

**Title:** Engineer III – Lakeland Electric  
**PG:** 69  
**Status:** Civil Service  
**Position Reports to:** Designated Supervisor  
**Department:** Lakeland Electric

**Class Code:** 202020  
**Date:** 09/08

**GENERAL DESCRIPTION OF CLASS:**

This highly skilled engineering position is responsible for the performance of difficult and complex engineering assignments associated with the planning and design of a variety of projects and studies needed to support the electric power facilities. Work is under the general supervision of an administration supervisor. Tasks afford the opportunity for independent judgment and action in planning details of work and in making technical decisions. A supervisor reviews work performed.

**ESSENTIAL FUNCTIONS:**

1. Prepares scope of work for a given project or study which may require data gathering, specifications, plans, diagrams, schematics, equipment/materials and cost estimates for required aspects of the project or study.
2. Oversees, completes or assists in all aspects of assigned engineering project design or study.
3. Provides project management and quality control functions for work done by parties associated with the project or study.
4. Assists other divisions and City departments on multi-disciplinary and / or cross departmental projects and studies.
5. Studies and/or implements significant modifications or improvements to the electric power system.
6. Acts as a representative to other utility and industry organizations involved in the projects or studies.
7. Maintains and complies with project schedules and budgets.
8. Operates various computer aided engineering design and analysis programs or tools and produces work orders or studies to support projects.
9. Maintains an efficient filing and records system for projects from initiation to project close out.
10. Prepares complex forecasts, studies, technical reports, and related items.
11. Maintains an efficient filing and records system for projects from initiation to project close out.

**SPECIFIC FUNCTIONS FOR ENERGY SUPPLY:**

1. Oversees contract maintenance and repair projects.
2. Investigates and analyzes plant operation and maintenance problems, both short term and future, to determine solutions.
3. Provides construction management support, field inspections, quality control, and contract interface with construction crews, as needed, for major construction projects.
4. Researches and verifies "as built" condition of systems and equipment, including underground systems.
5. Assist in testing and operation of power plant equipment, performance of pollution controls testing, survey work, and non-destructive testing programs.
6. Develops and oversees design of complex power generation systems, construction standards, bid specifications, and drawings for specific projects according to established guidelines and engineering practices.
7. Calculates and oversees the calculation of statistical averages, cumulative and rolling averages, statistical trends, rates of change, percentages, etc., and tabulates, plots, and formats the results.

**SPECIFIC FUNCTIONS FOR ENVIRONMENTAL:**

1. Assists various departments within the organization on environmental permits, laws and regulations.

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- Performs permitting activities such as reviewing permit applications/draft permits for accuracy and completeness. Interprets environmental permits, laws and regulations as needed.
2. Acts as a liaison between regulatory agencies and the City for facility visits, inquiries, notifications and issues arising from compliance matters.
  3. Reviews, prepares, and submits environmental reports and data to various regulatory agencies within established time frame.
  4. Oversees Environmental contract and audit projects and deals with issues arising from audits.
  5. Investigates and analyzes environmental permitting and compliance issues to determine solutions.
  6. Develops complex environmental projects, environmental audit standards, bid specifications, and drawings for specific projects according to established guidelines and engineering/environmental practices.
  7. Provides project management support, field inspections, quality control, and contract interface with contractor, consultant and attorney as needed, for environmental projects.
  8. Provides assistance in research and verification of environmental laws, regulation and legislations.
  9. Calculates statistical averages, cumulative and rolling averages, statistical trends, rates of change, percentages, etc., and tabulates, plots, and formats the results.

***SPECIFIC FUNCTIONS FOR SYSTEM CONTROL:***

1. Use electric system software models to analysis electric system performance and prepare recommendations for reconfiguration or addition to existing transmission and distribution system facilities.
2. Use electric system software models and load growth data to forecast need for new substations, transmission lines, and distribution lines.
3. Reviews and update the annual Energy Delivery 10 Year plan for new substations, transmission lines, distribution lines and other facilities.
4. Calculates voltage regulator set points using electric distribution system software model.
5. Calculates various system performance indices. Make recommendations for work that may improve system performance.
6. Ensures compliance with local and national planning standards. Confirm that documentation required in the standards is current.

***SPECIFIC FUNCTIONS FOR TRANSMISSION & DISTRIBUTION:***

1. Serves as project manager and/or responsible engineer for the design of complex transmission and distribution power lines and structures for the power grid.
2. Applies appropriate industry codes and standards to unique and complex applications on the transmission and distribution system and mentors others in their proper use
3. Provides construction management support, field inspections, quality control, and contract interface with construction crews, as needed, for major construction projects..
4. May develop, maintain and approve the T&D electronic based construction and labor standards utilized by all engineering personnel for line design.
5. Participates on committees to develop engineering standards for Energy Delivery departments.
6. Provides analysis of power quality data.
7. Performs field inspections to define project needs, including easements, permits, and tree clearing, and verifies final as-built drawings for completed projects.
8. Performs duties as the main contact for coordination of T&D facility impacting road projects with state and local governmental agencies.

