Job Opening: Electrical Engineer in Microgrids and Distributed Energy

Open until filled. First review deadline is on Tuesday, May 27, 2025 at 9 am (Pacific).

The Schatz Energy Research Center at Cal Poly Humboldt is seeking an experienced electrical engineer to join our microgrid deployment team. The Schatz Center is a leader in microgrid innovation, including behind-the-meter, front-of-the-meter, and networked microgrid systems. We work in close collaboration with state and local agencies, Tribal Nations, and utility partners to develop strong projects that advance grid decarbonization, rural reliability and energy resilience, and Tribal energy sovereignty.

We are looking for an electrical engineer to support our growing portfolio of work related to clean energy microgrids and distributed energy. These technologies are critical to enable a broad transition to renewable and clean energy systems. The chosen applicant will work with our experienced electrical and controls engineering staff to develop innovative microgrid projects with multiple indigenous Tribes in Northern California.

This position is expected to start in July 2025, and is based at the Schatz Center in Arcata, CA. The exact start date is negotiable. Our team members have the flexibility to either work onsite full-time or alternate between remote work and onsite work, with a minimum of 40% of their time spent at the Schatz Center. During the initial onboarding period, the selected candidate could telecommute, but ultimately will need to live within commuting distance of the Schatz Center. Applications are welcome from all who are legally eligible to work in the U.S.

Who we are and what we do

Since 1989, the Schatz Center has been a leader in applied research and project development for clean and renewable energy. Our current portfolio includes microgrid development, sustainable transportation design, carbon life cycle analysis, solar product testing, offshore wind feasibility studies, and planning and policy for clean energy access around the globe.

We are located on the campus of Cal Poly Humboldt in Arcata, California. Arcata's 800-acre community forest and 11 miles of trails through the heart of the redwoods begin just one block away, and we are within biking distance of California's second largest inland bay and the Pacific Ocean.

As residents of a rural coastal community, we are keenly aware of our social and environmental responsibilities. We are committed to increasing energy access and resilience for communities worldwide — and do so through clean and renewable design that reduces climate change and restores environmental and human health.

Our organizational commitments

Our Vision

The Schatz Center envisions a healthy planet with thriving, equitable, resilient communities powered by clean energy.

Our Purpose

Our team is committed to addressing climate change and improving human and ecosystem health through work that supports clean energy, climate-resilience, equity, and justice. Our work includes:

- **Research and Development** – we do applied research focused on energy and environmental issues.
- **Technology Deployment** – we design, integrate, build, test, and operate innovative, renewable, and resilient energy systems that are responsive to social and environmental needs.
- **Collaboration** – we work with public and private partners including Tribal Nations, communities, agencies, academic institutions, foundations, and industry to exchange knowledge and implement innovative solutions locally and internationally.
- **Education and Training** – we support learning that provides practical, hands-on experience for current and future practitioners and leaders.

Our Values

We value:

- **Kindness**: Treating people and the planet with care and respect through acts of inclusion, helpfulness, generosity, and encouragement.

- **Integrity**: Approaching one another and our interdisciplinary research with curiosity, open-mindedness, transparency, and humility.
- **Equity, Diversity, and Inclusion**: Providing a nourishing and rewarding environment for Center staff, students, and partners. Respecting the differences of our colleagues and actively seeking to identify and remove barriers to ensure opportunities to thrive.
- **Justice**: Working to advance racial justice, gender equality and women's empowerment, LGBTQIA+ rights, economic equality, and environmental justice.
- **Teamwork and Collaboration**: Supporting internal and external community building and engagement to create inclusive and innovative solutions. Sharing knowledge with and learning from our colleagues, collaborators, community partners, and the public to advance understanding.
- **Effectiveness**: Using our technical, scientific, and policy expertise to do good work that makes a difference.

Job summary

As an electrical engineer at the Schatz Center, the successful applicant will help develop innovative projects that aim to decarbonize the electricity grid and provide resiliency benefits to communities. Once hired, engineers are responsible for contributing to and completing work across several projects simultaneously.

The successful applicant will report directly to a Principal Engineer and have the opportunity to work across both the electrical and controls engineering teams. Their role will also involve working with faculty, professional staff, and undergraduate and graduate students who are committed to understanding, deploying, and improving these emerging technology systems.

