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**greenergovCT**  
A Lead by Example Initiative



# 2023 PROGRESS REPORT

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This report summarizes progress on the implementation of Connecticut's State sustainability initiative and meets the reporting requirements of Executive Orders No. 1 and 21-3.

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# Introduction

On April 24, 2019, Governor Lamont launched the GreenerGov CT initiative by signing Executive Order No. 1 (EO 1), which directs Executive Branch agencies to advance environmental leadership resulting in cost savings for taxpayers. The Order calls on agencies to both recommit to and expand the State's Lead by Example (LBE) program to reduce operating costs and environmental impacts of State government facilities and operations. EO 1 builds on the foundation of the LBE program, invoking deeper levels of commitment and participation by setting new sustainability goals for Executive Branch agencies. EO 1 requires Executive Branch agencies to:

- 1. Reduce greenhouse gas emission by 45% below 2001 levels.**
- 2. Reduce waste disposal by 25% from a 2020 baseline.**
- 3. Reduce water consumption by 10% from a 2020 baseline.**
- 4. Set additional sub-goals by 2030.**

Item (D) of EO 1 directs the Steering Committee on State Sustainability, comprised of appointed Senior Sustainability Officers (SSOs) and delegates from over 30 State Agencies, to establish specific subordinate goals and interim targets to meet the overall goals. Executive Order No. 21-3 (EO 21-3) accomplishes this directive by setting the following commitments:

- By 2024, all Executive Branch agency facilities, to the extent practicable, shall implement an organics and food waste diversion program.
- By 2030, all electricity purchased and generated by the Executive Branch will be 100% zero carbon.
- By 2030, all newly leased light duty state vehicles shall be zero emission vehicles.
- By 2023, DEEP and DAS shall develop a plan to retrofit existing fossil fuel-based heating and cooling systems at state buildings to systems capable of being operated without carbon emitting fuels.
- By 2023, DEEP and DAS shall develop a plan and a budget to achieve zero-GHG emissions for all new construction and major renovations funded by the State or in facilities owned/operated by the Executive Branch, targeting construction beginning in fiscal year 2024 and after.
- By 2024, the State shall divest 1% of all Executive Branch building square footage, and an additional 2% by 2028.
- The State shall deploy an average of 10,000 kWDC of new solar capacity annually for the next 10 years, primarily new projects sited on state buildings or property.
- The State shall commit to reducing Executive Branch building GHG emissions by at least 1 % annually.

The newly established climate commitments are based on analysis conducted in 2021, which mapped out the investments and savings pathways necessary to reach EO 1 targets. Using the best available data, this analysis examined sector-specific strategies to meet the goals of EO 1, quantifying the potential energy reduction, savings, and costs of each strategy.

# Reporting Requirements

This 2023 Progress Report satisfies the EO 1 requirement to issue an annual "report on the progress in implementing this Order to the Governor and the chairpersons and ranking members of the Environment Committee and the Energy and Technology Committee of the General Assembly." It also covers the prior statutory requirement outlined in Conn. Gen. Stat. §16a-37u.

This 2023 Progress Report highlights the progress, achievements, and data from fiscal year 2022.

All 28 Executive Branch designated agencies and an additional six voluntary agencies submitted annual Sustainability Performance Plans detailing their progress on GreenerGov CT initiatives, barriers towards progress, and future planning.

For additional resources on sustainability initiatives in Connecticut state government visit: [portal.ct.gov/GreenerGov](https://portal.ct.gov/GreenerGov). The GreenerGov CT site seeks to increase public transparency of State actions and facilitate information-sharing and collaboration with municipalities, organizations, businesses, and other states pursuing similar LBE programs.

# Progress at a Glance

EO 1 Target	Metric	FY21'	FY22
Reduce GHG emission by 32.53% from a FY19 baseline	Change in GHG Emission (MTCO <sub>2e</sub> ) from FY19 baseline	-11%	-10.4%
Reduce waste disposal by 25% from a 2020 baseline by 2030	Baseline to be Determined	Incomplete Data	Incomplete Data
Reduce water consumption by 10% from a FY19 baseline by 2030	Change in Water Consumption (kGal) from FY19 baseline	-4.5%	1.9%

EO 21-3 Target	Metric	FY21	FY22
By 2024, all Executive Branch agency facilities, to the extent practicable, shall implement an organics and food waste diversion program	Number of facilities of total Executive Branch facilities with contracted composting service	2	2
By 2030, all electricity purchased and generated by the Executive Branch will be 100% zero carbon	Percentage of total electricity usage that is renewable	22%	24%
By 2030, all newly leased light duty state vehicles shall be zero emission vehicles	Percentage of leased vehicles that are EVs	1.1%	1.1%
By 2024, the State shall divest 1% of all Executive Branch building square footage, and an additional 2% by 2028	Change in Executive Branch square footage from FY19 baseline	-1.6%	-2.7%

EO 21-3 Target	Metric	FY21	FY22
The State shall deploy an average of 10,000 KWDC of new solar capacity annually for the next 10 years	Total Planned solar capacity (kWDC)	23,225	23,225
The State shall commit to reducing Executive Branch building GHG emissions by at least 1 % annually	Annual change in building GHG emissions (MTCO2e)	0.03%	-0.28%

Additional EO 21-3 Requirements	Progress
By 2023, DEEP and DAS shall develop a plan to retrofit existing fossil fuel-based heating and cooling system at State buildings to systems capable of being operate without carbon emitting fuels	GreenerGov CT is developing an RFP to hire a consultant to develop a decarbonization plan
By 2023, DEEP and DAS shall develop a plan and a budget to achieve zero-GHG emissions for all new construction and major renovations funded by the State or in facilities owned/operated by the Executive Branch, targeting construction beginning in fiscal year 2024 and after	GreenerGov CT is assembling a cross-agency Net Zero New Construction Team to develop this plan

<sup>1</sup> The 2022 Greener Government Progress Report evaluated agency Energy Cap data generated in fiscal year 2021. The report, for example, shows a 13.7% reduction in GHG emissions for FY 21 compared to the 2019 baseline. The 2023 report shows a 11% reduction in GHG emissions for FY 21 compared to the 2019 baseline. Agency data submitted after report publication were excluded from the 2022 report but included in the 2023 report. This explains the discrepancy between FY21 values in last year's report compared to FY21 values reported this year.

