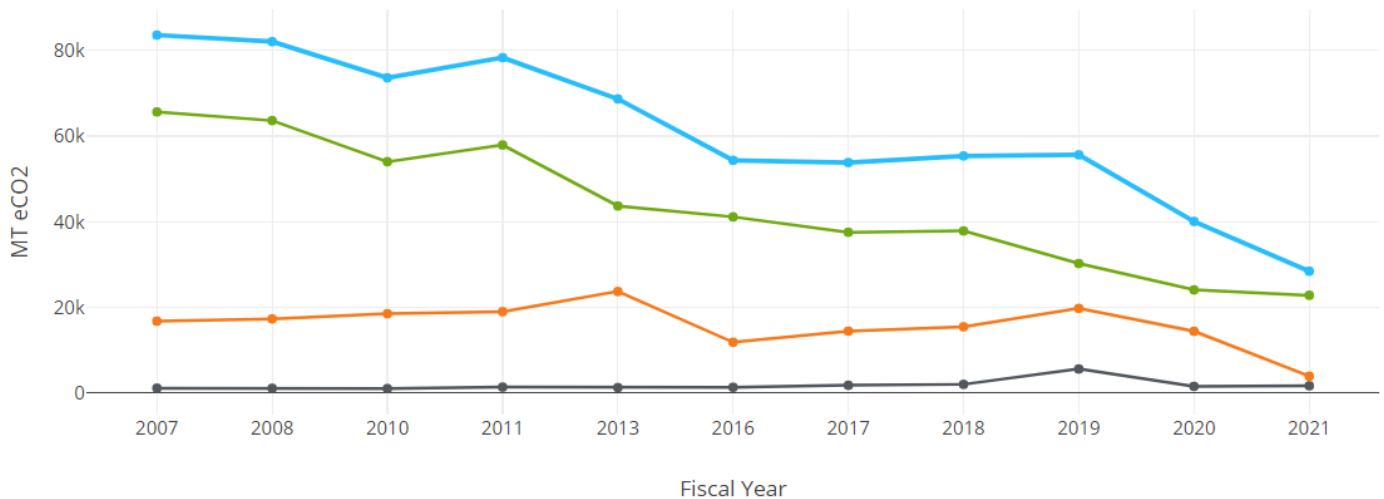


# Greenhouse Gas Emissions Inventory FY2021

In FY2021, CSU emitted 28,452 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e). Compared to the baseline year of 2007, the campus carbon footprint decreased by 55,140 MTCO<sub>2</sub>e, representing a 66% reduction in greenhouse gas emissions. The university-wide shut-down period due to the COVID-19 pandemic during this fiscal year resulted in an associated decrease in emissions from utilities and commuting. Additional factors contributing to a reduced pattern of emissions over time include our district steam provider's transition from coal to natural gas, energy efficiency projects and procurement of green power.

CSU Greenhouse Gas Emissions Inventory FY2021



- 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 (business flights and study abroad), commuting, waste, wastewater, and transmission and distribution (T&D) losses associated with purchased electricity
- Gross emissions:** total emissions produced through CSU's buildings and operations

Results are displayed in metric tons of carbon dioxide equivalent (MtCO<sub>2</sub>e).

