



RESEARCH, EDUCATION, AND ECONOMICS  
Agricultural Research Service  
VACANCY ANNOUNCEMENT

United States Department of Agriculture

**Announcement Type: WAGE GRADE**

- DEMO/Delegated Examining
- Merit Promotion

**Position Title:** High Voltage Electrician

**Series/Grade:** WG-2810-10

**Promotion Potential:** None

**Salary:** \$20.48-\$23.93 per hour

**Type of Appointment:** Permanent, Full-Time

**Location of Position:** Facilities Management & Operations Division, Beltsville Area, Operations & Maintenance, Beltsville, Maryland

**Announcement Number:** ARS-X4E-0282

**Opening Date:** June 14, 2004

**Closing Date:** Open Until Filled (First Cut-Off Date will be June 28, 2004, with subsequent cutoff dates every two week)

**Area of Consideration:** Applications will be accepted from all U.S. citizens

**APPLICATIONS WILL ALSO BE ACCEPTED FROM USDA SURPLUS AND FEDERAL DISPLACED EMPLOYEES IN THE COMMUTING AREA.**

**DUTIES:** The primary purpose of the position is to perform construction, maintenance, repair, inspection and servicing of overhead and underground electrical distribution lines and high voltage system carrying voltages up to and including 13, 200, some of which are energized requiring the use of hot line tools and equipment. Clears right of way for power lines, lays out line, operates auger to dig pole and anchor holes, sets poles using truck derrick to raise and position the poles, sets cross arms and supports, strings wire, installs transformers, lightning arrestors, insulators, metering equipment, primary fuse cutout, etc. Operates and maintains truck with insulated hydraulic aerial basket. Installs single phase and three phase meters on primary lines. Installs and maintains high voltage transformers in transformer vaults. Troubleshoots and tests for causes of trouble in power circuits, switchboards, panels, etc.

**PHYSICAL REQUIREMENTS:** Moderate to heavy physical effort is required in climbing poles, towers, etc. Must work in awkward positions and in hard to reach or cramped places. Is required to lift heavy objects and equipment.

**WORKING CONDITIONS:** Much of the work is outside in all types of weather including storm conditions to make emergency repairs. Is subject to the possibility of fatal shock when working on high voltage energized lines. Is subject to cuts, bruises, falls from poles, etc.

**OTHER CONSIDERATIONS:** As a condition of employment, the incumbent must be available for on-call duty outside normal duty hours, in accordance with procedures established for control of such on-call duty. Employee will be required to carry a pager/cell phone for being contacted during emergencies etc. Employee may be required to work weekends, holidays, or after hours when necessary. Employee may be required to report for duty during emergencies, critical periods, or during times when the Government is closed due to inclement weather.

As part of the regular duties of the position the employee is required to operate government motor vehicles such as but not limited to pickup truck, bucket trucks, crane/pole trucks over 26,000 lb.. GVW in performance of their position. *As a condition of employment, selectee must maintain a valid Commercial Drivers License(CDL) for the class of vehicle they operate.*

**FURTHER CONSIDERATIONS:** This position is part of a work function currently undergoing a competitive sourcing study. Competitive sourcing studies generally take from 12 -18 months. At the end of this time, a decision is made about whether the function will continue to be performed by federal employees or will be contracted out.

**QUALIFICATIONS:** Applicants must have experience and/or training of sufficient scope and quality to perform the duties required. Applicants will be rated in accordance with their knowledge and skill in the job elements listed below:

1. Ability to do the work of a High Voltage Electrician without more than normal supervision (**SCREEN-OUT ELEMENT**)
2. Knowledge of electrical equipment
3. Theory and instruments used in high voltage electrical practices
4. Technical practices (theoretical, precise, artistic)

5. Ability to use electrical drawings
6. Ability to use and maintain hand tools
7. Troubleshooting

**APPLICANTS WHO DO NOT MEET THE SCREEN-OUT ELEMENT WILL NOT RECEIVE FURTHER CONSIDERATION**

**SUPPLEMENTAL QUESTIONNAIRE:** Applicants will be **required** to complete a supplemental questionnaire. **The questionnaire [X] IS ATTACHED. Applicants who fail to complete and return the questionnaire will NOT receive further consideration for the position.**

**CERTIFICATION/LICENSE REQUIREMENTS:** All applicants **MUST** indicate possession of a **valid State Driver's License, and a valid Commercial Drivers License (CDL)**. Applicants who fail to submit proof of possession will not receive consideration for the position.