# Steering Committee Members

Executive Order 1 established the Steering Committee on State Sustainability, co-chaired by the Secretary of the Office of Policy and Management (OPM), the Commissioner of the Department of Administrative Services (DAS), and the Commissioner of the Department of Energy and Environmental Protection (DEEP). The Steering Committee is composed of Senior Sustainability Officers from each Executive Branch agency, designated by their commissioners, who are responsible for leading their agency's efforts to comply with EO 1.

**Senior Sustainability Officers for Connecticut State agencies participating in EO 1 are as follows:**

## Executive Branch Agency

Agriculture Experiment Station  
 CT State Library  
 Department Mental Health and Addiction Services  
 Department of Administrative Services  
 Department of Aging and Disability Services  
 Department of Agriculture  
 Department of Banking  
 Department of Children and Families  
 Department of Consumer Protection  
 Department of Correction  
 Department of Developmental Services  
 Department of Economic & Community Development  
 Department of Energy & Environmental Protection  
 Department of Housing  
 Department of Insurance  
 Department of Labor  
 Department of Motor Vehicles  
 Department of Public Health  
 Department of Revenue Services  
 Department of Social Services  
 Department of Transportation  
 Department of Veterans Affairs  
 Dept of Emergency Services & Public Protection  
 Division of Criminal Justice  
 Military Department  
 Office of Early Childhood  
 Office of Policy & Management  
 Public Defender Services  
 State Department of Education

## Voluntary Agency

Capital Region Development Authority  
 Connecticut Housing Finance Authority  
 CT Airport Authority  
 CT General Assembly/OLM  
 CT Green Bank  
 CT Innovations  
 CT Lottery Corporation  
 CT State Colleges and Universities  
 Judicial Department  
 State Education Resource Center  
 UCONN  
 UCONN Health Center

# Data Dashboard

The Data Dashboard (visualized below) provides comprehensive data on sustainability initiatives implemented within the Connecticut state agencies. It provides data on the state's progress towards achieving the objectives outlined in EO 1 and EO 21-3 as well as data concerning utility use and cost in Connecticut state agencies.

The Data Dashboard can be accessed through the link provided below:

[GreenerGov CT Dashboard | Connecticut Data](#)

## UTILITY USE AND COST, FY19-FY22

### Executive Branch Agencies

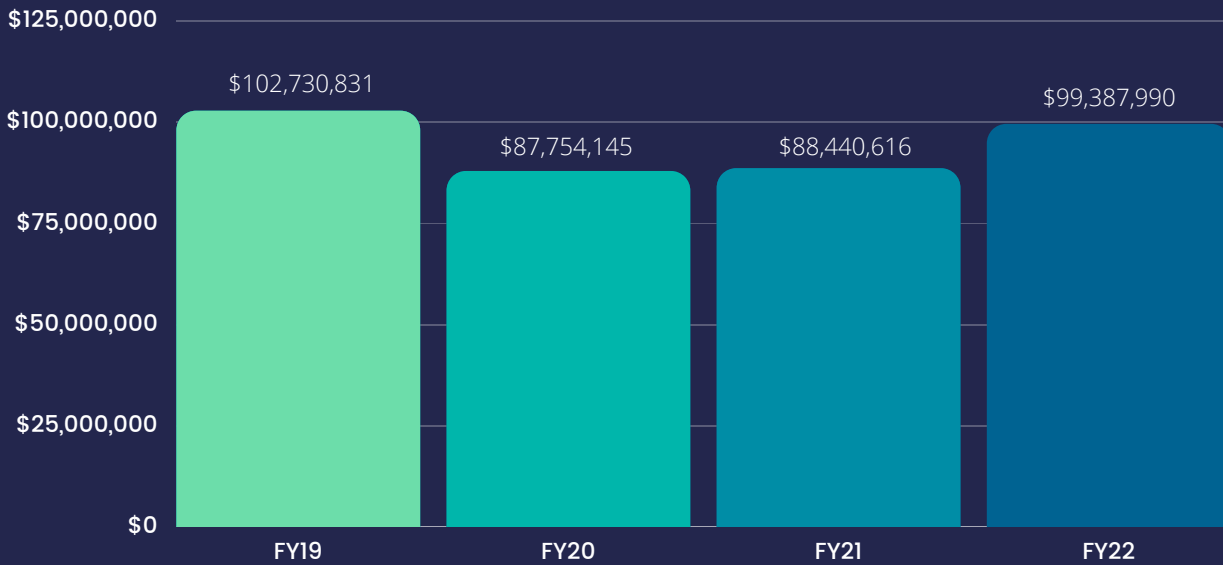
		FY19	FY20	FY21	FY22	Change	Cost	Use
Electric	Cost	\$46,161,208	\$41,692,601	\$40,869,340	\$40,218,790	-13%		
	Use (kWh)	287,467,451	271,343,703	261,878,607	254,773,633	-11%		
Natural Gas	Cost	\$11,390,077	\$9,849,628	\$10,489,333	\$12,990,584	14%		
	Use (CCF)	12,402,420	11,822,668	11,785,712	11,843,590	-5%		
Other Building Energy	Cost	\$5,917,784	\$4,916,060	\$4,766,356	\$6,091,803	3%		
	Use (MMBtu)	444,045	288,420	316,148	238,932	-46%		
Vehicle Diesel	Cost	\$6,053,121	\$4,618,997	\$5,163,900	\$7,240,450	20%		
	Use (Gal)	1,862,499	1,560,472	1,837,687	1,699,636	-9%		
Vehicle Gasoline	Cost	\$11,867,067	\$9,844,608	\$9,364,775	\$15,487,624	31%		
	Use (Gal)	4,411,549	4,068,020	3,701,492	4,141,076	-6%		
Water & Sewer	Cost	\$11,987,051	\$10,122,337	\$9,863,776	\$8,719,521	-27%		
	Use (Kgal)	3,404,986	3,512,027	3,252,019	3,339,521	-2%		
Waste Disposal	Cost	\$9,354,523	\$6,709,914	\$7,923,136	\$8,639,219	-8%		
	Use	-	-	-	-	-		
Total Utility Costs	Cost	\$102,730,831	\$87,754,145	\$88,440,616	\$99,387,990	-3%		
Total GHG Emissions	mtCO2e	232,354	206,511	206,781	208,299	-10%		

\*Gasoline and diesel costs were estimated based on the average monthly cost from EIA.gov: \$3.74 for gasoline and \$4.26 for diesel in FY22; \$2.53 for gasoline and \$2.81 for diesel in FY21; \$2.42 for gasoline and \$2.96 for diesel in FY20; \$2.69 for gasoline and \$3.25 for diesel in FY19.  
 \*\*Other Building Energy sources include oil, propane, steam, chilled water, and hot water.



