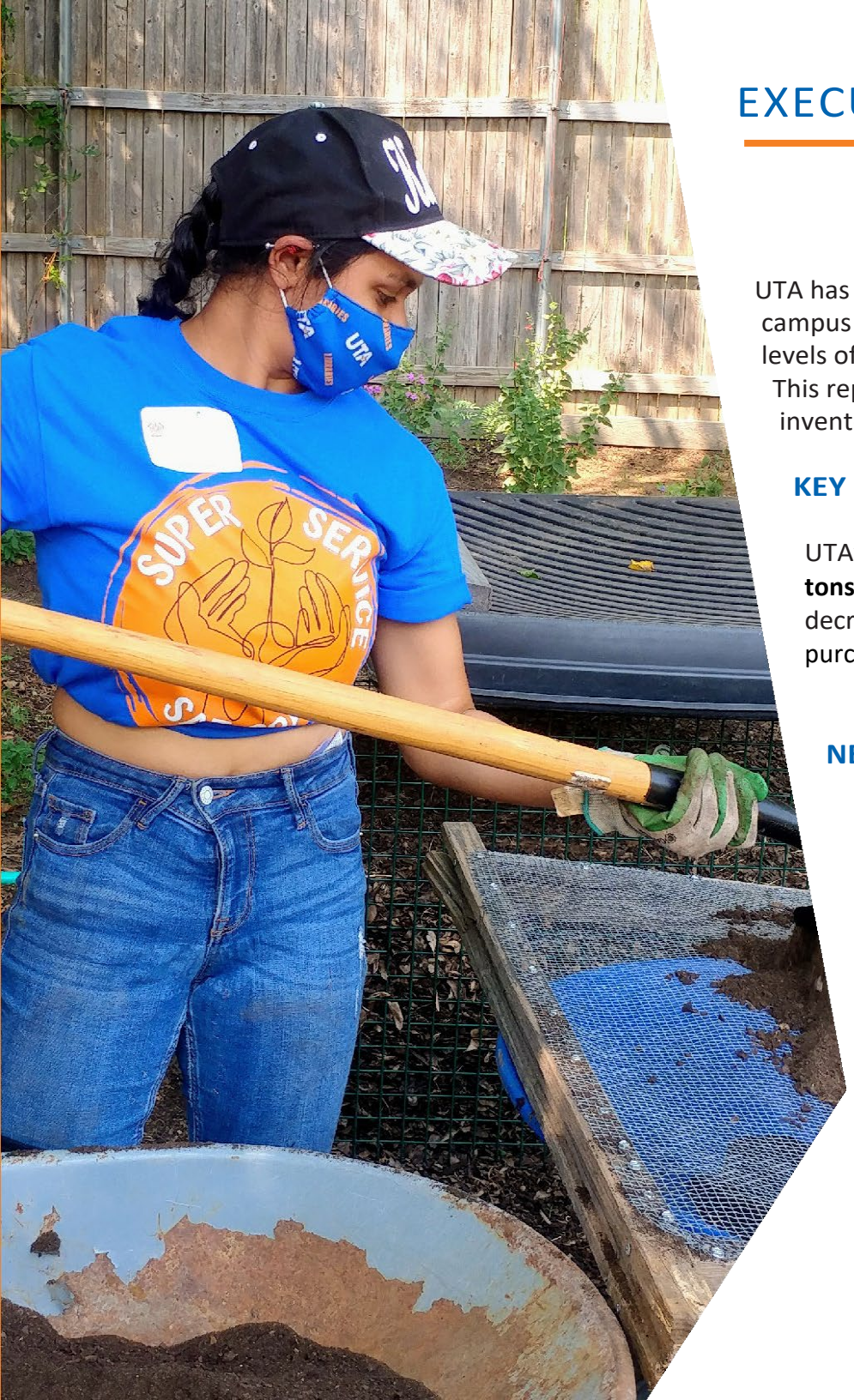
FY 2024 GREENHOUSE GAS EMISSIONS REPORT

UTA Office of Sustainability



EXECUTIVE SUMMARY

UTA has worked hard to implement various sustainability measures across campus this year. Even though the UTA community has once again hit record levels of enrollment, our emissions have stayed on a downward trend. This report shows the results of UTA's 2024 greenhouse gas emissions inventory, how this year compared to previous years and our next steps.