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**SPECIFIC FUNCTION FOR SUBSTATION OPERATIONS:**

1. Serves as project manager and/or responsible engineer for the design of complex T&D substations and related systems
2. Performs all aspects associated with the design of protective relaying, revenue and power quality metering, and SCADA/EMS control systems.
3. Performs technical and economic evaluations of designs, studies, bids and specifications for substation, protective relaying, metering, and SCADA/EMS related projects
4. Provides construction management support, field inspections, quality control, and contract interface with construction crews, as needed, for major construction projects.

**SPECIFIC FUNCTIONS FOR CORPORATE PRICING:**

1. Develops, modifies and maintains utilities Cost of Service software model.
2. Collects, sanitizes and inputs annual financial and operational data needed to execute Cost of Service Modeling.
3. Designs, generates and evaluates Cost of Service studies and reports to the company, customer class segment, and individual customer level.
4. Assists in the review and establishment of Retail Electric Rates and Fees and Retail and Wholesale Water rates.
5. Develops an Electric Conservation Demand and Energy forecast for the utility.
6. Develops and reviews conservation projects and programs for the electric and water utilities.
7. Oversees the use and necessary modifications to lighting equipment databases required to support the utilities private and municipal lighting programs
8. Develops and maintains reporting structures to monitor program profitability by forecasting expenses and revenues.
9. Creates new and adjust current pricing and product offerings and strategies.
10. Coordinates installation of new and maintenance of existing weather stations and the equipment throughout the service territory.
11. Builds and maintains databases on weather reporting stations.
12. Supplies all climatologically data to utility analyst/forecaster for evaluation.
13. Coordinates the purchase of alternatively fueled vehicles to comply with the Department of Energy's Alternative Fuel Vehicle procurement and use program.
14. Organizes the design and construction of new alternative fuel dispensing stations to support the electric utilities alternative fuel fleet.
15. Responsible for all reporting requirements necessary to verify compliance with Federal Department of Energy mandates.

**ADDITIONAL RESPONSIBILITIES:**

1. Performs related work as required.

**KNOWLEDGE, SKILLS & ABILITIES:**

1. Extensive knowledge of fundamental and applied engineering sciences, principles, and practices.
2. Extensive skill in the use of engineering, and mathematical references and tables, charts, and computer equipment required in professional engineering work.
3. Considerable knowledge of design and test codes, sources of technical information and safety requirements related to electric power activities.
4. Knowledge of permitting requirements for City, County, and State agencies.
5. Considerable knowledge of project expenditures and budgetary cost controls.
6. Ability to establish and maintain effective working relationships with supervisor, co-workers, consultants, other utilities, other City employees and the general public.

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7. Ability to procure goods and services from various vendors.
8. Ability to use various portable test equipment and meters, and survey instruments and to perform engineering and surveying calculations.
9. Ability to perform routine technical computations, make estimates, compiles statistical information, and performs analysis.
10. Highly capable of understanding, following, and/or transmitting complex oral and written instructions.
11. Highly capable self-starter, self-motivated, detail oriented, a team player and to be able to carry out assignments independently with only general oversight.
12. Highly capable of managing multiple projects simultaneously and in a proficient manner, while maintaining schedule flexibility as needed.
13. Ability to develop, modify and maintain computer modeling applications. (Corporate Pricing and Reporting)

**WORKING ENVIRONMENT/CONDITIONS:**

**ENERGY SUPPLY, ENVIRONMENTAL:**

The job may require some physical work that involves walking, balancing, climbing ladders and stairs, kneeling, stretching, reaching, pushing, pulling, crouching, bending or standing some of the time, occasional lifting up to 30 pounds, routine keyboard operations and operation of City vehicles.

Work may include fieldwork as required at various job sites as well as to perform job duties in an office, power plant and outside environment. Employee may also have exposure to the general hazards of the industrial working environment and construction sites.

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

**ENERGY DELIVERY, CORPORATE PRICING & REPORTING:**

Requires sedentary and active work that involves walking or standing some of the time, and routine keyboard operations, operation of City general purpose vehicles (automobile or pick up truck), some job duties may be performed in an office environment while other duties may require field work at various outdoor job sites.

The job risks exposure on rare occasions to electrical or mechanical or chemical hazardous conditions, and occasional exposure to noise levels, dusts pollen, bright or dim lights, cold or heat, wet or humid conditions, fumes and heights.

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

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

1. Graduation from an accredited four (4) year college or university with a Bachelor of Science degree in engineering.
2. Five (5) years of experience in related engineering work.
3. An equivalent combination of advanced engineering degree and experience, which is determined to be directly related to the foregoing specific experience requirements, may be substituted.
4. Completion of City University Level one (1) or completion within twelve (12) months.

**SPECIAL REQUIREMENTS:**

1. Must possess a valid state of Florida driver's license.
2. Must maintain a valid telephone number.
3. May be required to attend meetings and visit job sites at locations other than primary work locations.

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4. May be required to pass and maintain qualifications for:
  - a. Respiratory Protection Physical
  - b. Pulmonary Function
  - c. Qualitative and Quantitative Fit Test(s)
5. 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.