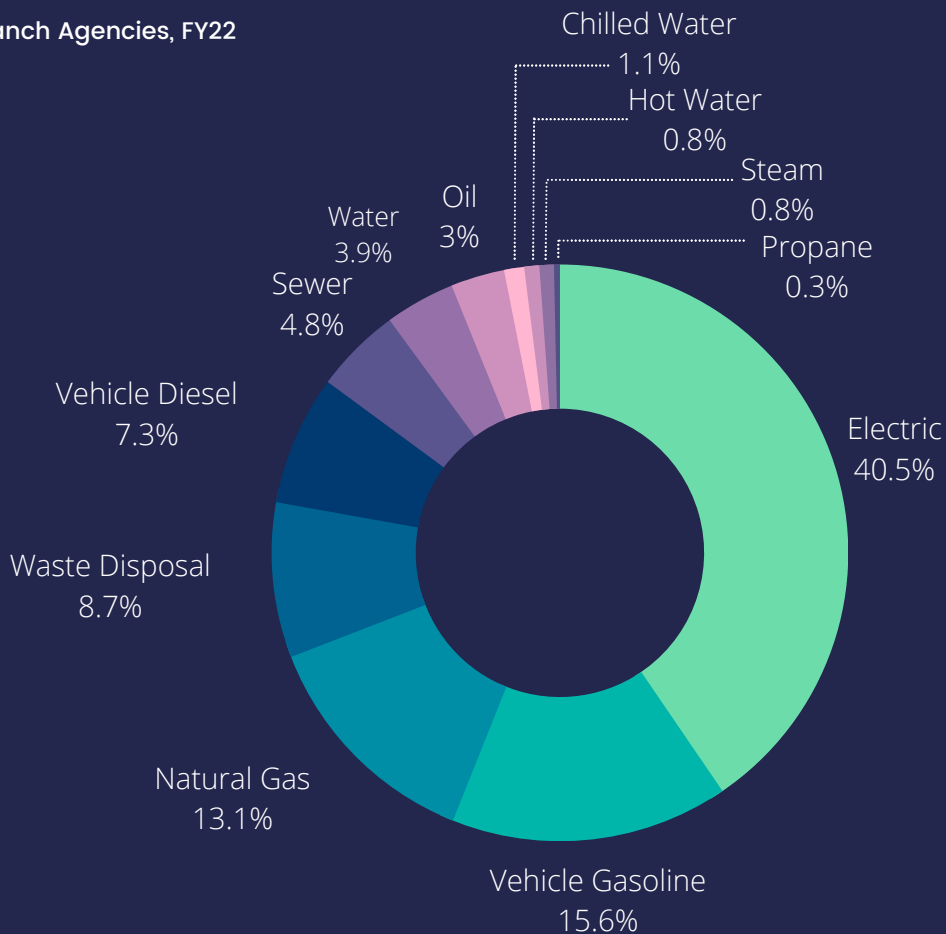
## UTILITY EXPENDITURES

Executive Branch Agencies, FY19-FY22



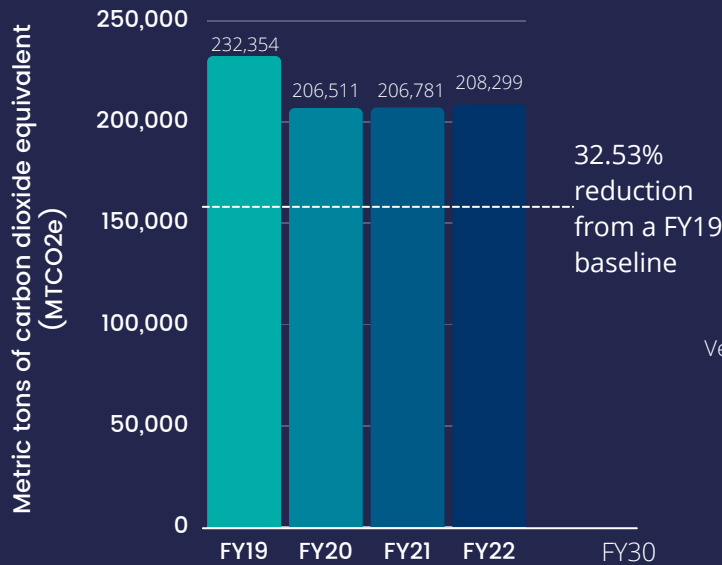
## UTILITY EXPENDITURES BY COMMODITY

Executive Branch Agencies, FY22



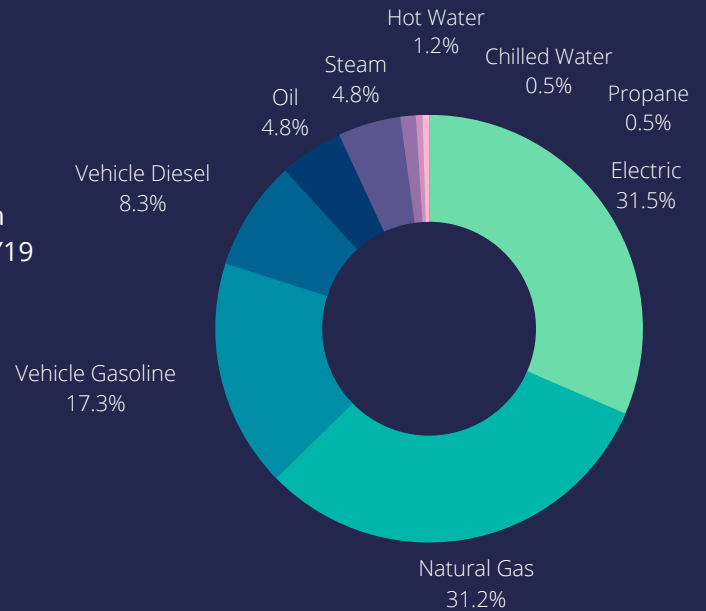
## TOTAL GHG EMISSIONS

Executive Branch Agencies, FY19-FY22



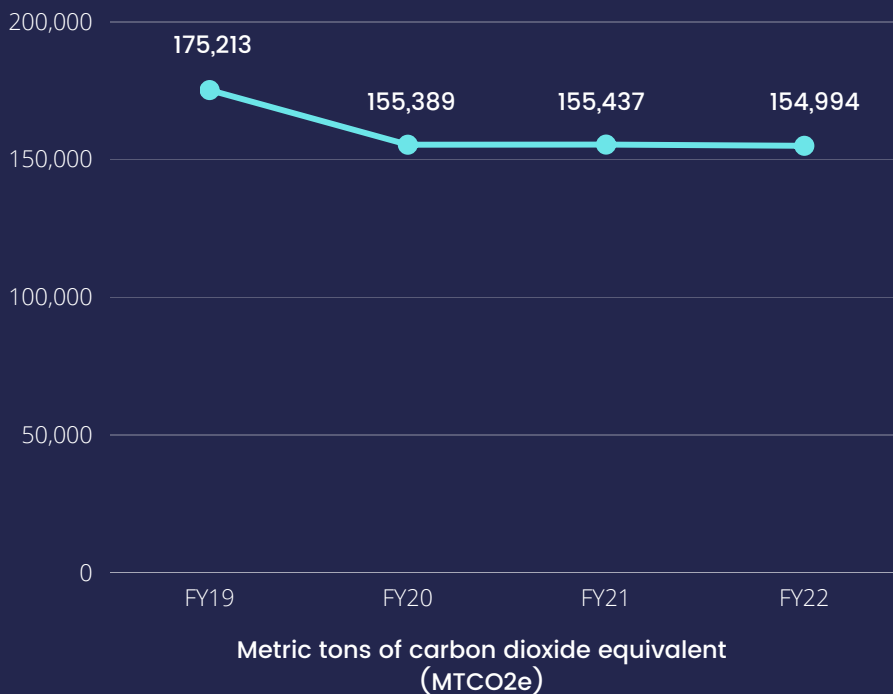
## GHG EMISSIONS BY COMMODITY (MTCO2E)

