

Sustainability Performance Plan

FY 2022

*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 FY22.

Agency Details

Agency: Department of Transportation

Senior Sustainability Officers: Robert Bell & Peter Zelez

Date Submitted: 12/29/2022

GreenerGov CT Participation Overview

1. How has your agency worked towards the sustainability goals of EO 1 in FY22?

In FY2022, the CTDOT worked on initial EV charging buildout and Battery Electric Bus deployment. The Department drafted a roadmap for siting EVSEs at DOT facilities and worked on the first National Electric Vehicle Infrastructure Plan. There are numerous projects that were initiated in FY22 that will be completed during FY23 that include lighting retrofits, facility upgrades, and continued preservation of pollinator habitat.

2. List key agency staff involved in EO 1 in FY22.

Robert Bell
Peter Zelez
Jon Andrews
Adam Boone
Kevin Carifa
Sue Donlon
Dave Elder

Adam Fox
Zachary Giron
Elise Greenberg
Rick Hanley
Fred Krauth
Emily Pysh
Jenn Reilly
Larry Vanterpool
Samara Walton

Sustainability Projects

3. How many projects has your agency implemented that had a positive impact on sustainability in FY22? 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 FY22.

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4. Provide a summary of the sustainability projects completed in FY22 at your agency. For each project include:
 - a. Project summary
 - b. Project location
 - c. Project status
 - d. Project benefits
 - e. Projected savings (in dollars and the appropriate unit of measurement if known)

Project 1

Project Summary: The construction and design of additional EV charging infrastructure at CTDOT Headquarters and District Offices. In total, 29 Level 2 chargers were installed onsite, with over 54 outlets/ports available to EVs (30 of which are available to staff and visitors).

Project Location: CT DOT Headquarters

Project Status: Completed FY 2022

Benefits: The installation of these charging units will allow for the charging of employee, visitor, and DOT fleet EVSEs. By encouraging employee charging and incorporating EVs into our motor pool, DOT hopes to spur the adoption of electric vehicles and exemplify our commitment to lead by example.

Project 2

Project Summary: SBEA Lighting Replacement at the DOT Avon Building

The replacement of 17 250-watt Metal Halide High Bay Lighting with 88-watt energy efficient LED High Bay lighting equipped with integrated daylighting and occupancy sensors throughout the maintenance garages.

Project Location: CT DOT Avon Maintenance Facility

Status: Completed FY 2022

Benefits: The installation of energy efficient lighting with energy-saving improvements which reduced utility bills. Installation of High-Performance lighting reduced maintenance cost

associated with re-lamping and fixture replacement. Replacement of lighting improved the lighting lumen output.

Projected Savings: Estimated annual savings of 8,476 KWh/year

Project 3

Project Summary: Replacement and retrofitting of roadway lighting along state roadways

Project Location: Various locations and state roadways

Project Status: Completed FY 2022

Project Benefits: The installation of energy efficient lighting with energy-saving improvements which reduced utility bills. Installation of High-Performance lighting reduced maintenance cost associated with re-lamping and fixture replacement. Replacement of lighting improved the lighting lumen output.

Projected Savings: Estimated annual savings of 1,707 MWh/year

Project 4

Project summary – Deployment of 11 Battery Electric Buses (BEBs) to the Hamden Division of CTtransit

Project location - CTtransit located in Hamden

Project status – Completed FY22

Project benefits - Each BEB deployed to Hamden for the CT Transit fleet is expected to save on diesel fuel costs and emissions. The vehicles offer a quieter, more comfortable ride. This project helps to advance one of the State's environmental goals to electrify at least 30% of its bus fleet by 2030.

Projected savings - Deploying the zero-emission buses in place of the existing vehicles will reduce CTDOT's annual greenhouse gas emissions by approximately 1,000 metric tons per year.

Project 5

Project Summary: M8 electric train sets acquired and placed into operation on Shore Line East commuter rail, replacing diesel-powered trains.

Project Location: Shore Line East commuter rail service from New London to New Haven

Project Status: completed FY22

Project benefits: M8 Electric Multiple Units (EMU) represent a substantial improvement over the older diesel-powered train sets. Electric trains emit no carbon emissions and include additional amenities for riders such as electrical outlets at each seat, brighter interior spaces, updated restrooms, higher back seats and improved luggage racks.

Project 6

Project Summary: Roadway Lighting along I-91 from Enfield to East Windsor

The project involved the replacement of the existing exterior High-Pressure Sodium (HPS) light fixtures with energy efficient LED fixtures. Replacement of 250-watt HPS Median Lighting with 125-Watt LED lighting, 100-watt under bridge lighting with 65-watt LED lighting, and 200-watt off and on ramp lighting with 98-watt LED lighting along I-91 From Enfield to East Windsor.

Project Location: I-91 from Enfield to East Windsor

Project Status: In Progress FY 2022 (Completed November 2022)

Project Benefits: The installation of energy efficient lighting with energy-saving improvements which reduced utility bills. Installation of High-Performance lighting reduced maintenance cost associated with re- lamping/fixture replacement. Replacement of HPS lighting with High efficiency LED lighting improved the lighting lumen output.

Projected Savings: Estimated annual savings of 326,405 kWh

Project 7

Project Summary: SBEA Lighting replacement at the DOT Headquarters Building

The replacement of fluorescent and HPS Lighting with energy efficient LED lighting throughout the Headquarters building. Areas covered include conference rooms, Commissioner's offices, atrium, restrooms, and hallways.

Project Location: CT DOT Headquarters

Project Status: In Progress FY 2022 (Completed September 2022)

Project Benefits: The installation of energy efficient lighting with energy-saving improvements which reduced utility bills. Installation of High-Performance lighting reduced maintenance cost associated with re-lamping/fixture replacement. Replacement of HPS, Metal halide and fluorescent lighting with High efficiency LED lighting improved the lighting lumen output.

Projected Savings: Estimated annual savings of 126,039 kwh/year

Project 8

Project summary: Data building boiler and water heater replacement. Thirty-year old systems were replaced with more efficient units, resulting in natural gas savings.

Project location: Newington, CT

Project status: FY2022 In Progress (Completed October 2022)

Project benefits: Reduction in natural gas usage

Future Plans

5. What planned sustainability initiatives beyond FY22 does your agency have relating to GHG reduction, water use reduction, and waste reduction?

GHG Reduction

Inclusion of EVSE at facilities and recommendations for future build-out. EVSE Installations at District Offices. Installation of Solar at DOT HQ in Newington, and CT Transit in Hamden.

Expand Battery Electric Bus procurement, operation and charging infrastructure at bus maintenance garages. Continue conversion of roadway lights to LED.

DOT will be creating a Carbon Reduction Strategy during FY2023, a requirement of the new FHWA Carbon Reduction Program.

Water Use Reduction

Evaluate and reduce irrigation. Implement leak checks at major facilities.

Waste Reduction

Evaluate opportunities to reduce hazardous waste. As more employees transition back in the building, we will consider developing a composting program.