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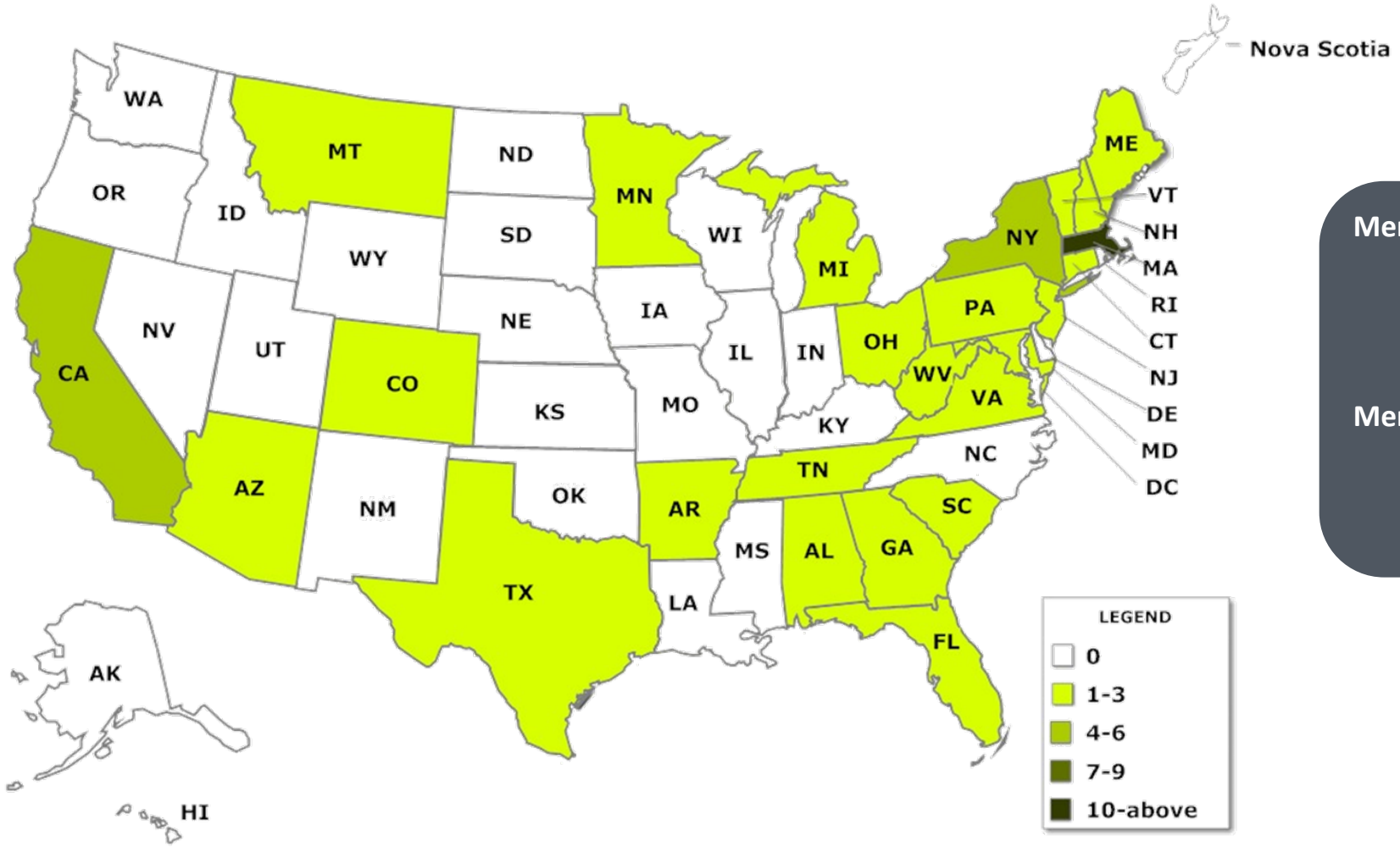
Texas A&M University

FY18 Sustainability Solutions

Updated July 2019

University of Toledo
University of Vermont
University of Washington
University of West Florida
University of Wisconsin - Madison
Vanderbilt University
Virginia Commonwealth University
Wake Forest University
Washburn University
Washington State University
Washington State University - Tri-Cities Campus
Washington State University - Vancouver
Washington University in St. Louis
Wayne State University
Wellesley College
Wesleyan University
West Chester University
West Virginia Health Science Center
West Virginia University
Western Oregon University
Westfield State University
Widener University
Williams College
Worcester Polytechnic Institute
Worcester State University

Who Else Partners With Sightlines?