KEY TAKEAWAY

UTA's total greenhouse gas emissions (GHG) for 2024 amounted to **74,643 metric tons of CO_2e**. Despite growth, our overall emissions since fiscal year 2018 have decreased. Emissions are primarily driven by **Scope 2** emissions (indirect emissions from purchased energy).

NEXT STEPS

This year, UTA will launch its inaugural Climate Action Plan, marking a significant milestone in our commitment to sustainability and environmental responsibility. This comprehensive plan will serve as a roadmap for reducing our carbon footprint, identifying key strategies and initiatives to lower our greenhouse gas (GHG) emissions across all operations. As part of this ambitious plan, UTA will establish clear, measurable goals for reducing GHG emissions, with a focus on both short-term and long-term objectives.

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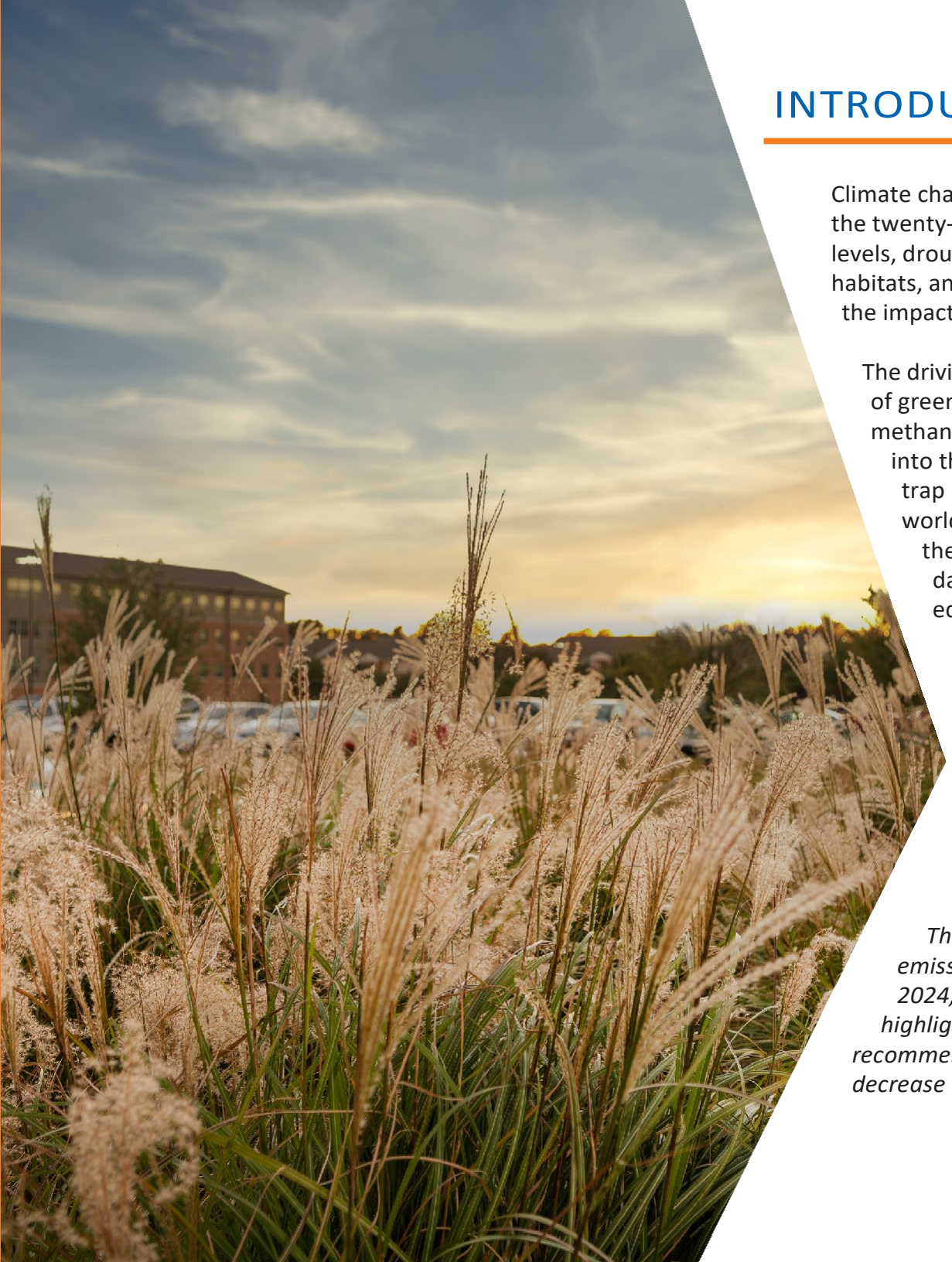
LAND ACKNOWLEDGEMENT

