment.

Operates computers which control boiler operations, auxiliary equipment, and HVAC systems.

Conducts boiler, HVAC, and water systems testing, analyzes results, and adds chemicals to maintain proper system functions.

Balances air distribution systems, and maintains proper air temperature, humidity, freshness, and flow quality.

Cleans, inspects, and maintains boilers, by performing chemical cleaning of equipment, repairing brickwork, replacing tubes, and maintaining boiler combustion and emissions.

Performs chiller maintenance such as the cleaning of condenser tubes and evaporators, and the maintenance and repair of pumps, air compressors, steam systems, cooling towers, motors, and variable frequency drives.

Performs maintenance and repair on various water and sewage pumping, filtration, and treatment equipment.

Cleans, maintains, and repairs HVAC systems and equipment, calibrates controls, performs air testing and chemical treatment, and replaces air filters.

Responds to mechanical, electrical, or plumbing calls; troubleshoots and coordinate necessary repairs.

Maintains computerized energy management systems; troubleshoots problems; and identifies and replaces faulty equipment and devices.

Identifies, recommends, and develops energy conservation projects and initiatives.

May handle various types of hazardous materials; and respond to incidents having potential environmental impact and/or safety concerns, such as chemical spills, oil spills and blowouts; implements evacuation plans in emergency situations.

May maintain right-to-know libraries, respond to inquiries, assess problems, and provide advice regarding incidents.

May operate high or low voltage electrical distribution systems, steam, diesel and gas turbine generators, transformers and switch gears, load centers, motor control centers, panel boards, emergency power and lighting distribution systems, motor generator sets, and uninterrupted power supply systems.

May supervise subordinate staff, including Plant Utilities Assistants, Facility Operations Assistants, contractors, and other trades staff.

Plant Utilities Engineer 2

Supervises Plant Utilities Engineers 1 and other lower-level staff engaged in plant operations, maintenance, and repair functions; may supervise contractors.

Schedules, plans, and supervises the activities of skilled and semi-skilled employees and contractors involved with plant operations, maintenance, and repair activities.

Provides training, instruction, and assistance to staff in the performance of tasks, and implements changes in procedures to improve efficiency.

Inspects plant equipment and operations to ensure proper maintenance, scheduling, and safe and efficient operations.

Prepares estimates of materials, parts needs, and costs; orders or directs ordering of materials, equipment, and parts; and maintains tool and equipment inventories per applicable policies and standards.

Supervises and coordinates the handling of various types of hazardous materials and the response to any incidents having potential environmental impact or safety concerns.

Identifies budget requirements, including staffing, repair, maintenance, material, and equipment needs; makes recommendations to assist with preparation of annual operating budgets.

Enforces energy conservation protocols and supervises the installation and modification of equipment to obtain peak energy efficiency.

Plant Utilities Engineer 3

Supervises Plant Utilities Engineers 2, other lower-level staff, and contractors engaged in plant operations, maintenance, and repair functions.

Plans, directs, and coordinates activities involving systems maintenance, health and safety issues, and energy conservation.

Reviews contractor specifications and drawings, makes recommendations for modifications, and directs and inspects work performed to ensure successful completion of projects.

Provides training, instruction, and assistance to staff to ensure the proper use of materials and equipment, quality of workmanship, and compliance with safety regulations and codes.

Reviews material estimates and parts needs and costs, and approves ordering of materials, equipment, and parts.

Develops, maintains, and updates technical manuals, blueprints, and specifications.

Develops and implements procedures to organize and assess operations, monitor quality control, and maintain records.

Develops guidelines and implements procedures for handling hazardous materials and directs and coordinates response to incidents having potential environmental impact and/or safety concerns.

Maintains written procedures and records of plant operations activities, such as energy consumption, equipment malfunction, meter and gauge readings, and preventive maintenance logs.

Plans, develops, and implements energy conservation protocols.

Develops and recommends operating budgets to higher-level staff.

May supervise maintenance, repair, rehabilitation, and construction activities in small facilities without dedicated staff.

Plant Utilities Engineer 4

Performs the duties of Plant Utilities Engineer 3, and supervises Plant Utilities Engineers 3, other lower-level staff, and contractors engaged in plant operations, maintenance, and repair functions.

Oversees plant utilities operations in the largest facilities, and/or those with the most complicated equipment.

May function as an assistant to a Plant Superintendent A or B in the largest plant utilities and maintenance operations.

Minimum Qualifications

Plant Utilities Engineer 1

Open Competitive: four years of experience in the operation, maintenance, and repair of boilers, HVAC, or auxiliary plant utilities equipment in commercial, industrial, or institutional facilities.

Plant Utilities Engineer 2

Promotion: One year of permanent service as a Plant Utilities Engineer 1.

Plant Utilities Engineer 3

Promotion: One year of permanent service as a Plant Utilities Engineer 2.

Plant Utilities Engineer 4

Promotion: One year of permanent service as a Plant Utilities Engineer 3.

Note: Classification Standards illustrate the nature, extent and scope of duties and responsibilities of the classes they describe. Standards cannot and do not include all of the work that might be appropriately performed by a class. The minimum qualifications above are those which were required for appointment at the time the Classification Standard was written. Please

contact the Division of Staffing Services for current information on minimum qualification requirements for appointment or examination.

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