

State of Connecticut
FY 2020

Sustainability Performance Plan

State Department of Education

Prepared by Keith Norton
Senior Sustainability Officer

Approved by Charlene M. Russell-Tucker
Acting Commissioner



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.

SDE and EO 1

SDE's mission

The Connecticut State Department of Education is the administrative arm of the Connecticut State Board of Education. Through leadership, curriculum, research, planning, evaluation, assessment, data analysis and other assistance, the Department helps to ensure equal opportunity and excellence in education for all Connecticut students. The Department is responsible for distributing funds to all Connecticut public school districts. The Department also operates the Connecticut Technical Education and Career System.

SDE's FY20 participation overview

Replace and upgrade old equipment and ancillary components with energy efficient ones. Improve our handling of recyclable materials.

SDE staff involvement in EO 1

Don Poulin - Chief of Engineering Services

4

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 FY20

Sustainability Projects

1

Location: Norwich Technical High School
Project Type: Structural - GHG - Building energy efficiency
Description: Blow out condensers, replace aging monitoring equipment, and evaluate failing software
Status: Implemented in 2020-21 and is still ongoing
Benefits Summary: Meeting of COVID related mandates put forward by multiple state and federal agencies

2

Location: Norwich Technical High School
Project Type: Structural - GHG - Building energy efficiency
Description: Upgrade and repair of all exterior site lighting across the Norwich Technical High School campus.
Status: Project began in 2019, still incomplete
Benefits Summary: Unknown at this date. New LED bulbs are a vast improvement from prior high pressure sodium bulbs and ballasts. Projected life of LED bulbs are far greater than HPS bulbs. No ballasts will also certainly add savings, but exact projections are unknown at this date.

3

Location: Norwich Technical High School
Project Type: Structural - Combination
Description: Repair of existing deficiencies of AHU systems both mechanical and software, compliance with COVID 19 recommendations, health and safety recommendations.
Status: Project began in 2018 – still in progress
Benefits Summary: Cleaner air for students and faculty, compliance with COVID-19 recommendations.

4

Location: Henry Abbott Technical High School
Project Type: Structural - GHG - Building energy efficiency
Description: Replaced hot water heater. Work completed in December of 2020.
Status: In progress in FY 2020
Benefits Summary: New water heaters are more efficient and will reduce the natural gas consumption.

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

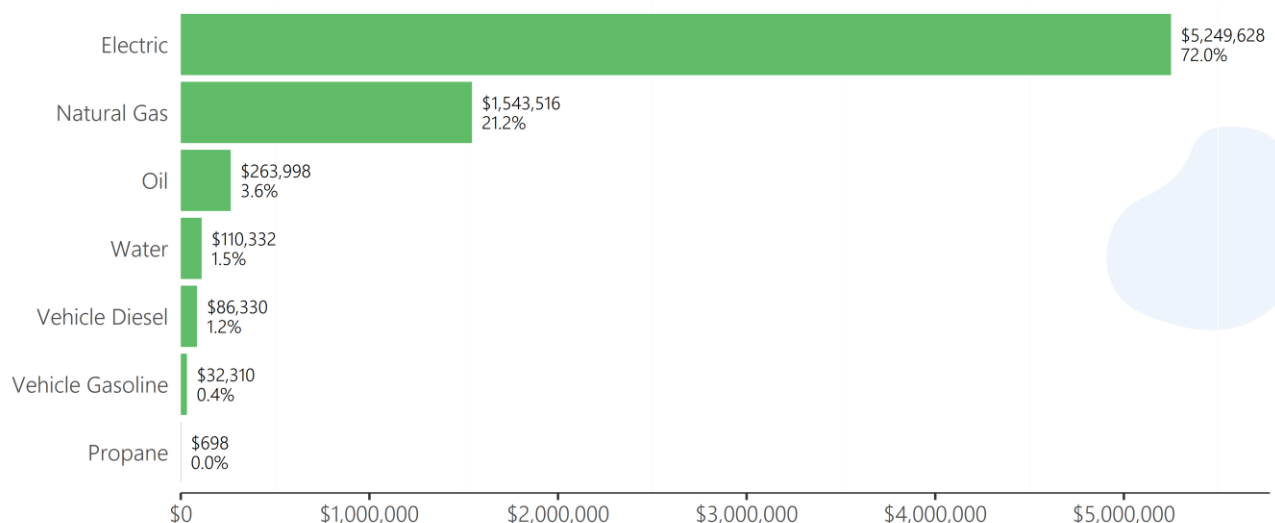
Commodity	Unit	Use			Cost		
		FY19	FY20	Change	FY19	FY20	Change
Electric & Natural Gas	MMBtu	323,365	293,343	-9.3%	\$7,518,537	\$6,793,144	-9.6%
Other Building Energy	MMBtu	28,962	20,791	-28.2%	\$411,948	\$264,697	-35.7%
Vehicle Gasoline	Gal	14,841	13,633	-8.1%	\$38,143	\$32,310	-15.3%
Vehicle Diesel	Gal	39,989	29,166	-27.1%	\$127,164	\$86,330	-32.1%
Total GHG Emissions	mtCO2e	22,368	20,093	-10.2%	-	-	-
Water	Kgal	18,763	31,004	+65.2%	\$68,751	\$110,332	+60.5%
Total	-	-	-	-	\$8,164,543	\$7,286,813	-10.8%

*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.