**SUPPLEMENTAL QUESTIONNAIRE: Applicants will be required to complete a supplemental questionnaire.** The questionnaire is attached to this vacancy announcement. **Applicants who fail to complete and return the questionnaire will NOT receive further consideration for the position.**

**PHYSICAL EXAMINATION IS REQUIRED**

**APPLICATION INFORMATION**

**HOW TO APPLY:** Send a resume, Curriculum vitae, Optional Application for Federal Employment (OF-612), or SF-171, to the Contact address listed below. The following information is required to evaluate applicant qualifications and to determine if applicants meet legal requirements for Federal employment:

- Announcement number, title, and grade(s)
- Full name, mailing address (including zip code) and day and evening phone numbers (with area code)
- Social security number
- Identify country of citizenship (U.S. citizenship is required)
- Veterans' Preference (If applicable--see "Veterans' Preference" below for required forms and documentation)
- Highest Federal civilian grade held (if applicable)
- Highest education level achieved. Specify:
  - Name, city, state, zip code (if known)
  - Date or expected date (month/year) of completion of degree requirements
  - Type of degree received
  - Graduates of foreign universities must include proof of foreign education equivalency to an accredited U.S. college/university
- Copy of college transcripts or list of college courses (if required under **QUALIFICATIONS** or if applicable to the position).
- Paid and non-paid work experience related to the position. For each work experience identified, include:
  - Job title
  - Series/grade (if Federal employment)
  - Duties and accomplishments
  - Employer's name and address
  - Supervisor's name and address
  - Starting and ending dates
  - Hours per week
  - Salary
  - Indicate if we may contact current supervisor/employer
- Job-related:
  - Training courses (title and year)
  - Skills (e.g., other languages, typing speed, computer software/hardware, tools, etc.)
  - Certificates/licenses (current)
  - Honors, awards, and special accomplishments
- Supplemental employee questionnaire

**OTHER IMPORTANT INFORMATION:**

**-All status candidates who wish to be considered under both alternative merit promotion and non-status competitive examining must submit two (2) complete applications. When only one (1) application is received it will be considered under the alternative merit promotion procedures if the applicant is a current or former Federal employee with reinstatement eligibility.**

-This position is being filled in accordance with the Alternative Merit Promotion system. All merit promotion principles remain in effect.

- **Relocation Expenses:** Relocation expenses will be paid in accordance with P&P 412.5 Recruitment and Retention Incentives and Other Special Pay, Sections 6 and 7, which may be found at [www.afm.ars.usda.gov/divisions/hrd/hrdhomepage/empopp.htm](http://www.afm.ars.usda.gov/divisions/hrd/hrdhomepage/empopp.htm) and click on Policy on Payment of Relocation Expenses under General Information.

- **USDA surplus/Federal displaced employees must** submit documentary evidence of eligibility. Well qualified surplus and displaced employees within the local commuting area will receive selection priority as provided by OPM regulations. Applicants **must** submit the following:
  - a copy of their RIF Separation Notice (for displaced employees) OR Certification of Expected Separation or other documentation identifying you as surplus;
  - evidence of full performance level of current position;
  - a copy of their most recent performance appraisal; and
  - a copy of their most recent SF-50, Notification of Personnel Action, to verify reassignment eligibility.
- Current Federal employees **must** submit their most recent performance appraisal.
- Current Federal employees and reinstatement eligibles should submit an SF-50, Notification of Personnel Action, to verify competitive eligibility.
- Male applicants over age 18 who were born after December 31, 1959, must have registered with the Selective Service System (or have an exemption) to be eligible for a Federal job.
- Applicants will not be notified of the status of their application until a final selection has been made.
- **If applications do not contain all of the requested information, applicants may lose consideration for the job.**
- **If applicants make a false statement in any part of their application, they may not be hired; may be fired after they begin work; or may be fined or jailed.**
- Applications submitted via Government envelopes, will not be accepted.

