Sustainability Performance Plan

FY 2021

Department of Public Health

Prepared by Chukwuma Amechi
Senior Sustainability Officer

Approved by Manisha Juthani, MD
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

DPH's Mission

The Department of Public Health's sustainability mission is to pursue and implement strategic organizational initiatives that will foster sustainable outcomes through smart usage of energy and water and waste solutions at its facilities.

FY21 Participation Overview

DPH participates in 3 Project Teams. The renewable energy, energy efficiency and sustainable water use project teams and participated in various activities in FY2021.

The Water Sustainability Lead for DPH participated in meetings, provided subject matter expertise, contributed to, and lead the effort in developing the Water Audit for the Sustainable Water project.

Additionally, the EnergyCAP Invoice uploader ensured timely update of the DPH utility bills in EnergyCAP necessary in establishing the baselines and benchmarks for evaluating the success of the initiative.

Participating Agency Staff

Steven Harkey, Water Sustainability Project

TBD, Energy Efficiency Project

Jim Vannoy, Renewable Energy

Danielle Pare, Energy CAP Invoice Uploader
Sue Morin, Building Inventory and Meter Correlating Liaison (State Public Health Lab)

Daniel Velez, Procurement Supply Stream

Laura Hayes (Advisory member)

FY21 Sustainability Projects

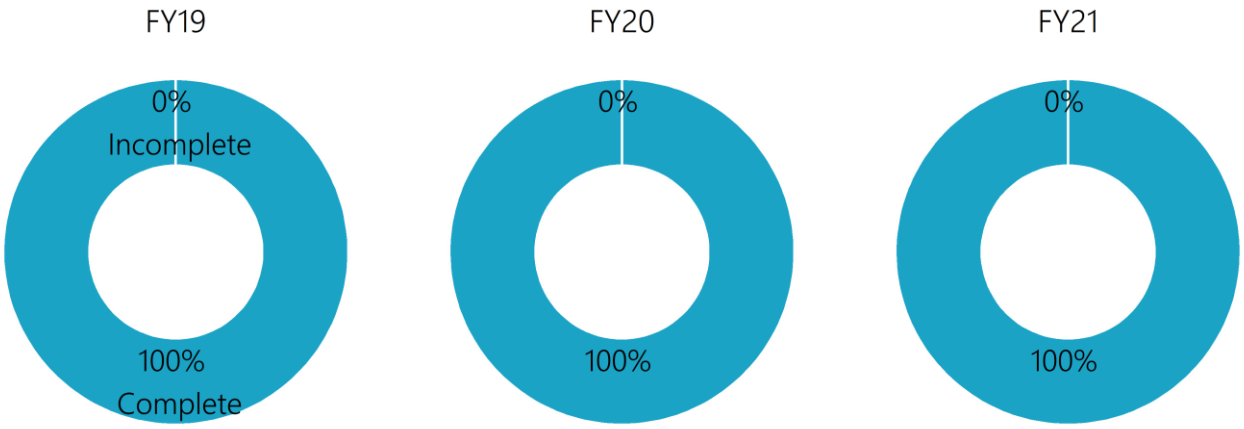
DPH did not implement any projects in FY2021 due to COVID-19.

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.

