
GREENERGOV CT
STEERING COMMITTEE MEETING
Friday 28, 2025
79 Elm Street, Hartford, CT 06106
Gina McCarthy Auditorium
CONNECTICUT ENERGY & ENVIRONMENT
CONNECTICUT OFFICE OF POLICY AND MANAGEMENT
CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES

Welcome!

From the Co-Chairs

COMMISSIONER
KATIE S. DYKES
DEEP

SECRETARY JEFF BECKHAM
OPM

COMMISSIONER
MICHELLE GILMAN
DAS

GREENERGOV CT

State of Connecticut

GreenerGovCT

AGENDA

1. Welcome and Introductions
2. GreenerGov Annual Report Presentation
3. Sustainability Efforts & Data Integration
4. Overview & Discussion of Resources for SSOs
5. Public Comment
6. Closing

ANNUAL REPORT PRESENTATION & KEY INITIATIVES

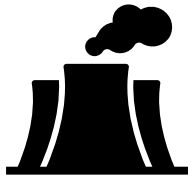
3/7/2025

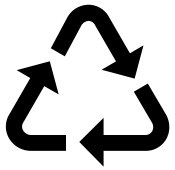
2. GREENERGOV E.O. 1TARGETS

Targets

E.O.1: Goals for State Sustainability

Reduce GHGs by 45% below 2001levels by 2030	Reduce 25% of waste by 2030 from a 2020 baseline	Reduce 10% of water consumption by 2030 from a 2020 baseline





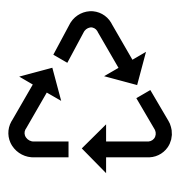
2. GREENERGOV E.O. 21-3 TARGETS

Strengthening interim targets by 2024

Organics & food waste program	Plan for zero GHGs for new construction & renovations	1% divestment of state building sq ft.

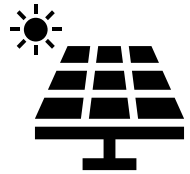
Strengthening interim targets by 2030

Electricity purchased 100% zero carbon	Leased state vehicles - zero emissions	Plan for zero emission heating & cooling systems	Solar capacity increase of 10,000kWDC

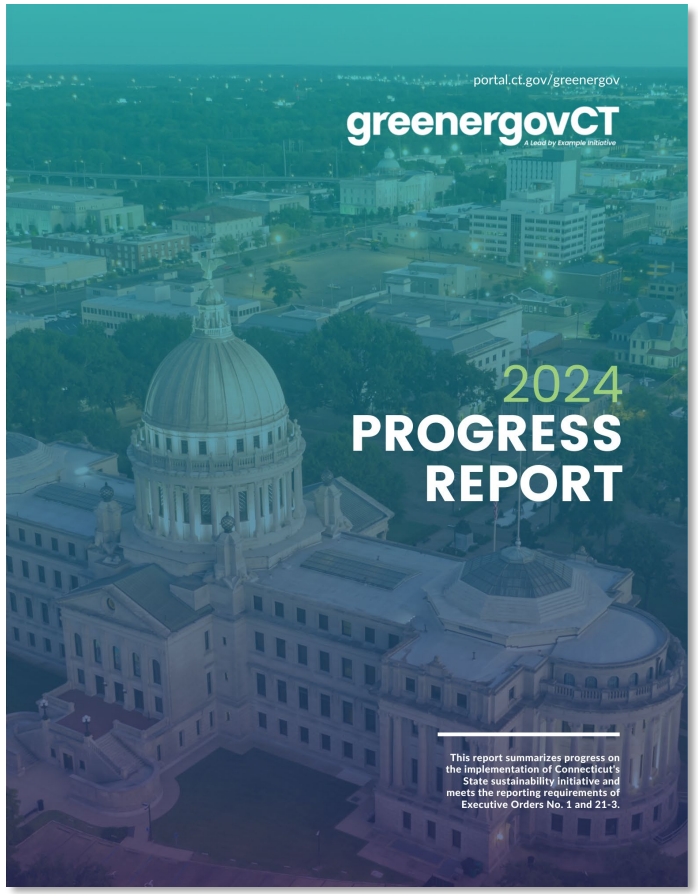








FY23 ANNUAL REPORT – KEY FINDINGS



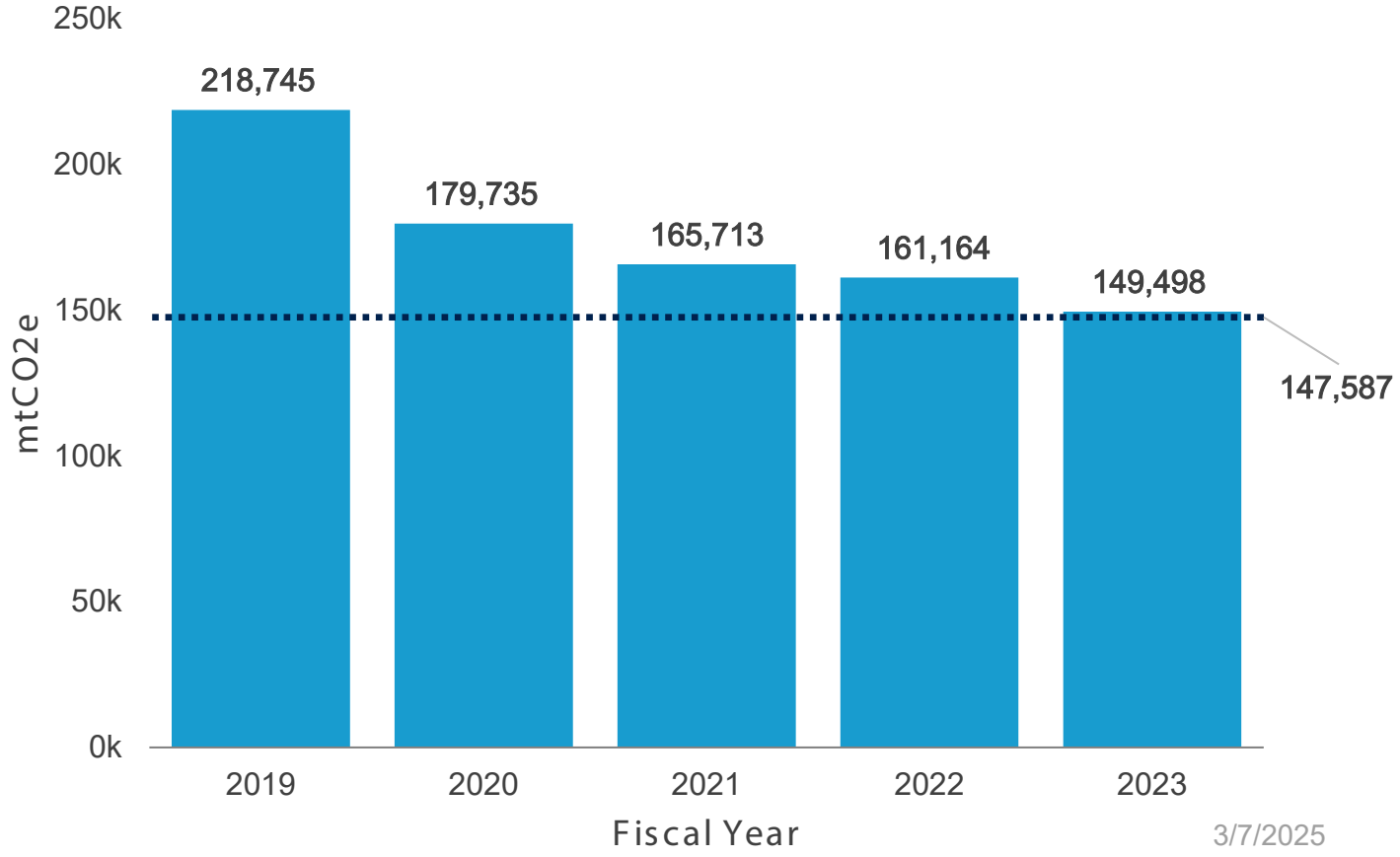
- Annual progress report includes updates on sustainability projects from agencies in 2024
- Includes updated data on utility use and cost for FY19-FY23 and progress on sustainability goals
  - Data was pulled on February 10, 2025
  - Data is preliminary and subject to change as updates are made to the EnergyCAP database
- In addition to the 2024 Progress Report, the GreenerGov CT Reporting Dashboard on the CT Open Data Portal has also been updated to reflect updated data from FY19-FY23.