**- APPLICATIONS MUST BE POSTMARKED BY THE CLOSING DATE OF THE ANNOUNCEMENT.**

**SPECIAL HIRING AUTHORITIES:** If you meet the basic eligibility requirements and you are eligible for a noncompetitive appointment (a list of who may be eligible for noncompetitive appointments can be found at [www.usajobs.opm.gov/a2.htm](http://www.usajobs.opm.gov/a2.htm), please indicate the type of special appointment you are seeking on your application and follow all other instructions in this announcement. If you do not indicate the type of special appointment you are seeking, you will be considered under competitive procedures. If you wish to be considered under both noncompetitive and competitive procedures, please submit two (2) complete applications.

**VETERANS' PREFERENCE:** If applicants served on active duty in the United States military and were separated under honorable conditions, they may be eligible for veterans' preference. To claim 5-point veterans' preference, you must attach a copy of your DD-214, Certificate of Release or Discharge from Active Duty, or other proof of eligibility. To claim 10-point veterans' preference, attach an SF-15, Application for 10-Point Veterans Preference, plus the documentation required by that form. For further details, call the U.S. Office of Personnel Management (OPM) at 478-757-3000 or TDD 478-744-2299. Select "Federal Employment Policies and Procedures" then Veterans Preference and Special Hiring Authorities for Veterans."

**EEO STATEMENT:** The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice or TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202)720-5964 (voice or TDD). **USDA is an equal opportunity provider and employer.**

**ACCOMMODATION:** This agency provides reasonable accommodations to applicants with disabilities where appropriate. If you need a reasonable accommodation for any part of the application and hiring process or have questions/concerns regarding reasonable accommodation and/or accessibility for any part of the application and hiring process, please contact Sue Dixon, ARS, Civil Rights Staff, 202-690-0372, DC Relay Service: 202-855-1234 (TDD), or email: [sdixon@ars.usda.gov](mailto:sdixon@ars.usda.gov). The decision on granting reasonable accommodation will be on a case-by-case basis.

**CONTACT:**

**For a copy of this vacancy announcement and/or application forms, call 301-504-1482.**

**For specific questions regarding this vacancy call:** Susan Mooring on 301-504-1360

Submit applications to:  
 USDA, Agricultural Research Service  
 Human Resources Division  
 ATTN: ARS-X4E-0282  
 Susan Mooring  
 5601 Sunnyside Avenue  
 Beltsville, MD 20705-5104

FAX applications to: 301-504-1535

E-MAIL applications to: [scirecruit@ars.usda.gov](mailto:scirecruit@ars.usda.gov)

For employment information and current job opportunities: **INTERNET ADDRESS:** [www.ars.usda.gov](http://www.ars.usda.gov)  
**DIAL-A-VACANCY:** 301-504-1482  
**DC RELAY SERVICE:** 202-855-1234 (TDD)

**SUPPLEMENTAL QUESTIONNAIRE for  
 High Voltage Electrician (Required as part of Job Application)**

**Answers may be written on this form or on separate sheets of plain or lined paper.**

**ELEMENT 1 : ABILITY TO DO THE WORK OF A HIGH VOLTAGE ELECTRICIAN WITHOUT MORE THAN NORMAL SUPERVISION.( SCREEN-OUT ELEMENT)**

1. Describe your experience performing electrical installation, testing, repair and maintenance above 600 volts.

2. Indicate on the blank line the answer that best describes your level of independence for each task listed.

**The answers are defined as follows:**

- A. Able to perform task under close supervision
- B. Able to perform task under general supervision
- C. Able to perform task independently, only needing assistance for unusual problems
- D. Able to perform task independently
- E. Able to provide instruction and guidance to others
- F. None

Troubleshoot

Plan, layout, and place distribution panels, circuit breakers, relays, conduit, fixtures, and distribution lines.

Plan, layout and install substation equipment and controls

Adjusting and repairing remotely controlled switchgear

Calculate voltage, voltage drop and current capability in series and parallel circuits.