University of Texas at Arlington respectfully acknowledges the Wichita and Affiliated Tribes upon whose historical homelands this University is located. Their ancestors resided here for generations before being forcibly displaced by U.S. settlers and soldiers in the mid-1800s. We recognize the historical presence of the Caddo Nation and other Tribal Nations in the region; the ongoing presence and achievements of many people who moved to the area due to the Indian Relocation program of the 1950s and 1960s; and the vital presence and accomplishments of our Native students, faculty, and staff.



INTRODUCTION

Climate change has emerged as one of the most urgent challenges of the twenty-first century. With extreme weather events, rising ocean levels, drought, flooding, disease, poor air quality, diminished natural habitats, and adverse effects on human physical and mental health, the impacts of climate change are impossible to ignore.

The driving force behind climate change is the immense quantity of greenhouse gasses emitted by burning fossil fuels, creating methane gas through landfills, and releasing other chemicals into the atmosphere via anthropogenic activities. These gasses trap heat from the sun in the earth's system, warming our world at an unprecedented pace. As we work to combat the irreversible change we've caused and to reduce further damage to the climate system, institutions of higher education have emerged as important leaders in driving sustainable solutions.

Institutions such as the University of Texas at Arlington (UTA) are uniquely positioned to make deep emission reductions in their own operations while educating and supporting the climate leaders of the future. Attending a university that is leading in mitigation work is an invaluable experience for students, one that has far-reaching implications.

The first step in mitigating climate change is tracking emissions that are contributing to the climate crisis. In 2024, UTA underwent a greenhouse gas emission inventory, highlighted in this report, which also includes proposed recommendations for taking swift and impactful action to decrease greenhouse gas emissions.

DEFINITIONS

AASHE STARS	the Association for the Advancement of Sustainability in Higher Education (AASHE) runs the Sustainability, Tracking, Assessment and Rating System (STARS), which is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance
Climate change	a change in global or regional climate patterns, in particular a change apparent from the mid- to late 20th-century onwards and attributed largely to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels
Fugitive emissions	result from the direct release of greenhouse gas compounds into the atmosphere of from various types of equipment and processes, such as refrigeration and air conditioning systems, fire suppression systems, and the purchase and release of industrial gases
Greenhouse gasses	any gas that has the property of absorbing infrared radiation (net heat energy) emitted from the earth's surface and reradiating it back to the earth surface, thus contributing to the greenhouse effect
Scope 1 emissions	direct greenhouse gas emissions occurring from sources that are owned or controlled by the institution, including combustion of fuels to produce electricity, steam, heat, or power using equipment in a fixed location such as boilers, burners, heaters, furnaces, incinerators and combustion fuels by institution-owned cars, tractors, buses, and other transportation devices
Scope 2 emissions	indirect greenhouse gas emissions that are a consequence of activities that take place within the organizational boundaries of the institution, but that occur at sources owned or controlled by another entity; includes purchased electricity, purchased heating, purchased cooling, and purchased steam
Scope 3 emissions	all indirect emissions not covered in Scope 2; examples include purchased goods and services, capital goods, waste generated in operations, business travel, commuting (employee and student), end-of-life treatment of sold products, downstream leased assets, franchises, and investments

METHODOLOGY

The primary tool used for this work was the University of New Hampshire's Sustainability Indicator Management & Analysis Platform (SIMAP), a greenhouse gas tracking tool that is widely used within the higher education community.

This platform performs calculations on raw data that result in emission information for carbon dioxide, methane, and nitrous oxide. This data is then aggregated into the common unit of metric tons of carbon dioxide equivalent, or $MTCO_2e$.

The fiscal year 2024 data presented in this report was collected and analyzed by UTA's Sustainability Program Manager, Mashaal Atif Butt.

