

**Job Title:** Substation Electrician Apprentice I**Location:** Service Center**Department:** Electric Substation**Job Status:** Full-Time**Reports To:** Substation Supervisor**Job Grade:** 901**Pay Status:** Non-Exempt**Date Created/Updated:** 11/8/2024

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**Position Summary**

The Substation Electrician Apprentice I, under direct supervision, will perform various tasks in construction, operations, and maintenance of electric substation and transmission facilities to include distribution breakers and apparatus, transmission breakers and apparatus, power transformers, control systems, structures, substation properties, and transmission rights of way. Responds during and after normal business hours to all trouble calls relating to Substations in all weather conditions. Demonstrates safe driving habits and maintains a clean driving record. Expected to learn NBU systems and processes in order to execute both routine and abnormal work activities safely and efficiently. The Substation Electrician Apprentice I develops skills and knowledge developing the overall team's capability. The Substation Electrician Apprentice I is expected to complete the training and demonstrate competency in the skills established within Level I of NBU's Substation Apprenticeship Program after 12 months. In the case of extraordinary circumstances, and with Management approval, the Substation Electrician Apprentice I may be granted up to 6 months of additional time to complete this program step. Minimum qualifications are non-negotiable.

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**Essential Duties & Responsibilities****SUBSTATION AND TRANSMISSION OPERATIONS**

- Responsible to maintain clean and organized work areas such as:
  - Service Trucks
  - Control Houses
  - Storerooms and work stations
- Assist as instructed with
  - Substation and transmission operations tasks
  - 12.5 kV and 138 kV switching operations
  - Information gathering activities
  - Purchasing, storing, receiving, retrieving, and distributing equipment, tools, and supplies
- Support NBU staff with tasks related to or collocated with substations and transmission rights of way
- Learn about substation design plan sets and technical specifications with guidance from senior substation personnel
- Schedule, plan, and successfully complete the training courses and competency demonstrations detailed in Level I of the NBU Substation Apprenticeship program

**SUBSTATION AND TRANSMISSION MAINTENANCE**

- Assist as instructed with periodic site and equipment inspections, report findings, and routine maintenance items to ensure proper operation such as:
  - Change compressed gas cylinders
  - Equipment maintenance as prescribed by manufacturer
  - Replace, adjust, and modify equipment and components
  - Conduct infrared camera inspections and address areas of concern
  - Power and control wiring repairs
  - AC and DC power systems and equipment

- Assist as instructed with periodic and reactive inspections of transmission lines and rights of way and report findings

## SUBSTATION AND TRANSMISSION CONSTRUCTION

- Assist as instructed with building, modifying, and enhancing substation and transmission facilities
- With guidance from senior substation personnel learn how to ensure safety and quality of construction and capital improvement activities performed on and around NBU facilities by others such as:
  - Contractors and consultants
  - NBU staff
  - LCRA and other utility Personnel
- With guidance from senior substation personnel learn how to perform construction project management duties such as:
  - Review and develop construction project contracts, design drawings, and specifications
  - Supervise contractors and consultants and inspect their work products
  - Resolve requests for information and change orders
  - Resolve material procurements
  - Review project after completion and report successes, lessons learned, and opportunities for improvement

## GENERAL RESPONSIBILITIES

- Ability to learn new skills, perform those skills consistently, and recall those skills for application after time passes.
- Must develop an understanding of operations concepts in order to repeat similar tasks in differing circumstances and environments.
- Ability to work
  - on and near equipment energized at hazardous voltage levels
  - in confined spaces and at hazardous heights
- Ability to read, write, and understand verbal and written communications in English
- Ability to understand design plan sets and technical specifications
- Ability to lift and carry tools, equipment, and materials in hazardous environments and across uneven ground
- Ability to distinguish colors accurately
- Maintain regular attendance; leave schedule should be managed so as to not interfere with ability to accomplish tasks, including special projects and assignments with deadlines
- Adhere to NBU safety and administrative policies, procedures, and practices at all times and in all situations
- Ensure NBU staff, contracted staff, and visitors adhere to NBU safety and security standards
- Develop & maintain effective customer service skills for communications with co-workers, customers and the public in general
- Maintain strict confidentiality of business, employee and customer information in written and oral communications and safeguard sensitive documents
- Exemplifies NBU Core Values of Safety, Team, Integrity, Culture, and Stewardship
- Participate in and support initiatives to reach annual NBU Performance Measures
- Other duties as assigned

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## Formal Education and Work Experience Requirements

Degree/Diploma Obtained: High School Diploma/GED

Required Field of Study: General Studies

Work Experience Time Frame: No Experience

Other: Click or tap here to enter text.

