

CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING (CASE) SCIENCE AND TECHNOLOGY POLICY FELLOWSHIP PROGRAM

PLANNED SCOPE OF WORK

CASE FELLOWSHIP ON BUILDING DECARBONIZATION FOR THE BUREAU OF ENERGY AND TECHNOLOGY POLICY, CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

Statement of Need: With [Executive Order #3](#) signed September 3, 2019, Governor Ned Lamont reconfirmed that “Connecticut will continue to be a national leader on climate action” due to the profound effect of Greenhouse Gas (GHG) emissions on global climate. The executive order strengthened the already significant use of state resources for development and implementation of policies, projects, and programs to proactively reduce GHG emissions, as monitored by the [Governor’s Council on Climate Change](#). Guiding documents include the soon-to-be released Integrated Resources Plan (IRP), which will be followed by revisions to the state’s Comprehensive Energy Strategy.

A significant focus for GHG reduction is the state’s building sector, which contributes 31% of total GHG emissions within the state, with heating, ventilation and air conditioning comprising 60% of building energy consumption. With over 80% of the state’s households, commercial and industrial buildings heated with fossil fuels, the reduction of fossil fuel use within this sector is a key strategy for reducing GHG.

The National Academy of Science’s consensus study report “*Accelerating Decarbonization of the US Energy System*” published in 2021 recommends to Congress actions that will support building decarbonization strategies being developed and implemented in Connecticut and among Connecticut’s regional state partners, such as directing the US Department of Energy to establish a national zero-emission appliance manufacturing standard covering all fossil-emitting building uses and development of model carbon neutral standards for new and existing buildings that could, in turn, be adopted by states and local authorities (p. 149).

Overall Objective:

The objective of the Fellowship is to support:

- the development of a real estate market that values energy efficiency in residential real estate transactions, including a full integration of the US Department of Energy’s Home Energy Score and information on energy efficiency, renewables, and resiliency into real-estate transaction processes and implementation of other home energy labels where home energy scores do not apply;
- the development of a voluntary commercial building benchmarking program using Portfolio Manager; and
- alignment of financial incentives with building decarbonization for residential and commercial new construction to drive the new-construction marketplace toward net zero-energy buildings with low operational energy use ratings.

Tasks:

Planned Fellowship project tasks to be conducted include

- Develop training materials and organize at least one training session for real-estate industry professionals on integrating the U.S. Department of Energy Home Energy Score and information on energy efficiency, renewables, and resiliency into real-estate transactions processes by fall 2022.
 - Coordinate with other states in the region and with the Northeast Energy Efficiency Partnerships on the implementation of the Home Energy Score.
 - Develop and implement a plan to increase rental property owners in income eligible efficiency programs.
- Oversee the development, in coordination with the utilities, of a voluntary commercial building benchmarking program by summer 2023.
 - Identify best practices from the various cities or other jurisdictions that have implemented similar programs.
 - Work with US EPA on how to incorporate their tools and lessons learned.
 - Conduct outreach with commercial building owners to obtain participation.
- In conjunction with the state’s Comprehensive Energy Strategy and the Conservation and Loan Management Plan, develop and implement new incentives for installation of renewable thermal technologies (RTTs) in new construction for the Residential New Construction program and Energy Conscious Blueprint program funded by the Energize CT program to drive the new-construction marketplace toward zero-energy buildings with low operational Energy Use Intensity ratings by summer 2023.
- Undertake additional tasks as necessary to support strategies identified in the Integrated Resources Plan and Comprehensive Energy Strategy currently in development.

NOTE: *The planned Scope of Work, including the project tasks, are subject to change. You are encouraged to apply if your experience and/or education includes some, but not necessarily all of the planned project task areas.*

For Questions, contact Terri Clark, Executive Director, CASE, 860-282-4229, 860-754-8191 (cell, preferred) or via email at tclark@ctcase.org.