Determine types, sizes, and gauges of conduit, wiring, couplings, relays, and controls.

Replace and adjust mechanical contacts

Construct and install rigid conduits

Make emergency cutouts and substitutions of power lines and equipment

String and hoist wires to cross arms

Check the statement which best applies to you. Check only one answer:

Plan and layout electrical systems from building plans, blueprints, and schematics.

Plan and layout less complex repair work from work orders or sketches.

Check design and layout sketches of others.

**ELEMENT 2-B: KNOWLEDGE OF ELECTRICAL EQUIPMENT (HIGH VOLTAGE)**

1. Use the answer key below to Indicate on the blank line your level of independence performing the following task. **THEN** Circle the answer that best describes your experience. (Choose all that apply.)

**The answers are defined as follows:**

- A. Able to perform installation, modification, maintenance and repair under close supervision
- B. Able to perform installation, modification, maintenance and repair under general supervision
- C. Able to perform installation, modification, maintenance and repair, only needing assistance for unusual problems
- D. Able to perform installation, modification, maintenance and repair independently
- E. Able to provide installation, modification, maintenance and repair instruction and guidance to others
- F. None

<input type="checkbox"/> Electric power control equipment	Install	Repair	Replace	Modify	None
<input type="checkbox"/> Transformers	Install	Repair	Replace	Modify	None
<input type="checkbox"/> Converters	Install	Repair	Replace	Modify	None
<input type="checkbox"/> Regulators	Install	Repair	Replace	Modify	None
<input type="checkbox"/> Cables	Install	Repair	Replace	Modify	None
<input type="checkbox"/> Circuit breakers	Install	Repair	Replace	Modify	None
<input type="checkbox"/> Switches	Install	Repair	Replace	Modify	None
<input type="checkbox"/> Power distribution lines and circuits.	Install	Repair	Replace	Modify	None
<input type="checkbox"/> Industrial multi phase systems.	Install	Repair	Replace	Modify	None
<input type="checkbox"/> Electrical intrusion alarm	Install	Repair	Replace	Modify	None
<input type="checkbox"/> Fire alarm systems.	Install	Repair	Replace	Modify	None
<input type="checkbox"/> Automotive wiring	Install	Repair	Replace	Modify	None
<input type="checkbox"/> Lightning arrester	Install	Repair	Replace	Modify	None
<input type="checkbox"/> Metering equipment	Install	Repair	Replace	Modify	None

2. Describe your experience performing a difficult electrical installation, repair and/or replacement.

**ELEMENT 25D: THEORY AND TESTING INSTRUMENTS USED IN HIGH VOLTAGE ELECTRICAL PRACTICES**

1. Give an example of work you performed laying out, setting up and performing a job dependant on your knowledge of electrical and/or electronic theory and instruments. Describe the objective, your role and independence, obstacles (if any) and the end result.

2. Choose the number that best describes your knowledge of each of the following electrical theories.

- 1. No knowledge
- 2. Some knowledge
- 3. Able to train others.

- Current
- Voltage
- Resistance
- Ohm's Law

- Magnetism
- Alternating Current
- Power factor
- Line loading
- Dielectric properties
- Conductive properties
- National Electrical Safety Code

3. Choose the number that best describes your experience using each type of equipment listed below.

- A. Able to use under close supervision
- B. Able to use under general supervision
- C. Able to use independently, only needing assistance for unusual problems
- D. Able to use independently
- E. Able to provide guidance to others
- F. None

- Ammeters
- Electron tubes
- Transistors
- Rectifiers
- Amplifiers
- Test lights
- Ohmmeter
- Ammeter
- Becketts
- Voltmeter
- Frequency meter
- Polarity testers
- Power factor meters
- Voltage testers
- Wattmeters
- Meggers
- Oscillator
- Tone detector
- Multimeters
- Phase rotation meters
- Ground fault interrupter testing equipment

**ELEMENT 25E: TECHNICAL PRACTICES (THEORETICAL, PRECISE, ARTISTIC).**

1. Give examples of work situations which required you to invent new methods to complete a job that could not be done using traditional methods.

2. Give examples of work you have performed that required knowledge and experience in new and up-to-date

trade practices.