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## Certification and Licensures Requirements

- Class 'C' Driver's License must be maintained as a condition of employment

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### Other Minimum Qualifications

- Must reside within a forty-five-minute response time of the NBU Service Center as measured by an internet mapping tool
- Strong mechanical aptitude & safe work habits
- Positive technical and behavioral performance history
- Flexibility in work schedule including emergency response, holiday, weekends, after hours as required. On call duty (24 hours per day, 7 days per week, typically for two weeks at a time) required on a periodic basis.
- Verified previous Apprenticeship Program experience (NBU or other programs) and appropriate levels of field experience may qualify an individual to be placed within NBU's Substation Apprenticeship Program – the individual may be required to demonstrate knowledge and competency through field and/or classroom testing for appropriate placement.
- Ability to use basic computer software programs such as Microsoft Excel, Microsoft Word, and Outlook.

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### Knowledge of Computer Software

|                      | No Knowledge                        | Beginner                            | Intermediate             | Expert                   |
|----------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| Arc GIS              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| AutoCAD              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| Crystal Reports      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| Microsoft Access     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| Microsoft Excel      | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Microsoft Word       | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Microsoft Publisher  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| Microsoft PowerPoint | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |

### Other Software Knowledge

Outlook email and calendar

### Experience with Machines, Tools, Equipment and Other Work Aids

Hand tools, power tools, meters, high & low voltage tools, crane truck, trucks, infrared imaging devices, aerial lift devices, pumps, insulated tools, multimeters, grounding cables, computer, printer, cameras.

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### Physical Demands

**Standing:** Frequently

☐ Making Presentations

☒ Observing Work Sites

☒ Observing Work Duties

☒ Communication with Co-Workers

☒ Computer Keyboard

☒ Telephone Keypad

☒ Calculator

☒ Calibrating Equipment

**Walking:** Frequently

☒ To Other Departments/Office/Office Equipment

**Fine Dexterity:** Frequently

☒ Around Worksite

**Lifting:** Occasionally

- ☒ Supplies
- ☒ Equipment
- ☒ Files

**Carrying:** Occasionally

- ☒ Supplies
- ☒ Equipment
- ☒ Files

**Sitting:** Rarely

- ☒ Desk Work
- ☒ Meetings
- ☒ Driving

**Reaching:** Occasionally

- ☒ For Supplies
- ☒ For Files

**Handling:** Rarely

- ☒ Paperwork
- ☐ Monies

**Kneeling:** Occasionally

- ☒ Filing in Lower Drawers
- ☒ Retrieving Items from Lower Shelves/Ground

**Pushing/Pulling:** Occasionally

- ☒ File Drawers
- ☒ Equipment
- ☒ Table and Chairs
- ☒ Hose

**Climbing:** Occasionally

- ☒ Stairs
- ☒ Ladder
- ☒ Step Stool
- ☒ Onto Equipment

**Vision:** Constantly

- ☒ Reading
- ☒ Computer Screen
- ☒ Driving
- ☒ Observing Worksite

**Foot Controls:** Occasionally

- ☒ Driving
- ☒ Operating Heavy Equipment
- ☐ Dictaphone

**Balancing:** Occasionally

- ☒ On Ladder
- ☒ On Equipment
- ☒ On Step Stool

**Bending:** Occasionally

- ☒ Filing in Lower Drawers
- ☒ Retrieving Items from Lower Shelves/Ground
- ☒ Making Repairs

**Crouching:** Occasionally

- ☒ Filing in Lower Drawers
- ☒ Retrieving Items from Lower Shelves/Ground

**Crawling:** Rarely

- ☒ Under Equipment
- ☐ Inside Attics/Pipes/Ditches

**Hearing:** Constantly

- ☒ Communication Via Telephone/Radio/To Co-Workers/Public
- ☒ Listening to Equipment