Executive Branch Agencies, FY22



## GHG EMISSIONS FROM BUILDING ENERGY USE

Executive Branch Agencies, FY19-FY22



**-11%**  
change from FY19-FY20

and

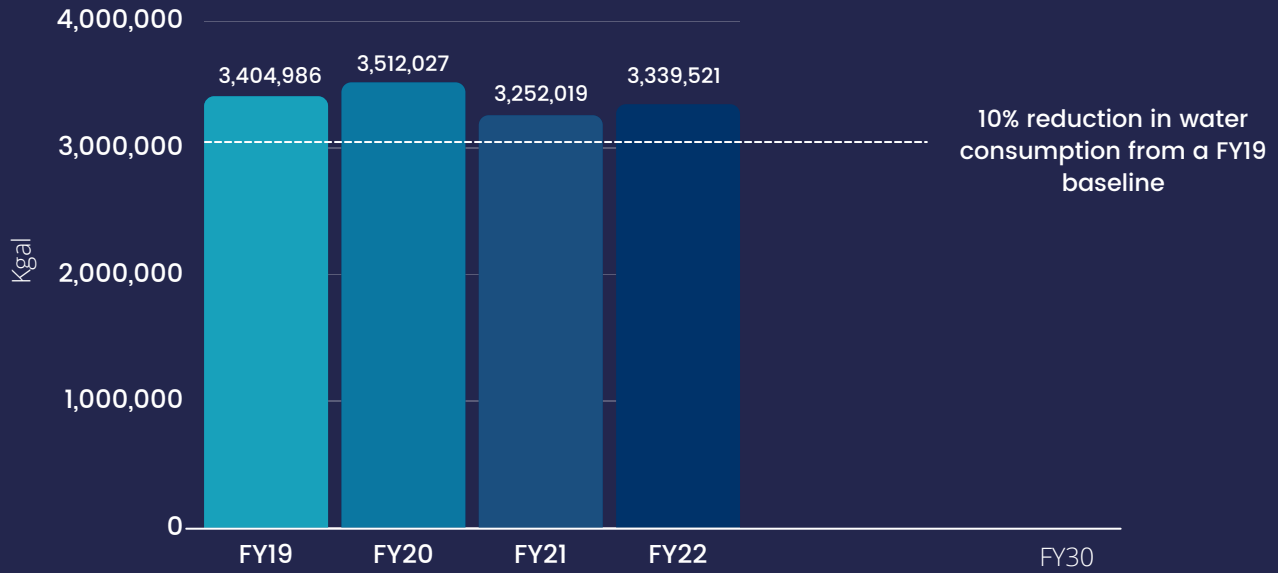
**0.03%**  
change from FY20-FY21

and

**-0.3%**  
change from FY21-FY22

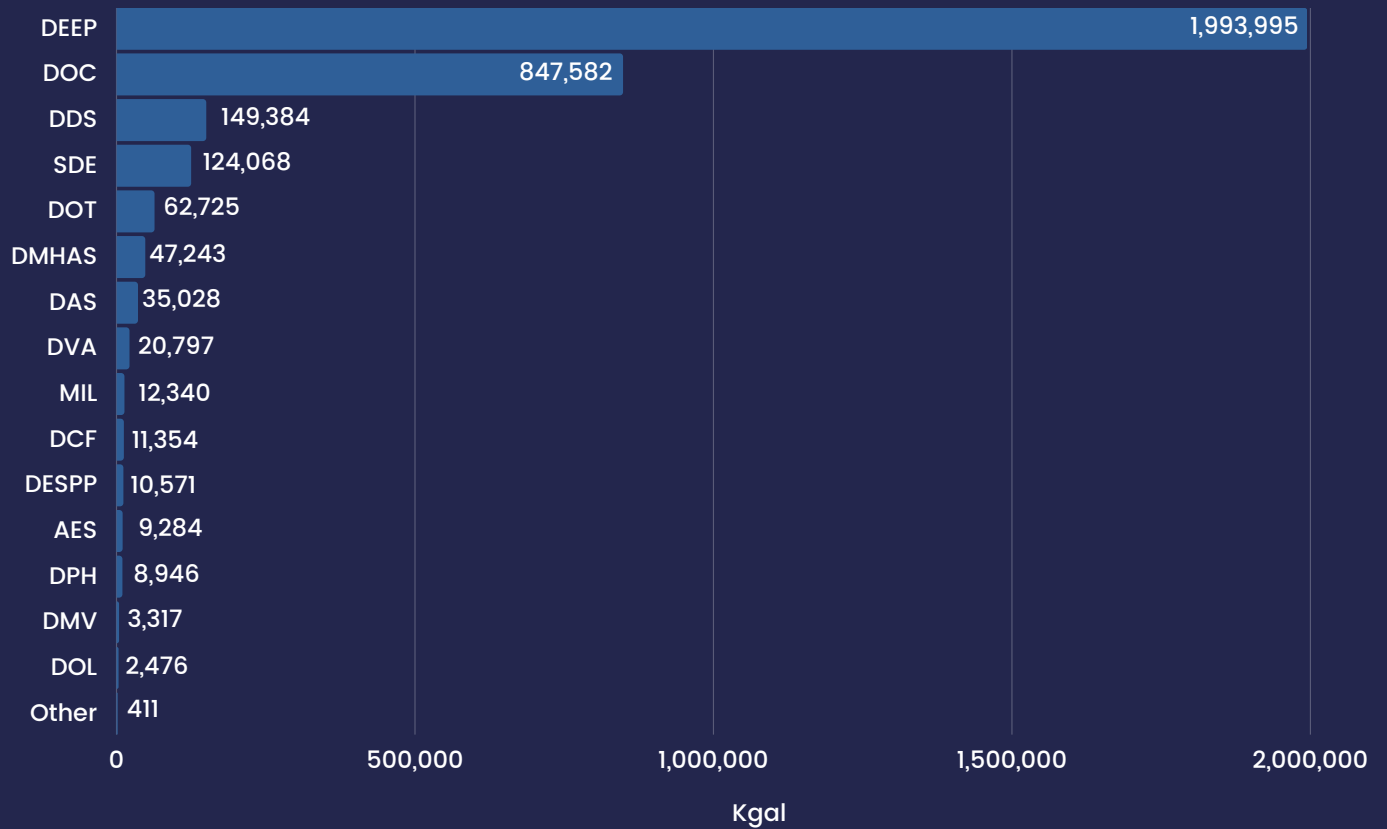
## WATER/SEWER USE

Executive Branch Agencies, FY19-FY22



## WATER/SEWER USE BY AGENCY

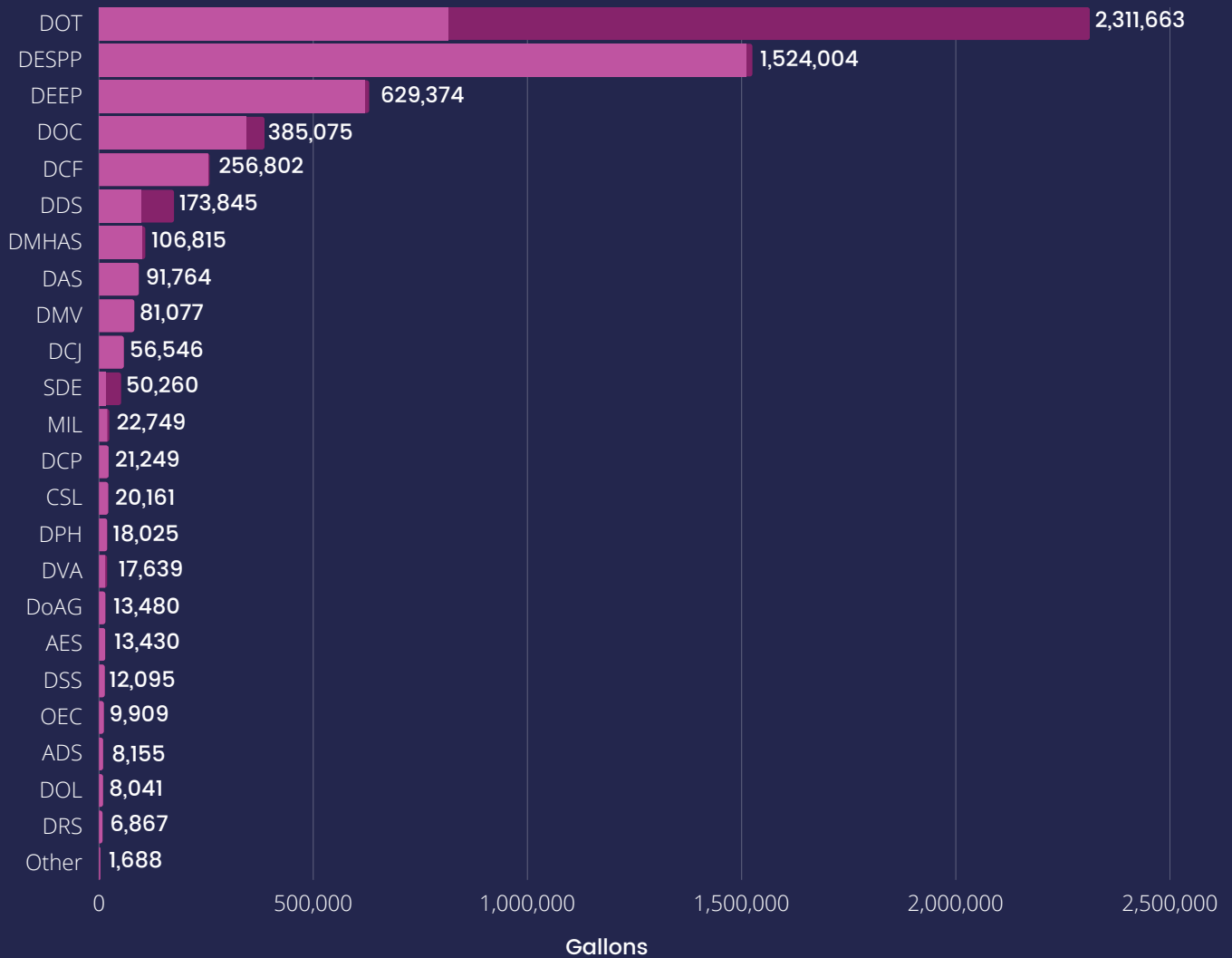
Executive Branch Agencies, FY22



## GAS & DIESEL USE BY AGENCY

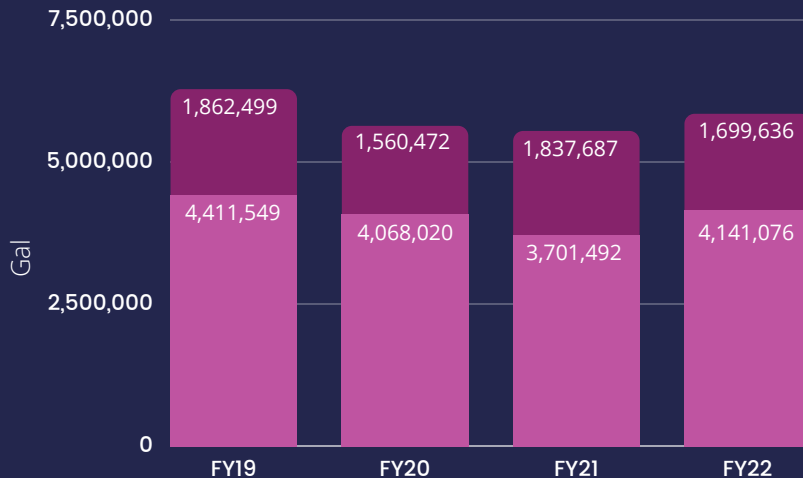
Executive Branch Agencies, FY22

Gasoline Diesel



## GAS & DIESEL USE

Executive Branch Agencies, FY19-FY22



Diesel use down 9% since FY19



Gasoline use down 6% since FY19



# Data and Methodology

**To track State government utility data, agencies or vendors upload utility bills and usage information to EnergyCAP, the State's online energy management software, which centralizes collection of thousands of utility bills from across the State's operations and facilities.**

While calculating baseline goals for some EO 1 targets are straight forward, others have presented complications described below. The Greener Gov team is working to resolve the baseline challenges by implementing data and methodology enhancements. This section refers to key targets outlined in Executive Order 1. Subsequent GreenerGov annual reports will also include progress towards Executive Order 21-3.

## Translating the GHG Reduction Goal

Although EO 1 calls for a 45% reduction in GHG emissions by 2030 compared to a 2001 (or 2014)<sup>2</sup> baseline, State government activity data was unavailable for either target baseline. Instead, GreenerGov CT calculated the 2030 GHG reduction goal as a percentage change from a FY19 baseline, which was the earliest year with available data. Using the 2018 statewide annual GHG inventory as a reasonable proxy for FY19, the GreenerGov CT 2030 GHG reduction target is 32.53% below FY19 baseline GHG emissions.

## Waste Data Methodology

Measurement of the rate of waste generation requires quantification of waste materials and an accurate measure of facility occupancy over a common time period. These measurements are made more meaningful with cohort data on facility type, waste and recycling infrastructure, presence/absence of onsite food service, and other contributors to both waste generation and diversion of non-waste materials.

<sup>2</sup> From EO1, "the 2018 report of the Governor's Council on Climate Change, established by Executive Order No. 46, called for a 45 percent reduction in GHG emissions below 2011 levels by 2030, equivalent to a 34 percent reduction below 2014 levels, and urged that all state agencies, in the aggregate, reduce their energy use or energy intensity."

