



UNH Sustainability Institute

Sustainability Fellowship **Analyzing the Business Case for New Greenhouse Gas Reduction Strategies at the University of New Hampshire – Durham, NH**

The University of New Hampshire (UNH) has a history of leadership in managing its energy and carbon “footprints.” UNH’s climate action plan, WildCAP, adopted in 2009, targets a goal of a 50% reduction in its total greenhouse gas emissions by 2020, below a 2001 baseline. The University’s expects to meet its 2020 reduction goal ahead of the target year, and is now looking ahead to the need to develop updated carbon reduction goals but *also* to the development of a campus climate and energy resilience plan to be embedded into WildCAP.

To that end, the UNH Energy Task Force is seeks a Sustainability Fellow to work with the University’s Energy Office and the ETF Executive Committee in beginning to identify and scope existing and emerging options for energy storage on campus. Energy storage options shall include both thermal and electrical storage systems.

As part of this process, the Fellow will perform a comprehensive analysis of the energy data at UNH’s cogeneration plant and central chilled water plants to examine questions of appropriate sizing for various energy storage scenarios at UNH. Then they will analyze the return on investment of various storage capacities, technologies and options, and look at relevant energy projects being undertaken by other universities with similar constraints, needs and assets. The Fellow will also research rebate and grant opportunities available to fund energy storage initiatives at UNH.

The final deliverable will be a report that inventories different energy storage opportunities, estimated life-cycle costs and “first costs”, estimated greenhouse gas reductions, implementation considerations, possible co-benefits, outstanding questions, and next steps. The report shall include a dynamic excel simulation model that will allow UNH to model different scenarios in the future, such as various storage capacities, system costs, energy costs, etc.

This is a multi-disciplinary project that involves building and energy systems, alternative energy technologies, master planning, public administration, and economic analysis. The chosen Fellow will gain a thorough and nuanced understanding of the practical challenges and opportunities in campus energy and resilience planning—and will play a key role in helping UNH reduce its contribution to climate change.

Location: Durham, NH

Time commitment: 40 hours per week, June 5-August 18, 2017

Compensation: \$6000 stipend

Desired Qualifications:

- Enrollment in an undergraduate or graduate degree program: mechanical engineering, energy management, urban planning, business or a related field
- Familiarity with building energy systems and alternative energy technologies
- Experience and proficiency with life-cycle cost accounting
- Proficiency with data management, and experience in quantitative analysis
- Exceptional communication skills
- Creativity, attention to detail, and a high level of initiative

UNHSI Sustainability program eligibility:

Graduate students, exceptional undergraduate students, and recent graduates are eligible. We will encourage, but not require, an academic sponsor or reference for each fellow, and where possible we will ask that course credits are awarded.

Supervision, Training, Mentoring and Evaluation

This fellow will receive supervision from UNH Energy Manager Adam Kohler as well as mentoring and professional development offerings from UNHSI.

Fellows will be expected to participate in three MANDATORY events:

- A three-day, two-night orientation in Durham, NH, May 31- June 2nd. Lodging and food are provided; Fellows are responsible for any associated travel costs.
- Midterm project presentations to UNHSI staff, faculty and relevant project partners (can be done remotely).
- A summative evaluation and feedback session at the end of their placement.

Apply by February 17th at <https://www.sustainableunh.unh.edu/sustainability-fellows>