

Sustainability Performance Plan

FY 2023

*This report was written in compliance with
section 5 of Executive Order 1.*



Sustainability Performance Plan

Executive Order 1 (EO 1) calls on Executive Branch agencies to advance environmental leadership and cost savings for taxpayers by reducing greenhouse gas emissions and other sustainability objectives in energy use in buildings and vehicles, water use, and waste disposal.

The goals of EO 1 include:

- 45% reduction in GHG emissions below 2001 levels,
- 10% reduction in water consumption from a FY20 baseline, and
- 25% reduction in waste disposal from a FY20 baseline.

Sustainability Performance Plans are plans drafted each year by Senior Sustainability Officers to detail agency progress and necessary goals, actions, and responsible parties to achieve the targets set in EO 1.

This report includes details on sustainability initiatives and participation in the GreenerGovCT initiative in FY23.

Agency Details

Agency: The University of Connecticut

Senior Sustainability Officer: Stanley Nolan, *Interim* Associate Vice President of Facilities Operations, Senior Sustainability Officer

Date Submitted: Enter date of submission here.

GreenerGov CT Participation Overview

1. How has your agency worked towards the sustainability goals of EO 1 in FY23?

The University of Connecticut participated in the EO1 and Greener Gov CT initiative as a non-mandated partner in order to continue its ongoing efforts to reduce energy, water and waste consumption. The university has undertaken multiple projects in accordance with their goals to become carbon neutral by 2030 under the vision of UConn's President Maric.

2. List key agency staff involved in EO 1 in FY23.

Stanley Nolan, Senior Sustainability Officer, *Interim* Associate Vice President of Facilities Operations

Katie Milardo, Associate Director, Energy, Water & Compliance, Facilities Operations

Mark Bolduc, Energy & Compliance Manager, Facilities Operations

Patrick McKee, Senior Sustainability Program Manager, Office of Sustainability

Sustainability Projects

3. How many projects has your agency implemented that had a positive impact on sustainability in FY23? Include projects relating to infrastructure improvements as well as behavioral change that took place in owned, leased, or occupied space and were either in progress or completed in FY23.

Working in collaboration with our utility providers, UConn has completed 20 plus projects which achieved a total energy savings of 1.6 million kWh and 5,150 MMBtu's resulting in a reduction of 926 metric tons in carbon emissions. This has been an investment of \$2.4 million direct University funds and \$540,000 rebates and incentives.

4. Provide a summary of the sustainability projects completed in FY23 at your agency. For each project include:
- Project summary
 - Project location
 - Project status
 - Project benefits
 - Projected savings (in dollars and the appropriate unit of measurement if known)

Project 1:

What: UConn's Facilities Operations department completed the two additional phases of implementing new LED lighting upgrades, known as SLED, at the Avery Point campus as well as the Law School. These projects impacted all buildings on each campus totaling approximately 880,000 square feet. These lighting upgrades include improvements to building aesthetics along with improving energy efficiency.

Where: UConn Avery Point and Law School.

Project Type: Structural – GHG – Building Energy

Status: Completed in FY 2023

Benefits: These SLED projects utilized technology such as occupancy sensors and daylight harvesting sensors to improve energy savings. These energy savings will account for a reduction in greenhouse gas emissions and costs for energy consumption.

Savings: The estimated savings from these SLED account for 643 metric tons of carbon reductions. There is also an estimated savings of about 1,000,000 kWh and almost \$140,000 annually.

Project 2:

What: UConn implemented additional LED lighting retrofit for academic, administrative and athletic buildings on the Storrs Campus. The following buildings benefited from these projects: Fieldhouse, McMahon, Torrey Life, Daily Campus, Beach Hall, Busby Suites, Charter Oak Apartments, McConaughy Residence Hall, Gentry, Dairy Bar, Storrs Hall, Shippee and Northwest Dining Hall. These retrofits covered over 815,000 square feet of space.

Where: UConn Storrs Campus.

Project Type: Structural – GHG – Building Energy

Status: Completed in FY 2023

Benefits: Implementing LED retrofits results in a reduction of energy consumption and greenhouse gas emissions along with energy cost savings.

Savings: The estimated savings from the LED retrofits described above have an estimated carbon reduction of 280 metric tons. There is an estimated annual savings of nearly 480,000 kWh and about \$48,500.

Project 3:

What: EcoMadness is a sustainability competition among 27 campus residence halls to encourage energy and water use reduction and proper recycling habits. While the program has been running for years, recycling education and behavior tracking was in 2021.

