Faculty Name:
Bianca Howard

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Lab:
Building Energy Research Laboratory

Project Title:
Quantifying the energy flexibility of buildings

Description:
Enabling electrified buildings to change when they consume energy is important to the transition
to net-zero energy systems as they enable more renewable energy to be used. Electrified
heating and cooling systems are especially interesting as the building thermal inertia and the
variety of methods for supplying heating and cooling provide opportunities to change electricity
consumption with minimal impact on occupants. However, the energy flexibility potential of
buildings has yet to be quantified as it depends on a variety of factors such as the building
construction, HVAC systems and implemented control strategies. The research position will
determine the effect of various factors on building energy flexibility. The project will use the
Modelica Buildings Library to develop detailed models of buildings and their HVAC systems and
systematically explore the energy flexibility of buildings across seasons.

Location of Research:
Hybrid (both Remote and On Site)

# of hrs/week:
40

Department/Program:
Mechanical Engineering

Eligibility:
MS

To apply, please contact:
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