

# **JOB OPENING**

## **CITY OF FARMINGTON**

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**JOB POSITION #90: SENIOR / ELECTRICAL TRANSMISSION AND PLANNING ENGINEER**

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**NUMBER OF VACANCIES:** 1      **DEPARTMENT:** Electric Utility

**WORK LOCATION:** M.O.C.

**PAY CLASS:** EPAT-1, EPAT-0, Exempt      **HIRING RANGE:**  
EPAT-0 (\$6,021.10 - \$7,134.61 per month)  
EPAT-1 (\$5,473.73 - \$6,486.01 per month)

**DAYS WORKED:** Mon - Fri      **HOURS WORKED:** 8 a.m.-5 p.m.

**TYPE OF POSITION:** Regular Full-time

**APPLICATIONS WILL BE RECEIVED UNTIL:** Friday, October 8, 2010

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### **JOB DUTIES**

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*Resumes submitted without a City of Farmington application  
will not be considered in our job selection process.*

#### **SELECTION/SKILLS TESTS REQUIRED:**

No skills test. Phone interview and/or in-person interview only.

#### **ESSENTIAL DUTIES:**

Performs office administrative and field advising work to coordinate and supervise the development, installation, and maintenance of existing and new construction of the Electric Department's transmission.

Works under the General supervision of the Transmission Planning and Design Supervisor.

Plan, prepare, recommend and design the expansion and modification of the Electric Utility's main transmission system. Use computer power flow analysis for forecasting future system and circuit loading requirements. Determine if adequate facilities exist for new system loads.

Design grading, foundations, grounding, steel structures, equipment, connectors and conductor requirements design of transmission line facilities.

Design and recommend the placement of transmission and distribution switches for line sectionalizing. Analyze motor starting requirements for large new and existing loads.

Develop specifications and material lists for purchasing transmission line construction.

Performs electric system long range planning studies. Researches electric system load growth patterns, establishes load projection guidelines for new development, reviews contingency plans to restore service under emergency conditions.

Identifies the need for major capital additions and project requirements to maintain and enhance integrity of the electric system transmission network.

Performs power requirements studies, load forecasts, construction work plans and system long range plans.

Performs system integration with computer applications.

Plans and presents engineering program results to Engineering Supervisor, including defining the project philosophy, activities, milestones, and updates a schedule and budget for large engineering projects.

5 Year Load Forecasts: Predict individual circuit loads and power transformer loads. Maintain a 5-year forecast updated once per year.

- Use Monthly loads reports
- Examine building permits as a tool for prediction of load growth
- Use work order as basis for prediction

Run load and reliability studies as required to meet NERC standards.

Compile average power factor at the substation in report.

Evaluates materials, equipment, procedures, and analyzes material failure patterns to assure safety and reliability of the distribution system.

Prepares and revises specifications and standard drawings for electric material and equipment for transmission and distribution, designating parts and materials acceptable for specific applications using knowledge of electrical engineering and related disciplines.

Analyzes material specifications and construction practices for total owning cost and safety especially in transmission projects.

Seeks input and gains consensus or acceptance with user personnel in development of new guidelines and standards and communicates them to all Standards Committee members.

Coordinates purchase of new material with Purchasing and Warehouse as required to complete Standards approval of materials.

Reviews material design for compliance with engineering principles, company standards, prepares related specifications and recommends action at Standards Committee meetings.

Prepares WECC compliance studies as required and reviews standard assigned to engineering area.

Evaluates and recommends action on new designs, specifications, and drawing releases.

The holder of this position is expected to perform independently and apply engineering training and judgment under overall direction and supervision of the Engineering Supervisor.

Job Posting #90 - Senior / Electrical Transmission and Planning Engineer

Develop transmission and distribution construction standards.

Evaluate material bidding documents and recommend material purchases.

Provide NESC code assistance and interpretation for Estimators and field personnel.

Coordinate assignments with Surveying, GIS Drafting Departments and Protection Engineer or Relay Engineer.

Assists in the installation adjustment and testing of transmission switches.