Member Characteristics:

- 60% Private
- 40% Public
- 55% Signatories of ACUPCC
- 45% Charter Signatories

Members Diverse in:

- Size & Student Population
- Setting & Climate Zone
- Energy Sources & Uses

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Components of Texas A&M's Emissions Profile

Scope 1 Direct GHGs	Scope 2 Upstream GHGs	Scope 3 Indirect GHGs
• On-Campus Stationary (Cogen plant and other) • Vehicle Fleet Fuel • Refrigerants • Fertilizer • Animals	• Purchased Electricity	• Faculty/Staff/ Student Commuting • Directly Financed Air & Ground Travel • Study Abroad Travel • Solid Waste • Wastewater • Paper Purchasing • Transmission & Distribution Losses

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Texas A&M Peer Group

Institution	Size	Climate Zone	Urbanization
Arizona State University	23.2M GSF	5	Urban Fringe of a Large City
Clemson University	8.8M GSF	4	Urban Fringe of a Mid-Size City
George Mason University	7.5M GSF	3	Urban Fringe of a Large City
Northwestern University	14.5M GSF	2	Large City
The University of Alabama	12.2M GSF	5	Mid-size City
Towson University	5.8M GSF	3	Urban Fringe of a Large City
Virginia Commonwealth University	9.7M GSF	4	Mid-size City

Comparative Considerations

Size, technical complexity, region, geographic location, and setting are all factors included in the selection of peer institutions

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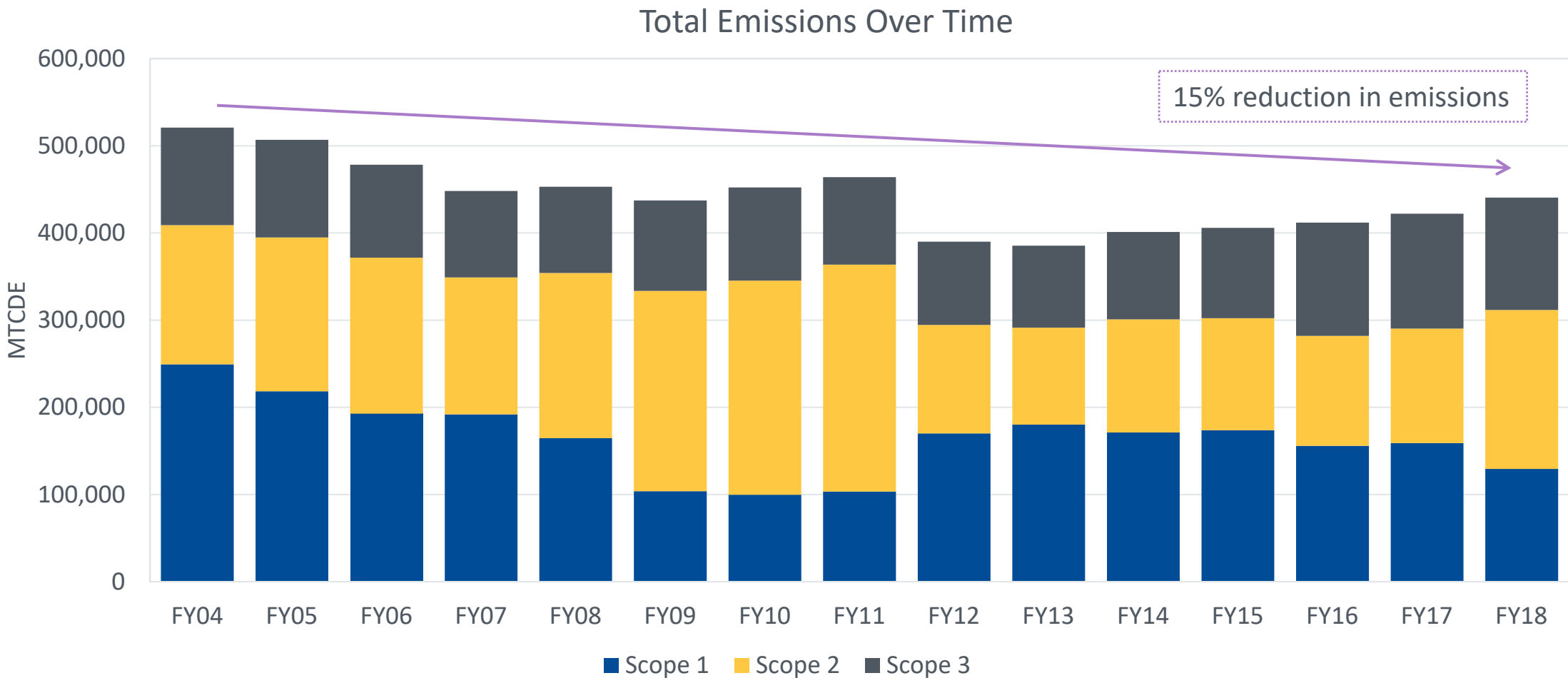
Emissions Summary

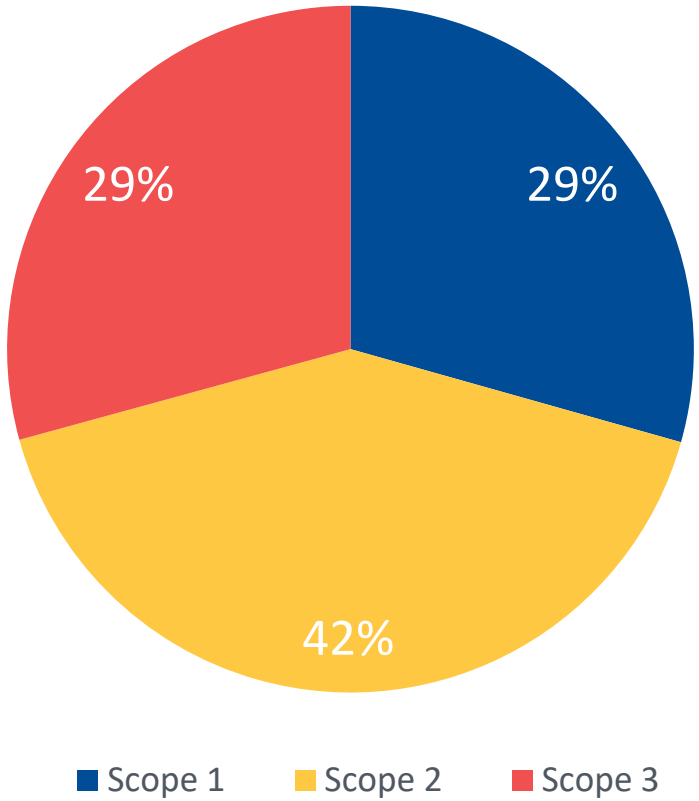
Overall Reduction in Emissions Since 2004