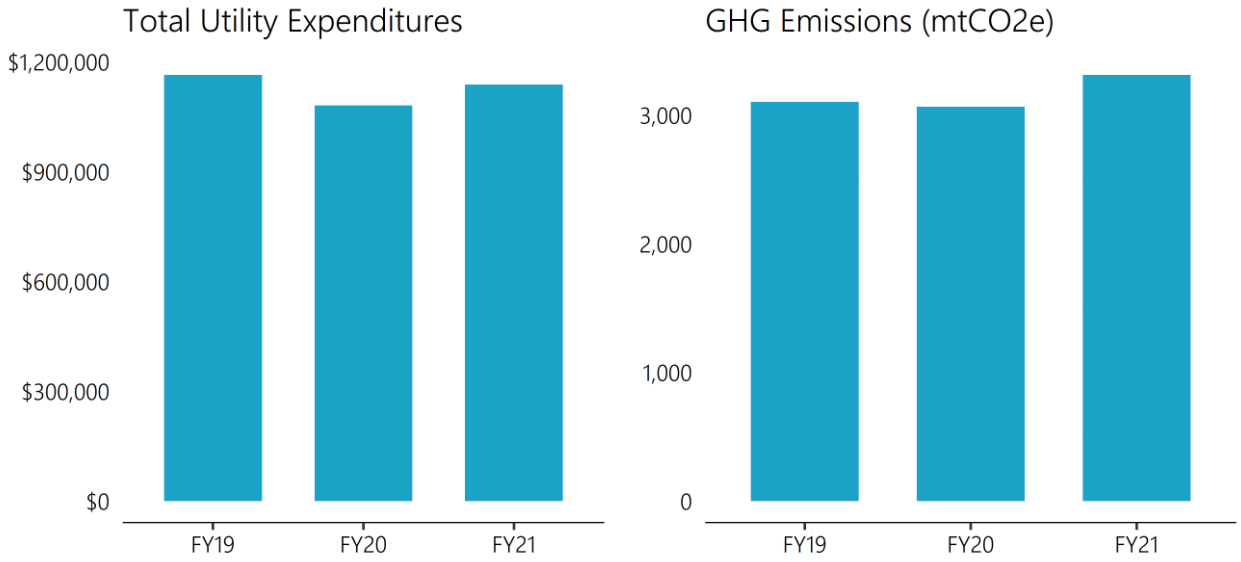
Data Completeness

The charts below display the estimated percent of utility data for DPH 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

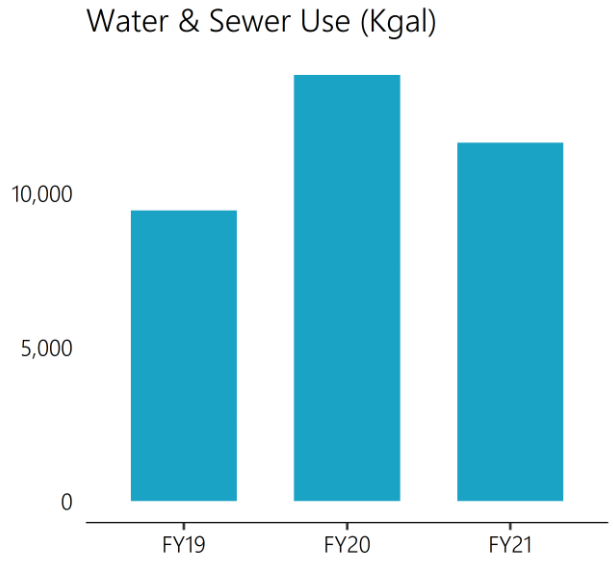
The charts below summarize the total utility expenditures and total GHG emissions for DPH for FY19-FY21. Keep in mind that data that is missing or not yet processed in EnergyCAP may cause these numbers to be artificially low.

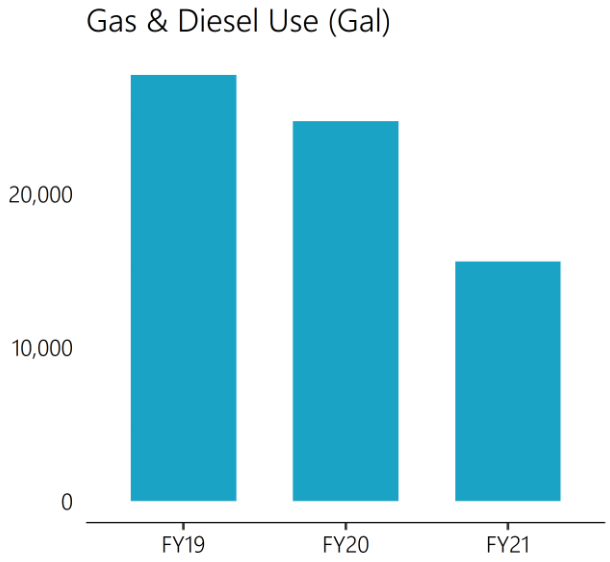


Performance Data cont.

Data Trends, FY19-FY21 - Continued

The charts below summarize the water and gas/diesel use for DPH 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 DPH 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.

		Use				Cost			
Commodity	**Unit**	**FY19**	**FY20**	**FY21**	**FY19-21 Change**	**FY19**	**FY20**	**FY21**	**FY19-21 Change**
Electric	kWh	5,158,435	5,091,867.39	5,558,559	+7.8%	$835,817	$753,108	$801,876	-4.1%
Natural Gas	CCF	279,345	277,768.55	319,975	+14.5%	$179,833	$151,488	$189,022	+5.1%
Vehicle Gasoline	Gal	27,392	23,394.89	14,630	-46.6%	$73,685	$56,616	$37,013	-49.8%
Vehicle Diesel	Gal	350	1,341.78	974	+178.8%	$1,136	$3,972	$2,738	+141.0%
Total GHG Emissions	**mtCO2e**	**3,104**	**3,066.75**	**3,313**	**+6.7%**	-	-	-	-
Water	Kgal	4,707	6,922.29	5,824	+23.7%	$48,472	$73,616	$66,414	+37.0%
Sewer	Kgal	4,737	6,921.65	5,824	+22.9%	$25,078	$41,688	$40,696	+62.3%
Total	-	-	-	-	-	**$1,164,021**	**$1,080,487**	**$1,137,759**	**-2.3%**

*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.

