

State of Connecticut
FY 2020

Sustainability Performance Plan

Agriculture Experiment Station

Prepared by Michael Last
Senior Sustainability Officer

Approved by Dr. Jason C. White
Director



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

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 120+ sustainability projects in FY19 in the first 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, the COVID-19 pandemic brought significant changes to the operations of state agencies as agencies responded to the crisis. The impact of the pandemic on the sustainability goals of EO 1 is not yet known, but some effects will be documented in the FY20 Sustainability Performance Plans and the GreenerGov CT Progress Report.

AES and EO 1

AES's mission

The mission of The Connecticut Agricultural Experiment Station is to develop, advance, and disseminate scientific knowledge, improve agricultural productivity and environmental quality, protect plants, and enhance human health and well-being through research for the benefit of Connecticut residents and the nation. Seeking solutions across a variety of disciplines for the benefit of urban, suburban, and rural communities, Station scientists remain committed to "Putting Science to Work for Society", a motto as relevant today as it was at our founding in 1875.

AES's FY20 participation overview

Currently, the agency participates in the Energy Efficiency project team. In the past, CAES has participated in multiple projects that were funded by LEED by example such as window and lighting replacement.

AES staff involvement in EO 1

Michael Last
Michael Cavadini
Lisa Kaczinski

1

Sustainability Project

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 FY20

Sustainability Projects

1

Location: New Haven Greenhouses (renovation)

Project Type: Structural - GHG - Building energy efficiency

Description: The two greenhouses on the northern side of the New Haven campus are to be renovated and outfitted with new and more efficient operating systems.

Status: In progress in FY 2020

Benefits Summary: Efficiency in heating and lighting (energy reduction).

Cost Savings: \$18,400 operating cost reduction

Performance Data

The following data was pulled from EnergyCAP, the state's utility tracking software, on March 15, 2021. Note that utility data on agencies occupying space owned by another state agency may or may not be linked to their EnergyCAP accounts.

Total Utility Costs

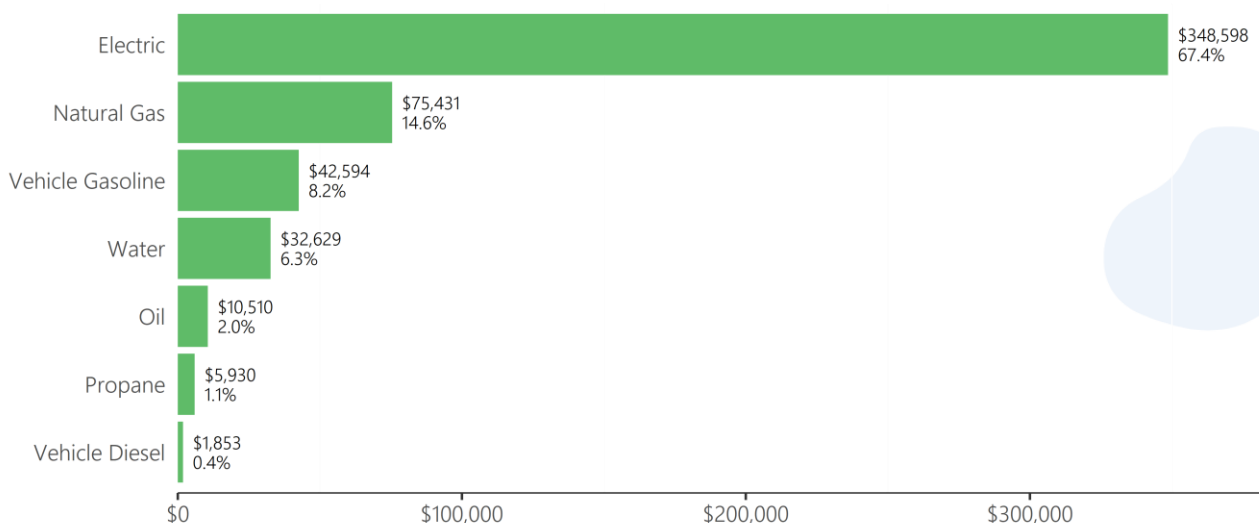
Commodity	Unit	Use			Cost		
		FY19	FY20	Change	FY19	FY20	Change
Electric & Natural Gas	MMBtu	13,750	16,680	+21.3%	\$308,811	\$424,029	+37.3%
Other Building Energy	MMBtu	1,312	1,406	+7.2%	\$18,811	\$16,439	-12.6%
Vehicle Gasoline	Gal	20,375	17,972	-11.8%	\$52,365	\$42,594	-18.7%
Vehicle Diesel	Gal	693	626	-9.7%	\$2,205	\$1,853	-15.9%
Total GHG Emissions	mtCO2e	1,099	1,316	+19.8%	-	-	-
Water	Kgal	2,687	3,673	+36.7%	\$23,397	\$32,629	+39.5%
Total	-	-	-	-	\$405,588	\$517,545	+27.6%

*Gasoline and diesel costs estimated based on average weekly cost from EIA.gov, \$2.37 for gasoline and \$2.96 for diesel in FY20 and \$2.57 for gasoline and \$3.18 for diesel in FY19.