## CSU Greenhouse Gas Emissions by Source FY2021

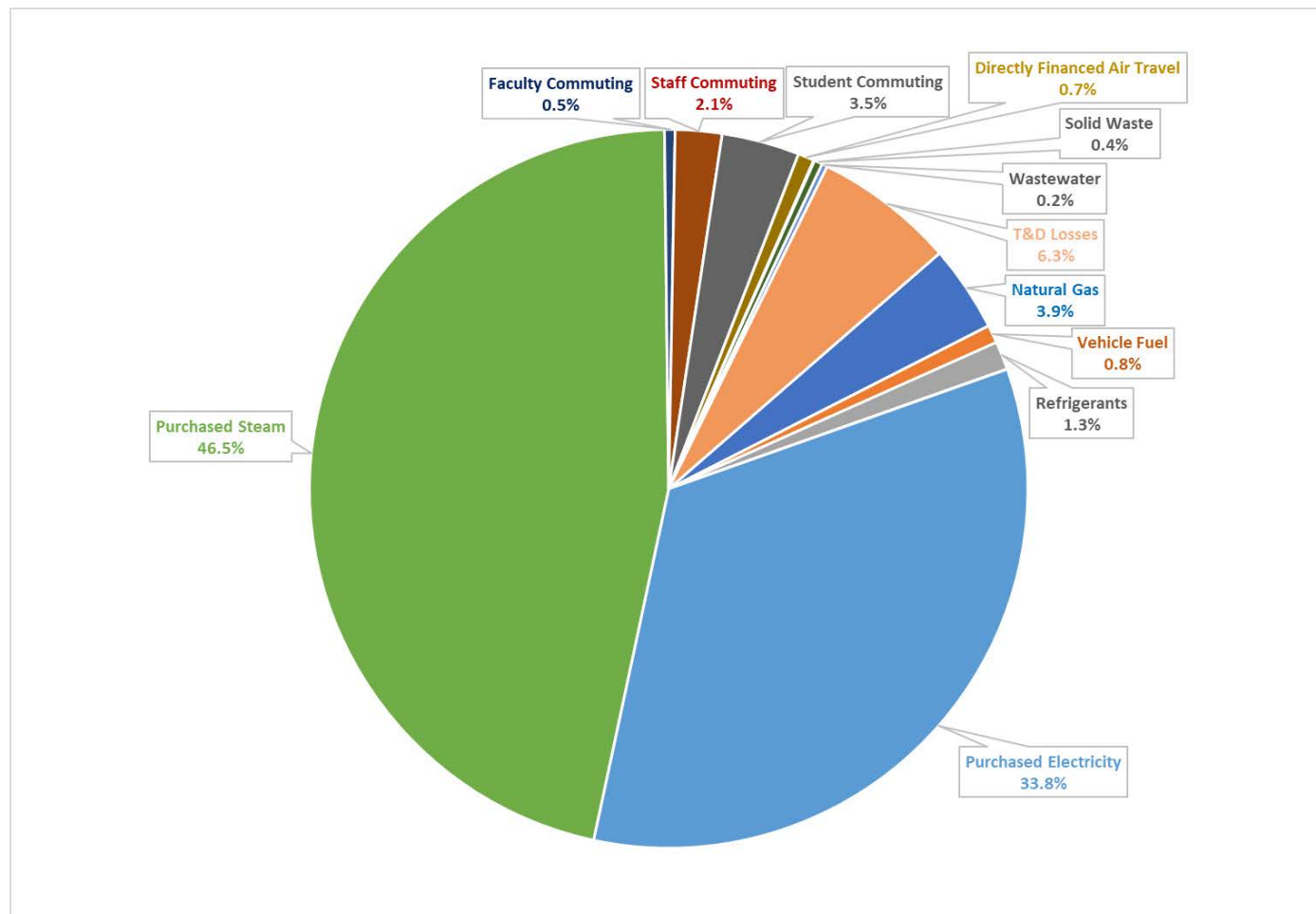


Table 1. The major components of CSU's greenhouse gas emissions by source category.

Emissions associated with purchased electricity are 58% lower than they would be without our annual purchase of green power through Green-e certified Renewable Energy Certificates (RECs) and our commitment to the EPA Green Power Partnership program.