FY23 ANNUAL REPORT – KEY FINDINGS – GHG EMISSIONS

- Executive Branch GHG emissions went down over 30% since FY 2019.
- GHG emissions from building energy (electricity, natural gas, oil, propane, steam, chilled water, and hot water) decreased by 8% from FY22.
- Much of this reduction can be attributed to a cleaner electricity mix and increased equipment efficiency.

GHG Emissions Reduced by 31.7% from FY19 to FY23

The GreenerGov CT GHG reduction target is 32.53% below FY19 baseline GHG emissions by 2030.

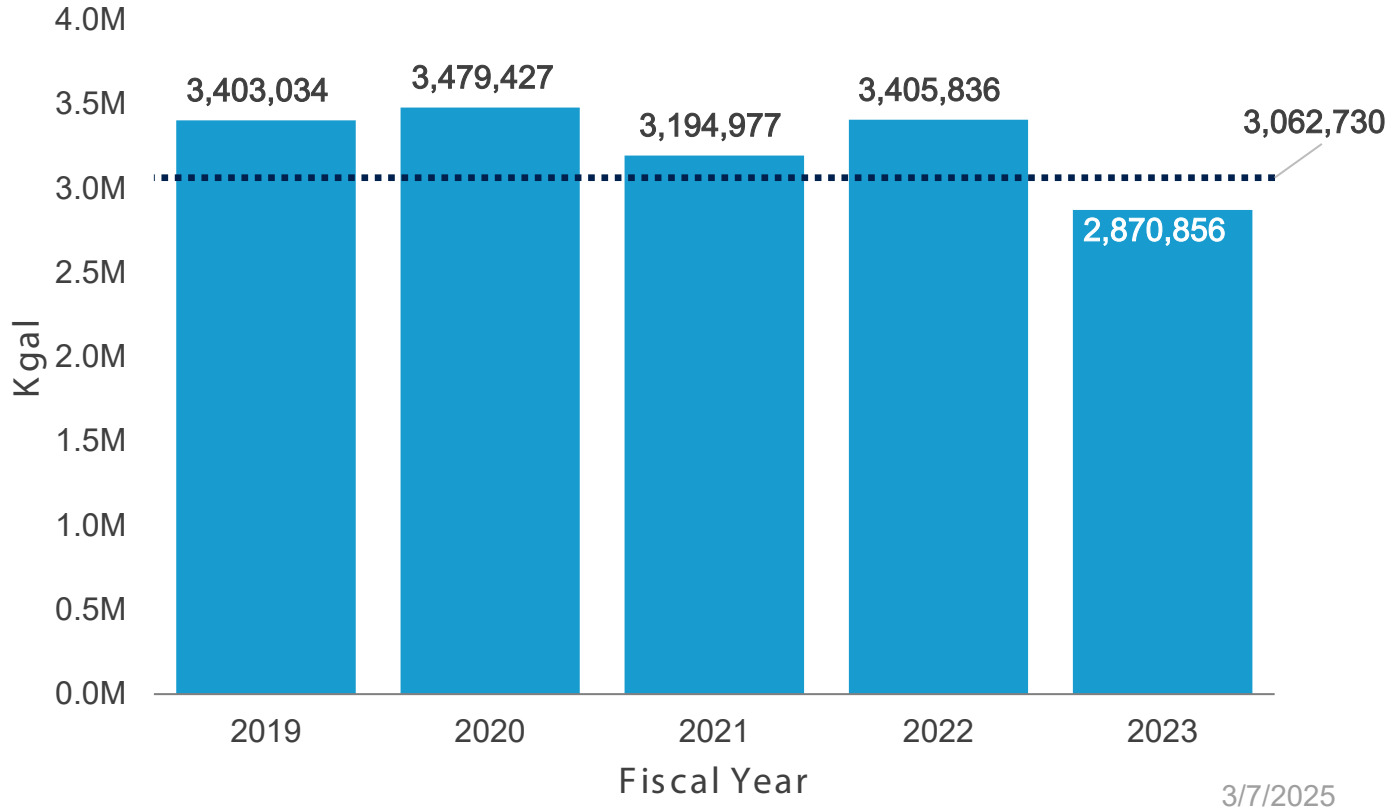


FY23 ANNUAL REPORT – KEY FINDINGS – WATER

- Available water and sewer data show a decreased of more than 15% since FY 2019.
- Some of this decrease can be attributed to incomplete data. More work is needed to ensure water usage data is complete going forward.

Water and Sewer Use Reduced by 15.6% from FY19 to FY23

The GreenerGov CT water use reduction target is 10% below FY19 baseline GHG emissions by 2030.



FY23 ANNUAL REPORT – KEY FINDINGS – WASTE

- EO 1 requires Executive Branch agencies to reduce waste disposal by 25% from a FY19 baseline by 2030.
- To measure progress towards this goal, we need consistent data on waste disposal at Executive Branch facilities, which we currently do not have.
  - Facilities have a mix of metered and unmetered waste disposal, static and seasonal occupancy, varying levels of access to recycling and other diversion programs, and systemic restraints on waste management practices.
- Our goal is to implement a consistent measurement methodology with the ability to incorporate facility-specific factors.

FY23 ANNUAL REPORT – KEY FINDINGS – EO 21-3 GOALS

Goal	Metric	FY22	FY23
By 2024, all Executive Branch agency facilities, to the extent practicable, shall implement an organics and food waste diversion program	Number of Executive Branch facilities with contracted composting service	2 (out of 29)	6 (out of 29)
By 2030, all electricity purchased and generated by the Executive Branch will be 100% zero carbon	% of total electricity usage that is zero carbon	76%	63%
By 2030, all newly leased light duty state vehicles shall be zero emission vehicles	% of leased vehicles that are electric vehicles	1.1%	4.3%
By 2024, the State shall divest 1% of all Executive Branch building square footage, and an additional 2% by 2028	Annual change in Executive Branch square footage	-2.7%	8.6%
The State shall deploy an average of 10,000 KWDC of new solar capacity annually for the next 10 years	Total installed solar capacity (kWDC) since 2020	23,225	23,954
The State shall commit to reducing Executive Branch building GHG emissions by at least 1% annually	Annual change in building GHG emissions (MTCO2e)	-3.8%	-8.2%

FY23 ANNUAL REPORT – KEY FINDINGS

Visit the GreenerGov CT Reporting Dashboard on the CT Open Data Portal to explore the metrics related to GreenerGov CT and see agency Sustainability Performance Plans.

ANNUAL REPORT PRESENTATION & KEY INITIATIVES

- Net Zero Projects – DEEP & DOC
- Transportation Electrification - DAS, DOT, MIL
- The Decarbonization Study - DAS
- Waste Initiative – UConn

DEEP WESTERN DISTRICT HEADQUARTERS

DEEP WDHQ at Black Rock SP

LEED Platinum/Net-Zero Design

16 Geo-Thermal Wells/No Fossil Fuel HVAC

Solar Generation – 186 panels/100 kW

Trombe Wall – Thermal Mass/Passive Solar Heating

Storm Water Treatment/Mitigation Onsite

Footprint Consolidation – 11 Buildings

CT State Forest Harvested/DEEP Milled Wood Products – Trim/Wainscot/Casework/Form-liners

Transient Workstations for DEEP staff

Training Room for DEEP Events and Meetings

Low Carbon/Recycled Glass Concrete Mix Design - Pozzotive

1st CT Executive Branch LEED Platinum/Net-Zero Building

Directional Boring – New Water and Sewer Service from CWC/Thomaston WPCA

DEEP Program Staff Collaboration

DEEP INNOVATION 2024


GARBAGE
RECYCLING


DEEP West - Energy Dashboard
EXIT

REDUCING FOSSIL FUEL DEPENDENCY - DOC

TRANSPORTATION ELECTRIFICATION - DAS

- Mandated by statute to electrify state light-duty fleet vehicles
  - Coordinating with state agencies to install electric vehicle (EV) chargers on state property where DAS leases light-duty fleet vehicles to

- EVSE contracts:
  - EVSE Software
  - EVSE Hardware
  - Maintenance/installation

