

Beaver Water District
Job Description
Job Title: Electrical Engineer II

Exempt: (Y/N): YES
Date: June 2024

Department: Engineering
Reports To: Engineering Manager

JOB SUMMARY

The Electrical Engineer II position's primary engineering focus is on the electrical facilities of Beaver Water District (BWD), including, but not limited to, motors, VFDs, transformers, switchgear, breakers, switches, diesel generators, natural gas generators, solar array generators, distribution power lines, relays, capacitors, and appurtenances. The Electrical Engineer II shall also provide support to the Engineering Department for water treatment, pumping, piping, and other engineering needs of BWD. The Electrical Engineer II must be able to be reached by telephone and to be on 24-hour "on-call" status.

ESSENTIAL DUTIES AND RESPONSIBILITIES *(include but are not limited to the following)*

- Assists in the planning, design, and construction management of low-voltage and medium-voltage electrical infrastructure such as switchgear, switching stations, breakers, switches, generators, overhead and underground distribution lines, relays, and appurtenances.
- Collects, manages, and assimilates engineering data for projects.
- Provides support to the Electrical and Instrumentation Department for the operation, maintenance, troubleshooting, repair, replacement, and expansion of BWD's electrical and instrumentation infrastructure.
- While normally not a lead role, assists with engineering functions related to water treatment and conveyance.
- Assists in construction management duties for projects including construction inspection, submittal and shop drawing review, payment estimate review, and coordination with outside engineering consultants and contractors.
- Utilizes CAD software to create, edit, and manage engineering drawings as directed by the Engineering Manager.
- Organizes and maintains Operation and Maintenance manuals and construction records and drawings.
- Assists the Engineering Manager and Compliance Manager to develop/refine safety programs and procedures to ensure safe and productive operations.
- Assists the Plant Manager, Operations Department, and Management in evaluating electrical efficiency and cost saving measures.
- Assists the Electrical & Instrumentation Department and Asset Management Lead in the development and execution of asset management plans for BWD's electrical infrastructure.
- Other duties as assigned.

MINIMUM QUALIFICATIONS

To perform this job successfully, an individual must be able to perform each essential duty and responsibility satisfactorily. The minimum qualifications required to perform the essential duties and responsibilities are listed below. Reasonable accommodations may be made to enable qualified individuals with disabilities to perform the essential duties and responsibilities.

EDUCATION:

- Bachelor's degree in Electrical Engineering (or equivalent) from an accredited four (4) year college. Any equivalent combination of education, experience, and training that provides the desired knowledge, skills, and abilities will be evaluated.
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EXPERIENCE:

- Minimum of two (2) years' experience in the electrical engineering field (or equivalent), with five (5) or more years preferred.
- Experience with medium voltage (up to 13.2-kV nominal) systems is preferred.
- Experience with electronic relays and generation facilities is preferred.

OTHER REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES:

- Must have good communication and interpersonal skills.
- Coursework and/or knowledge of Power Systems, Motors, Transformers, Renewable Energy, Power Delivery, or Three Phase Power Calculations.
- Ability to prepare and present clear and concise written and oral reports, instructions, and communications.
- Must be proficient, or have the willingness to gain proficiency, in the use of computers and related software, as well as in the use of computer aided drafting (CAD).
- Must have the ability to read, analyze, and interpret plans, electrical diagrams (ex. one-line diagrams), professional journals, technical procedures, and governmental regulations.
- Must be able to write reports, business correspondence, and procedures for manuals.
- Must have the demonstrated ability to successfully interact with, present information to, and respond to questions from groups of managers, clients, customers, and the public.
- Ability to perform fundamental power system analysis and electrical component sizing calculations based on established engineering principles.
- Ability to solve practical problems and deal with a variety of known and/or abstract variables in situations where only limited standardization exists.

CERTIFICATES, LICENSES AND REGISTRATIONS:

- Must possess (or be able to obtain within 24 months) and maintain, as a condition of employment, Grade IV Water Treatment and Distribution licenses, as issued by the Arkansas Department of Health.
- Valid Driver's License
- Valid automobile insurance
- Must be able to successfully pass a pre-employment drug screen, and criminal background assessment.
- Registered Professional Engineer in the State of Arkansas or ability to obtain registration within two (2) years of employment is preferred.

PHYSICAL DEMANDS

The physical demands described in the attachment to this job description entitled “Physical Demands of the Electrical Engineer II Essential Job Functions” are those that must be met by an employee to successfully perform the essential duties and responsibilities of this job. Reasonable accommodations may be made to enable qualified individuals with disabilities to perform the essential duties and responsibilities.

MENTAL DEMANDS

Must be able to manage tasks and priorities, and complete job duties proficiently while adapting to changing demands and priorities. This position is one in which a lapse of attention could result in injury, illness, or death. For the safety of the employee and others, the employee must be able to work in a constant state of alertness and concentrate for long periods of time while operating, maintaining, and monitoring heavy equipment and machinery, and while working with and around hazardous materials, at heights, and in confined spaces.

SAFETY SENSITIVE

This position is designated as a safety sensitive position because it includes as part of the job duties the operating, maintaining, and monitoring of heavy equipment and machinery, and working with and around hazardous materials, at heights, and in confined spaces. Promotes safety practices to others through encouragement and reminders. Follows all safety requirements. Reports unsafe conditions. Ensures system specific safety requirements are followed.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential duties and responsibilities of this job. Reasonable accommodations may be made to enable qualified individuals with disabilities to perform the essential duties and responsibilities.

While performing the duties of this job, the Electrical Engineer II frequently works in an office environment. The Electrical Engineer II also frequently works in a construction field environment near moving mechanical parts and equipment and is occasionally exposed to wet and/or humid conditions and vibration. The Electrical Engineer II may be exposed to fumes or airborne particles, toxic or caustic chemicals, and risk of electric shock and is required to wear personal protective equipment where appropriate. The Electrical Engineer II occasionally works in high, precarious places and is often exposed to outside weather conditions.

The noise level in the work environment is occasionally loud in field settings and moderate in an office environment.