A few assumptions were made in the data analysis process due to the unavailability of certain information:

1. Diesel and distillate oil #2 are the same substance, since SIMAP only has the option to calculate emissions for the latter as a stationary source.

2. The nature and purpose of gasoline combustion on campus was unknown, so the emission factor for motor gasoline was used.

3. The small amount of diesel used in the campus fleet in fiscal year 2024 was absorbed into SIMAP's "Stationary Source: Diesel" category starting in FY 22, which is why there is no data in the "Transportation source: diesel fleet" since that year.

RESULTS

The table below shows results by source after FY 24 data was entered into the University of New Hampshire's Sustainability Indicator Management & Analysis Platform (SIMAP). It also shows the change in emissions from fiscal year 2019 to fiscal year 2024.

Table 1. — Scopes 1 and 2 greenhouse gas emissions ($MTCO_2e$) by source, fiscal years 2019–2024

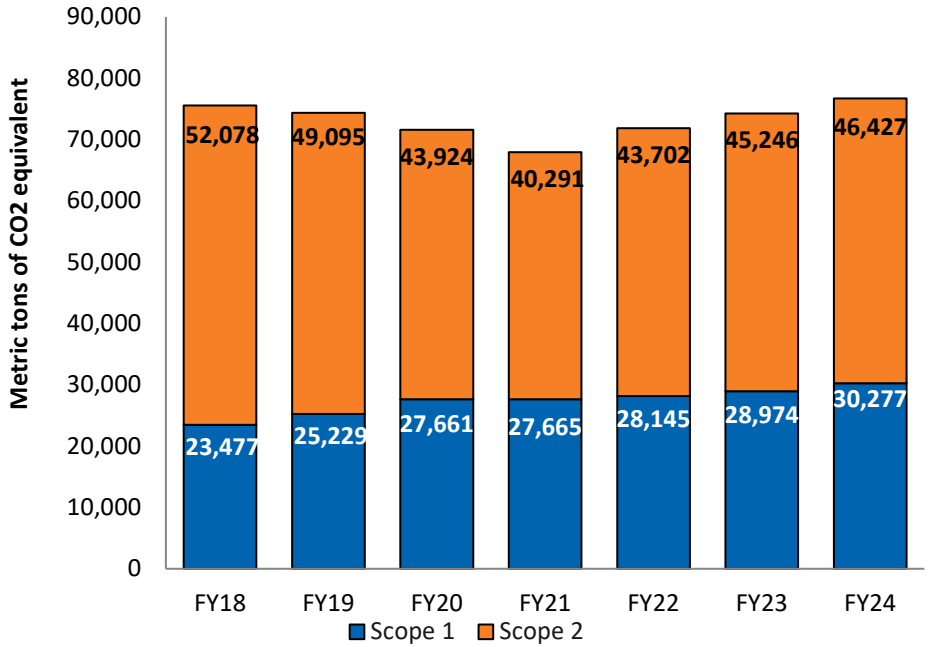
Scope	Emissions sources ($MTCO_2e$)	FY 19	FY 20	FY 21	FY 22	FY 23	FY24	FY 18–24 change
1	Stationary source: natural gas	21,161	20,623	20,718	21,027	22,286	22,395	18.80%
1	Stationary source: gasoline	3,021	2,548	2,311	2,350	2,455	2,563	-26.76%
1	Stationary source: diesel	35	64	62	26	31	90.75	-120.86%
1	Stationary source: solar	0	0	0	0	0	0	0.00%
1	Transportation source: gasoline fleet	637	560	508	516	539	501	-32.77%
1	Transportation source: diesel fleet	3	1	1	0	-	-	-100.00%
1	Refrigerants and chemicals	373	3,864	4,065	4,226	3662	4728	1325%
2	Purchased electricity	49,095	43,924	40,291	43,702	45,246	46,427	-10.85%

ANALYSIS: KEY TAKEAWAYS

#1: EMISSIONS HAVE DECREASED

Since FY18, UTA has successfully reduced its overall greenhouse gas emissions (see Fig. 1). While purchased electricity remains the largest contributor, accounting for 62% of total emissions, our Scope 2 emissions have continued to decrease compared to FY18. The remaining 38% of emissions stem from natural gas, refrigerants, stationary gasoline use, and mobile sources (see Fig. 3).