- Charging Fee implementation

FACILITY ELECTRIFICATION

Office of Transit and Ridesharing
Connecticut Department of Transportation
February 28, 2025

Legislative and Executive Language Related to Electrification

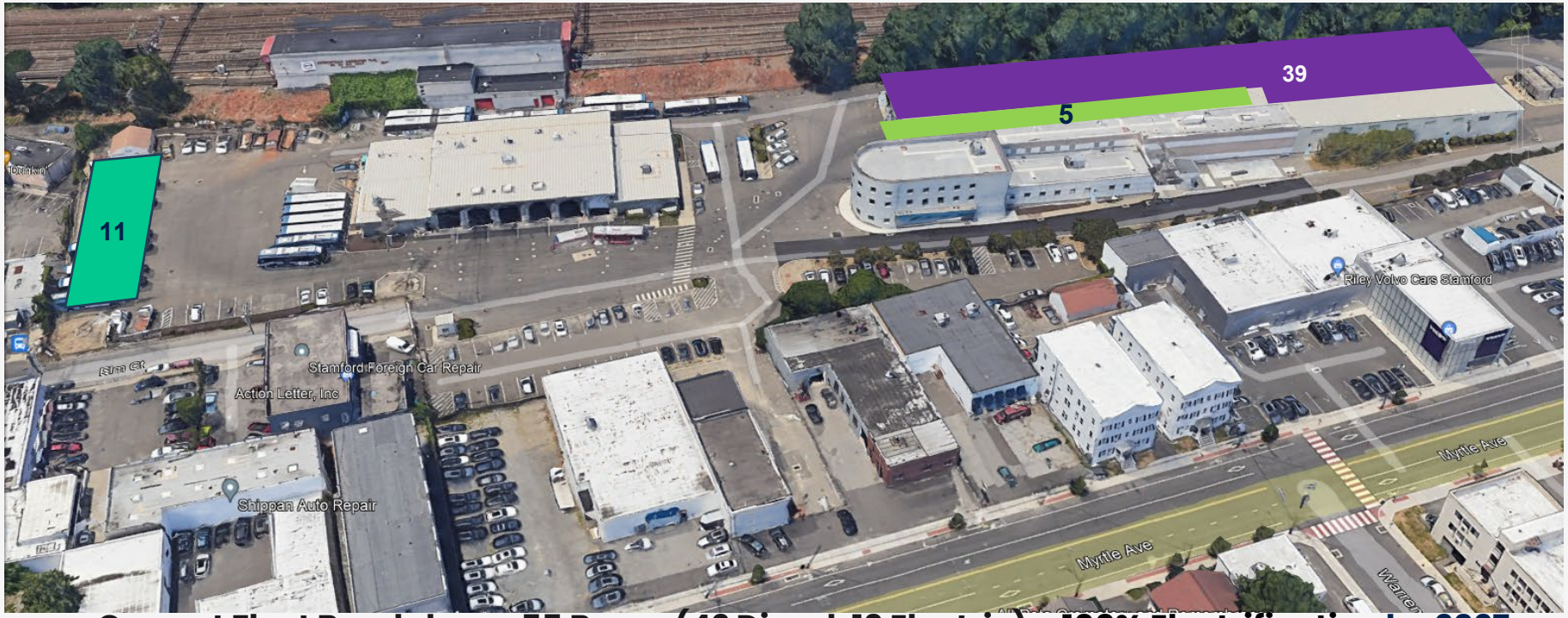
Connecticut General Statutes 4a-67d, excerpt:

"Existing law requires that, starting January 1, 2030, at least 30% of state-purchased or –leased buses be zero-emission buses. Beginning January 1, 2024, the bill also prohibits the state from procuring, purchasing, or leasing diesel-fueled buses."

State of Connecticut Executive Order No. 21-3 (dated 12/16/22), excerpt:

"Statewide battery electric bus fleet by 2035. The DOT shall cease purchasing or providing state funding to third parties for the purchase of diesel buses by the end of 2023. DOT shall create an implementation plan which identifies any barriers to full bus fleet electrification."

CTtransit Stamford



Current Fleet Breakdown: 55 Buses (42 Diesel, 13 Electric) - 100% Electrification by 2027

Phase 1 Electrification – 4 BEB Pilot Program

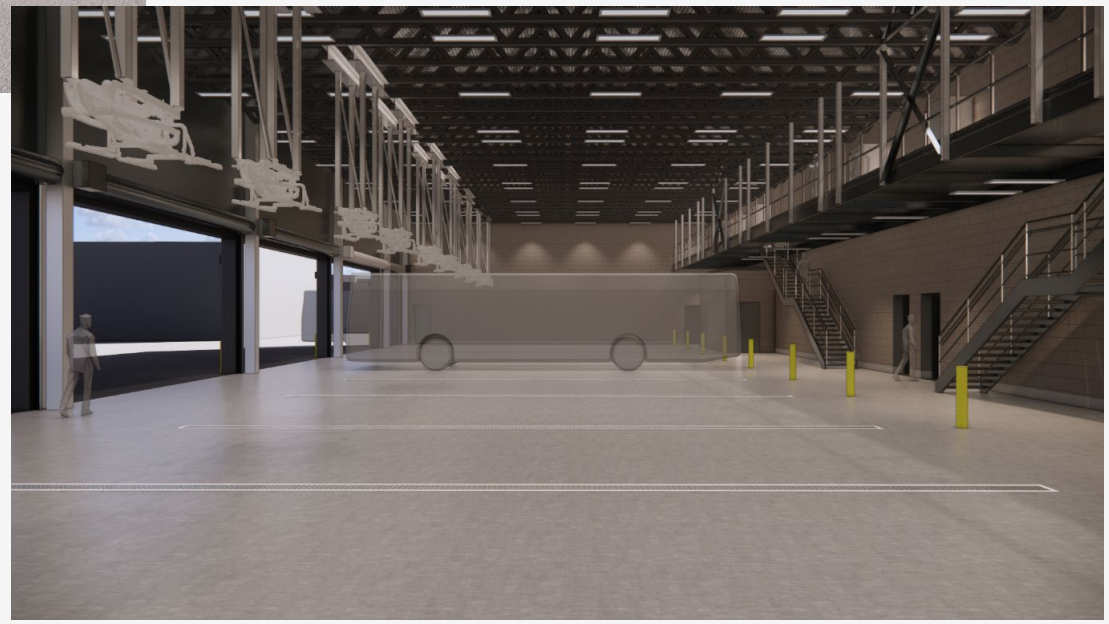
- 5 new chargers installed and operational – 13 BEB's in service
- Charge management software to monitor bus charging

1. Phase 2 - 100% Electrification Construction of Existing building

- Currently in construction – adds 39 chargers upon completion, by end of 2025

2. Phase 2 – 11 Bus Building

11 Bus Building



New 11 BEB storage & charging building – Phase 2 Electrification

- 11 pantographs to charge 11 buses
- Mobilization February 2025
- Construction Completion expected Q4 2026

Charging Locations

Charger Type	Location	# of chargers
Pantograph	Bus Garage	39
Plug-in	Bus Garage	5 (10 dispensers)
Pantograph	11-Bus Building	11
	Total:	55

LONO Grant

- The “Low Or No Emission” grant offered by FTA provides funding for the purchase or lease of low/zero-emission transit buses
- Includes acquisition, construction and leasing of required supporting facilities
- **June FY2023 = $26,437,120**
- Funding to purchase and deploy BEBs to replace older diesel buses and modernize its CTtransit Stamford Division to support BEB service

Schedule/Funding

100% Electrification

Project Phase	Funding Source	Federal Amount	State Amount
Planning/Design	100% State	-	$476,900
Construction	80/20 FTA Low or No Emission Grant (CT-2024-006)	$6,849,120	$1,712,280
(20) 40FT BEB's	1.) Low or No Emission (5339) 2.) Formula Funds (5307)	$15,200,000 $8,800,000	$3,800,000 $2,200,000

11 BEB Storage Building

Project Phase	Funding Source	Federal Amount	State Amount
Planning/Design	100% State	-	$1,591,000
Construction	80/20 5307 FTA Grant (CT-2023-022-01)	$8,419,488	$2,104,872

