

Sustainability Performance Plan

FY 2021

Department of Correction

Prepared by Chris Iwanik
Senior Sustainability Officer

Approved by Angel Quiros
Commissioner

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



greenergovCT
A Lead by Example Initiative

EO 1 Background

On April 24, 2019, Governor Lamont launched the GreenerGov CT initiative by signing Executive Order 1 (EO 1) which directs 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.

EO 1 calls on agencies to recommit to and expand the state's Lead by Example (LBE) program to reduce the operating costs and environmental impacts of state government facilities and operations. EO 1 builds on the foundation of the state's LBE program by setting new sustainability goals, listed below, for Executive Branch agencies and invoking deeper levels of commitment and participation.

GHG

45% reduction in
GHG emissions
below 2001 levels

WATER

10% reduction in
water consumption
from a FY20 baseline

WASTE

25% reduction in
waste disposal from a
FY20 baseline

Since the GreenerGov CT initiative was launched, significant progress has been made towards laying the groundwork for expanded LBE initiatives in the future: governance structures were established, baseline data was collected, and financing and project strategies were developed. Additionally, agencies reported completing or making progress on 90+ sustainability projects in FY20 in the annual agency Sustainability Performance Plans. 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.

In 2020 and 2021, agencies continued to navigate the COVID-19 pandemic. As many agencies returned to the office in 2021, the GreenerGov CT leadership encouraged agencies to use the return to the office from teleworking as an opportunity to refresh staff practices and to take on new sustainability initiatives. The FY21 Sustainability Performance Plan includes a summary of sustainability actions initiated as part of the "Returning to the Office Greener" call to action.

EO 1 Participation Overview

DOC's Mission

Since 1968 the Connecticut Department of Correction has proudly served and protected the citizens of the State of Connecticut by daily ensuring the safety, security and order of our 14 correctional facilities in a manner which is widely viewed as a national model. The Department endeavors to provide the programming, education and treatment, which willing inmates may utilize to improve themselves and the success of their eventual reintegration into society. Our staff of dedicated correctional professionals takes great PRIDE (Professionalism, Respect, Integrity, Dignity, Excellence) in the daily performance of their duty to our state.

FY21 Participation Overview

DOC has been an active participant of EO1. We have start energy projects or are in the planning stages of projects such as LED Lighting updates, Energy management system upgrades and Water conservation upgrades to name a few. As the agency with the most energy usage DOC is taking advantage to and doing projects to minimize costs while at the same time helping minimize our impact on the environment.

Participating Agency Staff

Steve Link
Chris Iwanik
Tom Levesque
Rich Pease



Sustainability Projects

including projects relating to infrastructure improvements or behavioral change that took place in owned, leased, or occupied space and were either in progress or completed in FY21

Sustainability Projects

Project 1

What: Updating all interior and exterior lighting to LED

Where: LED Osborn CI

Project type: Structural - GHG - Building energy efficiency **Status:** In progress in FY 2021

Benefits: Cost savings as well as longer life of fixtures

Project 2

What: Upgrade all interior and exterior lighting to LED

Where: Northern LED upgrade

Project type: Structural - GHG - Building energy efficiency **Status:** In progress in FY 2021

Benefits: Cost Savings as well as longer life of fixtures

Project 3

What: Upgrade all interior and exterior lighting to LED

Where: MacDougall/Walker LED project

Project type: Structural - GHG - Building energy efficiency **Status:** In progress in FY 2021

Benefits: Cost savings as well as longer life of fixtures

Project 4

What: Upgrade all interior and exterior lighting to LED

Where: New Haven CC

Project type: Structural - GHG - Building energy efficiency **Status:** In progress in FY 2021

Benefits: Cost savings and as well as longer fixture life

Sustainability Projects cont.

Project 5

What: Upgrade the energy management system to a new DDC system.

Where: MacDougall/Walker CI

Project type: Structural - GHG - Building energy efficiency **Status:** In progress in FY 2021

Benefits: Able to remove costly air compressors and implement energy savings by more accurately controlling the HVAC system.

