

Sustainability & Energy Conservation



September 2024

UConn

Accelerating UConn's Carbon Mitigation Storrs Campus

- **Electric Vehicle Charging Infrastructure and Services Upgrade** – In construction, install of 7 new locations (30 ports) at the Storrs campus including EV charging equipment and infrastructure upgrade. Total Cost \$957,200. This effort aligns with the 2030 Connecticut Electric Vehicle Road map goal.
- **Hydrogen Fuel Dispenser** – Construction scheduled for Spring 2025, install of a hydrogen fuel dispenser at the Reclaimed Water Facility to fuel light duty vehicles. Total Cost \$835,500. This project supports new technology for the future utility and infrastructure at Storrs.
- **Fuel Cell Installations at IPB and Putnam** – In construction, install and operations of two (2) – 250kw Fuel Cell energy unit at IPB and two (2) – 460 kW Doosan units at Putnam Hilltop. Total Cost FCE \$13M/8 years and VFS Doosan \$15M/20 years. Cost savings TBD. Total metric tons of CO₂eq emissions - 923.
- **South Campus Utility Plant Geothermal** – In construction, install of 70+ wells more than 750 feet deep to support the heating/cooling at South Campus. This project supports new technology for the future utility and infrastructure at Storrs and offsets ~38,400 MMBtu of energy needed from fossil fuels.
- **Energy Services Performance Contract Phase 2** – In planning, project would include steam/condensate line replacement, Retro commissioning of 24 buildings (3M sq ft), LED lighting upgrades in 44 buildings (2.1 M sq ft), and solar canopies on various parking lots (1.6 M sq ft). Total Cost Estimate for study - \$500,000. Total metric tons of CO₂eq emissions – 1,531.
- **Energy Conservation Projects** – including lighting, steam trap surveys and repairs, retro commissioning projects, dining hall ventilation project, and ASHRAE audits. Total metric tons of CO₂eq emissions – 9,080.

Accelerating UConn's Carbon Mitigation

UConn Health

- **Budderfly Project** – In collaboration with Shelton CT based Budderfly, an energy as a service (EaaS) company, a 12-month pilot program in construction at the Farmington Child Care Center will install an all electric ultra high-performance heat pump HVAC system to assist achieving a net zero carbon footprint and deliver a substantial energy cost savings. Funded by Connecticut Innovations (CI) through its CI Innovations Lab, this pilot is the latest initiative and investment by the State of Connecticut through the state's strategic venture capital arm covering initial costs for equipment and installation without upfront capital expenditure from UConn Health.
- **Electric Vehicle Charging Infrastructure and Services Upgrade** – The installation of 24 dual port Level 2 EV charging stations and infrastructure upgrades with a capital cost of \$620K offset by a CT DEEP VW Settlement Grant \$230,000 and Eversource Rebate \$120,000. This effort aligns with the 2030 Connecticut Electric Vehicle Road map goal.
- **Fuel Cell Installations**– Construction is scheduled for Summer 2025 to install 60 Bloom fuel cell units at a capital cost \$6.2M supplying ~70% of electrical demand. This project supports new low emissions technology for future utility and infrastructure and will have a total utility cost savings of \$40M-\$60M over 20 years.
- **Energy Conservation Projects** – including LED lighting projects in Garage 2, Garage 3, parking lots and additional areas, steam trap surveys and repairs, and retro commissioning in the Out-Patient Pavilion building.

Energy Conservation Program Highlights

Partnerships with CNG and Eversource Incentivize Projects

Since 2011, 23 Building Retro-Commissioning Projects have been completed:

- Almost 20 Million Kwh Annual Savings
- \$1.6 Million in Annual Cost Savings
- 11,800 metric tons of Greenhouse Gas Reductions

Since 2010, Over 300 Lighting Projects have been completed:

- 17.1 Million Kwh Annual Savings
- \$1.6 Million in Annual Cost Savings
- 11,900 metric tons of Greenhouse Gas Reductions

Since 2010, Over 100 other Energy Conservation Measure (ECM) Projects have been completed:

- 7.8 Million Kwh Annual Savings
- \$736,000 in Annual Cost Savings
- 5,400 metric tons of Greenhouse Gas Reductions

Completed one of the only Lead-by-Example ESPC Projects in the State:

- 1.9 Million Kwh Annual Savings
- Almost 44,000 MMBtu Annual Fuel Savings
- \$1 Million in Annual Cost Savings
- 4,300 metric tons of Greenhouse Gas Reductions

ENERGY CONSERVATION = GREENHOUSE GAS EMISSIONS REDUCTIONS