Facility	Project	Stage	2024	2025		2026		2027	
			Q4	Jan. - Jun.	Jul. - Dec.	Jan. - Jun.	Jul. - Dec.	Jan. - Jun.	Jul. - Dec.
CTtransit Stamford	100% Electrification (Existing Bus Storage Building)	Construction							
CTtransit Stamford	New 11 BEB Storage Building	Construction							

Electrification Challenges

Supply Chain

- Long lead time on parts and materials

Grid Capacity

- Not enough capacity in the area
- Requires upgrades to the grid

Funding

Electrification Priority

Age of Fleet

- Cycling out old diesel & hybrid electric buses for fully electric buses one-by-one

Grid Capacity

- BEB charging and building load require more capacity than what is available

Statewide Totals Chargers

CTtransit Hartford – 8 chargers

CTtransit Hamden – 10 chargers

CTtransit Waterbury – 2 chargers

Greater Bridgeport Transit Authority – 7 chargers

River Valley Transit – 2 chargers

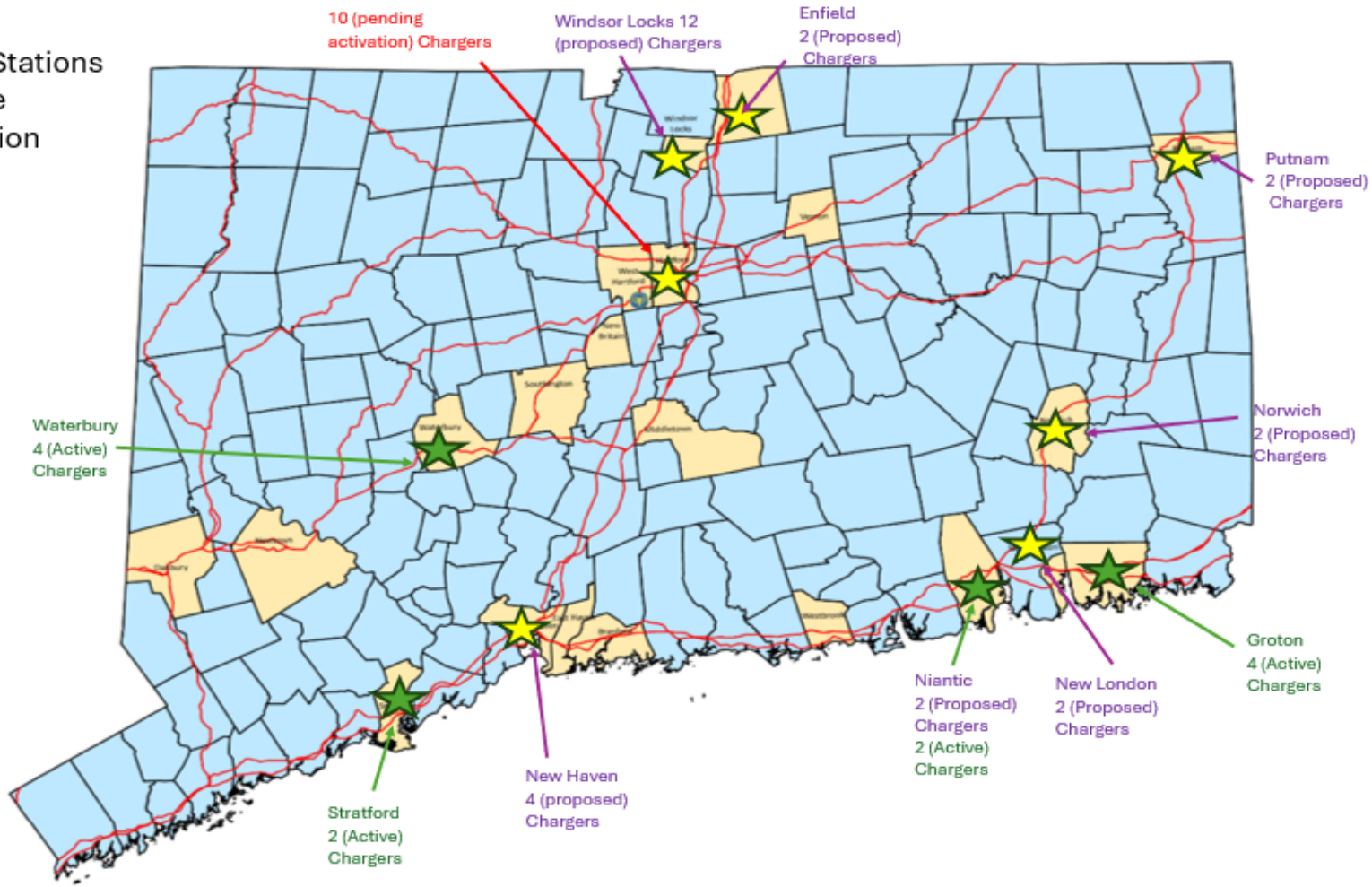
Milford Transit District – 2 chargers

Windham Regional Transit District – 2 chargers

TRANSPORTATION ELECTRIFICATION - THE MILITARY DEPARTMENT

48 Total Charging Stations
12 Currently Active
10 Pending activation
26 In construction

Total Cost:
$696,274.63
Federal Funding
$628,398.50



EO 21-3 HVAC Decarbonization Study - Purpose

Retrofit existing fossil-fuel based HVAC systems to those capable of operating without carbon emitting fuels.

- Mandated by: EO #21-3, Part 3-D
- Scope: Nearly 4000 Executive Branch facilities
- Consultant: DAS & DEEP engaged Arup in 2024

DECARBONIZATION STUDY – DAS

Decarbonization Study Final Deliverables

- Decarbonization Action Plan
  - Prioritized steps
  - Cost Analysis
  - Procurement roadmap
- Comprehensive Decarbonization Database Tool
  - Existing and potential on-site electrical production (e.g., photovoltaic panels)
  - Facility-specific decarbonization solutions
  - Order of magnitude installation costs
  - Utility/operating costs & energy usage versus current conditions

DECARBONIZATION STUDY – DAS

Phase I – Discovery: Complete

- 26 State Agencies contributed to workshop sessions
- Agencies provided valuable input on:
  - Existing assets & energy usage
    - Information management processes
    - Level of detail available
  - Starting point for decarbonization
  - Decarbonization challenges

DECARBONIZATION STUDY – DAS

Phases II-IV: Underway

- Funding and contract amendment in-place
- Kick-off with Arup team scheduled
- Agencies notified of upcoming continued collaboration
- 18-month duration for study completion

DECARBONIZATION STUDY – DAS

Phase II – Baselining and Digital Tool

Collect, review, and synthesize all 26 Agencies' information

- Baseline energy usage, cost, and equipment inventory
- Develop decarbonization database tool
  - Understand Agencies' asset portfolios
  - Identify Agencies' prioritization criteria
  - Digital decarbonization database tool high-level design and user testing

DECARBONIZATION STUDY – DAS

Phase III – Identification, Prioritization, & Testing

Identify and test decarbonization strategies

- Base strategies on short-list of building types
- Determine decision-making and implementation priorities
- Conduct site visits for each building type
- Conduct energy modeling of proposed decarbonization strategies for impacts on (1) emissions and (2) cost

DECARBONIZATION STUDY – DAS

Phase IV – Assessment & Completion

Final deliverables and warranty service

- Agency-specific decarbonization solutions
- Digital decarbonization database tool
  - Conduct training
  - Provide durational ongoing support to DAS/CS after study completion

UCONN WASTE INITIATIVE

UCONN | UNIVERSITY OF CONNECTICUT

DINING SERVICES

Who are we?