Figure 1. — UTA's greenhouse gas emissions over time by scope



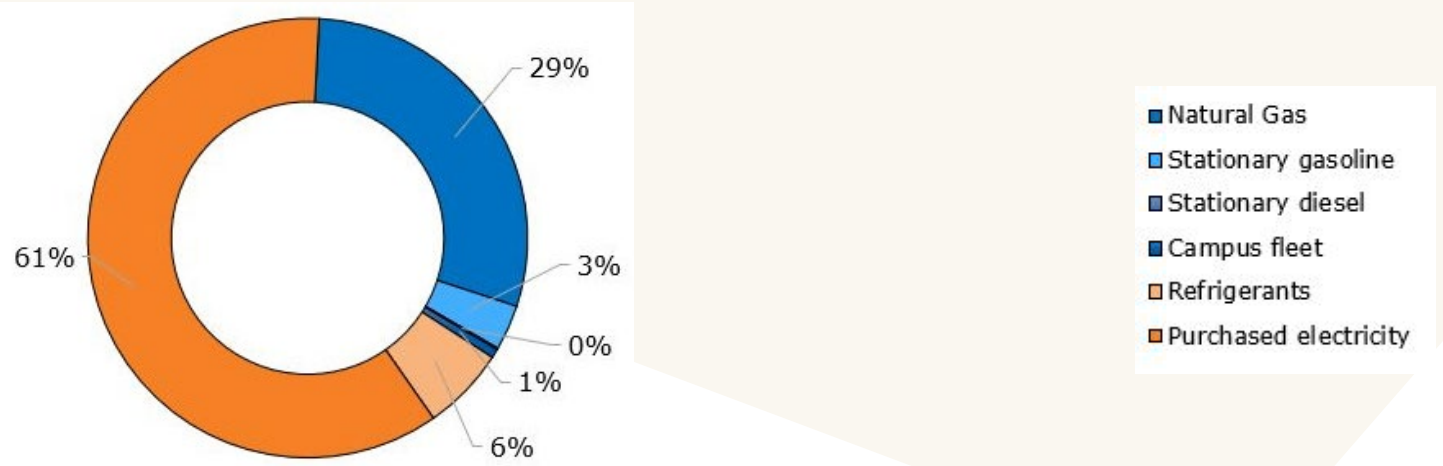


Figure 2. — UTA's FY24 greenhouse gas emissions by source

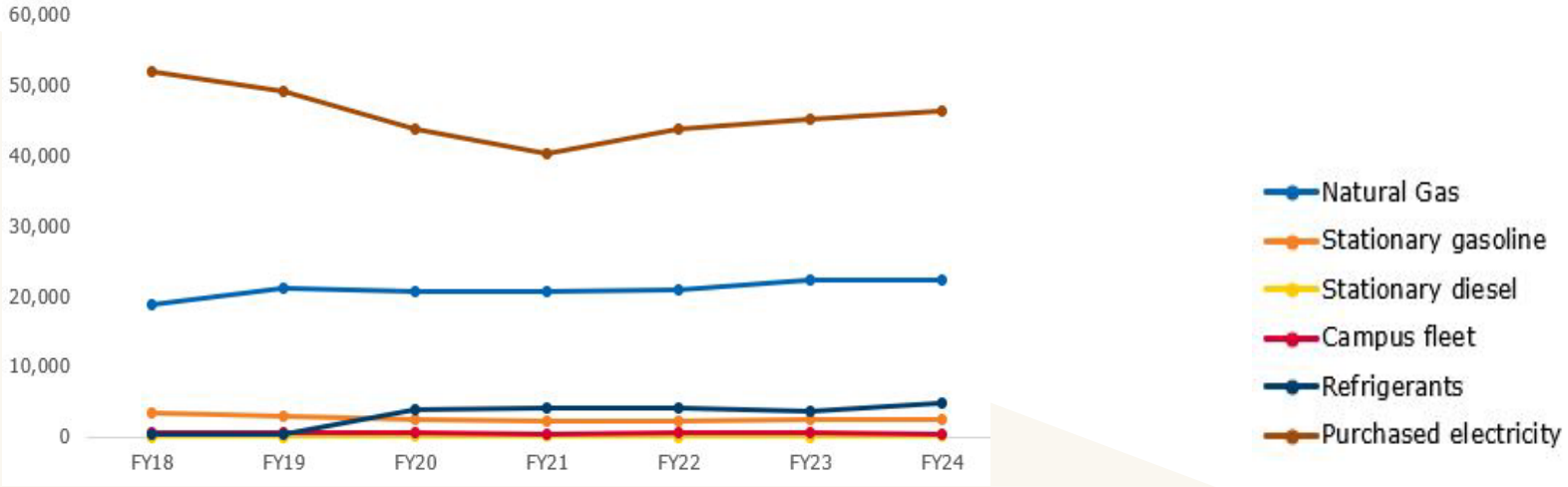
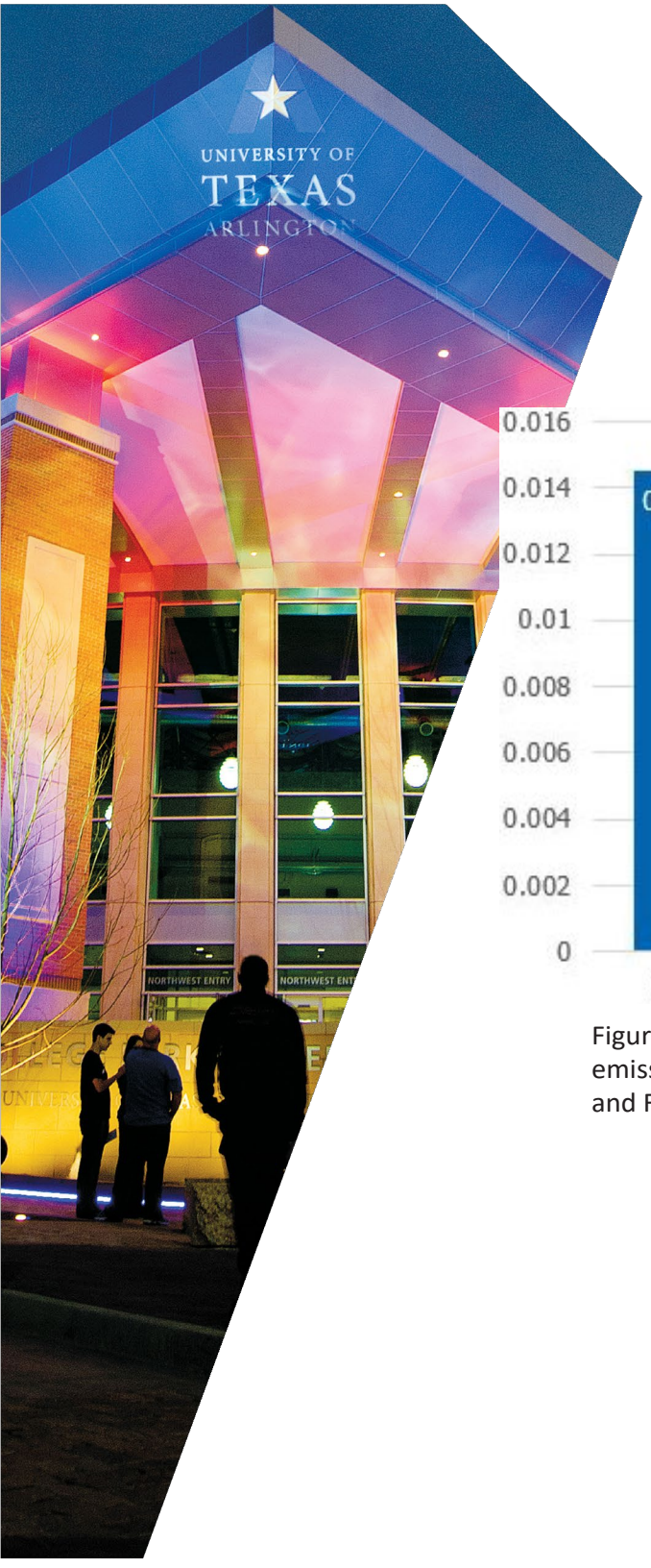


Figure 3. — UTA's greenhouse gas emissions over time by source



Another important note is that UTA's campus underwent an expansion in size between 2010 to 2023. Despite this expansion, the greenhouse gas emissions per square foot have been cut by almost a third in this time (see Fig. 4), indicating the success of low emission practices on campus when construction increases are neutralized. However, when looking at total emissions without accounting for the larger size of the campus, there is a net increase from 2010 to 2024 (see Fig. 5). This is a reversal of the previous trend of emissions decreasing below 2010 levels between 2020 and 2022.