Project 6

What: Install solar arrays at various facilities statewide

Where: Statewide

Project type: Structural - Renewable energy **Status:** In progress in FY 2021

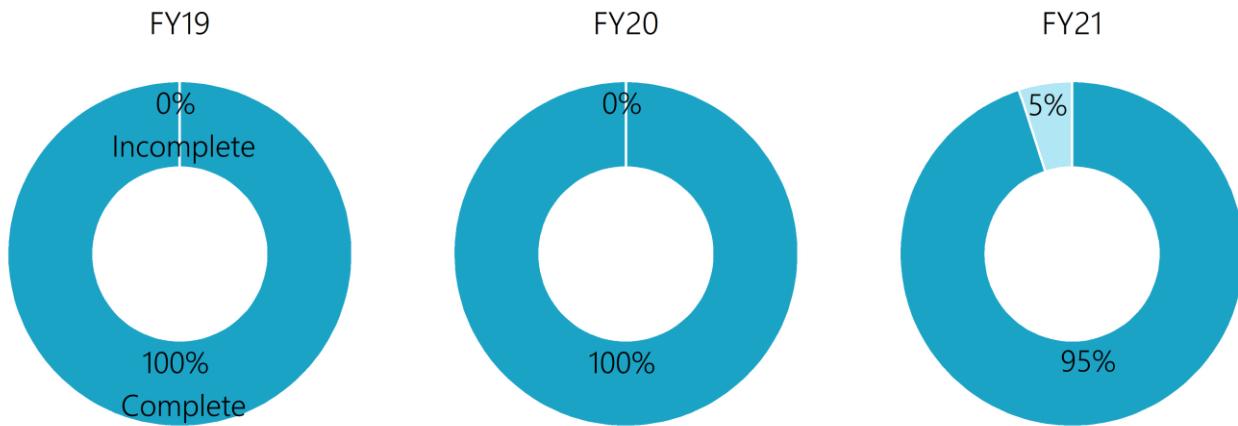
Benefits: Energy savings as well as utilizing renewable energy.

Performance Data

The following data was pulled from EnergyCAP, the state's utility tracking software, on December 9, 2021. Note that utility data on agencies occupying space owned by another state agency may not be linked to their EnergyCAP accounts.

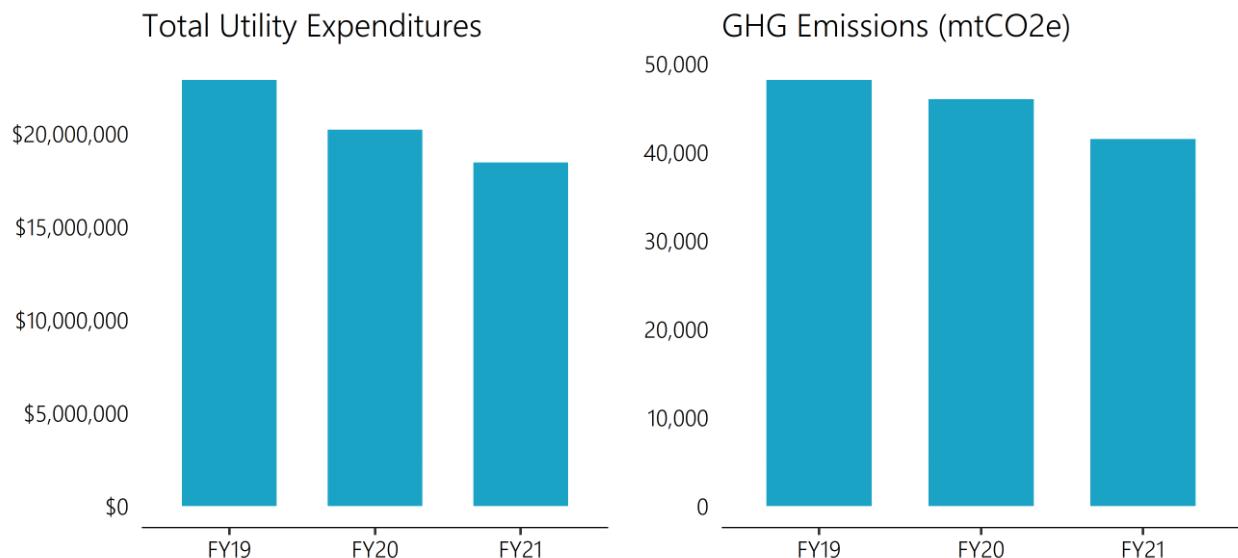
Data Completeness

The charts below display the estimated percent of utility data for DOC entered into EnergyCAP. More recently uploaded data may still be 'in queue' awaiting processing by EnergyCAP and will not be reflected in this report.



