Colorado State University Greenhouse Gas Report for FY19

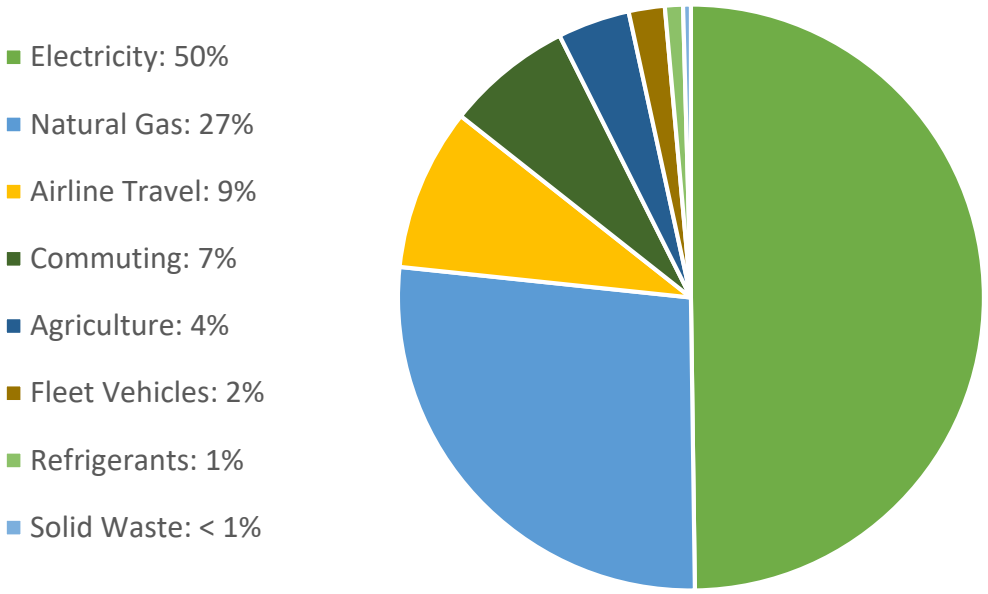
What is a greenhouse gas inventory? And how is Colorado State doing?

Organizations use greenhouse gas (GHG) inventories to measure the environmental impacts and GHG emissions. All of the organization's activities are accounted for and the global warming potential of each gas is then converted into equivalent units of CO_2 (carbon dioxide).

Most institutions of higher education 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 ed sector and consistently track progress over time.

Measuring impacts at CSU

CSU's FY19 GHG inventory summarized in eight categories:



What surprises you about CSU's emissions? Did you notice purchased electricity is the largest piece of our footprint, or that solid waste is the smallest – why is that? Why are electricity and natural gas so BIG? …buildings – and the all of 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 to our carbon footprint.

Reducing electricity consumption is a way each of us has an opportunity to help make a difference every day. A GHG inventory tells a lot about an organization's operational impacts, and highlights areas that need the greatest focus to reduce GHG emissions.

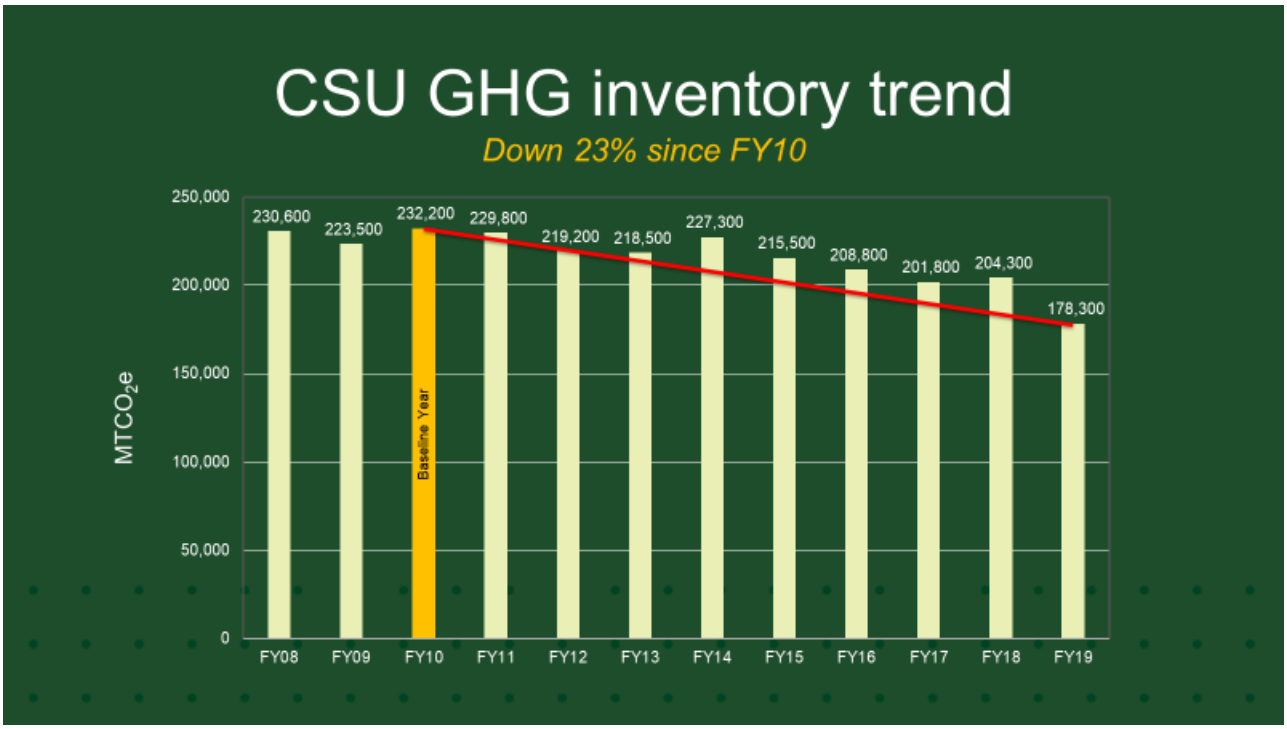
The FY19 inventory is presented as a pie chart above and as a table below – the categories and impacts are the same.