## Categories

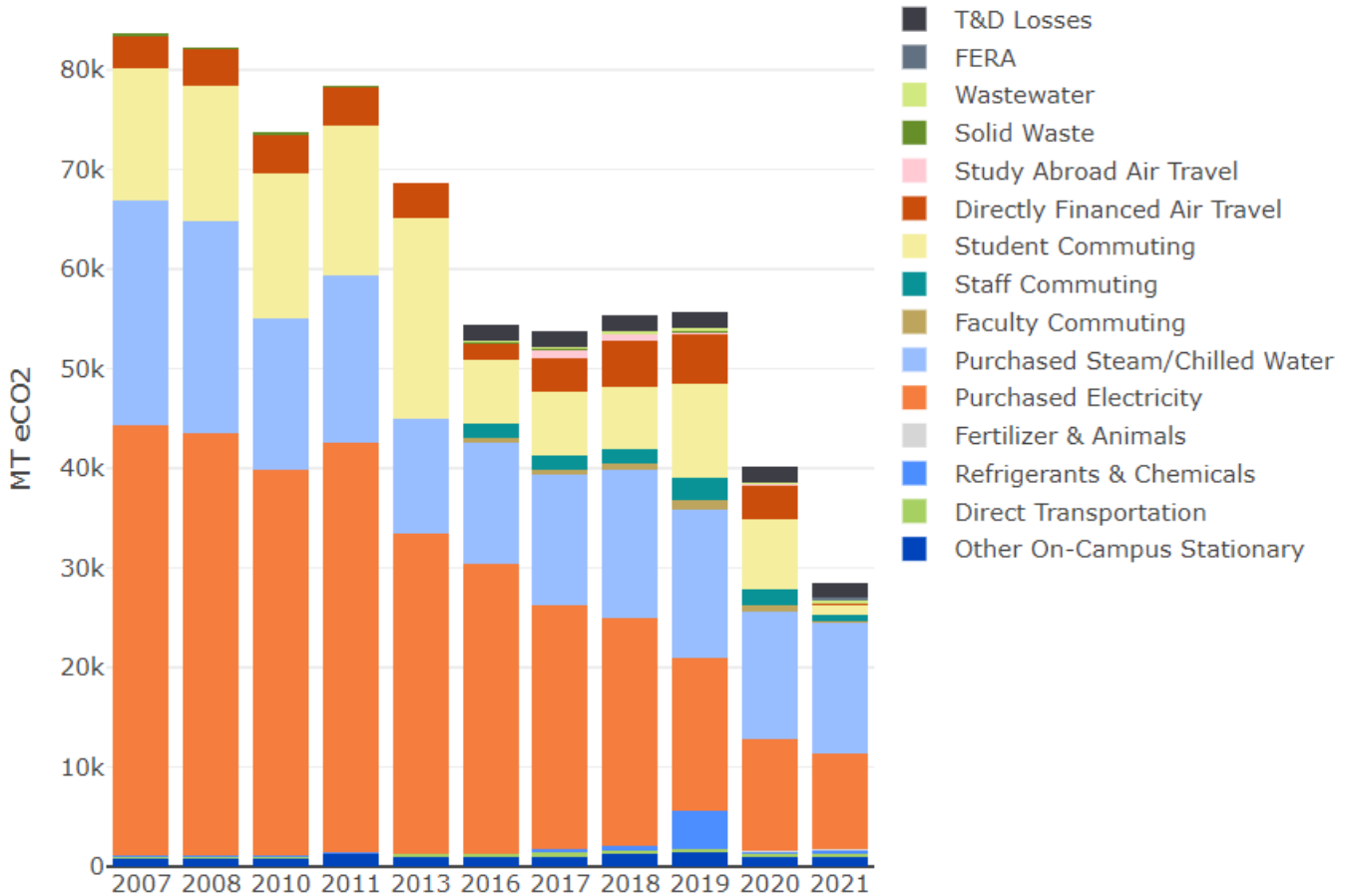


Table 2. The major components of CSU's greenhouse gas emissions by source category showing change over time from reporting years 2007 to 2021.

### A note about **Scope 2 Purchased Electricity**:

According to the [GHG Protocol Scope 2 guidance](#) from the World Resources Institute, there are two recommended methods for calculating purchased electricity footprint, location-based and market-based. This report uses the market-based method which takes into account renewable energy purchases. Graphs in this report showing emissions associated with electricity have renewable power purchases embedded (2014-2021). Before 2014, a greater percentage of brown power purchased resulted in larger scope 2 emissions related to electricity. Electricity data shown here represents emissions, not consumption of kilowatt hours.