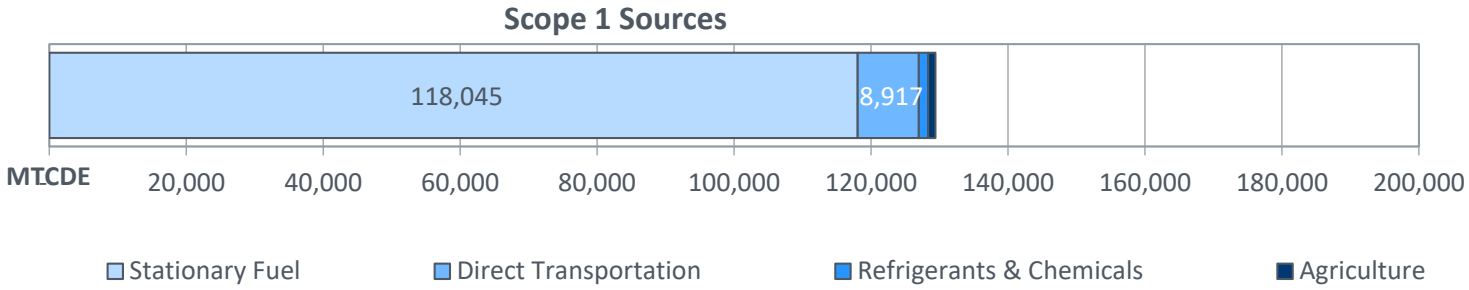
Scope 2 and 3 emissions have been increasing since 2013

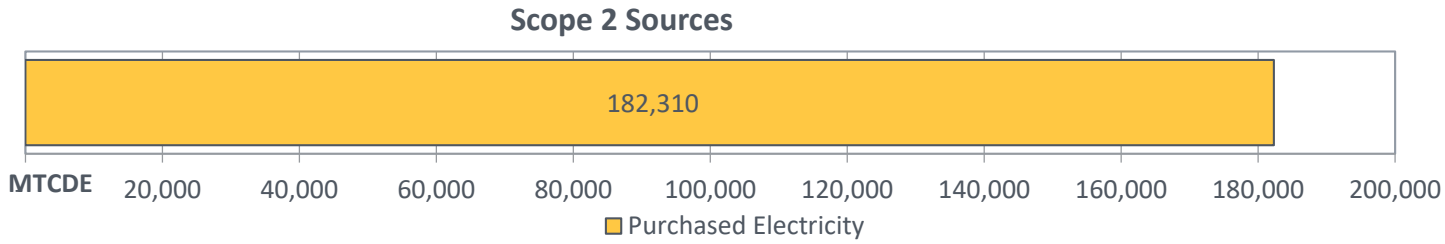


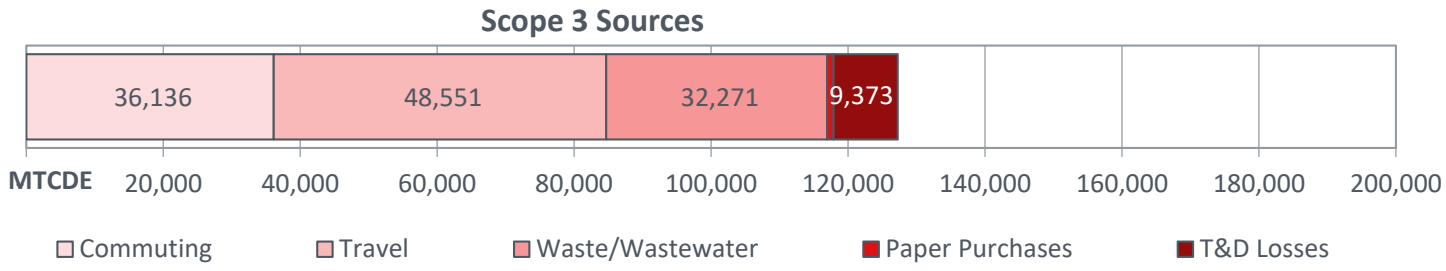
Scope 2 Leading Texas A&M's FY18 Emissions Profile