CSU's FY19 GHG inventory summarized in eight categories:

Category	FY19 $MTCO_2e$	Percent	Scope
Electricity	109,900	50%	1, 2, 3
Natural Gas	59,500	27%	1
Airline Travel	20,100	9%	3
Commuting	15,800	7%	3
Agriculture	8,100	4%	1
Fleet Vehicles	4,100	2%	1
Refrigerants	2,300	1%	1
Solid Waste	1,100	< 1%	1, 3
Credits (RECs, Compost)	-42,600		3
Total	**178,300**		

Emissions by category in metric tons of CO_2 equivalents ($MTCO_2e$), percent contribution, and scope.

How are we doing over time?



GHG Emissions Trend – 23% reduction since FY10

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. Overview:

- 232,200 $MTCO_2e$ – FY10, baseline which future inventories are measured against
- 204,300 $MTCO_2e$ – FY18, was down 12% from baseline
- 178,300 $MTCO_2e$ – FY19, down 23% from baseline (this sizeable reduction was mostly attributed to a large purchase of renewable energy credits, RECs)

CSU can celebrate a 23% decrease since FY10, but without the large purchase of RECs this year, the bars would appear flatter across the years. While the overall decreasing trend is good – especially given CSU's growth in students and buildings – CSU must do more to reduce overall emissions. You can help!

CSU adopted its first Climate Action Plan (CAP) in 2010 to chart the course to reduce emissions. The plan is revised every few years. The current (2018) CSU CAP outlines 16 strategies that the University is working on to reduce emissions and to reach carbon neutrality by 2050.

For questions related to the GHG inventory, the data collection, input activity, or formal output, please contact Carol.Dollard@colostate.edu or Stacey.Baumgarn@colostate.edu. For a more technical view and reference, this is the summary output of the Excel-based inventory tool.

FY19 GHG Summary – Colorado State University

	FY19	Annual Summary				
		Energy Consumption [MMBtu]	CO2 [kg CO2]	CH4 [kg CH4]	N2O [kgN2O]	Total Emissions [MTCO2e]
Scope 1	Cogen Electricity	0	0	0	0	0
	On Campus Stationary	1,117,976	59,415,472	1,142	116	59,500
	Direct Transportation	58,057	4,120,987	175	53	4,100
	Refrigerants	0	0	0	0	2,300
	Agriculture	0	0	185,514	9,741	8,100
Scope 2	Purchased Electricity	580,203	105,497,201	10,567	1,543	106,100
Scope 3	Faculty/Staff Commuting	80,752	5,634,555	2,574	263	5,800
	Student Commuting	129,403	8,727,599	22,385	2,032	10,000
	Air Travel	125,405	19,939,950	82	633	20,100
	Solid Waste	0	0	40,672	0	1,100
	Scope 3 T&D Losses	21,667	3,797,899	380	56	3,800
Offsets	Additional					(900)
	Non-Additional					(41,600)
	Scope 1	1,176,033	63,536,459	186,831	9,909	74,000
	Scope 2	580,203	105,497,201	10,567	1,543	106,100
	Scope 3	357,228	38,100,003	66,094	2,983	40,800
	Total All Scopes	2,113,464	207,133,663	263,491	14,435	220,900
	Total Offsets					(42,600)
	Net Emissions					**178,300**