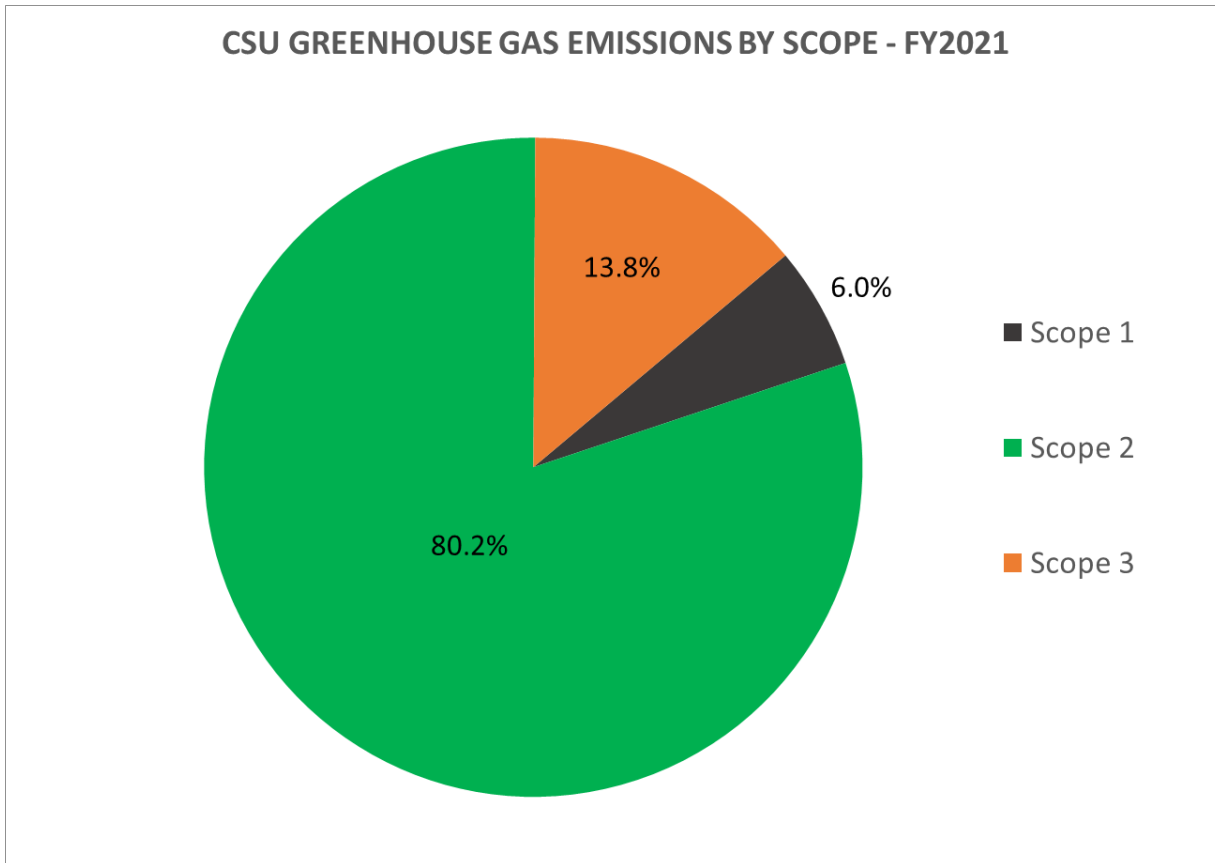


Table 3. The major components of CSU’s greenhouse gas emissions by scope category 1, 2 or 3 based on the type and location of emissions generated.

**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 (business flights and study abroad), commuting, waste, wastewater, and transmission and distribution (T&D) losses associated with purchased electricity

## **NOTES ON DATA AND RESULTS:**

All twelve months of FY21 include atypical data due to the COVID-19 pandemic. The university-wide shut-down period during this time resulted in an associated decrease in emissions from utilities and commuting. Purchased steam represents a larger percentage of emissions than in previous years because campus buildings still required heating over the winter season to prevent freezing. Electricity use decreased with fewer building occupants on campus in FY21, though not to the level anticipated during an extended campus closure.

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

Scope 2 emissions decreased between 2011 and 2015 due to conservation and energy efficiency efforts such as lighting and HVAC upgrades.

Scope 2 emissions attributable to steam generation have decreased due to Cleveland Thermal's transition from coal to natural gas in 2016.

Scope 2 emissions attributable to purchased electricity continually decreased between 2014 and 2022 due to an increase in the proportion of renewable electricity (Green-e certified RECs) included in CSU's electricity supply contract.

- May 2014 to June 2016 = 15% green power
- July 2016 to May 2019 = 30% green power
- May 2019 to April 2022 = 58% green power

### **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.

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

An interactive version of CSU's greenhouse gas emissions inventory report can be found at the [SIMAP Public Reporting Dashboard](#). Reports date back to 2007.

## **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. The Presidents' Climate Leadership Commitment requires each signatory to develop or update a campus Climate Action Plan every five years.

Jennifer McMillin  
CSU Director of Sustainability