One of the largest self operated dining programs in the country	4 million meals served per year	460 Full time staff	900 + student employees
$22 million spent on commodities per year	10 Dining Halls	15 Retail locations	Storrs, Groton, Hartford

The 5 pillars of operation

UCONN | UNIVERSITY OF CONNECTICUT

DINING SERVICES

Green Initiatives

Trayless Dining (2012)
Napkins centralized (2014)
Purchasing Philosophy
Sustainable Fish Program
Menu Management System
Pre-consumer & Post-consumer waste
Recycling
Training
Reducing Single Use Plastics
Plate sizing
Portion sizing
Cup sizing
Donation & Food Pantry
Certified Green Restaurant
First public university to have all dining halls certified

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DINING SERVICES

Food Waste

Food Waste → Quantum Biopower

Cooking Oil → Biodiesel Fuel

Take Less Waste Less - Trayless/Visual Reminders

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DINING SERVICES

Reducing Single Use Plastics

Reusable To-Go Container Program

Reusable Mug Program

No Plastic Straws (2018)

No Plastic Bags (2019)

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DINING SERVICES

Local Food

UConn Dining Services is the largest consumer of locally grown produce in Connecticut

36% of all food purchases are regional purchases

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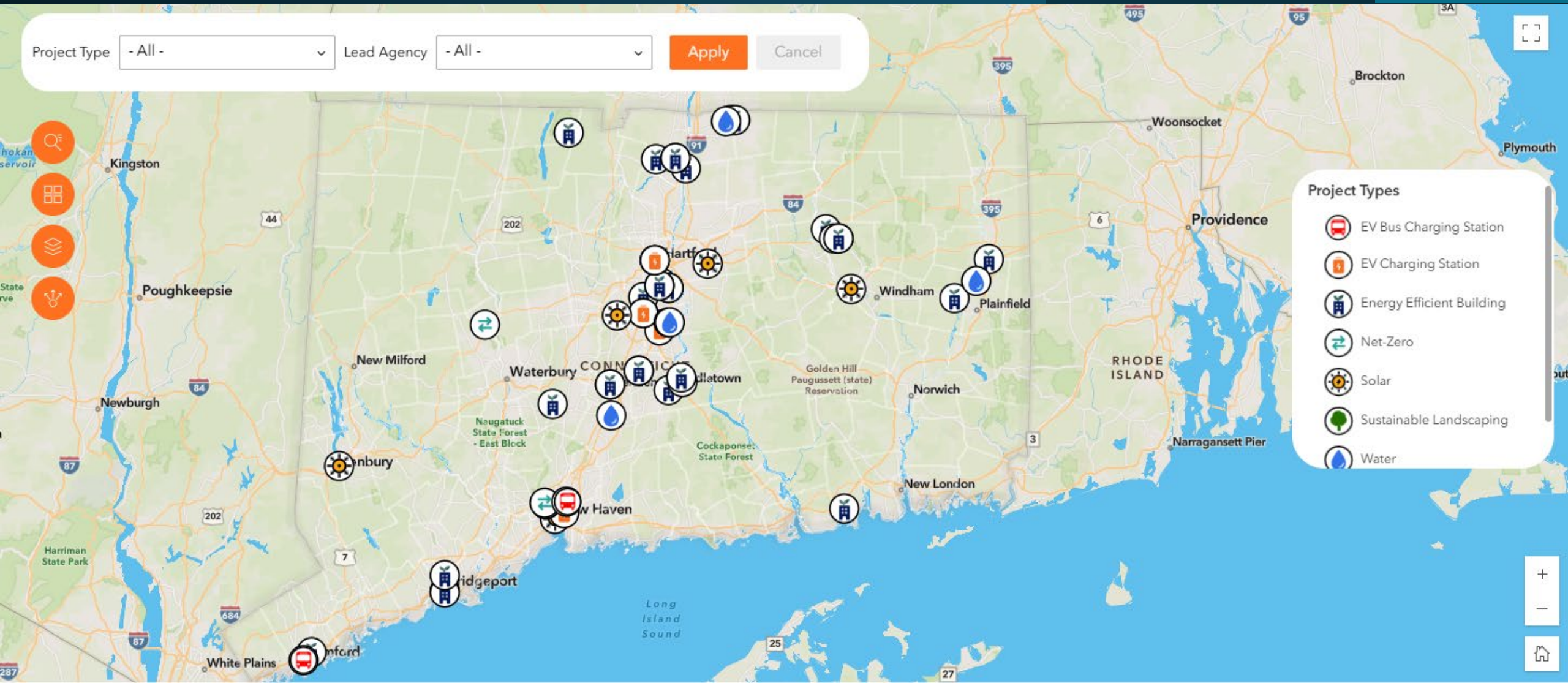
DINING SERVICES

SUSTAINABILITY EFFORTS AND DATA INTEGRATION

- The Interactive Map – DEEP & OPM
- EnergyCAP - DEEP
- Better Climate Challenge - DAS

THE INTERACTIVE MAP



ENERGYCAP OVERVIEW

Presented by: Wvarrda Saulat
Bureau of Energy and Technology Policy

WHAT IS ENERGYCAP

EnergyCAP is an energy management software that is used for managing utility bill data for Connecticut's Executive Branch agencies.

Agencies upload their utility bills into EnergyCAP and the software analyzes the bills to help us gain understanding into the state's energy consumption patterns.

Used to:

- **Track progress towards Executive Order 21 -3 sustainability goals.**

ENERGYCAP TASKS AND REQUIREMENTS

Billing Data To Upload

Electricity, Natural Gas

Gasoline, Diesel Fuel

Oil , Propane,

Waste, Recycling

Sewer, Steam, Water, Fire Protection

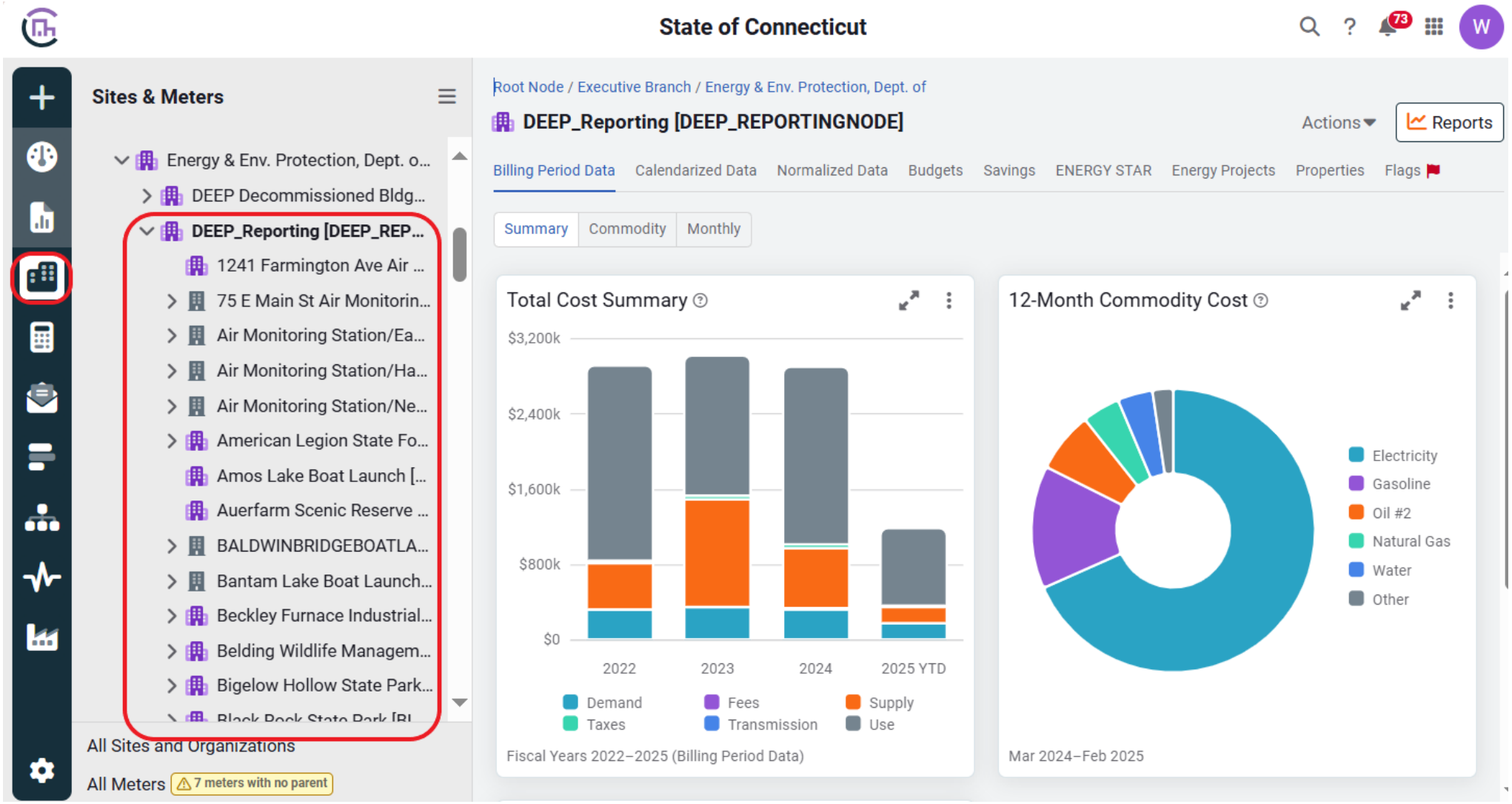
Other Agency Tasks

Manage Building Inventory

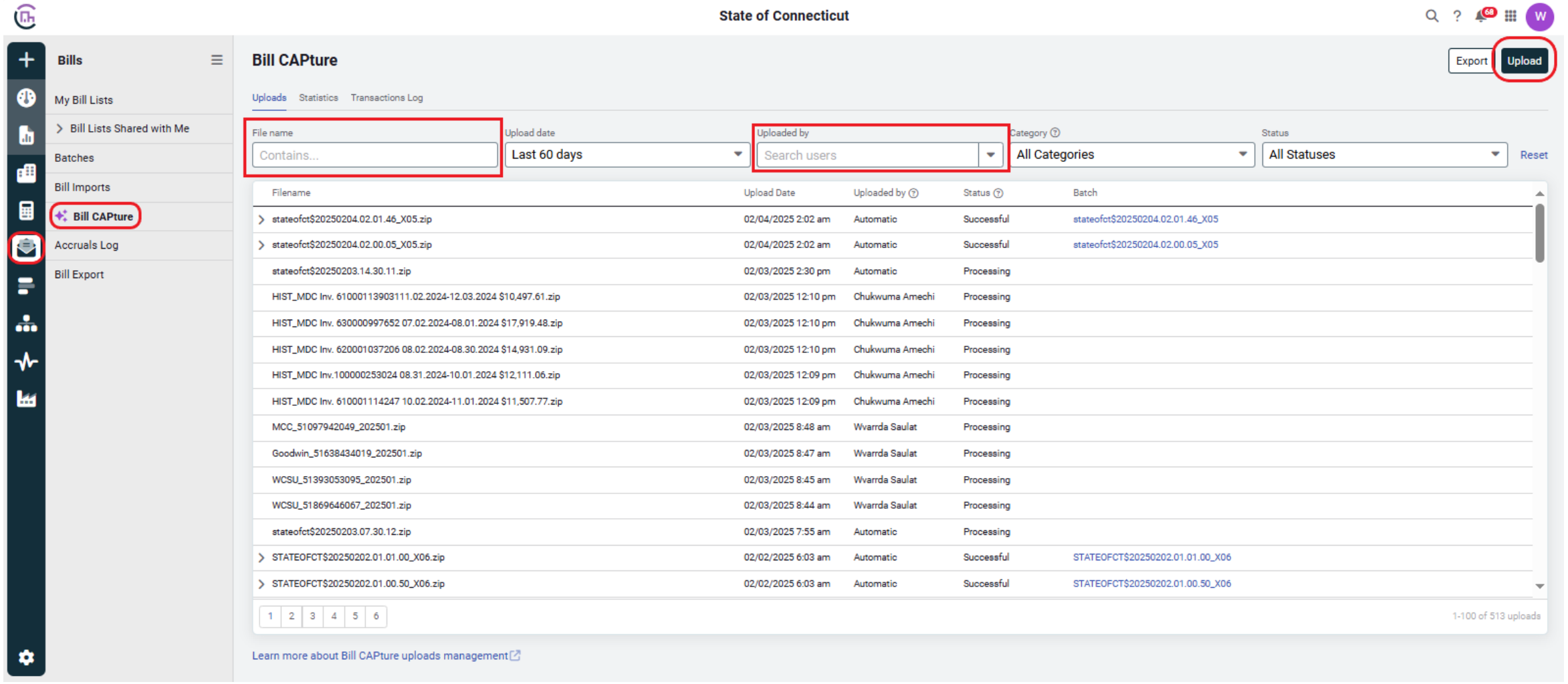
Ensure no Data gaps

Resolve Bill Flags

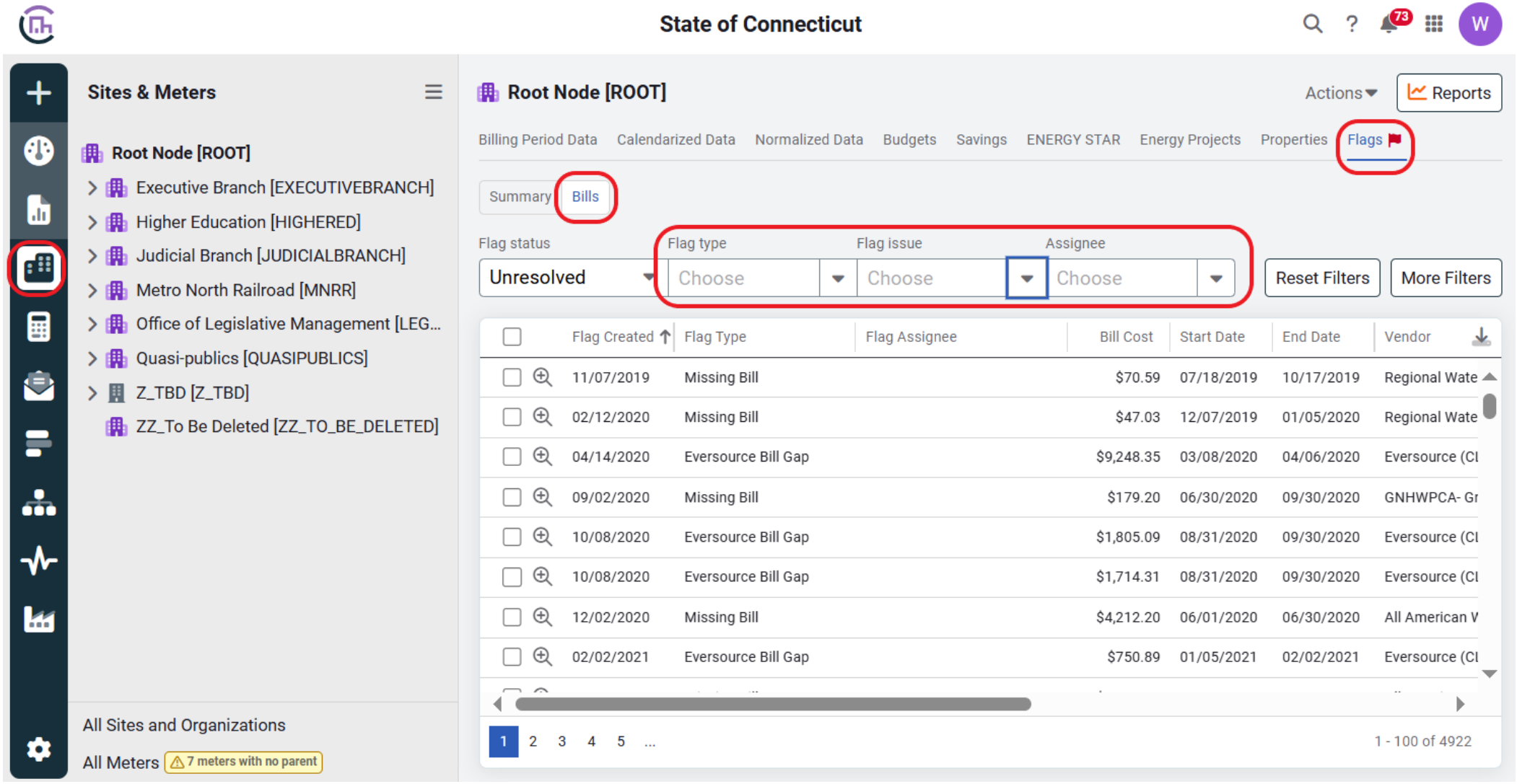
MANAGING BUILDING INVENTORY DATA



ENSURING NO DATA GAPS



MONITORING BILL FLAGS



DASHBOARDS

Provide visual insight into your utility bill data.