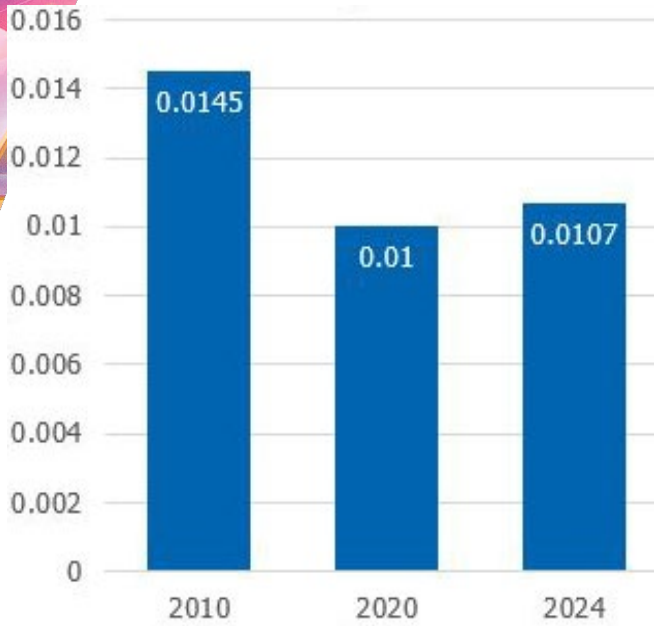


Figure 4. — UTA's greenhouse gas emissions per square foot from FY10, FY20 and FY24

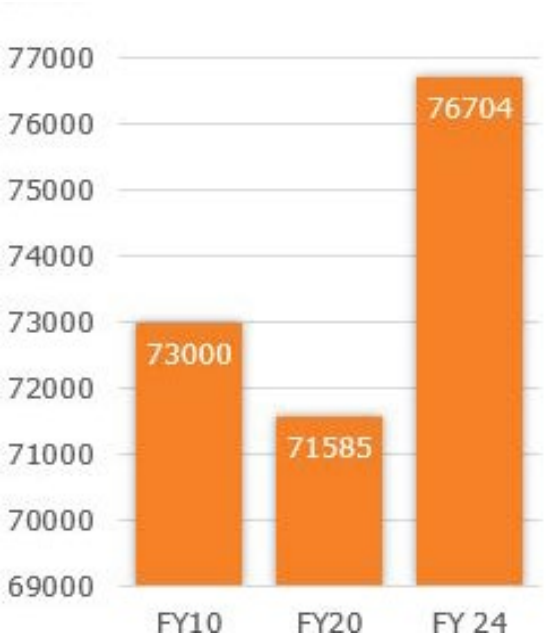


Figure 5. — UTA's total greenhouse gas emissions in FY10, FY20 and FY24

#2: UTA HAS THE LOWEST TOTAL EMISSIONS OF ITS PEERS

UTA's FY24 emission data was analyzed in comparison with the same group of peers used in the FY22 report: Texas A&M University, University of Texas Austin (UT Austin), University of Texas San Antonio (UT San Antonio), and University of Texas Dallas (UT Dallas).

UTA's emissions have seen a slight increase compared to its peers in recent years. In 2023, we recorded the second-lowest emissions per gross square foot. However, as shown in the graph, there has been a modest rise, and we now have the third-highest emissions in this category. This shift highlights the need for continued focus on improving energy efficiency and implementing strategies to further reduce our environmental impact.