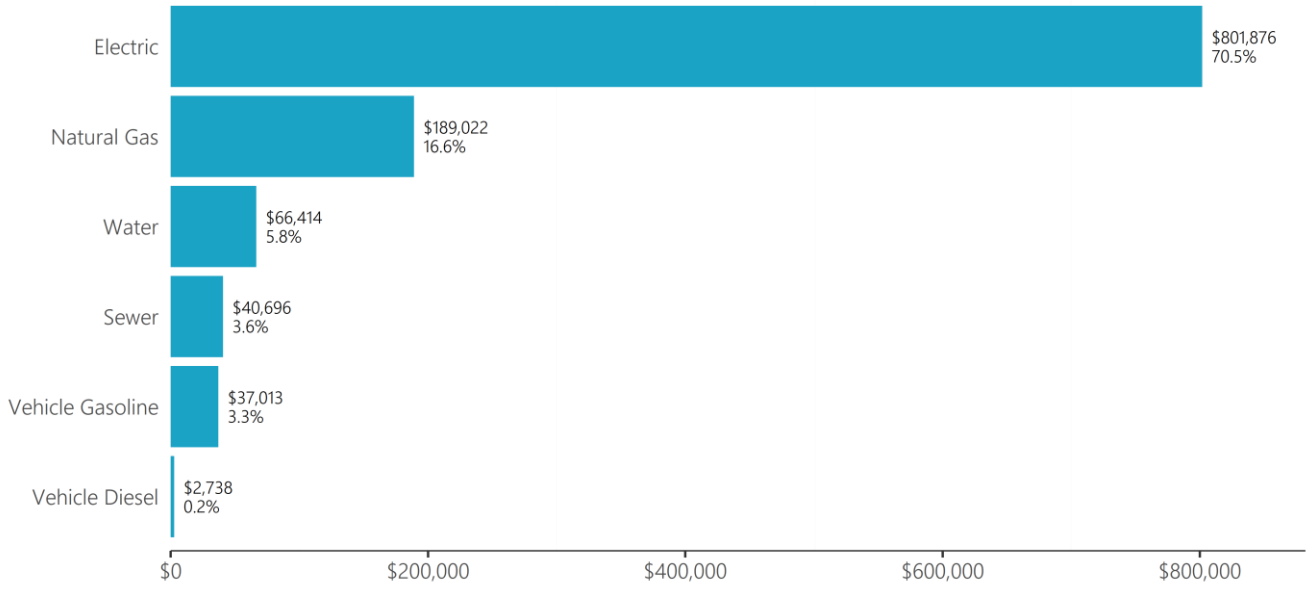
Performance Data cont.

