Sustainability Fellowship
Municipal Greenhouse Gas Inventory
City of Concord
Concord, New Hampshire

About the Sustainability Fellows Program:
UNH Sustainability Fellowships pair exceptional students from across the U.S. with municipal, educational, corporate, and non-profit partners in New England to work on transformative sustainability initiatives each summer. Sustainability Fellows undertake challenging projects that are designed to create an immediate impact, offer a quality learning experience, and foster meaningful collaboration. Fellows work on-site with their mentors at partner organizations during the summer, supported by a network of Fellows, partners, alumni, and the UNH Team. Graduate students, exceptional undergraduate students, and recent graduates from any accredited college or university are eligible to apply.

A detailed description of one Fellowship follows. To learn more about the other Fellowships offered this year, and for application instructions, see: www.sustainableunh.unh.edu/sustainability-fellows.

About the Host Organization:

Located among rolling forested hills and agricultural lands in the heart of the Merrimack Valley, New Hampshire’s capital city, Concord (pop. ~ 42,000) offers a vibrant New England downtown, commerce center and state government seat, and performing arts scene. Recently, the city has also become known as a progressive leader in the fight against climate change. Following earlier bold moves to improve energy efficiency in municipal operations and to source its electricity from renewables, in July 2018, Concord adopted a 100% renewable energy goal by unanimous vote of the City Council. This transition, the council agreed, presents an opportunity to create local jobs in emerging industries, stabilize energy costs, increase energy security, improve public health and reduce health care costs, and avoid climate change mitigation costs.

Concord’s Energy and Environment Advisory Committee (CEEAC) was charged with advising on implementation of the goal, and in 2019, presented a strategic plan to City Council. The strategic plan identified energy and emissions tracking and interim targets as an important component of successful implementation.
About the Fellowship:

The purpose of this Fellowship is to produce a baseline Greenhouse Gas (GHG) emissions inventory for one year (2018 or 2019), for the purpose of setting interim targets and measuring progress towards the City’s 100% renewable goals. This Greenhouse Gas Inventory will begin with detailing municipal government energy consumption and emissions sources. With remaining time, data gathering and analysis should proceed for an analogous community-wide GHG emissions inventory.

The GHG inventory will provide a basis for identifying emissions-reducing priority projects. This data-driven approach will aid in the City’s ability to forecast priority projects, their costs, pay-back periods, and emissions reduction impacts. This will help to provide a clear map of the projects and initiative that will need to be undertaken in order to achieve the City’s goals.

Outcomes:

The Fellow will develop a replicable methodology to account for GHG sources and emissions for Local Government Operations (LGO) for the City of Concord, based on best practices. The Fellow will acquire relevant data, complete the LGO inventory for the baseline year, and make recommendations on priority actions for reducing emissions (in consultation with city staff) in line with the City’s renewable energy goals. A final report documenting the methodology, inventory, and recommendations will be produced and presented to City Staff and the Energy and Environment Advisory Committee. As time allows, the Fellow will develop a framework and begin the data collection process for a community-wide GHG emissions inventory.

Impact:

The Fellow will gain experience evaluating GHG accounting methodologies and applying the chosen methodology in a municipal setting. The Fellow will communicate with a variety of stakeholders in city government and the community, and present findings in written and oral formats. Following the completion of this project, the Fellow will be well-positioned to take on a sustainability-, or climate change-focused consulting role within a host of organizations and companies.

Concord is part of an ever-growing contingent of cities that have signed a 100% renewable energy commitment. The methodology developed and used for this project could serve as a model for other cities to meet their own goals. For Concord, this project serves as a critical foundational step on the pathway to 100% renewable energy and net-zero emissions.

Desired Qualifications:

- Academic background in environmental or climate change science, or a related field
- Well-developed data analysis skills, and experience working with large complex data sets
• Advanced Microsoft Excel capabilities and solid familiarity with other Microsoft Office products
• Strong oral and written communication skills
• Attention to detail

• Interests in sustainability, community resilience, climate change, community engagement, municipal policy, renewable energy

**Work Location:** 41 Green Street, Concord, NH

**Mentors:**
Rob Werner, City Councilor, Chair of the Energy and Environment Advisory Committee
Sam Durfee, Senior Planner

**Compensation:** $6500
(taxable and distributed on a two-week payroll cycle over the course of the fellowship)

**Expectations:**
Fellows are expected to be primarily dedicated to their assigned projects throughout the summer, and also participate in a variety of networking activities, professional development opportunities, and presentations coordinated by UNHSI. Specifically, Fellows are expected to:

- Attend a mandatory orientation at UNH prior to the start of the fellowship term, **May 26-28, 2020.** (Travel scholarships may be available for students traveling from outside New England.)
- Work full-time on-site at the partner organization, **June 1 - August 14, 2020**
- Complete 400 hours of work, including work at host site as well as UNHSI activities, between May 26 – August 14, 2020.
- Complete a fellowship project according to the work plan (with adjustments as necessary). Project will include a written report.
- Participate in weekly webinars or advisory group meetings. In particular, attend all CEEAC meetings.
- Present work at mid-term and final poster sessions at UNH on **July 10 and August 7.** (Travel support available.) Present results to CEEAC and city staff.
- Engage in additional professional development, networking, and advisory activities as offered.
- Provide and receive feedback at the end of the fellowship.

**Apply by February 10** at [www.sustainableunh.unh.edu/sustainability-fellows](http://www.sustainableunh.unh.edu/sustainability-fellows).

**Questions** may be addressed to [megan.carney@unh.edu](mailto:megan.carney@unh.edu).