



**BONNEVILLE POWER ADMINISTRATION  
NON-COMPETITIVE REASSIGNMENT OPPORTUNITY  
INTEREST ANNOUNCEMENT 24-TORS-001**

**Electrical Engineer**

*For Classified position J08337 GS-0850-13*

*Pay Range: \$126,883-153,442*

*Full Performance Level: GS-13*

*This is a full-time, permanent position*

*Number of Vacancies: #1*

**OPENS: 8/28/2024**

**CLOSES: 9/06/2024**

**POSITION LOCATION:** Transmission Real Time Study Desk (TORS), Vancouver, WA

**WHO MAY APPLY:** Bonneville Power Administration employees currently at GS-13 are encouraged to apply.

**NOTES:** Selection from this announcement is subject to the requirements of applicable personnel regulations, policies, and BPA HR Directives. There is no promotion associated with this interest announcement (i.e., employee will retain their current rate of pay).

*Occasional travel is required to alternate control center. Additionally, this position requires covering rotating 12-hour shifts (either day or night, on holidays, weekends, etc) as needed by the group and to keep skills proficient. This position requires a current NERC Certificate to cover shifts. The primary work hours will be within core hours.*

**GENERAL INFORMATION:** The incumbent will report to *Supervisory Electrical Engineer*.

This position is located in Real Time Study Desk (TORS) organization of Real Time Operations (TOR), Transmission System Operations (TO), Transmission Services (T), Bonneville Power Administration.

The purpose of the position is to serve as a technical lead responsible for supporting and maintaining functional requirements, processes, and procedures for Real Time Assessment Tools and Day Ahead to Day +3 study tools and to represent Real-Time Study Engineer interests on BPA projects, and on occasion perform real-time, current day, and next day Operations Studies/Analysis. One Real Time Study Engineer is on shift at all times in 12 hour rotating shifts to provide advice based on this analysis to BPA dispatchers during real time conditions. This position may be called upon to assist in covering shifts during times of need but will primarily be working during core business hours.

**MAJOR DUTIES:**

Provides technical support to engineering and technical personnel by performing studies and tests of substantial variety; also evaluates and presents results necessary to control the proper analysis and integrity of engineering projects. Tasks may include but not limited to assisting project managers and other electrical engineering personnel in the engineering, design, and implementation responsibility for assigned projects, and other related engineering activities. On occasion will be asked to perform real-time, current-day, and next-day studies of power system conditions, and provide advice based on this analysis to BPA Dispatchers during real-time conditions.

**40%** Independently perform acceptance testing of various software applications used in real-time and next-day analysis timeframe. This duty requires knowledge of power flow modeling, requirements documentation

technique, and the ability to interpret various software results to engineering specifications. Prepare technical reports to document findings, such as the results of testing and validation, analysis of real-time data, periodic performance metrics, and procedures.

Provides support in the development of and maintains procedures for Dispatcher utilization of Real-Time Assessment tools including, but not limited to, RTCA, STNET, and PSST, and other voltage and transient stability tools.

Provides technical support in the development of and training in the use of Real-Time Assessment tools to BPA staff assigned to assist in producing safe and reliable operating limits.

Plans and conducts assessments of Real-time Assessment tools utilization and effectiveness.

Coordinates and participates with Transmission Technology and Information Technology staff to review, evaluate, and implement Real-time Assessment tools requirements, processes, and procedures.

Conducts electrical engineering testing and evaluation. Evaluates the operational quality of the BPA state estimator solution to ensure solutions are reasonably accurate for use with downstream applications. Recalibrates or adjusts the estimator as needed to ensure accurate solutions. Evaluates the quality of the BPA real-time contingency analysis results to ensure results provide actionable information.

Serves as a technical electrical engineering specialist in the test, checkout, and readiness of systems or equipment that involve new concepts and new and varied problems to be solved. Determines readiness of study tools for use in the real-time study of the electrical system. Examines and approves new system model releases prior to operational use. Works with other technical groups within BPA to integrate new real-time analysis applications into real-time decision processes. Identifies model and application quality issues and works with appropriate technical groups to resolve. Develops, tests, and validates Power System Analysis tools used in the real-time environment. Collaborates with WECC and other entities as a member of a regional group to develop specifications for new tools.

**20%** Conducts engineering studies for electrical power systems. Observes system conditions in a real-time simulator environment to analyze current-day and next-day operations under normal or emergency conditions. Performs contingency, voltage stability, and transient stability analysis to inform and support BPA Dispatcher operations. Reviews and validates unusual real-time contingency analysis results, such as unsolved contingencies, excessive limit exceedances, or islanding contingencies. Uses existing power flow models or develops new algorithms to test system performance and determines whether systems anomalies are the result of an actual problem or faulty data models. Contacts other utilities to investigate systems performance and verify data.

Uses power flow tools to test whether losing various system elements could cause reliability compliance violations. Validates analysis and findings, develops mitigation actions or other operational procedures, and provides advice to system dispatchers and Reliability Coordinators based on engineering interpretation of study results. Tests mitigation alternatives in system simulator to determine if they work and ensure plans are viable. Informs and coordinates study results with the Reliability Coordinator, adjacent TOP operational engineering staff, BPA Dispatchers, internal working groups, and others as appropriate.

