

**Title:** Power Quality Specialist  
**PG:** 54  
**Status:** Civil Service  
**Position Reports to:** Designated Supervisor  
**Department:** Lakeland Electric

**Class Code:** 3455  
**Date:** 10/08

### **GENERAL DESCRIPTION OF CLASS**

This is a highly skilled technical position responsible for a wide variety of duties involved with analyzing and improving the quality of electric power delivered to customers. It involves performing root cause analysis and designing solutions to resolve Power Quality (PQ) and Radio Frequency (RFI) issues from customer inquiries, which may be associated with outages, voltage fluctuations, other reliability issues and interference problems. Work is generally performed with considerable independence according to guidelines from supervisor and standards and is randomly checked for quality, accuracy and completeness.

### **ESSENTIAL FUNCTIONS:**

1. Applies technical knowledge of electric utility distribution system design and operations to analyze power Quality and Reliability issues.
2. Applies technical knowledge of operational characteristics of electrical equipment used in residential, commercial and manufacturing applications to analyze power quality and reliability deficiencies.
3. Maintains the various testing and monitoring equipment used for analysis such as Ultrasonic, Dranetz, Metrosonics, RPM Fluke, PMI monitors, Gridsense Monitors, as well as programming, installing, retrieving, and interpreting data from these devices.
4. Develops and maintains records of power quality surveys and results.
5. Communicates study findings and recommendations to customers.
6. Implements the requirements and principles of applicable safety laws, department guidelines and accepted industry practices in the performance of duties (LE Distribution Design and Construction Standards, LE Safe Work Practices, National Electric Code, National Electric Safety Code, FCC Radio Interference limits, OSHA requirements, and etc.)
7. Identifies and resolves Radio Frequency interference problems on Distribution and Transmission circuits using specialized RFI detection and tuning equipment.
8. Must be able to write work orders to resolve power quality issues using internal computer programs such as Maximo, Visual Job Planner, and GIS software.
9. Attends various conferences, seminars and other advanced training to broaden knowledge.
10. Coordinates repair and replacement for all monitoring and test equipment. Tests, evaluates and recommends new monitoring equipment.
11. Create work orders, prints, material lists, and related documents as required for construction purposes utilizing computer programs.
12. Prepares data specifications, engineering plans, diagrams, schematics, equipment and materials, and cost estimates for required projects and studies.
13. Contacts external customer to obtain needed information in order to help resolve any power quality issues. Maintains customer relationship throughout the project duration including any follow up meetings.
14. Establish and maintain project data file for the purpose of ensuring all internal requirements and documentation have been satisfied for the duration of the project.
15. Provides project management and quality control of work done by parties associated with projects and studies.
16. Performs field inspections to verify proper material used per design and issued work order.
17. Interface with overhead and underground electric line construction crews when needed.

### **ADDITIONAL RESPONSIBILITIES:**

1. May be assigned as mentor and trainer for new hire or inexperienced lower skill level engineering technician employee.
2. Performs related work as required.

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### **SUPERVISORY RESPONSIBILITIES:**

1. Performs supervisory responsibilities to include selecting, developing/training, assigning and monitoring work, performance management (establishing clear expectations, goals, and performance standards; coaching: providing timely feedback: conducting performance reviews, addressing performance/safety issues), recognizing and rewarding performance, and issue resolution within the work group, in accordance with policies and laws.

### **KNOWLEDGE, SKILLS & ABILITIES:**

1. Knowledge of and complete familiarity with personal computers, computer input/output terminals, calculators, and other technical data-processing devices.
2. Extensive knowledge of practices, procedures, standards and methods used in office and field engineering work as related to utility design.
3. Extensive knowledge of the materials and equipment used in utility system construction, operation, and maintenance.
4. Knowledge of basic engineering theory.
5. Knowledge of mathematics and statistics.
6. Knowledge of computer-aided engineering drafting, spreadsheets, word processing and other computer programs.
7. Considerable knowledge of applicable technical and safety codes.
8. Ability to assist other professionals in various complex statistical work and/or other types of related utility analysis.
9. Ability to perform engineering calculations required by duties.
10. Ability to understand and extract pertinent information from technical data or reports.
11. Ability to read and interpret plans, specifications, and engineering drawings, and prepare reports.
12. Ability to understand, follow and transmit complex oral and written instructions.
13. Ability to perform difficult technical computations, make estimates and compile statistical and other types of data.
14. Ability to establish and maintain effective working relationships with co-workers, other City employees, contractors, and the general public.
15. Ability to carry out assignments independently and with minimum supervision.
16. Ability to communicate effectively, both verbally and in writing.
17. Ability to develop, implement, and administer technical projects, including creating complex engineering drawings, work order documents, performing difficult technical computations, make estimates, cost evaluations, and to compile statistical data without supervisory input.
18. Ability/willingness to perform work safely and to report unsafe practices/ situations to the appropriate supervisor.
19. Must have the flexibility to handle multiple assignments with changing priorities and deadlines.

### **WORKING ENVIRONMENT/CONDITIONS:**

Requires sedentary work that involves walking or standing some of the time, exerting up to 50 pounds of force on a recurring basis, and routine keyboard operations.

The job risks exposure to environmental hazards to include traffic, electrical hazards to include high voltage, adverse and inclement weather conditions to include hot and or cold temperature variations, bright/dim light, heights, enclosed areas, dusts/pollen, vibration, moving machinery, fumes and or noxious odors, exposure to infectious diseases, contact with aggressive animals, insects and reptiles, as well as, walking uphill/downhill in slippery, muddy conditions.

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The job requires normal visual acuity, and field of vision, hearing, speaking, color perception, sense of taste, sense of smell, depth perception, and texture perception.

**QUALIFICATIONS (EDUCATION, TRAINING, AND EXPERIENCE):**

1. Two (2) years previous experience as Engineering Technician III - LE.
2. Successful completion of a recognized Power Quality Certification program (Association of Energy Engineers professional organization), or the ability to obtain certification within one (1) year.
3. Successful completion of 80 hours of hands on Radio Frequency Interference field investigation training by an experienced RFI engineer, technician or ham radio organization technical specialist, or the ability to obtain this specialized training within one (1) year.
4. Eight (8) years of experience in mathematical, technical, or in related electric utility work.
5. An equivalent combination of education and experience which is determined to be directly related to the foregoing specific requirements may be substituted.
6. Completion of City University Level one (1) or completion within twelve (12) months.

**SPECIAL REQUIREMENTS:**

1. Must maintain City driving privileges/valid Florida driver's license.
2. Must maintain a valid contact phone number.
3. May be required to work overtime, or alternate hours, as necessary for the efficient operation of the department. Position may be designated as Mission Critical by Department Director.