Colorado State University Greenhouse Gas Report for FY24

What is a greenhouse gas inventory? And how is Colorado State doing?

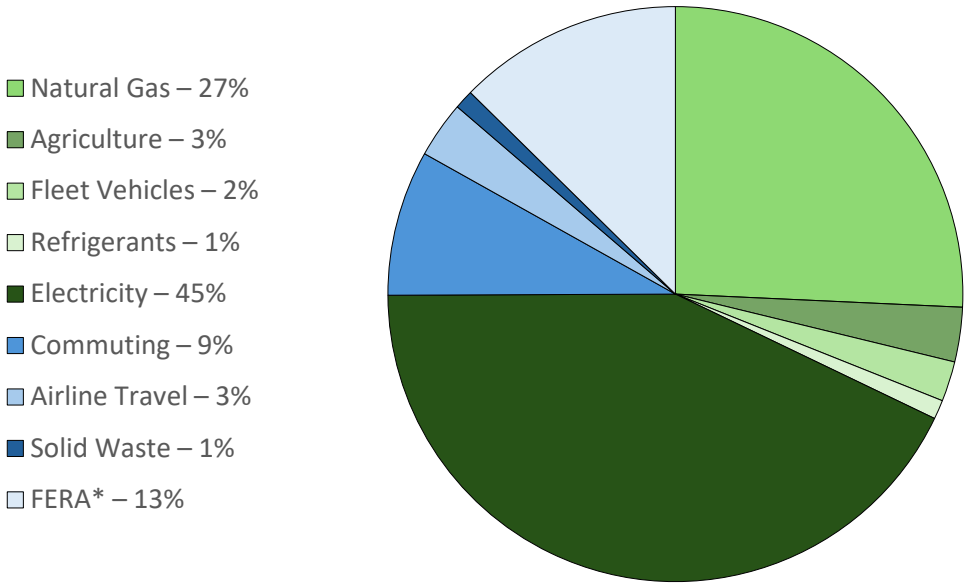
Organizations use greenhouse gas (GHG) inventories to measure the environmental impacts of their operations. Most of an organization's activities are accounted for and then, using the global warming potential of each gas, they are converted into equivalent units of carbon dioxide. Results are typically presented in metric tons of carbon dioxide equivalent ($MTCO_2e$)

Most higher education institutions complete an annual GHG inventory, as do many major businesses, cities, counties, and states. Each sector follows defined protocols to gather and report data. CSU follows criteria unique to higher education, which enables CSU to compare emissions within the higher education sector and consistently track progress over time. A GHG inventory tells a lot about an organization's operational impacts, and highlights areas that need the greatest focus to reduce GHG emissions.

Measuring Impacts at CSU

CSU's FY24 GHG inventory summarized in nine categories:

Total Emissions = 187,600 $MTCO_2e$



What surprises you about CSU's emissions? Did you notice purchased electricity is the largest portion of our footprint, or that solid waste is the smallest – why is that? Why are electricity and natural gas so BIG? …it is due to our buildings – and all the fossil-based fuels used to operate them.

If you want to help CSU reduce its GHG footprint – help reduce the amount of electricity we consume! Until the electricity we purchase comes from 100% renewable sources, reducing the amount of electricity we consume has the largest direct impact on our carbon footprint. Reducing electricity consumption allows each of us to help make a difference every day.

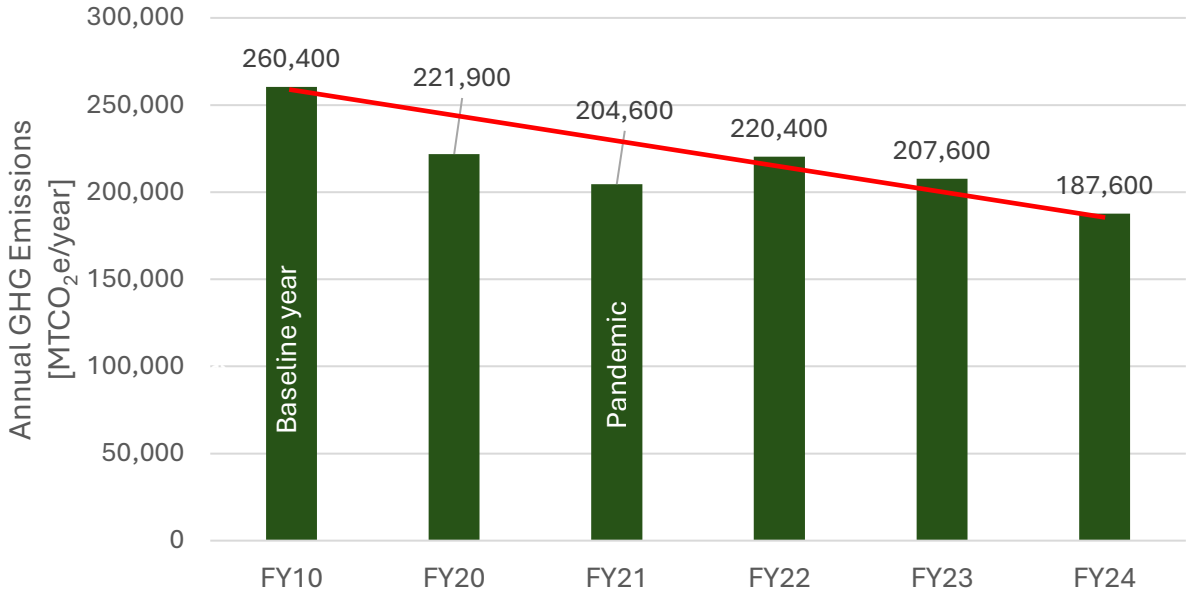
The FY24 inventory is presented as a pie chart above and as a table below – the categories and impacts are the same. In the table below, Scope 1 & Scope 2 emissions are subtotaled separately from the Scope 3 categories – to better highlight the relative impacts of each Scope.