Designs foundation for substation deadend structures and steel poles.

Responsible for reviewing, completion, and dissemination of “as built” drawings.

Perform such other duties as may be assigned by the Engineering Supervisor and Transmission Planning and Design Engineer.

Ability to use standard Microsoft Word and Excel Software.

The above represents the scope and range of duties. Not all duties will be assigned nor is this an inclusive itemization of duties.

NON-ESSENTIAL DUTIES:

Performs such other duties as assigned by Electrical Engineering staff, including calculations and designs for distribution system substations, system protection, transmission and capital improvements.

Inspection of civil work (concrete foundations).

Substation and distribution circuit design work under direct supervision of Senior Electrical Engineer in that area.

System protection coordination work and analysis under direct supervision of System Protection Engineer.

May serve on various employee committees, as required and assigned.

Keep assigned vehicle clean and maintained.

The duties listed above are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.

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## QUALIFICATIONS

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This position is subject to the City's Drug and Alcohol Free Workplace Program. This includes: pre-employment testing, post-accident testing, reasonable suspicion testing, return-to-duty testing, and follow-up testing.

**Senior Electrical Transmission and Planning Engineer:** High school diploma or equivalent combined with graduation from a four-year college or university with a Bachelor of Science degree in electrical engineering and a minimum of five years previous experience within an electrical utility or similar setting and four additional years of experience in an electric utility, consulting, or entity associated with the operation of a high voltage electric system. Seven years minimum electrical engineering experience. A Master degree may be substituted for one year of experience.

**Electrical Transmission and Planning Engineer:** High school diploma or equivalent combined with graduation from a four-year college or university with a Bachelor of Science degree in electrical engineering and a minimum of four years previous experience within an electrical utility or similar setting. At least part of the experience in an electric utility, consulting, or entity associated with the operation of a high voltage electric system. Four years minimum electrical engineering experience.

### **Qualifications for both positions:**

**A minimum of two years experience in the design, installation, maintenance and use of specialized transmission design or system planning.**

Experience in the use of electrical sag and tension chart programs, manufacturer's instruction books, and load flow and/or programs.

Specialized experience in electrical transmission design.

Ability to work under stress and handle stressful situations.

Ability to meet deadlines.

Must demonstrate ability to communicate with others through oral and written media.

Must possess the ability to establish and maintain **effective** working relationships with co-workers, supervisors, outside entities and the public.

Willingness to accept assignments in all phases of Electric Utility operation for the purpose of developing a well-rounded background.

Must have ability to follow direction of supervisors.

Current New Mexico driver's license required or able to obtain one within 60 days.

Positive contact with the public.

Knowledge of construction standards and procedures to prepare work orders.

Ability to establish and maintain working relationships with co-workers, supervisors, other City personnel and the public.

Ability and experience running load flow programs.

Ability to follow verbal and or written instructions.

Ability to operate tools and equipment listed.

Ability to do limited traveling.

**Extensive background check required.**

**TOOLS AND EQUIPMENT USED:**

Mapping/GIS work station, AutoCAD, and related software, printers, plotters, scanners, and other input/output devices, telephones, radios, and city vehicles.

**PHYSICAL DEMANDS:**

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of the job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently required to walk and occasionally will be required to walk over rough, undeveloped, heavy brush, and rocky ground. The employee is frequently required to stand; use hands to finger, handle, feel or operate objects, tools, or controls; and reach with hands and arms. The employee is frequently required to sit, talk or hear; and occasionally required to stoop, kneel, crouch or crawl.

The employee must occasionally lift and or move up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus. Employee will be viewing computer screen for several hours at a time.

**WORK ENVIRONMENT:**

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

Work is performed inside/outside in all types of weather conditions.

While performing the duties of this job, the employee occasionally works in outside weather conditions.

While performing the duties of this job, the employee occasionally works in outside weather conditions. The employee is occasionally exposed to wet and/or humid conditions.

The noise level in the work environment is moderate while in the field and quiet in the office.

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WE ARE AN EQUAL OPPORTUNITY EMPLOYER, M/F.