In early 2020, DEEP surveyed state agencies to gather waste usage data to create a baseline. In 2019, six Connecticut Executive Branch agencies staff prepared and served food in cafeterias. Today, most agencies replaced the cafeteria with a “grab and go” kiosk. The new food service model resulted in automatic waste reductions, challenging valid baseline comparisons.

The process of improving waste diversion practices and performance can begin once a facility has developed accurate baseline measurements and useful cohort data. Unfortunately, waste disposal weight or volume are not captured on invoices across the majority of state facilities. Currently, the volume of waste reported are from trash compactors at only a handful of state office buildings and at state correctional facilities.

The Executive Branch facilities currently 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. GreenerGov CT’s goal for gauging program performance is to implement a consistent measurement methodology with the ability to incorporate facility-specific factors. GreenerGov CT continues to explore multiple approaches to this effort utilizing both internal and external resources, including utilizing vendors that can provide technical assistance for implementing sustainable management strategies.

## Water Data Methodology

The tracking of our water consumption at state buildings is done through the EnergyCAP platform. Invoices from water utilities and municipal utilities are scanned and uploaded, by agencies, into EnergyCAP for tracking. Additionally, some well water data is tracked, for those facilities that consume a certain quantity of well water. Those facilities are required to meter the wells and report annually to DEEP. That information is then manually uploaded to EnergyCAP, to be reported in our overall water consumption. The GreenerGov team will continue to refine this process to ensure tracking of all water consumption data across state government.



# Key Program Achievements



## Waste Technical Assistance

DEEP has coordinated with DAS to issue an RFP to create a master contract for vendors who can provide technical assistance/guidance for implementing sustainable materials management strategies. The master contract will help State agencies (as well as local and regional jurisdictions) seek services to improve the efficiency of their solid waste and recycling operations, improve or expand existing waste programs, generate