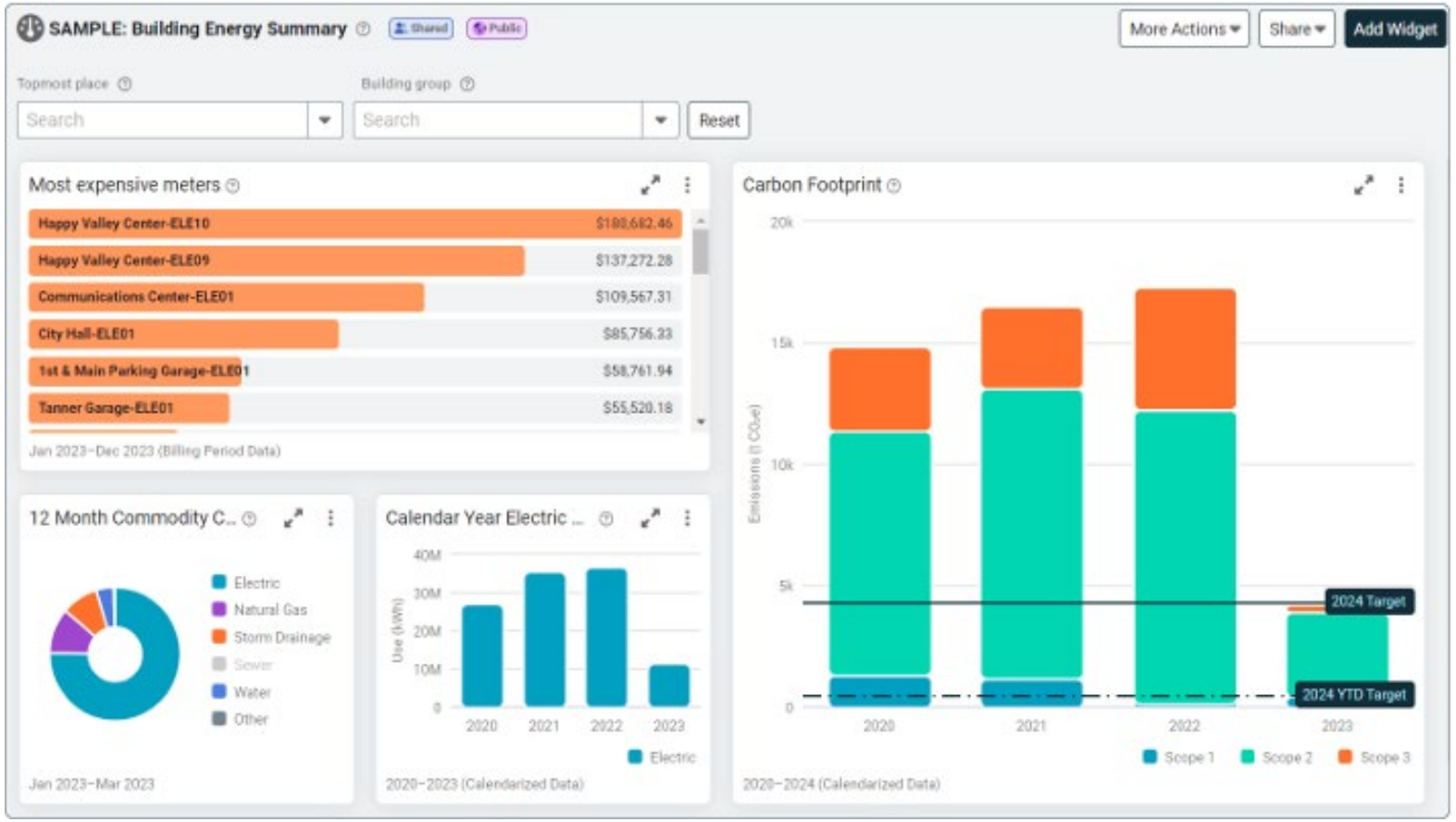
Useful features:

Utility costs and energy usage

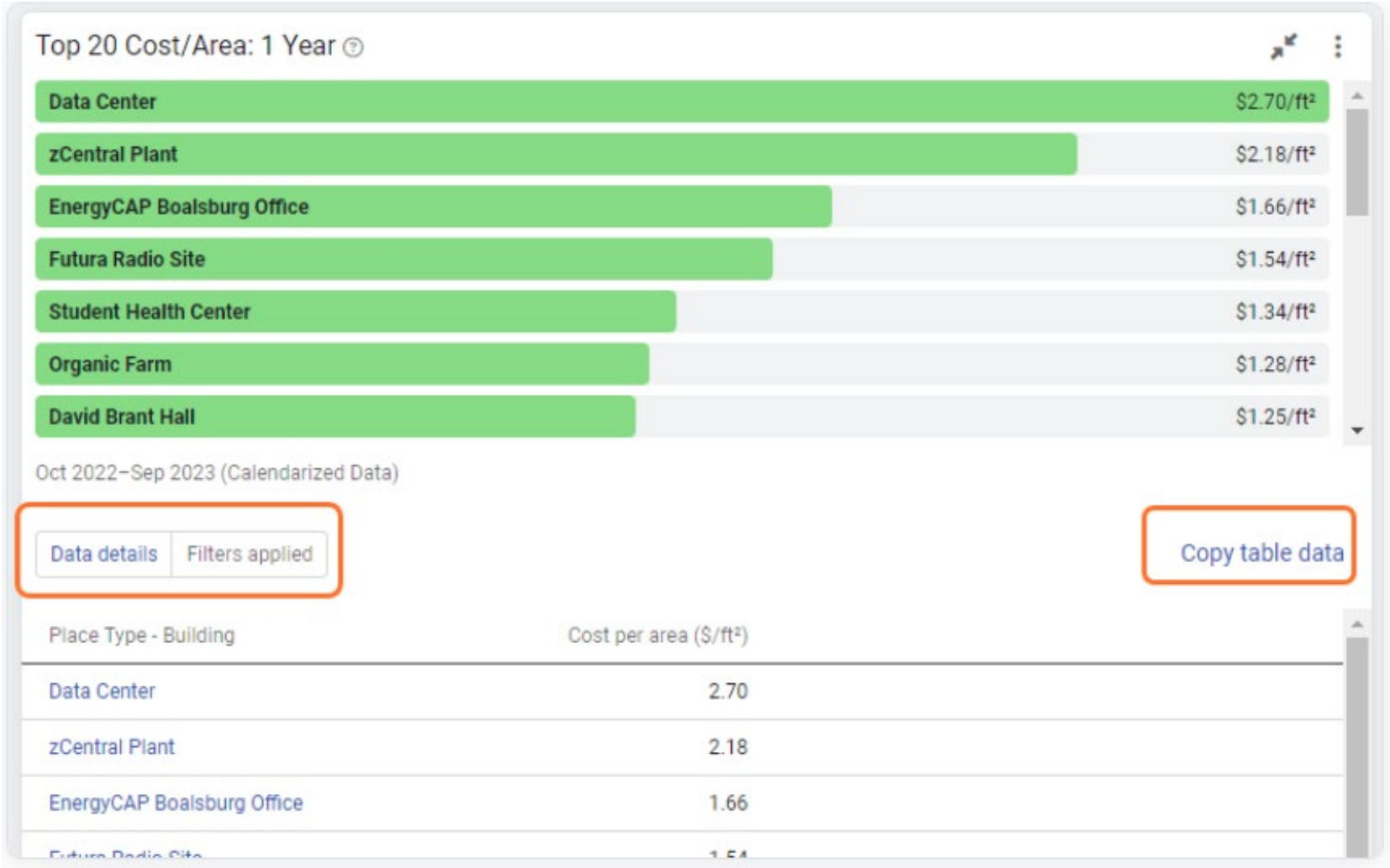
Building or location comparisons

Emissions

Missing Bills & Bill Flags.