**Twisting:** Frequently

- ☐ From Computer to Telephone
- ☒ Getting Inside Vehicle

**Talking:** Constantly

- ☒ Communication Via Telephone/Radio/To-Co-Workers/Public

**Other:** Click or tap here to enter text.

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**Environmental Factors**

|   | Never                    | Seasonally                          | Several Times<br>Per Year           | Several Times<br>Per Month          | Several Times<br>Per Week | Daily                               |
|---|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---------------------------|-------------------------------------|
| Extreme Temperature<br>(Heat, cold, extreme temp.<br>change)                              | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>  | <input type="checkbox"/>            |
| Wetness and/or humidity<br>(bodily discomfort from<br>moisture)                           | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>  | <input type="checkbox"/>            |
| Respiratory Hazards<br>(Fumes, gases,<br>chemicals, dust, and dirt)                       | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>  | <input type="checkbox"/>            |
| Noise and Vibration<br>(sufficient to cause<br>hearing loss)                              | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>  | <input type="checkbox"/>            |
| Physical Hazards<br>(High voltage,<br>dangerous<br>machinery,<br>aggressive<br>Customers) | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>  | <input checked="" type="checkbox"/> |

## Health and Safety Conditions

|                          | Never<br>(Never<br>Occurs)          | Rarely<br>(Less than 1<br>hour per<br>week) | Occasionally<br>(1/3 or more<br>of the time) | Frequently<br>(From 1/3 to<br>2/3 of the<br>time) | Constantly<br>(2/3 or more<br>of the time) |
|--------------------------|-------------------------------------|---|--|---|--|
| Mechanical Hazards       | <input type="checkbox"/>            | <input type="checkbox"/>                    | <input type="checkbox"/>                     | <input checked="" type="checkbox"/>               | <input type="checkbox"/>                   |
| Chemical Hazards         | <input type="checkbox"/>            | <input checked="" type="checkbox"/>         | <input type="checkbox"/>                     | <input type="checkbox"/>                          | <input type="checkbox"/>                   |
| Electrical Hazards       | <input type="checkbox"/>            | <input type="checkbox"/>                    | <input type="checkbox"/>                     | <input type="checkbox"/>                          | <input checked="" type="checkbox"/>        |
| Fire Hazards             | <input type="checkbox"/>            | <input type="checkbox"/>                    | <input type="checkbox"/>                     | <input checked="" type="checkbox"/>               | <input type="checkbox"/>                   |
| Explosives               | <input checked="" type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                     | <input type="checkbox"/>                          | <input type="checkbox"/>                   |
| Communicable Diseases    | <input type="checkbox"/>            | <input type="checkbox"/>                    | <input checked="" type="checkbox"/>          | <input type="checkbox"/>                          | <input type="checkbox"/>                   |
| Physical Danger or Abuse | <input checked="" type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                     | <input type="checkbox"/>                          | <input type="checkbox"/>                   |

**Other:** Click or tap here to enter text.

**Primary Work Environment:** Outdoors/Field

Other: Boots, Fire Retardant clothes, glasses, hard hat, gloves, high and low voltage gloves, ear plugs.

## Overall Strength Demands

- ☐ Sedentary - Exerting up to 10 pounds occasionally or negligible weight frequently, mostly sitting
- ☐ Light - Exerting up to 20 pounds occasionally, 10 pounds frequently, walking or standing often
- ☐ Medium - Exerting 20 - 50 pounds occasionally, 10 - 25 pounds frequently, or 10 pounds constantly
- ☒ Heavy - Exerting 50 - 100 pounds occasionally, 25 - 50 pounds frequently, or 10 - 20 pounds constantly
- ☐ Very Heavy - Exerting 50 pounds constantly

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## Non-Physical Demands

|   | Never                    | Rarely                   | Occasionally                        | Frequently                          | Constantly                          |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Time Pressure                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Emergency Situations                          | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Frequent Change of Task                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Irregular Schedule/Overtime                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Performing Multiple Tasks Simultaneously      | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Working Closely with Others as Part of a Team | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Tedious or Exacting Work                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Noisy/Distracting Environment                 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

**Other:** Click or tap here to enter text.

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## Employee Statement of Understanding

THIS JOB DESCRIPTION DOES NOT CONSTITUTE AN EMPLOYEE AGREEMENT BETWEEN NEW BRAUNFELS

UTILITIES (NBU) AND THE EMPLOYEE. Nothing in this position description restricts NBU's ability to assign, reassign or eliminate duties and responsibilities of this job at any time.

I HAVE READ AND RECEIVED A COPY OF THIS JOB DESCRIPTION.

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Employee's Signature

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Employee’s Printed Name

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Date