FY2018 emissions by source and scope



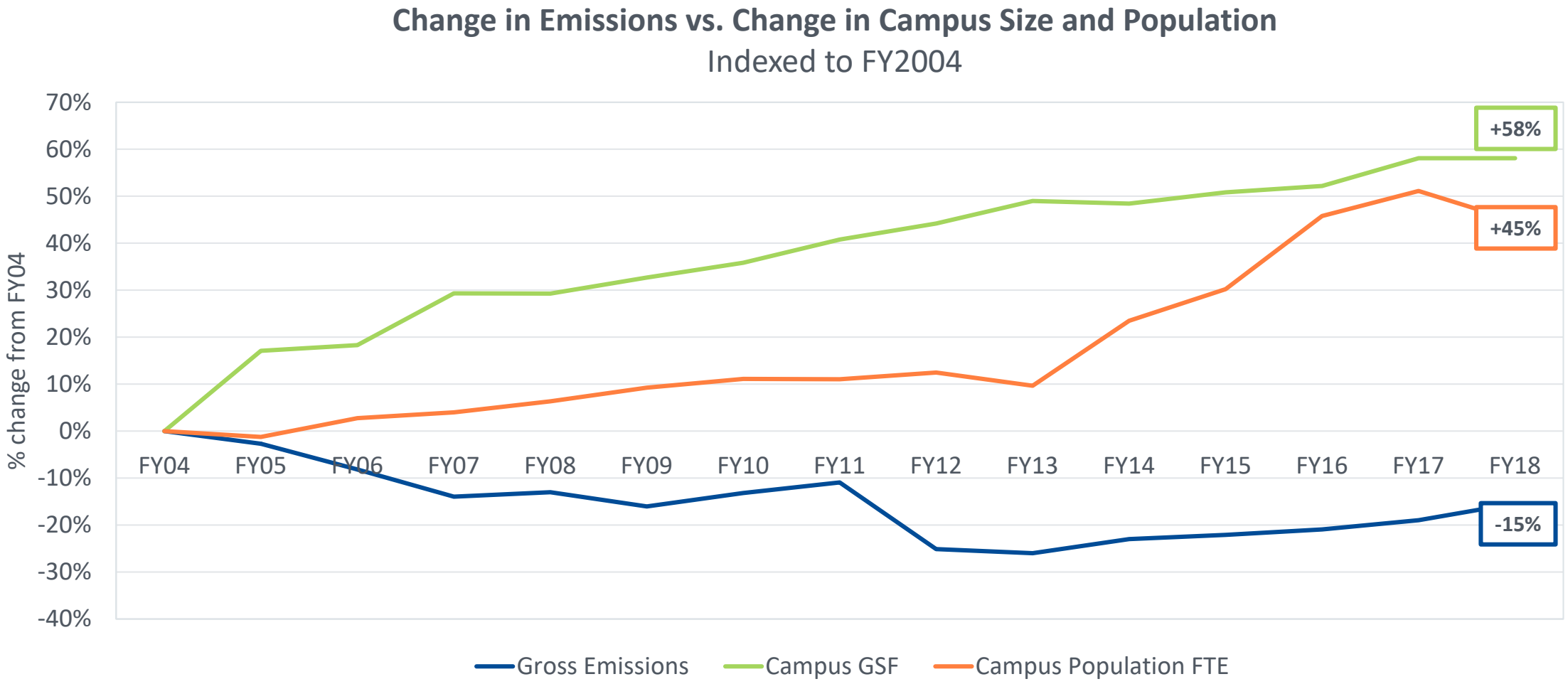






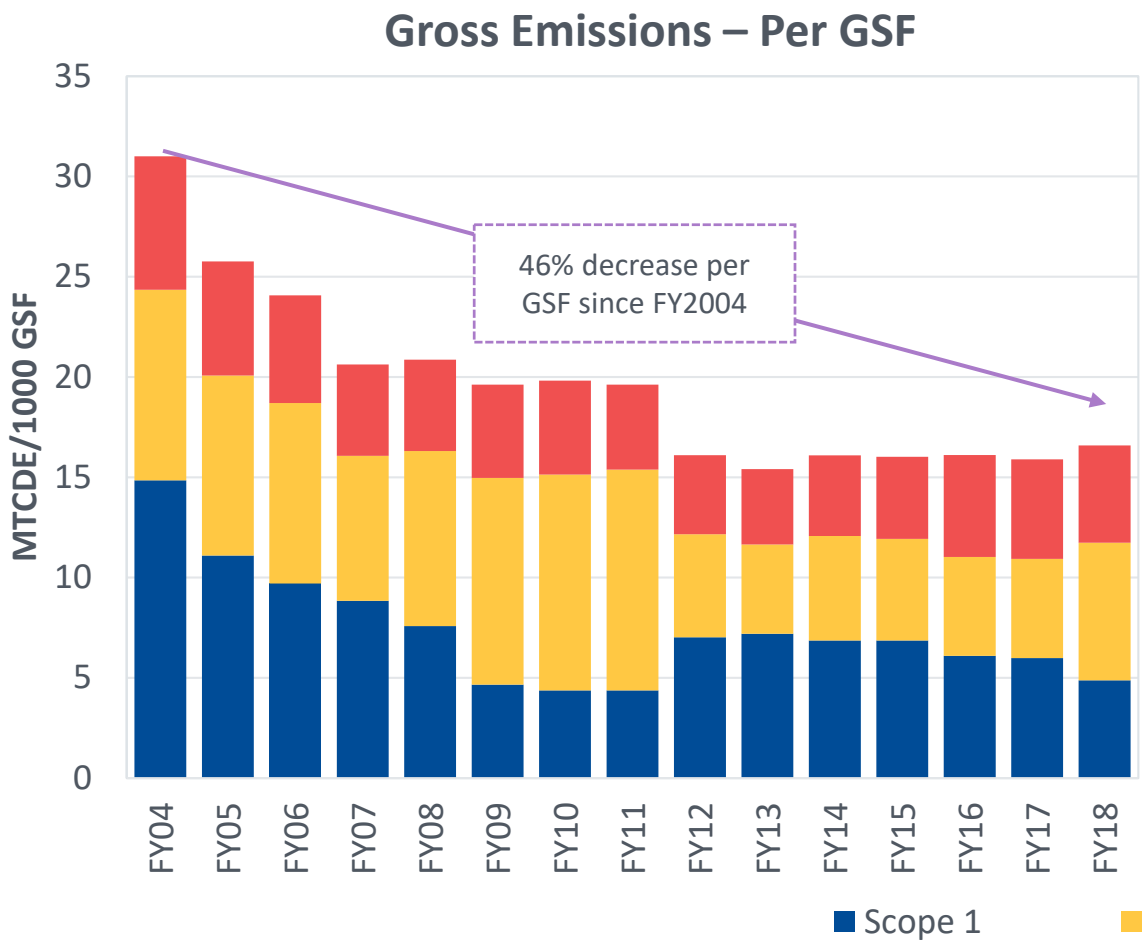
Great Improvements Despite Growing Campus