Data Trends, FY19-FY21

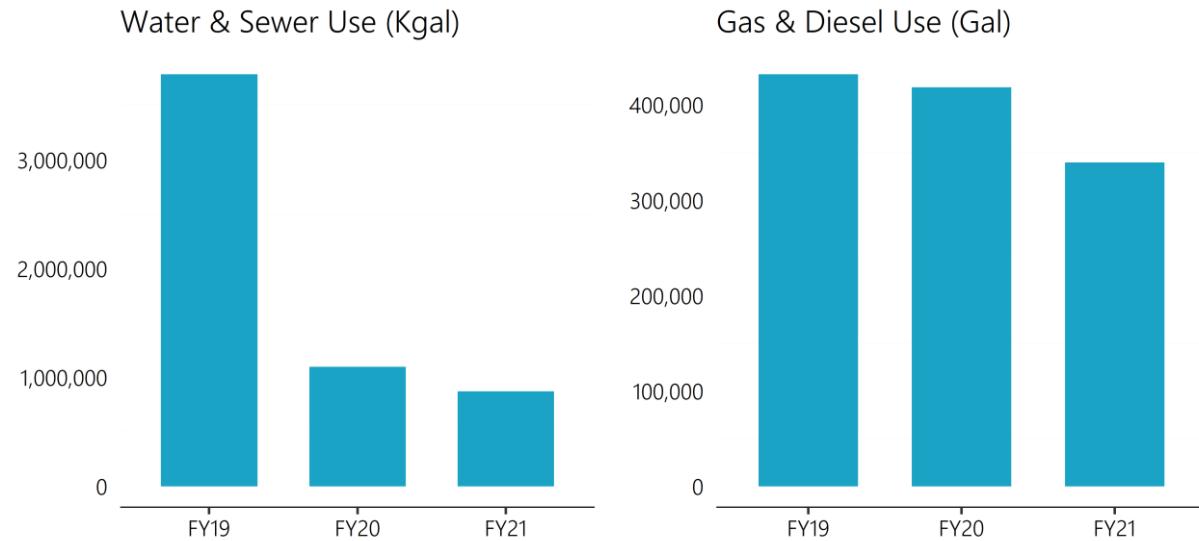
The charts below summarize the total utility expenditures and total GHG emissions for DOC for FY19-FY21. Keep in mind that data that is missing or not yet processed in EnergyCAP may cause these numbers to be artificially low.



Performance Data cont.

Data Trends, FY19-FY21 - Continued

The charts below summarize the water and gas/diesel use for DOC for FY19-FY21. Keep in mind that data that is missing or not yet processed in EnergyCAP may cause these numbers to be artificially low.



Detailed Utility Use and Cost Data

The table below summarizes the utility use and cost data for DOC for FY19-FY21 according to data pulled from EnergyCAP on December 9, 2021. As mentioned previously, keep in mind that this data may be incomplete.

Commodity	Unit	Use			FY19-21 Change	Cost			FY19-21 Change
		FY19	FY20	FY21		FY19	FY20	FY21	
Electric	kWh	65,767,073	62,566,585	60,384,960	-8.2%	\$9,754,991	\$8,867,848	\$8,599,370	-11.8%
Natural Gas	CCF	4,139,068	4,019,791	3,808,221	-8.0%	\$3,572,235	\$3,176,165	\$3,274,110	-8.3%
Oil	Gal	452,369	412,436	198,350	-56.2%	\$938,752	\$705,284	\$317,943	-66.1%
Propane	Gal	26,941	28,787	16,734	-37.9%	\$34,047	\$30,780	\$22,918	-32.7%
Vehicle Gasoline	Gal	398,218	357,868	309,618	-22.2%	\$1,071,206	\$866,039	\$783,335	-26.9%
Vehicle Diesel	Gal	33,940	60,644	30,098	-11.3%	\$110,304	\$179,506	\$84,574	-23.3%
Total GHG Emissions	mtCO2e	48,160	45,983	41,475	-13.9%	-	-	-	-
Water	Kgal	3,366,715	659,735	464,813	-86.2%	\$3,439,429	\$3,368,238	\$2,557,020	-25.7%
Sewer	Kgal	420,378	438,731	408,220	-2.9%	\$3,960,096	\$3,015,147	\$2,810,555	-29.0%
Total	-	-	-	-	-	\$22,881,059	\$20,209,007	\$18,449,825	-19.4%

*Gasoline and diesel costs estimated based on average monthly cost from EIA.gov, \$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.