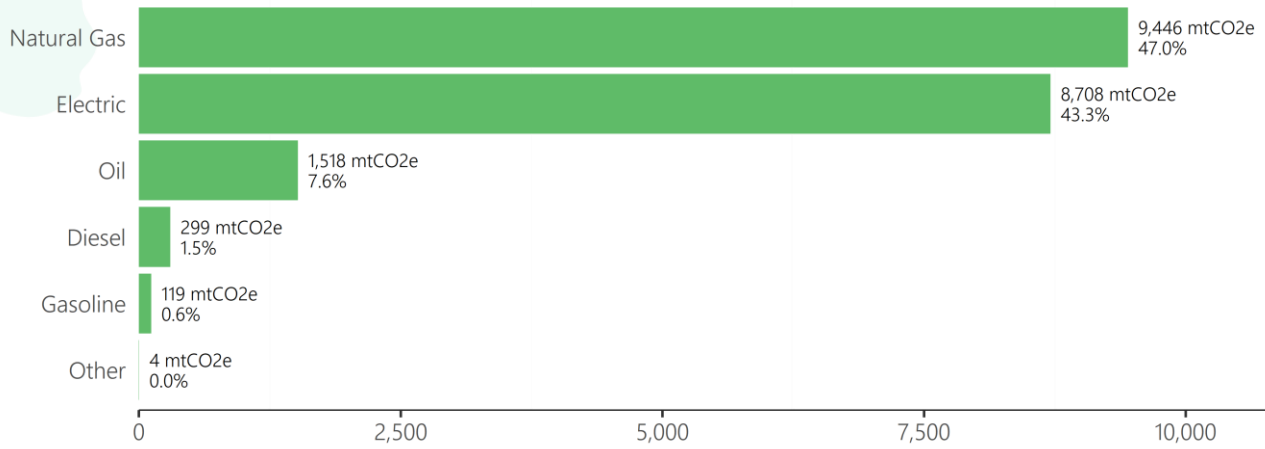
Commodity Cost Breakdown, FY20

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



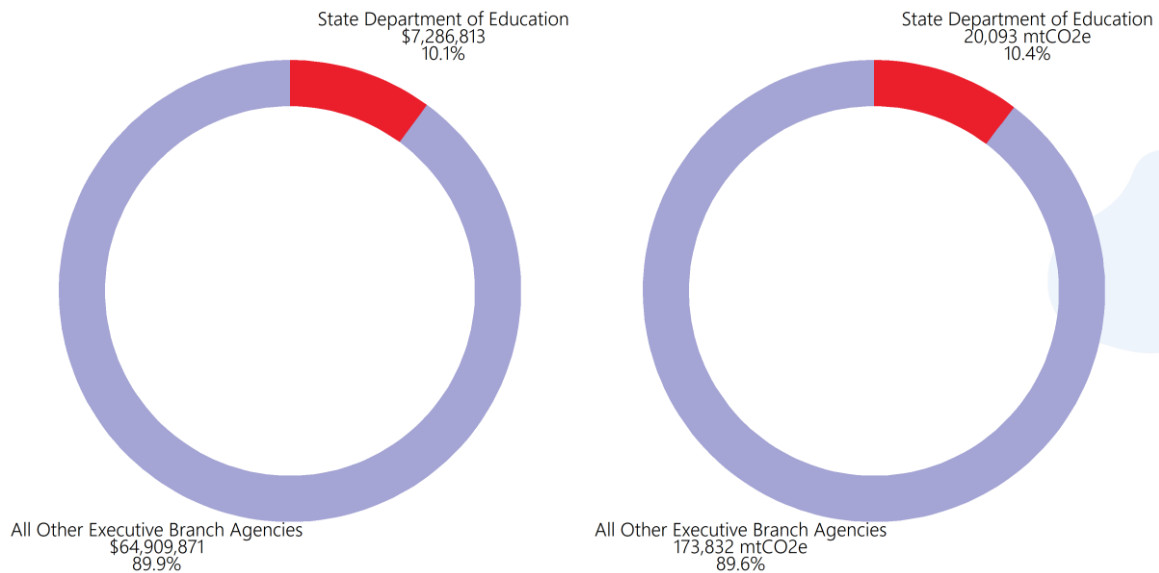
GHG Emissions Breakdown, FY20

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



Share of Utility Costs and GHG Emissions

The two charts below display SDE'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

Replacement of deficient maintenance vehicles, replacement of John Deere Gator, plow, broadcaster, new tires, oil, windshield wipers, brakes on all maintenance fleet vehicles. All in an effort to improve gas mileage and reduce emissions.

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

Compliance to state and federal GPH allowances for faucets, toilets and other water releasing mechanisms in building.

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

Comply with existing state and federal mandates.

COVID-19 Impacts

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

No measurable impact.

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

Additional details about changes due to the pandemic

No changes at the technical high schools.

Resources Needed

Barriers encountered while making EO 1 progress in FY20

- ✓ **Funding**
- ✓ **Staffing**
- Technical expertise
- No barriers encountered
- Other

Additional details about barriers encountered

Lack of response from state approved vendors. Slow turn around in request for work to be completed.

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

Funding. Confidence that the projects being requested are necessary for the building(s).

Additional info on SDE's participation in EO 1 during FY 2020

Recommend an annual assessment of each building's needs, with accompanying recommendations, completed by an outside firm. Those recommendations would then be tracked and funded based on most critical need.