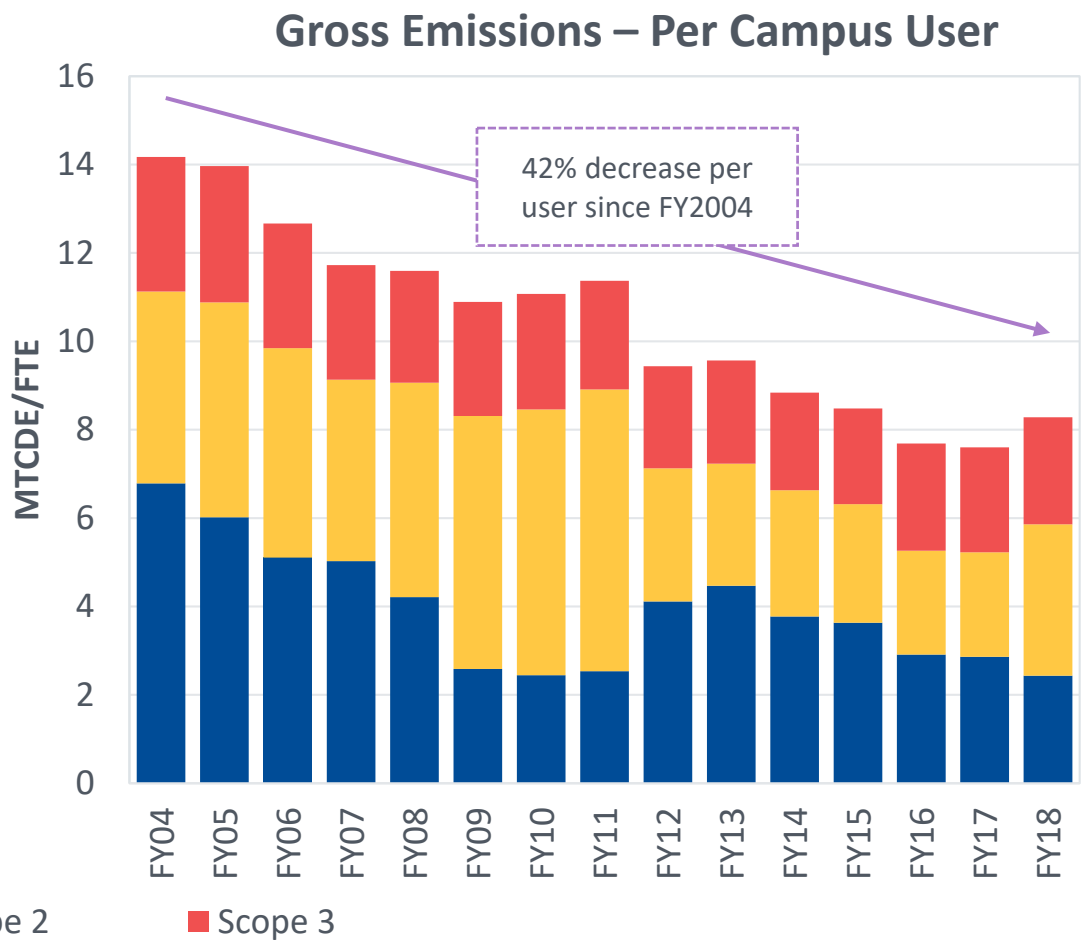
Space and Users have increased at a higher rate than emissions