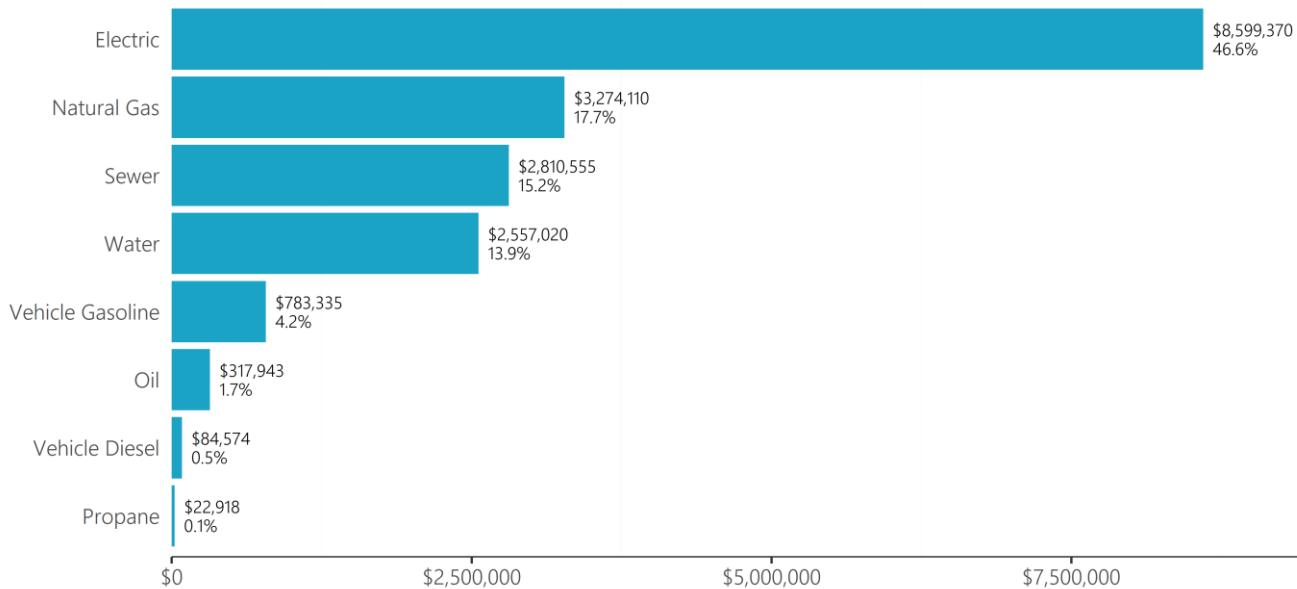
Performance Data cont.

FY21 Data Snapshot

The charts below highlight the breakdown of utility expenditures and GHG emissions by commodity for FY21.