significant cost savings related to waste disposal, and purchase reasonably priced equipment for waste diversion and water conservation. The master contract can be used for future State agency waste audit projects to help improve data collection and identify areas of focus for meeting the State's diversion goals. As of January 2023, seven vendors have been awarded contracts, with negotiations to include additional vendors. The master contract is effect from November 17, 2022 through November 17, 2025.



## Organics Collections

DEEP and the Center for EcoTechnology is providing assistance to state agencies with organics diversion. During 2022, this assistance resulted in the Department of Mental Health and Addiction Services Connecticut Valley Hospital (CVH) Facility starting an organics collection. CVH has diverted approximately 4 tons/week since implementation. Department of Correction (DOC) has identified a location for a pilot project in Somers and has received quotes from vendors. DAS's State Office Building at 165 Capitol Ave, opened their cafeteria in 2022 and also has a food waste program in place.



## Transportation

Electric vehicles (EV) represent a small but growing percentage of the state fleet. The Department of Administrative Services (DAS) is actively working to meet the requirement that, by 2030, all newly leased light-duty state vehicles be zero-emission vehicles. In FY22, DAS instituted the transition of the light duty state fleet to zero emission vehicles with purchases in FY23. Public Act 23-205 authorized \$35,000,000 for the purchase of electric vehicles and the construction and installation of electric vehicle charging infrastructure at state facilities. This funding is essential for increasing the penetration rate of EVs within the state fleet, as the upfront cost of EVs and a lack of charging infrastructure remain a significant barrier to adoption.

DAS and other state agencies are exploring the development of a structure for shared oversight of the billing, repair, and maintenance of Electric Vehicle Supply Equipment used to support fleet vehicles, as a cohesive approach to EV charging is necessary for optimal and cost-effective station deployment.

Nearly all state fleet vehicles are equipped with onboard vehicle telematics systems. These systems allow state fleet operators to utilize vehicle data to ensure that vehicle operations and maintenance schedules maximize efficiency. DAS is investigating how telematics systems can be further utilized to improve driver behavior, such as limiting idle times, to maximize vehicle efficiency.





