

Title: Engineer I – Lakeland Electric
PG: 58
Status: Civil Services
Position Reports to: Designated Supervisor
Department: Lakeland Electric

Class Code: 201820
Date: 09/08

GENERAL DESCRIPTION OF CLASS:

This is entry-level engineering work. An employee in this class demonstrates the application of engineering knowledge and skills in completing assigned projects or assisting on substantial portions of complex projects. Work is assigned with general instructions and objectives by a supervisor. Methods of procedure are outlined, but the employee has some latitude for independent judgment and action in planning details of work and in making technical decisions. Work performed is checked by a supervisor or higher level engineer.

ESSENTIAL FUNCTIONS:

1. Gathers and/or prepares data, specifications, engineering plans, diagrams, schematics, equipment/materials list, and cost estimates for required aspects of projects and studies.
2. Completes or assists in significant aspects of assigned engineering project design or study.
3. Provides project management and quality control of work done by parties associated with projects and studies.
4. Assists other engineers, divisions, and departments on multi-disciplinary and/or multi-departmental projects and studies.
5. Assists in preparing scopes of work for projects and studies.
6. Acts as a representative/liaison with other electric utility and industry organizations involved in projects and studies.
7. Maintains and complies with project schedules and budgets.
8. Operates various computer aided engineering design or 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. Assists in preparing complex forecasts, studies, technical reports, and related items.

SPECIFIC FUNCTIONS FOR ENERGY SUPPLY:

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

SPECIFIC FUNCTIONS FOR ENVIRONMENTAL:

1. Provides assistance to various departments within the organization on environmental permits, laws and regulations.
2. Provides assistance with permitting activities such as reviewing permit applications/draft permits for accuracy and completeness.
3. Interprets environmental permits, laws and regulations as needed.
4. Acts as a liaison between regulatory agencies and the City for facility visits, inquiries and notifications.
5. Reviews, prepares, and submits environmental reports and data to various regulatory agencies within established time frame.
6. Develops bid specifications, and schedule 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, as needed, for environmental projects.

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8. 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. Gather system data and maintain data base or database link to support the electric system software models. Run test cases in the software models. Calibrate the software models with the data.
2. Gather data on future load growth and enter it into a planning data base to support area load forecasting.
3. Support the review and update the annual Energy Delivery 10 Year plan for new substations, transmission lines, distribution lines and other facilities.
4. Maintain electric system one line diagrams that are used in planning studies and post storm system damage surveys.
5. Calculate various system performance indices.
6. Be aware of local and national planning standards.

SPECIFIC FUNCTIONS FOR TRANSMISSION & DISTRIBUTION:

1. Assists with the design of transmission and distribution power lines and structures for the power grid while following established codes and standards.
2. Assists in the development of design standards and materials lists.
3. Becomes familiar with NESC code and other appropriate industry standards.
4. Assists in field inspections to define project needs, including easements, permits, and tree clearing, and verify the final as-built drawings for completed projects.

SPECIFIC FUNCTIONS FOR SUBSTATION OPERATION:

1. Assists with the design of T&D substation facilities while following established standards.
2. Assists in field inspections to define project conditions needs and verify the final as-built drawings for completed projects.
3. Provides project management support, field inspections, quality control, and crew interface for substation projects.

ADDITIONAL RESPONSIBILITIES:

1. Performs related work as required.

KNOWLEDGE, SKILLS & ABILITIES:

1. Knowledge of fundamental and applied engineering sciences, principles, and practices.
2. Skill in the use of drafting instruments, engineering, and mathematical references and tables, charts, and computer equipment required in professional engineering work.
3. Ability to establish and maintain effective working relationships with supervisor, co-workers, consultants, other utilities, other City employees and the general public.
4. Ability to procure goods and services from various vendors.
5. Ability to use various portable test equipment and meters, and survey instruments and to perform engineering and surveying calculations.
6. Ability to read, understand and interpret, plans, specifications, technical reports, and engineering drawings.
7. Ability to perform routine technical computations, make estimates, compiles statistical information, and performs analysis.
8. Ability to understand, follow and transmit complex oral and written instructions.
9. Ability to be a self-starter, self-motivated, detail oriented, a team player and to be able to carry out assignments independently and with minimal supervision.

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10. Ability to manage multiple projects simultaneously and in a proficient manner, while maintaining schedule flexibility as needed.
11. Ability/willingness to perform work safely and to report unsafe practices/situations to the appropriate supervisor.
12. Ability/willingness to perform work to support the vision, mission, values and goals of the department.

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.

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