CSU's FY24 GHG Inventory summarized in nine categories:

Category	Scope	FY24 $MTCO_2e$	Percent
Natural Gas	1	50,300	27%
Agriculture	1	6,000	3%
Fleet Vehicles	1	4,400	2%
Refrigerants	1	2,100	1%
Electricity & Spur CUP	2	83,800	45%
Subtotal Scopes 1 & 2		**146,500**	**78%**
Commuting	3	16,000	9%
Airline Travel	3	6,200	3%
Solid Waste	3	2,100	1%
FERA*	3	24,700	13%
Subtotal Scope 3		**49,000**	**26%**
Credits (Compost & Offsets)	N/A	-8,000	-4%
Total		**187,500**	**100%**

**FERA – Fuel & Energy Related Activities*
Emissions by category in metric tons of CO_2 equivalents ($MTCO_2e$), percent contribution, and scope.

How are we doing over time?



CSU's GHG Emissions Trend – 27% reduction since FY10 including FERA.
Estimated FERA contributions are included for FY10-FY22.

Beginning in FY23, CSU began incorporating Fuel & Energy Related Activities (FERA) a Scope 3 category, into its GHG Inventory. This is consistent with updated GHG protocols and marks an enhancement in reporting – which offers a more comprehensive view of the environmental impact of energy. FERA accounts for the upstream effects of fuel and electricity usage, covering aspects like methane leakage, extraction, production, transportation, and transmission and distribution losses in the electric grid. This integration of FERA reflects the university's commitment to understanding and mitigation of its contributions to climate change.

CSU's first GHG emissions inventory began with FY06; however, FY10 is the baseline year to which others are compared, aligning with CSU's first adopted Climate Action Plan. A few highlights:

- 260,400 $MTCO_2e$ – **FY10**, baseline which future inventories are measured against
- 204,600 $MTCO_2e$ – **FY21**, down 20% from baseline. This atypical year was significantly impacted by the COVID-19 global pandemic, reflected in large decreases in emissions form airline travel and commuting
- 187,500 $MTCO_2e$ – **FY24**, down 27% from the baseline year when including FERA for all years. FY24 included a large purchase of offsets. Use and related emissions from Natural Gas decreased due to a warm winter. Emissions from electricity and commuting also decreased in FY24 compared to FY23. Also, see note below*

CSU adopted its first Climate Action Plan (CAP) in 2010 to chart the course to reduce emissions. The plan is revised every few years. In 2021, CSU adopted a new goal of carbon neutrality by 2040. The current CAP, completed mid-2022, reflects this updated goal by outlining strategies for emission reductions in the key emission categories. View the 2022 Climate Action Plan Update here or visit the Facilities Management Sustainability Reports Page to see previous versions of the CAP and past GHG Inventories.

Looking ahead to FY25, Colorado State University will again update its Climate Action Plan. The target year will remain 2040 but the goal will be refined to achieve carbon neutrality of Scope 1 & 2 emissions while continuing to measure and reduce a subset of the Scope 3 emission categories corresponding to our 2010 commitment.

For questions related to the GHG inventory, please contact Stacey.Baumgarn@colostate.edu – Sustainability & Energy Management, CSU Facilities Management.

**Note: This FY24 Inventory summary was updated / revised in Nov. 2025 to correct two data points. First, correcting an error in Natural Gas use that had been under-reported. Second, adopting a change in the methodology for calculating emissions from air travel – the new, improved method does result in lower emissions in this category.*