

## Supporting Renewable Energy Research and STEM Education in Rural Appalachian Ohio

This program supports Ohio University graduate students engaged in interdisciplinary, applications-based renewable energy research projects in Appalachian Ohio. Responsibilities of the assistantships include the development of application-based renewable energy research projects that advance the understanding, utilization challenges, and environmental efficiencies gained from solar, bioenergy and biofuels, utilities/transmission, and/or geothermal. These activities are intended to both advance understanding about renewable energy systems and strengthen long-term partnerships between the university and high schools to improve science, technology, engineering, and math (STEM) education. Graduate students will work with area high schools to enhance competency and student enthusiasm for STEM careers in environmental sciences and engineering fields. Funding includes graduate stipends and some research project costs (e.g., equipment, supplies, and travel). Duration of support ranges from one semester to two years (2018–2020), depending on the needs and progress of the student.

The list below provides broad research topics of interest:

1. Ecological benefits and environmental services achieved from implementing 'smart' technology for climate, food, energy, housing, and mobility.
2. Coproduction systems that generate fuel and other bioproducts.
3. Ecological benefits, economic challenges, and policy implications of using anaerobic digestion of waste to generate electricity, heat, and fertilizers.
4. Linkages between community well-being, renewable energy deployment, and environmental quality.
5. Innovative methods to measure and manage energy efficiencies and renewable technology to limit wasteful energy practices.
6. Policy incentives and financing mechanisms for solar photovoltaic (PV) use in residential and business sectors.
7. Methods to identify locations for potential PV installations considering size, costs, energy output, and greenhouse gas reductions.
8. Geology and soil suitability for optimal geothermal production in Ohio.
9. Energy transmission and distribution efficiencies including 'smart' inverters, 'smart' grid, microgrids, resilience, and energy storage.

**Celebrating 10 years of  
Impact and Innovation!**



Voinovich School of  
Leadership and Public Affairs

[OHIO.EDU/VOINOVICHSCHOOL](http://OHIO.EDU/VOINOVICHSCHOOL)

T. 1.877.625.1714 | F. 740.593.4393



Applicants must be full-time, degree-seeking graduate students enrolled in or accepted for admission to an Ohio University graduate program appropriate for studying renewable energy, sustainability, education, or policy. Students must identify a graduate advisor drawn from University faculty and jointly develop a well-conceived research project that involves innovative learning opportunities while also solving real-world problems. Awardees will be selected based on their record of scholarly performance, leadership potential, and the merits of the proposed research project.

Applicants should submit:

- a) A curriculum vitae describing prior coursework and relevant experience.
- b) A 2–3 page statement of research and education interests that includes one or more research project ideas. Applicants should work with their potential graduate advisors to develop specific project ideas.
- c) Copies of transcripts and GRE scores (part of graduate application).
- d) A statement of career goals/research interests (part of graduate application cover letter).
- e) Three letters of recommendation (part of the graduate application).

**Review of applications will begin as early as February 2, 2018.**

For more information on the Master's of Science in Environmental Studies including the online application, see [www.ohio.edu/environmentalstudies](http://www.ohio.edu/environmentalstudies) or contact Environmental Studies Program Director Dr. Geoff Dabelko at [dabelkog@ohio.edu](mailto:dabelkog@ohio.edu). For more information on Renewable Energy Research Assistantships specifically, please contact these faculty and staff members of the Voinovich School of Leadership and Public Affairs (GVS) and College of Arts and Science at Ohio University in Athens, Ohio:

Jennifer Bowman, Director of Environmental Programs

Dr. Sarah Davis, Environmental Studies Faculty

Dr. Derek Kauneckis, Environmental Studies Faculty

Dr. Dina Lopez, Geological Sciences

Dr. Kelly Johnson, Biological Sciences

Dr. Gilbert Michaud, Public Administration Adjunct Faculty

[bowmanj2@ohio.edu](mailto:bowmanj2@ohio.edu)

[daviss6@ohio.edu](mailto:daviss6@ohio.edu)

[kaunecki@ohio.edu](mailto:kaunecki@ohio.edu)

[lopezd@ohio.edu](mailto:lopezd@ohio.edu)

[johnsok3@ohio.edu](mailto:johnsok3@ohio.edu)

[michaudg@ohio.edu](mailto:michaudg@ohio.edu)

This internship is supported by the American Electric Power (AEP) Foundation. The Foundation complements a tradition of corporate philanthropy exhibited by AEP and its regional utilities in support their community relations goal: "To support and play an active, positive role in the communities where we live and work."

**Celebrating 10 years of  
Impact and Innovation!**

**10** OHIO UNIVERSITY  
**VOINOVICH**  
**SCHOOL**  
OF LEADERSHIP AND PUBLIC AFFAIRS



**OHIO**  
UNIVERSITY  
Voinovich School of  
Leadership and Public Affairs

**OHIO.EDU/VOINOVICHSCHOOL**

**T. 1.877.625.1714 | F. 740.593.4393**

