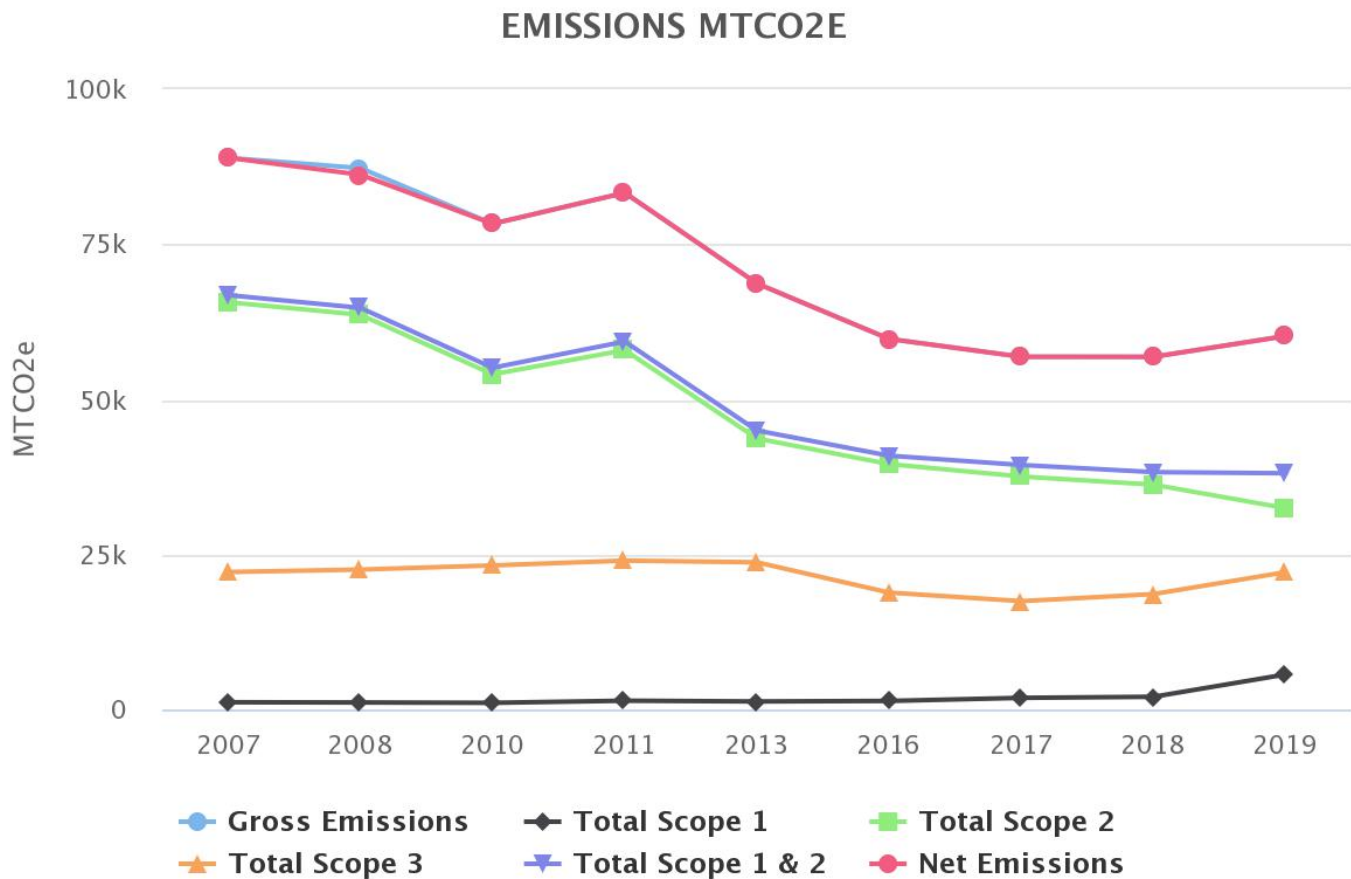**Cleveland State University**

Greenhouse Gas Emissions Inventory FY2019

In FY2019, CSU emitted 60,201 metric tons of carbon dioxide equivalent (MTCO2e). Since 2007, we have reduced our campus carbon footprint by 28,745 MTCO2e, representing a **32% reduction** in greenhouse gas emissions. This was achieved mainly through energy efficiency projects, procurement of green power, and our district steam provider's transition from coal to natural gas.

Scope 1 emissions: on-campus fuel combustion (natural gas), transport fuels, fertilizers and refrigerants
Scope 2 emissions: off-campus combustion of fuels for purchased electricity, steam, and chilled water
Scope 3 emissions: air travel, commuting, waste, wastewater, and transmission and distribution (T&D) losses associated with Scope 2 emissions
Gross emissions: total emissions produced through CSU's buildings and operations
Net emissions: total campus emissions minus any investments the university makes in carbon offsets

Results are displayed in metric tons of carbon dioxide equivalent (MtCO2e).