# Project Highlights

**Governor Lamont's EO 1 and EO 21-3 have led to many compelling projects across state government and the following examples highlight the breadth of opportunities from large-scale infrastructure projects to changing daily practices. We all have a role to play in fostering efficiency and savings!**



## Upgrading to LEDs

**Department of Motor Vehicles** conducted and implemented LED lighting upgrades at six of their owned buildings across the state, with a two more on the way. All these projects have been completed, with an estimated annual cost savings of \$43,000 cumulative.

**Department of Transportation** has implemented several LED lighting upgrades at various DOT facilities and along state roadways, resulting in a projected 462,627 kWh reduction in energy savings.

**Department of Corrections** has implemented LED lighting upgrades at several correctional facilities across the state, resulting in an estimated 31.3 million kWh reduction annually.



## Reduce, Reuse, Recycle

**Department of Social Services (DSS)** made significant strides in material management by establishing battery recycling stations in all offices, promoting paperless work process, which resulted in \$80,000 in paper cost savings. DSS evaluated appliances in all offices, removing and replacing inefficient models that will save \$2,500 annually and reduce 157,000 pounds of GHG emissions over 5 years.

**Department of Mental Health & Addiction Services** implemented a pilot recycling and waste management initiative where recyclables, food scraps, and trash are separated for disposal. Between 1,500 and 2,000 pounds of food scraps are collected weekly and composted.

**Department of Public Health (DPH)** installed water bottle refill stations saving over 10,000 plastic bottles. In June 2022, DPH presented a “Sustainability Awareness” session to all employees to provide education and awareness.



## Upgrading Building Heating & Cooling

**Department of Motor Vehicles** worked with their landlord to install a new energy-efficient HVAC unit at their Bridgeport location.

**Connecticut State Library** replaced air conditioning units at their Middletown facility with more efficient units, along with storm windows to prevent air drafts.



## Electric Vehicle (EV) Expansion

**Department of Social Services** increased their electric fleet from two vehicles to four vehicles that reduce gasoline and GHG emissions.

**Department of Transportation** constructed and designed EV charging infrastructure at DOT’s Headquarters and District Offices. In total, 29 Level 2 chargers were installed onsite.

**Department of Administrative Services** conducted site evaluations at over 21 state properties for the viability of EV charging stations installations.



## Water Conservation

**Department of Corrections** installed low flow fixtures and electronic water management system at Robinson Correctional Facility. The project will reduce water use by an estimated 50% and prevent excessive water use and overflow incidents.

## 2022 Awards Ceremony

On April 19, 2022, GreenerGov Co-Chairs, Senior Sustainability Officers, sustainability leaders, legislators, and the Governor gathered to recognize and celebrate the achievements of the 2022 GreenerGov CT award winners for their work in advancing benefits in environmental, energy, water, and waste conservation.

**The three award categories and winners of each award were:**

### Agency Change Maker Award

Recognizes individuals striving to transform their state agency to generate significant and measurable improvements in environmental, energy, and water conservation, or waste management benefits.

- **Stephen McGirr, Department of Administrative Services:** Leadership efforts on state fleet optimization and electrification. As Director of DAS' Fleet Operations, Stephen has led the charge in updating and modernizing the state's light-duty fleet. He's worked to improve maintenance and bring changes to the state fleet that will lessen its impact on the environment. Stephen has successfully integrated electric vehicles (EV) into the state fleet and oversaw installation of EV chargers at state facilities. In addition, Steve worked to secure telematics for existing state fleet vehicles which now comprise 80% of the 3,300 vehicle fleet. Telematics information will show DAS how to improve efficiency and move our fleet to 100% electric vehicles while reducing fuel use, saving money, and helping the state meet its greenhouse gas reduction goals.
- **Frederick Krauth, Department of Transportation:** Leadership efforts on sustainability project. Fred has served as the Building Maintenance Supervisor at DOT for over four years. His passion and excitement for sustainability and conservation is evident in the breadth of projects he has supported and led at DOT. In 2019, he oversaw the replacement of several cooling towers at the DOT Newington headquarters and in 2021 he also managed the replacement of the water heaters at the DOT Newington facility. He has also spearheaded a multitude of water conservation measures across the Department. He's demonstrating his leadership in producing significant impacts that resulted in long-term operational and behavioral changes for thousands of employees and travelers. In 2020, Fred managed the installation of more than 300 water saving devices at 7 DOT rest areas and administrative buildings. This is the type of quiet change that is making a huge difference in Connecticut.

## Innovation Award

Special distinction recognizing exceptional public sector sustainability innovation

- **Rick Hanley, Department of Transportation, retiree:** Spearheading electrification initiatives: Rick leads the Connecticut DOT and Connecticut Transit Implementation Plan to convert 100% of the state bus fleet to battery electric buses. Rick excels at puzzle-solving and enjoys working with the state's transit agency partners to ensure their questions are answered and helping them to successfully deploy zero-emissions buses. Rick has been a champion in identifying ways to reduce the Department's environmental footprint even before being "green" was an agency priority. In addition to reducing climate warming emissions, eliminating all fossil fuels from public transit buses has enormous co-benefits for air quality and public health. Rick's leadership in electrifying the state's bus fleet will drive significant progress towards meeting the state's climate goals.
- **Suzanne Huminski and Heather Stearns, Southern Connecticut State University:** Teaching innovation through sustainability partnerships: Suzanne and Heather have co-led SCSU's Office of Sustainability since its establishment in 2013. The Office's mission is to educate and train the next generation of Connecticut's leadership, workforce, and citizens with the skills and knowledge they need to foster sustainable solutions to society's most pressing problems. In 2020 and 2021, the Office successfully doubled its internship program to offer 10 paid positions during the academic year. This is especially noteworthy as many schools cancelled programs and laid off students during the pandemic. Their students, both interns and volunteers, reported that their experiences with the Office of Sustainability often were the only in-person activities they had during fall 2020 and they found these activities valuable for their health and well-being. The internships and associated programs and activities that the student's manage increases campus and community resilience in important ways.

## Impactful Project Award

Recognizes state projects that generated significant and measurable improvements in environmental, energy, and water conservation, or waste management benefits.