After onboarding and initial training activities, engineers work with a Principal Engineer, lead electrical engineer, and/or lead controls engineer and others to finalize the list of projects they will work on. Then a series of hand-off and orientation meetings will be organized to transfer engineering duties to them.

On a daily basis, the successful applicant will perform engineering and analytical work in collaboration with project teams in support of project execution. They contribute toward meeting project objectives and deadlines, and support project managers in keeping projects on time and within budget. As an electrical engineer, they also may supervise, coach, and/or mentor one or more early career-level staff or student research assistants.

The electrical engineer may represent our microgrid work at conferences, meetings, and other external events, and could potentially participate in networking and fundraising activities. They

may also contribute to the development of new ideas and processes that enhance organizational efficiency, promote an equitable, diverse, inclusive, and accessible workplace culture, support work-life balance as a core value, and help advance our vision, purpose, and values.

Engineers with appropriate qualifications and/or interest to gain the necessary knowledge and experience may have the option of joining the Schatz Center's on-call support team for microgrid operation and maintenance. Additionally, engineers at the Schatz Center have the potential to develop into a technical lead role, involving strategic leadership within a research area and development of a portfolio of related projects.

Core Functions:

- Research/Electrical Engineer (80%)
    - Perform electrical engineering following industry standard practices with an appropriate standard of care
        - Note: these activities will be executed under the responsible charge of a licensed engineer or, if the successful applicant is a licensed engineer, in collaboration with other licensed engineers.
    - Participate in a collaborative design process
    - Collaborate with clients, partners, and subcontractors
    - Identify problems and work with others to create and implement solutions
    - Participate in documentation and training for microgrid owner/operators
    - Support microgrid project development and proposal submission activities
    - Produce and review electrical plans, specifications, submittals, shop drawings, and associated calculations, studies, and cost estimates
    - Perform load management analysis
    - Provide construction support/management services
- Other Duties as Assigned (20%)
    - Attend/facilitate project/committee/team meetings
    - Support project reporting and deliverables activities
    - Participate in Center training, meetings, committees (as applicable), and other Center organizational processes

Qualifications

Minimum qualifications

Education and experience

Working knowledge of electrical engineering principles, practices, and methods. This qualification can be met by education, training, and/or experience equivalent to a

Bachelor's degree in a relevant Engineering discipline plus at least five years of related professional experience. For equivalency guidance, see our Criteria for Prior Education and Experience.

Knowledge, skills, and abilities

- Proficiency with typical electrical engineering calculations such as wire, conduit, and breaker sizing, and three phase real and reactive power calculations.
- Familiarity with load flow, short circuit coordination, and arc flash concepts.
- Experience designing and/or reviewing designs of electrical systems, including knowledge of evaluation of existing electrical equipment with a view to considering potential modifications.
- Knowledge of and experience with industry codes, standards, laws, ordinances, and regulations
- Knowledge of and experience with industry standard engineering and construction practices, calculations, study methodologies, onsite construction observation and/or management.
- Experience with the development and review of construction plans.
- Experience or familiarity with AutoCAD.
- Commitment to promoting and supporting equity, diversity, and inclusion in the workplace and with external partners.
- Ability to communicate effectively verbally and in writing.
- Ability to establish and maintain effective and cooperative working relationships inside and outside the organization, especially with those that may come from different cultures, environments, and different situations.
- Ability to think creatively and problem solve, as well as support colleagues and partners in problem solving.
- Ability to make progress on tasks working independently upon receipt of clear direction and to organize follow-up opportunities for additional guidance from Senior or Principal Engineers as needed to efficiently complete assigned tasks in a timely manner.
- Experience managing multiple priorities simultaneously, meeting deadlines, and quickly adapting to changing priorities.
- Attention to detail and accuracy, and experience maintaining accurate files and records.
- Proficiency and experience using common office software such as MS Word, MS Excel, MS PowerPoint, Google Spaces, Google Spreadsheets, and Google Docs.

Desirable experience or training

(The following are welcome, but they are not required to be eligible for the position. Please see the important note below.)

- Electrical Engineering License or Engineer-in-Training certification.
- Experience or familiarity with software such as:

    - Power system design and engineering software such as SKM, Etap, Hypersim, PSCAD, PSLF, PSSE, Cyme, or EasyPower.
    - Protection Relay programming, particularly SEL relay logic using Acselerator Quickset or equivalent manufacturer software.
- Experience with or knowledge of SEL Real-Time Automation Controller, CoDeSys, and/or other IEC 61131-3 programming using Acselerator RTAC or equivalent manufacturer software.
- Experience with or knowledge of Control and/or Power Hardware-in-the-loop testing.
- Knowledge of developing pseudocode and/or protection relay logic in flowchart format.
- Knowledge of how to conduct energy system modeling using System Advisor Model or equivalent tool.
- Experience with automation and associated communication protocols and network design.
- Experience with microgrids.

