

Opportunity Title: ORNL Technical Project Engineer-Federal Energy Management

Post-Bachelor's Research Associate

Opportunity Reference Code: ORNL20-11-ETSD

Organization Oak Ridge National Laboratory (ORNL)

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Description Oak Ridge National Laboratory (ORNL) is the largest U.S. Department of Energy (DOE) science and energy laboratory, conducting basic and applied research to deliver transformative solutions to compelling problems in energy, environment, and security.

> The Energy Efficiency Research and Analysis (EERA) Group in the Building Technologies Research and Integration Center (BTRIC) in the Energy and Transportation Science Division (ETSD) at ORNL is seeking applicants for a technical research position including applied research and development projects, financial analysis, and training in the area of Energy Savings Performance Contracting (ESPC) and Utility Energy Service Contracts (UESCs) for commercial buildings. This position will join ORNL's team that is operating in support of DOE's Federal Energy Management Program (FEMP). FEMP facilitates the federal government's implementation of sound, cost-effective energy management and investment practices to enhance the nation's energy security and environmental stewardship. This position would be a part of ORNL's team to facilitate performance contracting project development for federal agency customers with multimillion-dollar ESPC and other alternatively financed projects. This position is located in Oak Ridge, TN.

> The EERA Group works to optimize the energy performance of buildings and industrial facilities through applied research, technical assistance, and technology deployment. The team's comprehensive knowledge of buildings and energy use spans multi-building sites, whole-building systems, system components, and building equipment.

This opportunity is available through the ORNL Post-Master's Research Associate Program, an employee-based workforce development program designed to create a pipeline of STEM talent for DOE and the U.S. workforce by engaging recent graduates in work-based research and training experiences at ORNL. The selected candidate will receive a mentored experience with expected learning outcomes, while engaged in meeting work objectives that support ORNL's mission.

Major Duties and Responsibilities:

- · Conduct statistical analysis, research, and evaluations on the performance of individual ESPC projects by reviewing all financial aspects of project proposals such as project financing, costs for individual energy conservation measure, savings, and utility rates.
- Evaluate and analyze the performance of ESPC programs for the overall program and trends within the program.
- Use data from previously awarded ESPC and UESC projects to assess proposed costs of energy conservation measures in new projects.
- · Develop methods of assessing ESPC and UESC financing offers and methods of reducing financing costs.
- · Support sponsors on the measures necessary for program and project



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improvement.

- Develop and provide customized training for community, institutional, federal, and other public sector customers.
- · Provide specialized technical assistance for community, institutional, federal, and other public sector customers.
- Collaborate with program managers on new program development opportunities within the area of applied research pertaining to implementing ECMs and energy project financing.
- Present research and analysis results to Laboratory staff, sponsors, industry, and academia in the form of invited talks, high-impact reports, conference papers, or journal papers.
- · Work may include writing technical reports, conference papers, or journal papers to summarize the results of technical assistance activities and contributing to periodic progress reports for sponsors.
- · Candidate will support projects, collaborate with research staff and partner organizations on future research initiatives, network with related organizations, interact with existing sponsors in pursuit of additional research funding, and prepare proposals and present results to sponsors, peer reviewers, and others.
- Provide technical support and data analysis to federal agencies on alternative financing and procurement approaches to facilitate energy efficiency, renewable energy, resiliency, and water conservation projects at federal facilities.
- Provide technical project management for the development of multimillion-dollar alternatively financed energy efficiency.

Qualifications Candidates should have completed a bachelor's degree in mechanical engineering, industrial engineering, engineering management, or related discipline with at least one to two years of experience with building energy efficiency management and projects.

Preferred Skills:

- · Proficiency with the use of Excel and/or other tools in engineering data reduction and analysis is essential.
- Knowledge of building science, energy savings performance contracts, utility energy service contracts, heating and cooling technologies, and mechanical systems and controls is desired.
- · Ability to work creatively and cooperatively as a member of an interdisciplinary research team.
- · Excellent verbal and written communication skills to support regular interactions with Laboratory staff, sponsors, industry, and academia and to prepare reports, proposals, publications, and journal articles is required.
- Demonstrate strong interpersonal and communication skills to support team building, partnering, and leadership.
- · Willing to travel. You will be involved in meetings with DOE sponsors in Washington, D.C. and will attend key conferences and workshops. Travel will be periodically required to visit federal facilities. Travel is estimated at five to ten times per year.

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- Familiarity with performance contracting (ESPC/UESC).
- Experience with mechanical engineering modeling and analysis tools is desirable.
- Familiarity with numerical calculation and statistical data analysis techniques is desired.

Living in East Tennessee: While the opportunity to work at ORNL is an amazing experience in itself, it's easy to overlook everything else East Tennessee has to offer if you haven't had the opportunity to spend time here. From spending your weekends downtown at Knoxville's farmers market, the Rhythm n' Blooms Music Festival, or the Dogwood Arts Festival, to some of the best hiking, kayaking, and camping in the U.S., East Tennessee has something to offer everyone.

The ORNL Post-Bachelor's Research Associate Program is administered by Oak Ridge Associated Universities through its contract with DOE to manage the Oak Ridge Institute for Science and Education (ORISE).

Eligibility Requirements

- **Degree:** Bachelor's Degree received within the last 36 month(s).
- Discipline(s):
 - ∘ Engineering (6 ●)
- Age: Must be 18 years of age

ORAU is an Equal Opportunity Employer (**EOE AA M/F/Vet/Disability**); visit the <u>ORAU website</u> for required employment notices.

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