- **Suzanne Huminski, Eric Lessne, Keith Epstein, Heather Stearns:** For integrating sustainability for high impact at the Connecticut State Colleges and Universities and Southern Connecticut University. 2020-2021 was a landmark period at CSCU and Southern for minimizing dependence on grid power with the completion of three onsite high impact renewable energy projects. These projects were the culmination of a decade of work and experience and include 2MW of solar arrays located on university parking lots, 2MW of Bloom Energy Hydrogen Fuel Cells, and a 64,000 square foot Net-Zero Building to house the School of Business. These large-scale projects have additional value for state campuses, their surrounding communities, and beyond. They are also a critically important venue for demonstrating that large-scale beneficial change is not only possible but also advantageous for reducing costs and improving environmental quality for everyone.
- **Michael Barrera, Kirsten Rigney, Bob Snook, Jaime Hays, Joseph Suchecki, Gary Gerstenlauer, Steve Link:** Paving the road for 25 MW of solar PV at state facilities. This team worked across agency silos to craft a legal and procurement framework for state agencies to go solar using the quasi-public Green Bank's solar power purchase agreement program. They created a template agreement that all agencies can use, blazing a trail for their projects under a master agreement between the Green Bank and DAS. This framework has already been leveraged by state agencies to build a pipeline of 25 MW of solar PV projects at state facilities. This will produce considerable energy savings that will benefit both the host agencies and the environment. Round 1 of projects are expected to yield savings of \$15.8 million over 25 years.

- **Nicholas Ross:** Leadership efforts on state facility energy auditing. Nick led a monumental effort to conduct comprehensive energy audits at more than 30 of the state's biggest energy using facilities. These audit reports provide a list of recommended energy efficient measures to implement at state buildings to help reduce our greenhouse gas emissions. Nick made sure that we hired the right contractors to conduct this effort and that the recommended measures had associated cost and energy savings. The measures that will be implemented as a result of Nick's work will save about 96,000 MMBtu of energy, 17 million gallons of water, and 5,000 metric tons of GHG emissions while providing \$2 million in annual cost savings over the lifetime of the measures for taxpayers.
- **CT Green Bank, Andrew Norton, Stephen McGirr, Allan Peterson, Rick Hanley, John Getsie, Steven Hecimovich, Jen Loo, Paul Kritzler, Gerald Mallison, Rick Rosa, Suzanne Huminski, Robert Dollak, Paul Farrell, Patrick Caron, Kevin Boughan, Matt Macunas, Jennifer Reilly:** Efforts on the Clean and Efficient Transportation Team. This group spearheaded several important actions including managing the rollout of telematic tools and a fleet optimization software suite for about 3,300 light-duty passenger vehicles in the state fleet. This data visibility and benchmarking analysis are early steps in creating and tracking efficiency gains. Successfully beginning a phased integration of electric buses and retirement of diesel buses in collaboration with electric utilities was another major undertaking of this team to scope the buildout required for charging. Finally, acquiring 5 Chevrolet Bolt EVs for the state fleet and enabling the state to acquire new EVs and EV chargers on demand through the DAS bid list. All of these actions will help the state realizing GHG emissions reductions from this fleet activity over time as well as improve air quality and the health of our kids and our families who are suffering from the impacts of pollution from the transportation system. These are preliminary steps that are setting the groundwork for scalability and capturing operational savings.



# Auditing, Funding and Resources

## Audit Process and Results Overview

In 2020, Department of Administrative Services Division of Construction Services (DCS) lead an initiative in hiring five energy audit firms to conduct level 2 American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) energy audits at 32 State facilities, and receiving 24 complete audit reports. DEEP was able to secure funding for \$28 million in 2021 to fund the top 16 projects that the Technical Advisory Committee (TAC) prioritized based on emission reduction, water savings, and economic payback. These projects have moved into the design phase, with DCS managing multiple on-call design firms to prepare biddable contract documents for construction. Anticipated CO<sub>2</sub>e reduction resulting from these projects is over 3,700 metric tons per year.

## Funding

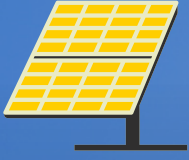
At the July 28, 2023 Bond Committee meeting, DEEP received approximately \$15 million to fund the rest of the energy audit projects not previously funded by the 2021 allocation, as well as, energy efficiency projects at the Department of Veterans Affairs.

Since 2012, the Technical Advisory Committee has approved 131 projects through bond funding, saving over \$10 million annually, over 2 million MMBTUs, and with overall average payback of approximately 17 years.

## Energize CT Program Participation

On March 22, Eversource and United Illuminating hosted a webinar for all state agencies on the Conservation and Load Management programs. The webinar provided information on how each program operates and how state agencies can participate. The webinar was well received and included agency highlights to show the impact these programs have had. A Master Agreement between DAS (on behalf of all State agencies), Eversource and United Illuminating, has been implemented to allow agencies to participate in the utility-administered program, which provides cost-effective, turnkey energy-saving services. The third annual Unleashing Savings in State Buildings with EnergizeCT was held on March 30, 2023. To view the webinar click here [C&LM](#)

# What's Next



## Supporting Solar Deployment and Project Pipeline

GreenerGov, in partnership with the CT Green Bank, is planning a 4th round of solar PV deployment at state facilities in the next couple of years, to achieve the EO 21-3 goal of deploying 10,000 KWDC in new solar capacity each year and decarbonization efforts.



## Senior Sustainability Officer Reengagement

The GreenerGov Planning team is developing a plan to reengage with the Senior Sustainability Officers to reevaluate the program. The team will review the successes achieved and areas that need improvements. This will involve some potential restructuring of sub-committees, holding steering committee meetings, and developing objectives so that we can achieve the goals outlined in our Executive Orders and other climate initiatives.



## Data Gathering Enhancements

The GreenerGov Planning team will explore data gathering methodologies designed to gain better visibility into areas such as waste collection and well water consumption. These areas have presented challenges across state government and the GreenerGov Planning team will coordinate with State Sustainability Officers to devise innovative solutions to establish baselines and key performance indicators.



## Decarbonization Plan

Per Executive Order 21-3, DEEP and DAS shall develop a plan to retrofit existing fossil fuel-based heating and cooling systems at state buildings to systems capable of being operated without carbon-emitting fuels. DEEP and DAS have issued an RFP to hire a consultant to develop and implement a decarbonization plan.



## Transportation Electrification

DEEP and DOT will continue to meet to discuss supply and infrastructure considerations related to CT Transit's bus and train decarbonization vision and to ensure efficient operation and coordination around the pursuit of federal funding opportunities. Note: There will be additional information on fleet electrification, including for light duty passenger vehicles, next year.

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