3. Give examples of work requiring use of trade math in making computations (e.g., calculations, angles, tapers, and tolerances, etc.).

**ELEMENT 75-J: ABILITY TO USE ELECTRICAL DRAWINGS.**

Using the guide below, choose the number that best describes your level of independence using the following instruction:

1. Not able to read and interpret; unable to use.
2. Able to read and interpret under close supervisory guidance.
3. Able to read and interpret, however may require some assistance.
4. Able to read and interpret on my own, independently, without supervision.

- |   |   |
|---|---|
| <input type="checkbox"/> Blueprints   | <input type="checkbox"/> Electrical components and symbols. |
| <input type="checkbox"/> Building codes   | <input type="checkbox"/> Simple circuit diagrams.           |
| <input type="checkbox"/> Building plans   | <input type="checkbox"/> Work orders                        |
| <input type="checkbox"/> Assembly drawings showing how parts fit together   | <input type="checkbox"/> Schematics and block diagrams      |
| <input type="checkbox"/> Drawings with different trade symbols  | <input type="checkbox"/> Wiring diagrams                    |
| <input type="checkbox"/> Engineering drawings   | <input type="checkbox"/> Technical Manuals                  |
| <input type="checkbox"/> Circuit diagrams for internal and external connections of complicated electrical equipment | <input type="checkbox"/> Manufacturers' specs               |

Check the response that describes your work situations:

- Under close supervision, follows specific instructions.
- Follows work orders and works from sketches or basic blueprints which are complete in terms of materials and methods used.
- Interprets complex instructions, sketches, blueprints, diagrams, and/or building codes.
- Uses judgment and experience to adapt specifications.
- Responds to frequent, new or changed instructions or specifications.
- Provides guidance and instruction to others on the full range of specifications.

**ELEMENT 81-B: ABILITY TO USE AND MAINTAIN HAND TOOLS (ELECTRICAL WORK).**

1. List the most complex tools and equipment which you use and maintain.

Check the following tools you have used:

- Cable pullers
- Conduit benders
- Drills
- Frequency meters
- Hydraulic benders
- Pipe threading machines
- Resistance bridges
- Soldering irons
- Screwdrivers
- Strippers
- Wirecutters
- Wire tongs
- Insulated tension links
- Tie sticks
- Other tools (please list)

Referring to the above tools, check any of the following with which you have had experience:

- Adjusting tools
- Calibrating tools
- Repairing tools
- Sharpening tools

2. Check the applicable statement.

- Instructs others in the use and maintenance of tools and equipment.
- Uses and maintains common tools and equipment on own judgement and initiative.
- Uses common tools and equipment under close supervision.

**ELEMENT 96-A: TROUBLESHOOTING (ELECTRICAL)**



- Check ground wire connections and cables for cracks, breaks, corrosion and punctures
- Test insulating oil from transformers and oil switches for breakdown and contamination
- Locate defects in cables
- Determine when operations limitations of equipment are exceeded
- Splice wires
- Scrape wires clean
- Form and seal various types of cable joints such as, straight, bridge, cap sleeve, vertical, disc, or knuckle joints.
- Troubleshoot and replace circuit boards in the controls of equipment

Check the types of experience you have had in resolving problems.

- Locate and resolve simple problems or malfunctions through sound or appearance.
- Locate problems or malfunctions through detailed inspection, advanced circuit testing or diagnostics, and using testing instruments, resolve problems and malfunctions with the help of other journeyman.
- Locate problems or malfunctions through detailed inspection, advanced circuit testing or diagnostics, and using testing instruments, resolve problems and malfunctions by oneself.
- Locate and diagnose difficult problems or malfunctions requiring specialized knowledge.
- Provide consultation to other workers in resolving difficult problems or malfunctions.

I certify that, to the best of my knowledge and belief, all of the above information on this Supplemental Questionnaire is true, correct, complete, and made in good faith.

Signature of Applicant

Date

I certify that, I possess a valid State-issued, Motor vehicle operator's license (Driver's License).

Signature of Applicant

Date

I certify that, I possess a valid Commercial Driver's License

Signature of Applicant

Date