Historical Trending of Normalized University Emissions

As campus enrollment has increased, gross emissions have not kept pace





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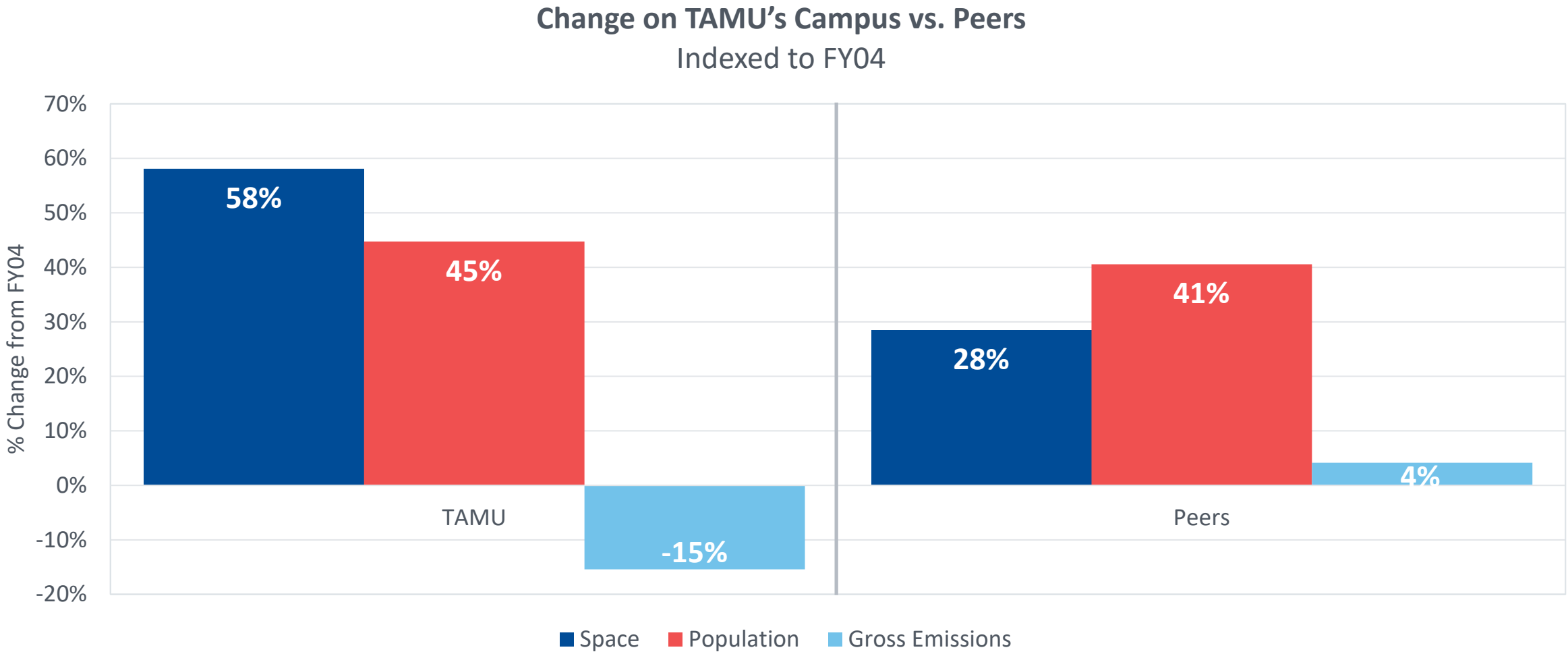
Emissions Comparison

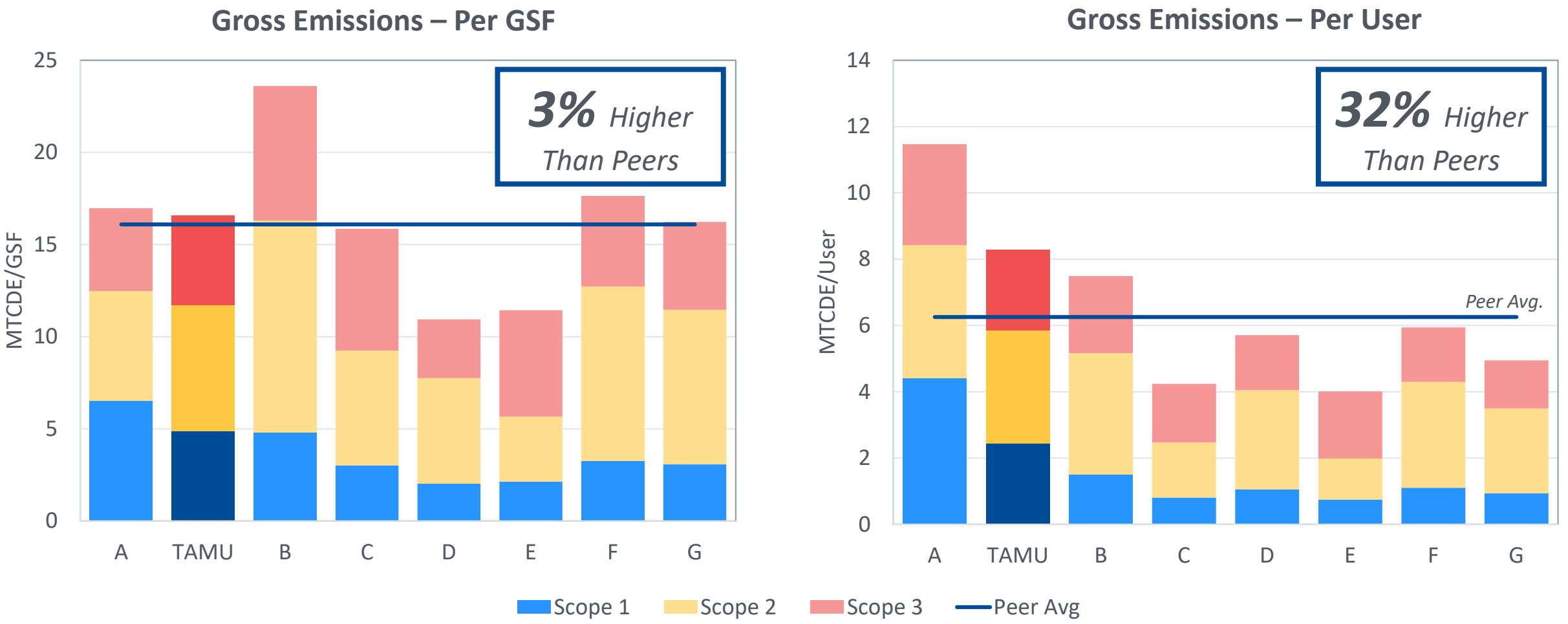
Peers Increased Emissions While Also Growing Campus