Important note:

This vacancy announcement includes both (a) minimum qualifications as well as (b) desirable experience or training. Research shows that many women and people of color, in particular, feel that they have to have 100% of both required and desired skills and experience before applying for a new job. We want to reiterate that the additional welcome experience and training options listed above *are not required to apply for a position on our team*. If you meet the minimum qualifications, we encourage you to apply.

Compensation and benefits

Compensation and term

This is a full time, benefit-eligible position with a minimum term of one year. Employee continuation is anticipated, contingent on funding, workload, and performance.

The monthly salary is between $6,202 and $8,731, depending on skills and experience. Cost of living adjustments are made annually in July.

Advancement

Advancement in step may occur at a frequency of at least every two years. Step raises outside this interval may also be granted for employee achievements such as professional licensure or completing a graduate degree. Advancement in category is based on criteria including experience, a strong performance record, and an increase in responsibility.

Insurance

Medical, dental, vision, and life insurance are available for employees and dependents.

Paid time off

- 14 holidays per year, including December 25 to January 1
- 6 ⅔ hours of vacation per month
- 8 hours of sick leave per month
- 1 personal day per calendar year

Paid leave is also provided for voting and jury duty, and programs are available for pregnancy, disability, and family medical leave.

Retirement

Beginning at one year of service, employee contributions of 10% of employee gross wages are made to a 403(b) employer-paid retirement investment plan.

Additional benefit information

For additional information on leave accruals, insurance, and other benefits, view the Cal Poly Humboldt Sponsored Programs Personnel Manual at: https://research.humboldt.edu/responsibilities-compliance/research-and-institutional-policies.

Please note that this is not a California State University position.

How to apply

Deadline

The first round of review will be based on materials that have been submitted by **9 am Pacific Time (US) on Tuesday, May 27, 2025**. The position will be open until it is filled.

Materials

Applicants must submit the following via email to schatzenergy@humboldt.edu:

1. A formal letter of application (cover letter), attention: Schatz Center Hiring Committee. In your letter, a) explain why you are interested to work with us in advancing clean energy and b) describe how your background prepares you to be an effective electrical engineer.

2. A resume: A maximum of 3 pages is preferred, however we encourage you to include all relevant and transferable experience and skills you wish us to consider. For guidance, view our Criteria for Prior Education and Experience. Please include timebase (hours per week or month) information for experience and/or training.
3. Contact information for 3 professional references.
4. A Cal Poly Humboldt SPF Employee Information Form for Applicants: https://forms.humboldt.edu/spf-self-identification-form-job-applicants-eif-pre-offer. Fill in **Submission Email/Contact** as follows: Name = Schatz Energy Research Center, Email = schatzenergy@humboldt.edu

Please include in your email how you learned about this vacancy.

Additional materials may be required from candidates invited to interview.

Affirmative action & equal opportunity

The Schatz Center operates under the Cal Poly Humboldt Sponsored Programs Foundation (CPHSPF), an Affirmative Action/Equal Opportunity Employer. We consider qualified applicants for employment without regard to race, religion, color, national origin, ancestry, age, sex, gender, gender identity, gender expression, sexual orientation, genetic information, medical condition, disability, marital status, protected veteran status, or any other legally protected status. More information about SPF's Equal Employment Opportunity hiring can be found at: https://research.humboldt.edu/employment/hiring.

Questions and inquiries

- For assistance with the application process, please submit an Accommodation Request Form, which can be at https://forms.humboldt.edu/spf-accomodation-request-form, or contact the campus ADA Coordinator at (707) 826-3626 or confidential fax at (707) 826-3625. For more information regarding accommodation, you may also visit the Cal Poly Humboldt Campus Disability Resource Center at https://disability.humboldt.edu/. Individuals in need of a telecommunications relay service may contact the California Relay Service at (877) 735-2929 TTY.
- Learn more about our employment opportunities at schatzcenter.org/jobs.
- For additional information, please email schatzenergy@humboldt.edu or call (707) 826-4345.