DASHBOARDS


Top 20 Cost/Area: 1 Year
Data Center $2.70/ft²
zCentral Plant $2.18/ft²
EnergyCAP Boalsburg Office $1.66/ft²
Futura Radio Site $1.54/ft²
Student Health Center $1.34/ft²
Organic Farm $1.28/ft²
David Brant Hall $1.25/ft²
Oct 2022–Sep 2023 (Calendarized Data)
Data details
Filters applied
Copy table data
Place Type - Building
Cost per area ($/ft²)
Data Center 2.70
zCentral Plant 2.18
EnergyCAP Boalsburg Office 1.66

CONTACTS

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Managed Services Specialist

- **Kim Fullum**
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DEEP EnergyCAP Team

- **Wvarrda Saulat**
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- **Jimena Fernandez**
  - jimena.fernandez@ct.gov

BETTER CLIMATE CHALLENGE

State Commitment	DOE's Commitment
Publicly pledge to reduce GHG emissions by 50% or more across portfolio, pursue energy efficiency target as part of decarbonization strategy, assign a senior executive/primary POC to work with DOE. **(EO1/EO21-3 outlines our goals and targets to achieve)**	Provide technical assistance and implementation strategies.
Develop an organization wide plan with GHG reduction milestones, share GHG reduction strategies, and participate in working groups. **(Currently developing a decarbonization plan for state executive branch agencies. Participating in US Climate Alliance working group meetings on various topics and share input)**	Collaborate with partners on a regular basis.
Provide energy performance and GHG emission data, and report annually for 10 years. **(GreenerGov Dashboard is public to show energy, water, and GHG data)**	Collect/share best practices and facilitate peer-to-peer working groups.
	Provide national recognition to partners.

OVERVIEW & DISCUSSION OF RESOURCES FOR SSOs

- Funding Options for Projects - DEEP
- Brainstorm on the creation of Interagency Working

FUNDING OPTIONS FOR PROJECTS – LBE PROJECT EVOLUTION

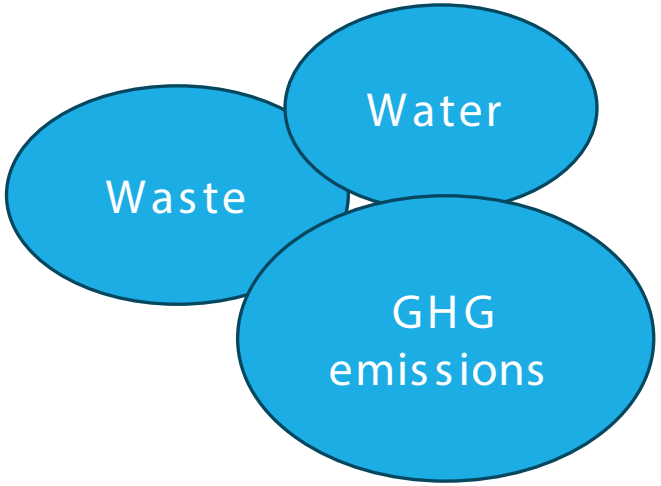
Lead by Example 2011

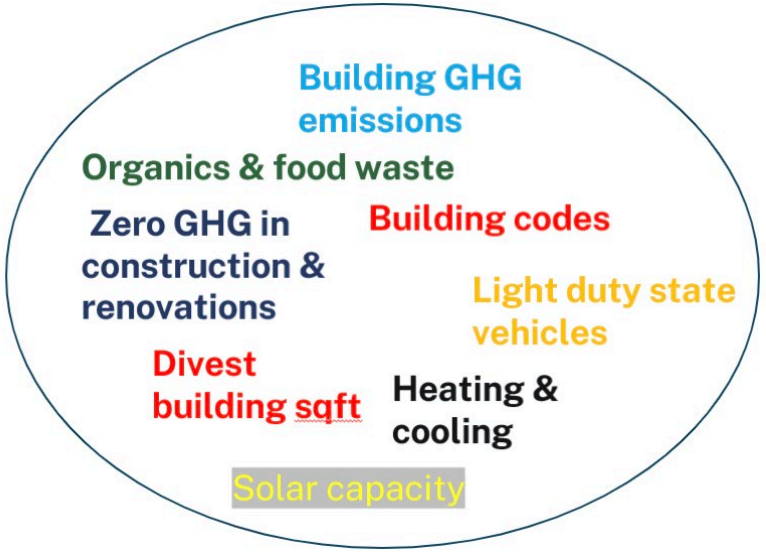
E.O 1 – April 2019

E.O.21-3 – Dec. 2021

Improving Energy Management

at State Facilities





FUNDING OPTIONS

On-bill financing with utility incentives

What is on-bill financing?

- The **first option** for **energy efficiency projects.**
- **Reduces the total project cost** through utility **rebates/incentives**
- Allows the remaining project costs to be **paid on-bill over time** (up to $1 million in Eversource territory & up to $500K in United Illuminating territory)

FUNDING OPTIONS

On-bill financing with utility incentives:

On-Bill Financing allows:

- Project costs to be billed through the **agencies' regular monthly bills.**
- Payments made by agencies from their existing **operating budget.**
- On-bill financing is provided at **0% interest** and for up to four years (Eversource offers five-year loans as well).
- **Upfront financing** comes from the utility or third-party financer.
- The Utility Company will oversee the implementation of the project.

LBE BOND FUNDS

- Bond funds are available for state agencies to help meet E.O. 1 and E.O 21-3 targets.

- *Important Note: Projects less than $1 million should go through utility on-bill financing before perusing Bond funds.*

LBE BOND FUNDING OPTIONS

Funding opportunities are available for projects that address any of the following topics:

- ***Building upgrades*** *that result in decreased environmental impacts and reduced greenhouse gas (GHG) emissions, which include* ***heating and cooling*** *upgrades, such as the installation of renewable thermal heating systems.*

- ***Electric vehicle*** *charging infrastructure to support charging state-owned or leased electric vehicles.*

- ***Water use*** *reduction initiatives.*

- ***Organic waste diversion (e.g., composting)*** *and waste reduction projects.*

- *Any* ***renewable energy*** *projects.*

- *And other projects related to the Executive Order targets.*

OTHER FUNDING OPTIONS TO CONSIDER

- Federal funding
- Other agency funds

BRAINSTORM ON INTERAGENCY WORKING GROUPS

DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
Katie Dykes, *Commissioner*

OFFICE OF POLICY AND MANAGEMENT
Jeffrey Beckham, *Secretary*

DEPARTMENT OF ADMINISTRATIVE SERVICES
Michelle Gilman, *Commissioner*

STEERING COMMITTEE

IMPACT SUBCOMMITTEES

- Renewable Energy
- Energy Efficiency
- Sustainable Materials Management
- Sustainable Water Use
- Clean and Efficient Transportation

SYSTEM SUBCOMMITEES

- Process Improvement
- Reporting
- Public Engagement
- Sustainability in Leased Spaces

40 Agencies ○ 29 Directed ○ 11 Voluntary

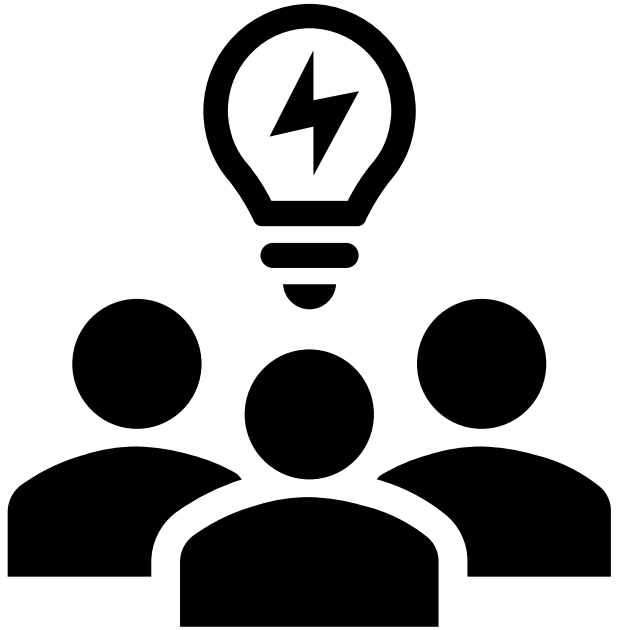
+

Bi-weekly **planning meetings** between the co-chairs agencies (DAS, OPM & DEEP)

+

Monthly Technical Advisory (TAC) meetings for agencies to submit project proposals for **LBE funding**

BRAINSTORMING SESSION REPORT OUTS



PUBLIC COMMENT

THANK YOU FOR PARTICIPATING IN THE STEERING COMMITTEE MEETING!