TAMU increased campus size and population more than peers, but decreased emissions



Emissions at Texas A&M Remain Higher Than Peers

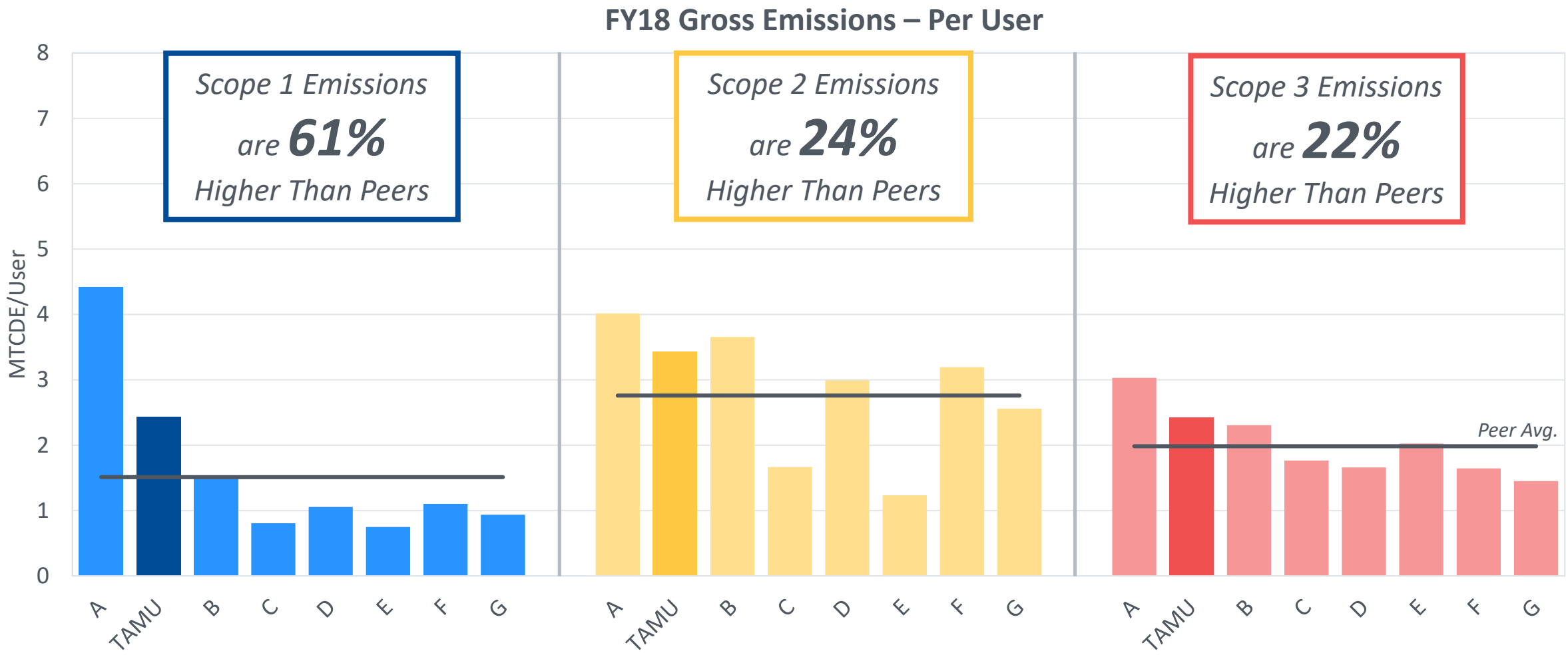
Additional reductions should be a focus as the campus continues to grow