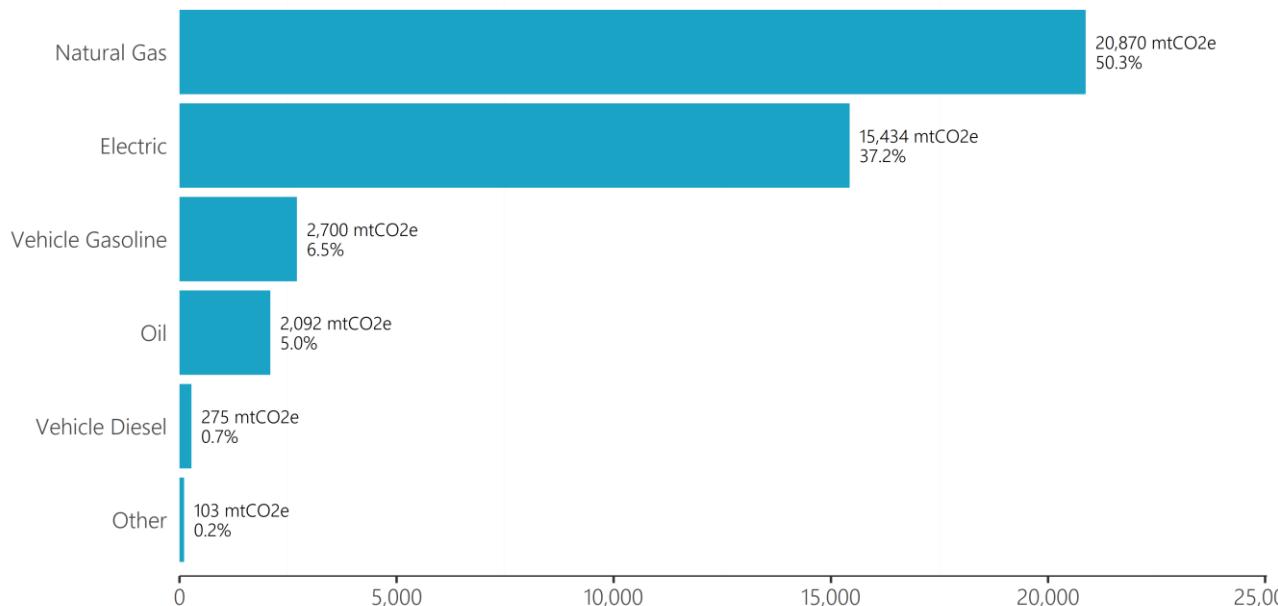
Commodity Cost Breakdown, FY21

The chart below represents the breakdown of commodity costs at DOC in FY21.



GHG Emissions Breakdown, FY21

The chart below represents the breakdown of GHG emissions by commodity at DOC in FY21.



Return to the Office Greener

In FY21, the GreenerGov CT leadership encouraged agencies to use the return to the office from teleworking due to the COVID-19 pandemic as an opportunity to refresh staff practices and habits and to take on new sustainability initiatives. Eleven actions were presented as possible strategies for a more sustainable return to the office, and agencies were asked to pick three actions not already in process. The actions for DOC are highlighted below.

Returning to the Office Greener Suggested Actions

1. Identify agency vehicles which could be transitioned to electric models.
2. Have a No-Cost retro commissioning scoping study to identify HVAC improvement and controls opportunities. 
3. Sign up a building to participate in Eversource's Strategic Energy Management program.
4. Have a free building energy audit performed to identify basic opportunities to upgrade lighting or weatherization. 
5. Perform a water audit to identify opportunities for fixture replacement or conservation actions.
6. Check for water leaks using the Fix-A-Leak Checklist. 
7. Assess the feasibility of hosting solar on your buildings or property. 
8. Optimize your dumpster size and pickup schedule.
9. Start an organics diversion/collection program.
10. Tune up recycling practices.
11. Make a Green Team of staff invested in making space and operations more sustainable.
12. Other actions

COVID-19 Impact

Impact of COVID-19 on DOC's ability to make progress on the goals of EO 1 in FY21

Due to the nature of DOC much of our manpower and resources have been used to combat COVID-19 and keep our facilities as safe as possible for our staff as well as the inmates that are housed in them. Staff have been used in different roles to accomplish this taking us away from some of the tasks and projects we wanted to spend more time on than we were able to at times. As we get to a better place the hope is to start spending more time implementing EO1 goals.

COVID-19 changes that have led to a positive sustainability outcome that will continue after the pandemic

Strategically evaluating building footprint needed for agency work	
Reassessing agency fleet	
Holding virtual meetings as a more regular practice	✓
Increased telework as a regular practice	
No changes to report	
Other	

Future Planning

Status of FY20 Plans

	Progress has been made	Progress has stalled	Plans have been completed.	Stated plans no longer a priority	Other
GHG Reduction	✓				
Water Use Reduction	✓				
Waste Reduction	✓				

Sustainability Plans Beyond FY21

GHG Reduction

Energy management system for Osborn CI LED upgrade for Cheshire CI

Water Use Reduction

Water conservation project for MacDougall/Walker CI

Waste Reduction

In the process of putting together a pilot program for organics working with our food services department.

Resources Needed

Barriers encountered while making EO 1 progress in FY21

Funding	✓
Staffing	✓
Technical expertise	
No barriers encountered	
Other	

Specific type of support or resources needed to make progress on future sustainability projects

Assistance in obtaining goals and performing accurate audits to realize the best opportunities for projects.