



PennState

MULTIPLE NEW TENURE TRACK POSITIONS IN INTEGRATED ENERGY SYSTEMS

The Pennsylvania State University is recruiting at least five tenure-track positions in Integrated Energy Systems (IES), as a part of its strategic initiative to further enhance its status as an international leader in energy research and education. These new hires will join the department most relevant to their research and teaching interests, either in the [College of Engineering](#) or the [College of Earth and Mineral Sciences](#). IES faculty will have outstanding opportunities for collaboration through institutes including the [Institutes of Energy and Environment](#) and the [Materials Research Institute](#). IES priority areas identified for this search include:

Renewable, Non-renewable, and Hybrid Energy Systems. We invite applications for candidates with expertise in energy systems, especially those that have a minimal carbon footprint, intrinsically high energy efficiencies, and negligible net water use. We are particularly interested in researchers working on alternative energies that have materials-focused topics, for example in solar energy and conversion technologies using CO₂ as a carbon source and integration of renewable energy technologies with energy storage systems.

Smart Energy Systems. Penn State is internationally recognized as a leader in energy efficiency for the built environment, but there are new opportunities to better integrate building design and energy consumption/production with microgrids, blurring the lines between the distribution network and the load. Additional faculty expertise is needed in on-site distributed energy systems, focusing on energy generation for single building and community-of-buildings levels. Another key area is energy security, with an emphasis on security of modern smart metering and small-scale energy generation technologies, as well as managing risks to the industrial generation and distribution systems and networks.

Impact Mitigation and System Optimization of Energy Generation and Distribution. Energy systems need to minimize freshwater use, reduce carbon emissions, and increase the safety and productive use of non-traditional waters, including produced and flowback waters from oil and gas operations. Of interest are faculty focusing on waste water injection, materials, methods or processes for the treatment and reuse of these waters, as well as monitoring and impact assessment of energy generation and distribution on natural waters. Penn State also seeks to increase the number of “systems-thinking” faculty who will serve as national leaders in topics such as tradeoffs between CO₂ emissions, optimizing transportation systems, and techno-economic evaluation of new energy technologies. Researchers exploring mechanisms of carbon capture, storage, utilization and mineralization are also encouraged to apply.

Applicants must have a PhD in a field related to one of the three IES topics. Appointments will be made at a rank commensurate with experience. Successful applicants will be researchers who can work across disciplines in a team to advance the science and engineering of energy systems. To apply, submit a single pdf file containing: a cover letter indicating at least one preferred home department and the names and addresses of four references; a full curriculum vitae containing a complete list of publications; separate statements of research, teaching interests, and commitment towards diversity and inclusion; and 3 published journal papers. Review of applicants will begin on **November 1, 2019**, and will continue until the positions are filled. Inquiries can be sent to Professor Bruce Logan (blogan@psu.edu), Chair of the Search Committee. **Apply online at <https://psu.jobs/job/90744>**

Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to all qualified applicants without regard to race, color, religion, age, sex, sexual orientation, gender identity, national origin, disability or protected veteran status. Penn State strives to build a welcoming, inclusive, and supportive environment for students,

staff, and faculty. Both the College of Earth and Mineral Sciences and the College of Engineering rely on the expertise, sensitivity and commitment of an inclusive faculty to enhance diversity, seek equity, and create a welcoming environment within our community. We are committed to nurturing a learning and working environment that respects differences in culture, age, gender, race, ethnicity, physical ability, sexual orientation, and religious affiliation. In welcoming every candidate, we strive to meet the needs of professional families by actively assisting with partner-placement needs. To review the Annual Security Report which contains information about crime statistics and other safety and security matters and policies, please go to <https://police.psu.edu/annual-security-reports>, which will also explain how to request a paper copy of the Annual Security Report.