Serves as an advisor to BPA Dispatchers during real-time conditions. Analyzes and interprets real-time, current-day, and next-day analysis results; makes decisions based on limited information and provides actionable information based on knowledge of existing operating instructions, study results, and expert judgment. Provides real-time guidance to BPA Dispatch on system operating limits and actions necessary to ensure reliable operation of the FCRTS following unplanned events.

Consults with management and planning personnel in preparing requirements and criteria for complex or high value projects for development or modification of operating instructions, mitigation procedures, operating limits, outage coordination, and other control center systems. Provides guidance and technical advice to staff within the organization in the performance of related assignments and is available to those employees for consultation on assigned projects. Develops operating instructions, operational guidance/ processes, and training modules to support BPA Dispatch and BPA Technical Operations.

**20%** Designs or directs the development of unique or leading-edge technology for the study of the Electrical Power System. Works with other engineering groups and serves as subject-matter expert to develop improved tools to support real-time analysis capability. Develops algorithms and specifications for technology innovation projects that are ultimately contracted out to a vendor for implementation.

Plans and coordinates assignments with other agencies and utilities participating in a regional forum to ensure full integration of technical and operational requirements.

Provides training to new real-time study engineers. Coordinates training for new team members. Creates documents necessary for training. Provides on-the-job training when required.

**20%** Acts as a subject matter expert in compliance assessment and certification. Provides expert consultation on issues pertaining to the electrical engineering aspects of regulated activities and participates in system event investigations and compliance reporting. Organizes and prepares case summaries and recommendations for review. Determines if the relevant compliance standards have been adhered to. Assists in preparing event analysis summaries or mitigation reports for events on the electrical system. Perform development and maintenance of SharePoint document libraries and reference sites used by TORS.

Prepares reports to regulatory agencies investigating system events. Prepares and implements mitigation plan actions should violations of NERC Standards occur.

Assist BPA Management in observation, formulating and applying analysis techniques, and tracking performance metrics related to real-time analysis (such as comparing actual to predicted performance) and next-day analysis (such as evaluating accuracy of forecast data and future hour power flow cases).

Performs other duties as assigned.

#### **QUALIFICATIONS REQUIREMENTS:**

- Employee must have held the grade of this position on a permanent basis. If this position has promotion potential, the employee must have either held the grade of the full performance level on a permanent basis or held a position on a permanent basis that had promotion potential to the full performance level.
- Specialized Experience: Employees must have at least one year of specialized experience at the next lower grade level in the Federal service.

#### **Knowledge, Skills and Abilities (KSA):**

- Knowledge of electrical engineering principals, mathematical modeling and practices sufficient to perform advanced current-day/next-day studies and real-time contingency analysis of transmission operations.
- Ability to perform advanced studies and analysis of data using a variety of software applications.
- Skill identifying and analyzing complex problems sufficient to develop innovative options and recommendations to improve reliability and system awareness.
- Ability to communicate effectively, both orally and in writing, through reports, correspondence, briefings, presentations, and other media in order to influence, persuade, or motivate others to obtain the desired effect.
- Ability to establish and maintain effective working relationships to influence, persuade, or motivate individuals or groups.

#### **Other Significant Facts Pertaining to This Position Are:**

1. Can be called upon to perform work seven days per week, 365 days a year, in 12 Hour Rotating Shifts.

2. The incumbent is required to obtain NERC System Operator certification by the end of the initial training period. Maintaining NERC certification is a requirement of this position.
3. Continuing training at the Vancouver, WA, site will be required each subsequent year to maintain qualifications and meet regulatory compliance requirements. Travel is required for 2-5 days on a quarterly basis.
4. The position is identified as a BPA Transmission Function employee under the FERC SOC non-discrimination rules and is required to complete BPA's mandatory Standards of Conduct (SOC) training.
5. The position is identified as one of the DOE Mission Essential Functions (MEFs) responsible for providing continued operation of a safe and reliable transmission system under altered or degraded operating conditions. During an event, the incumbent is required to report to a remotely located facility when the primary duty station is not available. As a designated MEF the incumbent must provide accurate and up-to-date contact information and must sign the Emergency Relocation Group (ERG) memorandum acknowledging the designation as an ERG member.
6. Work is performed in a time sensitive environment. The position requires the ability to multitask, perform analytical work quickly, and make quick decisions. Violations of national standards may result in financial penalties to BPA. This work environment may be stressful at times.
7. Upon classification of this PD, it has determined that this position meets the definition of the SSR for generation and/or transmission of electrical power.

**HOW TO APPLY:** Complete a brief memorandum of interest giving a description of your relevant experience and reasons for applying for this reassignment. Submit your memorandum, along with the completed supervisory acknowledgment statement below by close of business on (*closing date*) to: **dakleinschmidt@bpa.gov**. Do NOT submit a resume.

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***SUPERVISOR'S ACKNOWLEDGEMENT***

**INTEREST ANNOUNCEMENT (24-TORS-001)**

I acknowledge that \_\_\_\_\_ has requested consideration for this position. I understand this assignment is a permanent reassignment.

I am willing to consider approving the reassignment.

Supervisor's Signature \_\_\_\_\_ Date: \_\_\_\_\_

Supervisor's Title: \_\_\_\_\_ Routing: \_\_\_\_\_