Position: Energy Management Analyst	Position Number:
Department/Site:	FLSA: Non-exempt
Evaluated by:	Salary Grade: 121

Summary

Performs a variety of advanced-skilled work in the design, fabrication, installation, and maintenance of manual and computer-aided mechanical or industrial electrical systems, electrical controls, ventilation, air conditioning, and heating systems.

Distinguishing Career Features

The Energy Maintenance Specialist is a senior non-supervisory position in the skilled maintenance series, requiring formal training and experience in HVAC/R, low voltage electronics, mechanical systems, and computer-aided/networked system controls that analyze and enable mechanical systems to be adjusted for optimal cost-effective performance.

Essential Duties and Responsibilities

- Maintains air handlers at optimal levels using computer-aided controls. Tightens, adjusts, repairs, replaces, and calibrates boilers, chillers, cooling towers, variable frequency drives, motor control contactors, pumps, etc. Performs tune-ups and preventive maintenance on gas engines that drive chillers.
- Performs preventive maintenance on high voltage switch gear, irrigation pumps, walk-in freezers, and cafeteria equipment, as they relate to HVAC or related equipment.
- Upgrades, maintains, and administers building energy management systems by installing a wide range of computer-aided controls, digital building HVAC equipment controllers, drives and volume boxes, data communications cabling, and other devices or functions that enhance energy utilization.
- Works with site administrators to review class and extra-curricular activities and schedule lights, heating and cooling to provide service.
- Programs, monitors, and schedules multiple computerized energy management systems at various sites. Writes program utility blocks in global control modules to control application-specific devices.
- Calculates load factors to ensure adequate cooling and heating of occupied space, including air distribution system plenums, economizers, electrical loads, and exhaust fans.
- May perform a variety of electronic repairs and maintenance. Reviews energy performance, then diagnoses, adjusts, repairs or replaces, motors, heaters, transformers, switchgear and other electronic apparatus.
- Operates, maintains, inspects and repairs heating, air conditioning refrigeration, water

treatment, co-generation, heat reclamation, thermal energy storage, ventilation and air compressor equipment used with HVAC.

- Tests, adjusts and calibrates boiler and air conditioning machinery and mechanical, electrical, and pneumatic control instruments. Tests and, as required, chemically treats boiler, condenser and cooling tower water and water from other systems.

- Maintains up-to-date knowledge of indoor air quality standards and compliance requirements. Confers with others to recommend and evaluate heating, ventilation, air conditioning, and energy management infrastructure for new and remodeled facilities.

- Performs other duties as assigned that support the overall objective of the position.

Qualifications

- **Knowledge and Skills**

Requires a thorough knowledge of the principles, practices, methods, techniques, materials, tools, equipment, layouts and set-ups used in HVAC systems and boiler operation. Requires in-depth knowledge of electronics, including microprocessor operation, digital and pneumatic controls. Requires a working knowledge of construction, carpentry, electrical, and plumbing concepts, practices, and techniques. Requires a thorough knowledge of the uses and purposes of general maintenance, hand and power tools and equipment. Requires well-developed computer skills to use common office productivity software and special applications for energy management. Must know and understand all pertinent Federal, State and local laws, codes and regulations in area of specialization. Requires sufficient math skills to record and compute detailed measurements.

- **Abilities**

Requires the ability to perform all of the essential duties in the area of specialization at the journey level with minimal supervision. Must be able to use and maintain all of the tools, equipment, vehicles used during routine performance of duties. Requires the ability to plan, schedule and direct the activities of subordinates to attain high quality and efficiency in work. Requires the ability and initiative to independently develop methods and techniques in the interest of effectiveness and efficiency. Must be able to understand and follow oral and written instructions, maintain routine records and interpret plans and specifications found in area of specialization. Must be able to obtain cooperation of and maintain harmonious relations with the employees in other departments contacted during routine performance of duties. Requires the ability to obtain an applicable OSHA training.

- **Physical Abilities**

Incumbent must be able to maintain cardiopulmonary fitness, function indoors in a shop environment and/or outdoors in the field engaged in work of primarily an active nature, and to perform the following, with or without reasonable accommodation.

- Ambulatory ability to walk and carry tools and apparatus for 400 yards.
- Sufficient strength and agility to lift, load, and move heavy weight materials up to 75 pounds. Requires the ability to bend, stoop, and work in awkward positions.
- Visual acuity to read and observe diagrams, manuals, work conditions, and recognize color-coded wires and connections.
- Requires auditory ability to carry on conversations in person and with communications devices.

- **Education and Experience**

  The position may require Associates Degree in Energy Management, Industrial Technology, related field or completion of a formal apprenticeship in a specialized trade (HVAC Service/Controls, Industrial Electrical or Energy Management controls). Requires four years of experience at the journey level.

- **Licenses and Certificates**

  Requires a valid Driver's License. Requires appropriate certification in area of specialization for handling and recycling of refrigerants.

- **Working Conditions**

  Work is performed indoors and outdoors where significant health and safety considerations exist from physical labor and handling of materials.