FY21 Data Snapshot

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

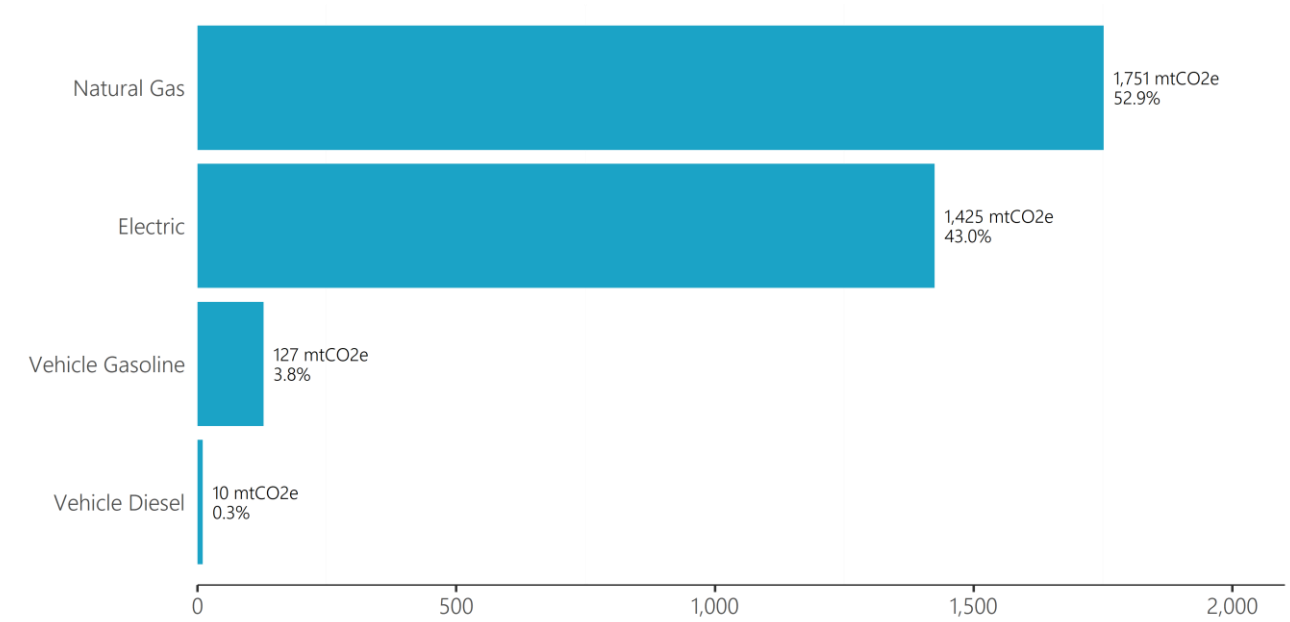
Commodity Cost Breakdown, FY21

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



GHG Emissions Breakdown, FY21

The chart below represents the breakdown of GHG emissions by commodity at DPH 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 DPH 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	

Additional details on the return to the office:

Internal discussions were held and ideas on water conversations efforts were discussed. Some of the ideas included implementing the fix-a-leak checklist as well as communication campaign about conservation. Although we could not implement the idea in FY2021, we intend to do so in FY2022.

COVID-19 Impact

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

As a result of COVID-19 and DPH role in responding to the pandemic, focus shifted and as such, the initiation and implementation of proposed sustainability projects continued to be hindered. Furthermore, Staff at the 410 Capitol Ave complex were directed to telework resulting in a minimal staff presence in the areas occupied by DPH at the 410 Capitol Avenue Complex. There is an anticipated accrued benefit from such minimal presence especially in the area of water and energy use, as well as waste production. However, the State Laboratory at Rocky Hill, CT was fully staffed with expanded hours of operation due to their significant and critical involvement in the response to the COVID-19 pandemic. Due to this sensitive role, no much could be done to advance the proposed sustainability plans.

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	

DPH has not adopted any policy changes on any of the above-mentioned practices to occur beyond the pandemic. However, all of these practices listed would be given consideration in light of its potential impact on sustainability outcomes.

Future Planning

Status of FY20 Plans

GHG Reduction

DPH FY2020 proposed a plan to pursue the use of solar energy to supplement the electrical power needs of the State Public Health Laboratory (SPHL) complex. The DPH has submitted a request to Mackie Dyke at the CT Greenbank to initiate the process of performing a feasibility assessment on the project.

Water Use Reduction

As part of the COVID-19 response, DPH has taken the initiative to upgrade/replace some equipment to include more energy efficient units at the State Public Health Laboratory. This was made possible using Federal funding for the pandemic. Examples include refrigerators, freezers, and steam sterilization units. It is anticipated that there would be a reduction both in electricity and water consumption costs when the replacements are complete.

Waste Reduction

The proposed plan was not implemented.

Sustainability Plans Beyond FY21

GHG Reduction

DPH has also submitted a request to initiate the feasibility assessment of implementing Electric Vehicle (EV) charging stations in our facilities. DPH still intends to conduct an energy audit at the SPHL facility in FY2022. This detailed energy audit will help to identify gaps in energy use and consumption and inform strategies and best practices for ensuring sustainable energy use at this complex.

Water Use Reduction

DPH still intends to pursue the waste reduction sensitization campaign as proposed in the FY2020 plan once activities returns to normal and staff return to the complex. DPH intends to pursue a "Fix any leaks" effort through a coordinated routine review of mechanical systems can be scheduled to look for leaks. The process will also include a multipronged approach to this effort. Part of it is a sign and info campaign focused on staff to report any leaks or fixture issues to maintenance staff. The other part is the scheduling of walkthroughs by maintenance staff to find any leaks. It may also require a targeted look at metering during off hours to see if water usage is happening when staff are not in the building.

Waste Reduction

DPH still intends to pursue the waste reduction sensitization campaign as proposed in the FY2020 plan once activities return to normal and staff return to the complex.

Resources Needed

Barriers encountered while making EO 1 progress in FY21

Funding	
Staffing	✓
Technical expertise	
No barriers encountered	
Other: Renewal Energy team lead retired from state service making it challenging to initiate some of the proposed renewable energy plans. A new team lead has appointment.	✓

Additional details on barriers encountered

As reported in the 2020 plan, the SPHL was required to increase the air handling capacity for the building due to the 24/7 coverage required for COVID-19 related response activities. This continued in 2021 considering the laboratory's role in responding to the COVD-19 pandemic. As mentioned, this enhanced capacity has resulted in higher energy needs to ensure the safety of the employees reporting to the building on and off hours. Prior to the pandemic, air handling capacity was automatically decreased from 7 PM to 7 AM, Monday through Friday and on weekends as an energy saving initiative.

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

Leadership and financial support.