NOTES ON DATA AND RESULTS:

The CSU campus continues to see a downward trend in GHG emissions over time for the following reasons:

Scope 1 emissions attributable to steam generation have decreased in recent years due to Cleveland Thermal's transition from coal to natural gas in 2016.

Scope 2 emissions have been decreasing since 2011 due to investments in the Campus-Wide Energy Conservation Program. Energy efficiency measures included LED lighting upgrades, enhanced utility metering, and mechanical system upgrades including a high-efficiency central chilled water plant.

Scope 2 emissions attributable to purchased electricity continually decrease due an increase in the proportion of renewable electricity (Green-e certified RECs) included in CSU's electricity supply contract.

- 2014 to 2015 = 15% green power
- 2016 to 2019 = 30% green power
- May 2019 to 2022 = 58% green power

FY19 GHG emissions increased over FY18 emissions for the following reasons:

Scope 1 emissions increased due to refrigerant leaks in CSU's chilled water plant.

Scope 1 emissions increased due to the addition of chilled water purchased for the newly established CSU Film School.
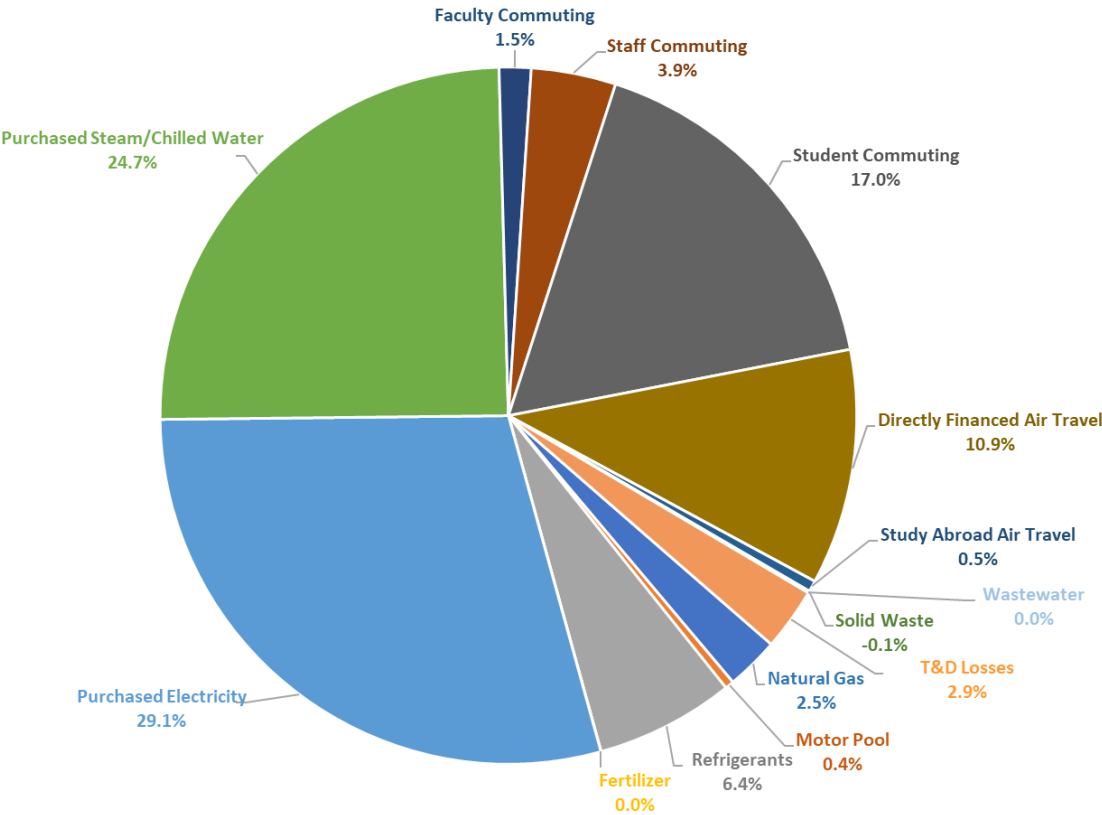
Scope 3 emissions increased in FY19 for commuting because an updated commuter behavior survey indicated a greater number of vehicle miles traveled per trip to CSU (average 14.8 mile one-way automobile commute) as compared to the previous survey (average 9 mile one-way automobile commute).
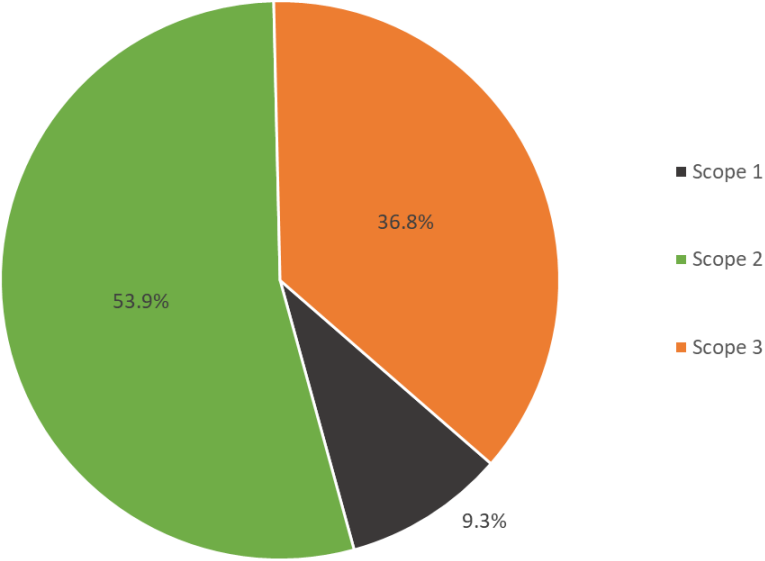
Additional notes about the report:

Scope 3 emissions stemming from food and purchased goods are not included in this inventory due to lack of data.

A detailed inventory of GHG emissions by source is included below.

CSU - GREENHOUSE GAS EMISSIONS BY SOURCE - FY2019

Faculty Commuting
1.5%

Staff Commuting
3.9%

Student Commuting
17.0%

Directly Financed Air Travel
10.9%

Study Abroad Air Travel
0.5%

Wastewater
0.0%

Solid Waste
-0.1%

T&D Losses
2.9%

Natural Gas
2.5%

Motor Pool
0.4%

Refrigerants
6.4%

Fertilizer
0.0%

Purchased Electricity
29.1%

Purchased Steam/Chilled Water
24.7%

CSU - GREENHOUSE GAS EMISSIONS BY SCOPE - FY2019
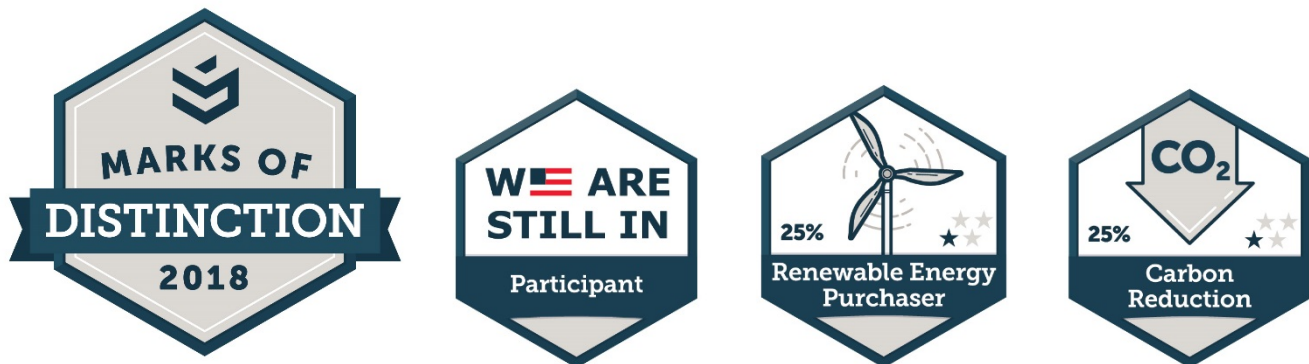
53.9%

36.8%

9.3%

- Scope 1
- Scope 2
- Scope 3

This report was completed using SIMAP, a carbon and nitrogen-accounting platform that tracks and analyzes campus wide emissions in the higher education sector.

The greenhouse gas emissions inventory reporting platform can be found at the Second Nature CSU Dashboard. Reports date back to 2007.

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Climate Action Planning

CSU became a signatory to the Presidents' Climate Leadership Commitment in 2011. Our Carbon Commitment focuses on reducing the emissions of harmful greenhouse gases and mitigating our contribution to climate change.

In November 2019, CSU received three Marks of Distinction from the Climate Leadership Network. One for our 25% Carbon Reduction achievement, one for purchasing over 25% renewable energy, and one for being a 'We Are Still In' Participant.

The Presidents' Climate Leadership Commitment requires each signatory to develop or update a campus Climate Action Plan every five years. The revised CSU Sustainability Plan (2020-25) has been drafted in collaboration with campus stakeholders. This Plan sets targets for emissions reductions, energy efficiency and renewable power. An approval and implementation process is set to be launched as campus resumes normal operations following the COVID-19 pandemic.

Jennifer McMillin
Director of Sustainability, CSU
May 29, 2020