**Other Building Energy sources include oil, propane, steam, and chilled water.

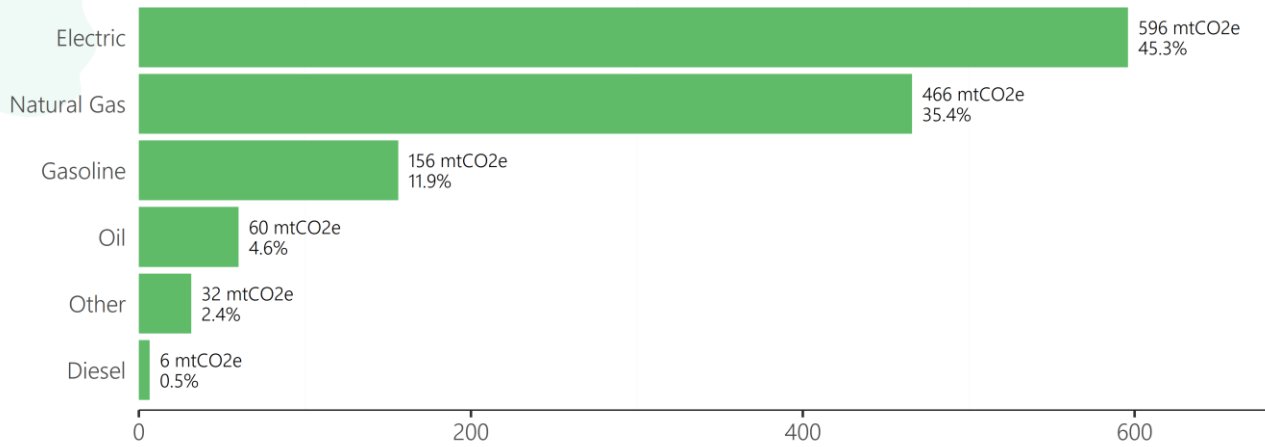
Commodity Cost Breakdown, FY20

The chart below represents the breakdown of commodity costs at AES in FY20.



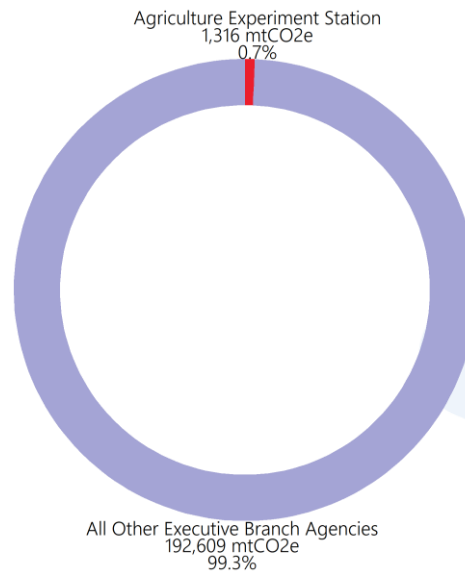
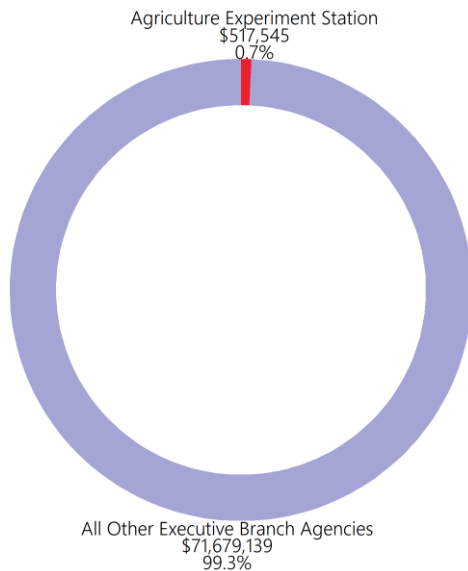
GHG Emissions Breakdown, FY20

The chart below represents the breakdown of GHG emissions by commodity at AES in FY20.



Share of Utility Costs and GHG Emissions

The two charts below display AES's proportion of the FY20 total utility cost and the total GHG emissions of all agencies participating in EO 1.



Future Planning

GHG Reduction (energy/fleet related)

Status of FY19 Plans

Progress has been made.

✓ **Progress has stalled.**

Plans have been completed.

Stated plans no longer a priority.

Planned FY21 Projects

The Agency is looking into installing electric vehicle (EV) charging stations on existing parking lots. With enough electrical work, it is believed the agency could host ten level 2 posts.

Water Use Reduction

Status of FY19 Plans

Progress has been made.

✓ **Progress has stalled.**

Plans have been completed.

Stated plans no longer a priority.

Planned FY21 Projects

The agency hosts multiple, water-cooled, chambers for the storage of scientific materials. There is interest in replacing these water-cooled systems with air compression systems. It is believed that a large reduction in water consumption would be the result of such a project.

Waste Reduction

Status of FY19 Plans

Progress has been made.

✓ **Progress has stalled.**

Plans have been completed.

Stated plans no longer a priority.

Planned FY21 Projects

The agency wishes to improve its recycling agenda. Staff education and the placement of more recycling bins are planned.

COVID-19 Impacts

Impact of COVID-19 on agency's ability to make progress on the goals of EO 1 in FY20

No impact reported.

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

Resources Needed

Barriers encountered while making EO 1 progress in FY20

✓ **Funding**

Staffing

Technical expertise

No barriers encountered

Other

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

Funding and faster approvals.