Throughout the month of October students in the residence halls work to reduce their consumption from the baseline collected in September. The Office of Sustainability and its intern team recruits and trains paid EcoCaptains to lead their hall in the competition. This includes educating residents on ways to reduce their energy and water consumption while encouraging behavioral changes. EcoCaptains also play an essential role in conducting weekly recycling compliance reviews. The waste and recycling audits were conducted in common areas to assess the recycling behaviors of each hall and score the hall on their compliance with the program criteria. Residents of the winning halls receive a coupon for a free scoop of Dairy Bar ice cream. The Office of Sustainability provides weekly competition updates to its social media pages and through direct emails to resident students.

Where: UConn Storrs Campus

Project Type: Behavioral – Combination

Status: Completed in FY 2023

Benefits: In October 2022, the winning resident halls had a 25% reduction in water usage and a 20% reduction in electricity usage respectively. The winning hall also had a recycling compliance of 100%!

Project 4:

What: RecycleThon – April 2023. With the help of 18 resident student EcoCaptains, the Office of Sustainability conducted a monthlong recycling competition in residence halls in early 2023. During the competition, weekly emails with recycling education and tips to decrease waste production were communicated to ALLco of UConn's resident students.

Where: UConn Storrs Campus

Project Type: Behavioral – Combination

Status: Completed in FY 2023

Benefits: This improved overall recycling compliance (a measure of assessing contaminants in recycling and trash waste streams) by 5%.

Future Plans

5. What planned sustainability initiatives beyond FY23 does your agency have relating to GHG reduction, water use reduction, and waste reduction?

Energy Conservation Projects – Subject to the availability of funding, UConn will continue to execute energy conservation projects in FY 2024 across multiple campuses to complete LED lighting retrofits with lighting controls, building retro-commissioning, condensate return repairs as well as steam trap surveys and repairs. In addition, UConn has an on-going program to conduct ASHRAE level energy audits in all campus buildings to identify potential energy conservation project savings. At date, approximately 30 building audits have been completed resulting in the planning of numerous energy savings projects which started in FY 2023 and will continue in FY 2024. These projects will result in energy savings of over 442,000 kWh, over 4,000 kilo-pounds of steam, 300,000 cubic feet of natural gas, \$66,000 in annual energy avoided costs and 440 metric tons of greenhouse gas reductions. These projects were intended to start in FY 2021 but were delayed due to funding issues.

Solar PV Installation – Potential solar PV installations are being evaluated at the Storrs campus for parking lots, garages and roof tops. Currently evaluating solar canopy installations at eleven parking lot locations and roof-top solar installations at several building locations. Planning for the additional solar installations will continue through FY 2024.

Husky Village Net Zero Energy Use Complex – UConn is evaluating the potential to install air source heat pumps at one of our student residential complexes, Husky Village. Husky Village currently uses natural gas to heat the complex. This project would eliminate the use of fossil fuels for heating purposes. In addition, one of the solar canopy projects noted above would be located near Husky Village. Solar power generated from the solar canopy project would be utilized to cover the electricity needed for the heat pumps. Therefore, with the use of the on-site solar, Husky Village can be a net zero energy use complex. Planning for this project will continue through FY 2024.

Fuel Cell and Hydrogen Fuel Deployment - UConn is seeking to install several fuel cells to provide additional electrical power as well as heat recovery for buildings on campus. The planning for these installations is on-going in FY 2024. In addition, UConn plans to install a hydrogen fueling station on the Storrs campus to be utilized for fueling the 24 hydrogen vehicles to be purchased for UConn's vehicle fleet. Anticipated completion of the hydrogen fueling station is in August 2024 while the purchase of the vehicles will occur in September 2024.

Energy Savings Performance Contract (ESPC) - UConn is developing scope of work for another potential ESPC project. UConn had completed a Phase 1 project in FY 2021. Bundled energy conservation projects may include: Replacement and upsizing of approximately 3,000 linear feet of steam/ condensate lines; propose solar canopies for parking lots on the Storrs Campus totaling 1.6 million square feet; water conservation and building envelope evaluations; steam trap installation and repairs; steam vault and building pipe insulation; interior/exterior lighting retrofit to LED technology at 44 buildings across the Storrs Campus totaling 2.1 million square feet and a Retro-Commissioning Project for 2.87 million square feet at 24 proposed buildings. Planning for this potential project will continue through FY 2024.