

# Holiday Energy Savings Initiative (HESI)

## FY 2022 Performance Report



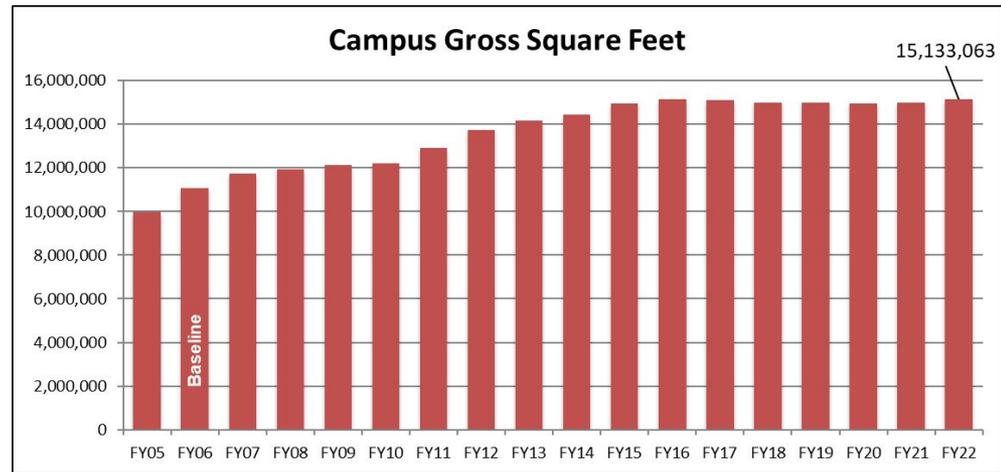
Energy Management

# Program Overview

- Project Description
  - The NC State campus closes annually for the Winter Holiday. During this time, building thermostat temperature setpoints are lowered, unnecessary lights and equipment are turned off, and doors and windows are closed to reduce utility consumption. These tasks are called energy conservation measures (ECMs). The heating setback temperatures are approximately 60°F. This temperature ensures buildings are not damaged from freezing conditions, while at the same time providing opportunities for energy conservation. Cooling thermostat setpoints are adjusted upward to approximately 80°F, in the event that warm weather leads to a call for cooling in the buildings.
- Business Case
  - By setting back buildings, NC State can save natural gas and electricity thereby avoiding utility costs and lowering carbon emissions.
  - During the FY 2022 Holiday Energy Savings Initiative (HESI), **\$416,000** in energy costs were avoided. Since the established baseline in FY 2005, the program has avoided over **\$5,200,000** in energy costs.
- Exemption Process
  - The program has a formal exemption process that allows select buildings and building zones to remain at normal heat and humidity operating levels throughout the setback period.
  - Research labs, occupied residences halls, and special need areas (library and art collections) are automatically exempt from the temperature setbacks.
- Education and Outreach
  - The campus community is informed about the program through email and routine media outlets, such as flyers, campus digital billboards, and social media.

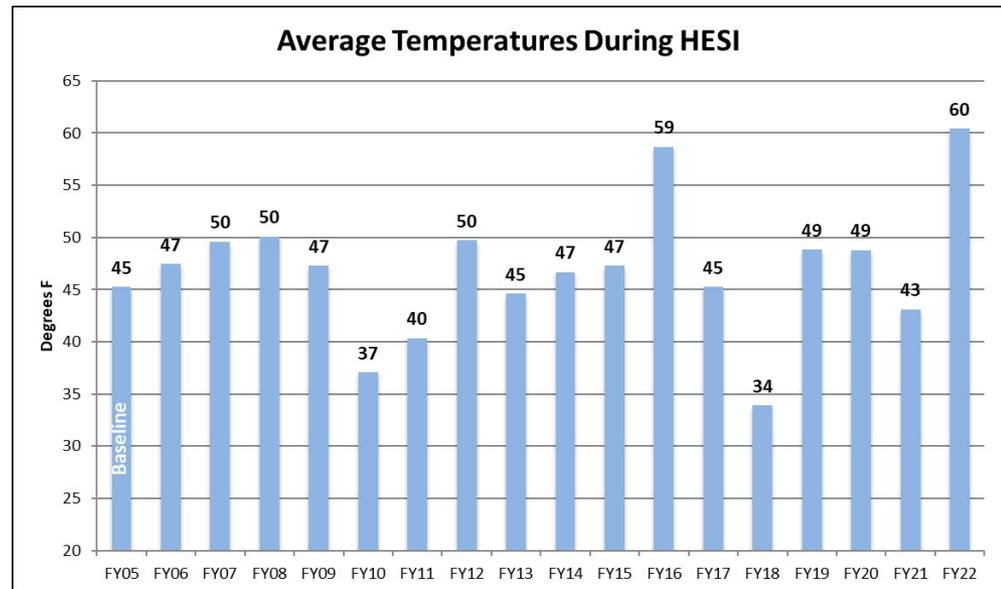
- Growth of NC State's Campus

- NC State has grown rapidly, adding 5 million square feet of building space in the last 15 years. Along with this growth, energy consumption is generally expected to grow at a similar rate. In order to compare energy use to prior years, energy consumption per gross square foot (GSF) is the accepted unit of measure.



- The Effect of Weather

- Colder temperatures equate to a higher demand for energy for heating campus buildings. FY21 saw relatively mild weather during the break, which aided energy saving efforts.



# FY22 HESI Calendar

**LEVEL 1 SETBACK**  
 Temperatures in classrooms and teaching labs will be lowered **Dec. 9 - Jan. 9.**

**LEVEL 2 SETBACK**  
 Temperatures in university buildings not exempt from HESI will be lowered **Dec. 24 - Jan. 2.**

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6 Exams	7 Exams	8 Exams	9 Level 1 Setback Begins	10 Deadline to submit exemption requests	11	12
13	14 Graduation	15	16	17	18	19
20	21	22	23	24 University Closed Level 2 Setback Begins	25 Winter Holiday	26 Winter Holiday
27 Winter Holiday	28 Winter Holiday	29 Winter Holiday	30 Winter Holiday	31 Winter Holiday	Jan. 1 Winter Holiday	2 Winter Holiday Level 2 Setback Ends
3 University Reopens	4	5	6	7	8	9 Level 1 Setback Ends
10 Spring Semester Begins	11	12	13	14	15	

# Avoided Energy Costs

Avoided energy costs are calculated by comparing the energy consumption during the FY05 baseline and normalizing for the changes in number of days of the savings period and campus gross square footage between the base year and the savings year, and then applying the energy prices for the current savings year. Using this approach, \$416,000 in energy costs were avoided in FY22, and over \$5,200,000 of costs have been avoided since the program began in FY06.