Figure 6. — UTA's greenhouse gas emissions compared to peer institutions, using the performance year as reported in AASHE STARS

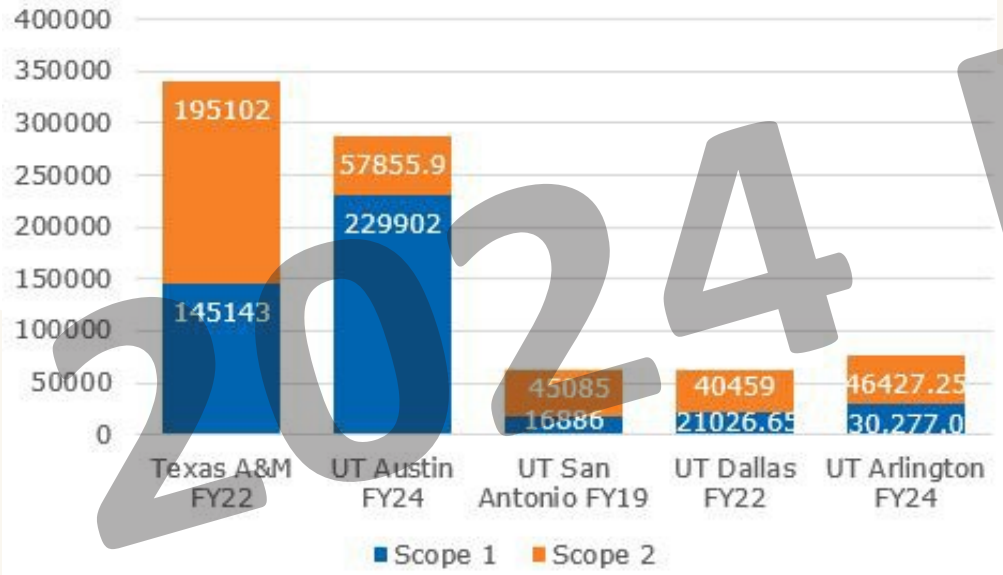
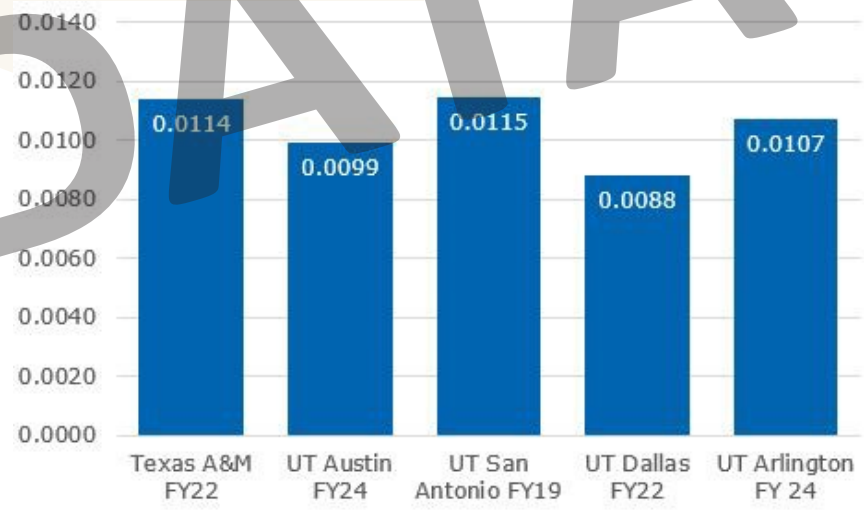


Figure 7. — UTA's greenhouse gas emissions per square foot compared to peer institutions using the performance year as reported in AASHE STARS



NEXT STEPS

#1: Climate Action Plan

UTA will launch its first Climate Action Plan in 2025. The Climate Action Plan will set goals and a timeline for lowering our emissions. When FY25 emissions are calculated, we will be able to definitively measure our success towards reaching the goals.

#2: Investigate emission sources

A significant portion of UTA's FY 20–22 Scope 1 emissions was from stationary gasoline use on campus. Finding out what this gasoline is used for and how to represent it most accurately in the emissions inventory would give UTA a more complete picture of their emissions. This is not a common source for universities to have in their inventories, and thus warrants some investigation.

#3: Using emissions report for STARS reporting

UTA will be renewing our STARS (Sustainability Tracking, Assessment & Rating System) status in 2025. As part of this renewal process, we will be submitting a comprehensive **Greenhouse Gas (GHG) Emissions Report**, which will be a key component of our STARS report. The GHG emissions data will not only help us track and assess our progress toward reducing our carbon footprint but will also provide valuable insights into our operations and their environmental impact.