Ordered by Density Factor

Emissions are Above Peers in All Scopes

Scopes 1 & 2 currently drive TAMU's above average emissions profile the most



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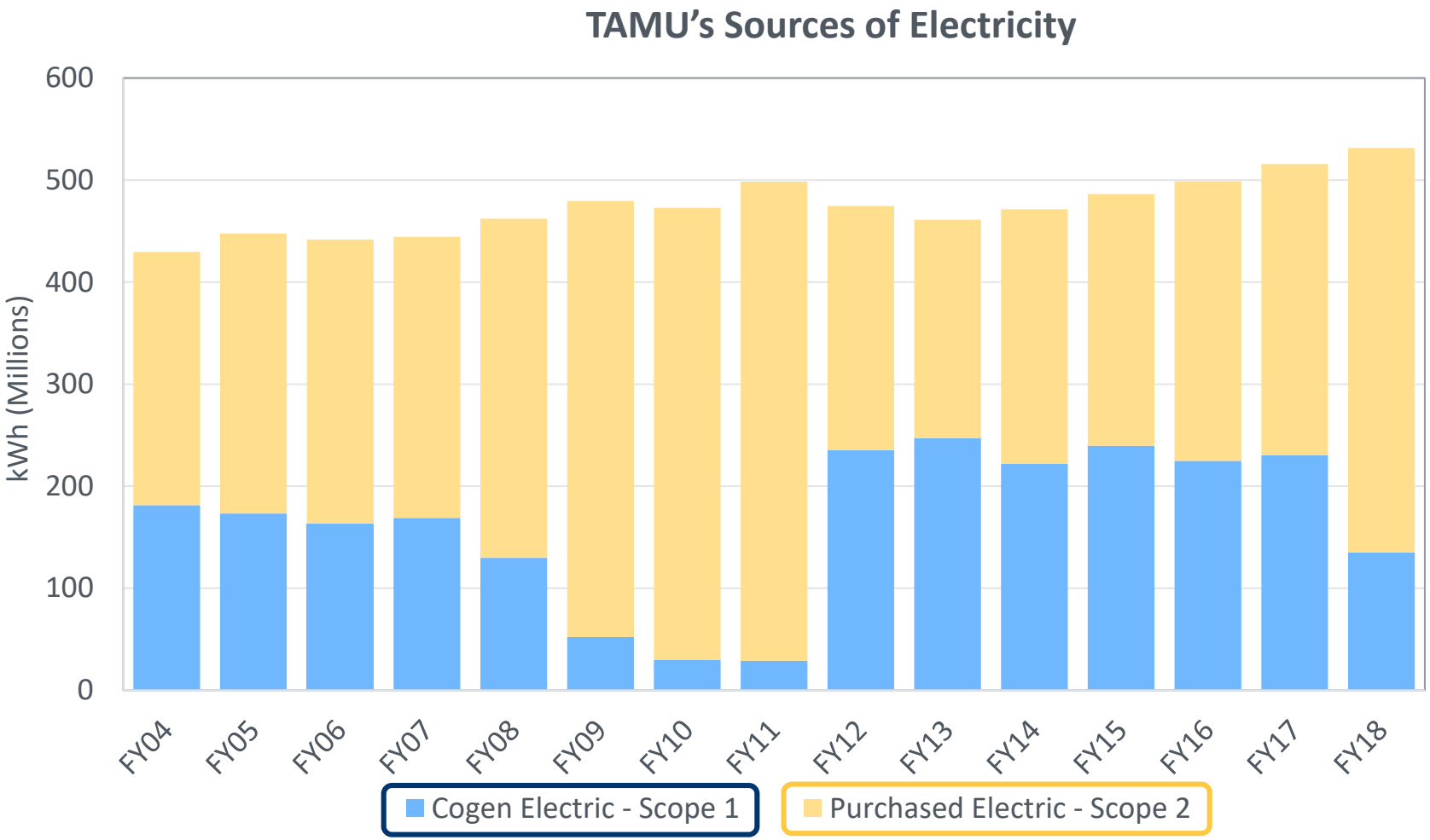
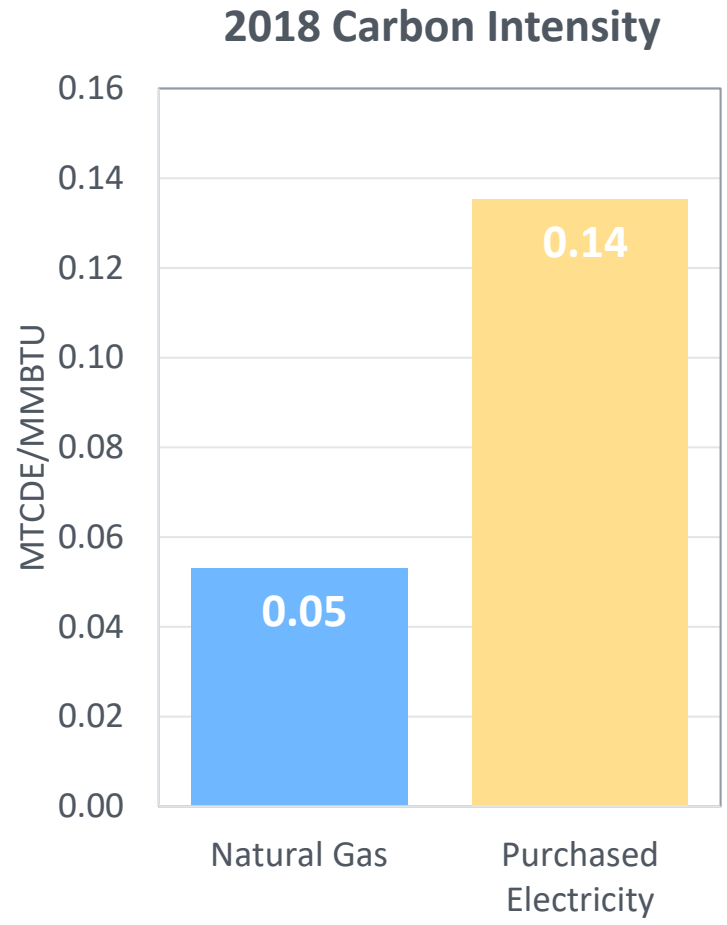
Utilities

Cogenerated Electricity Down in FY18 – More Purchased

Purchased electric has a higher carbon intensity than Natural Gas generated electric





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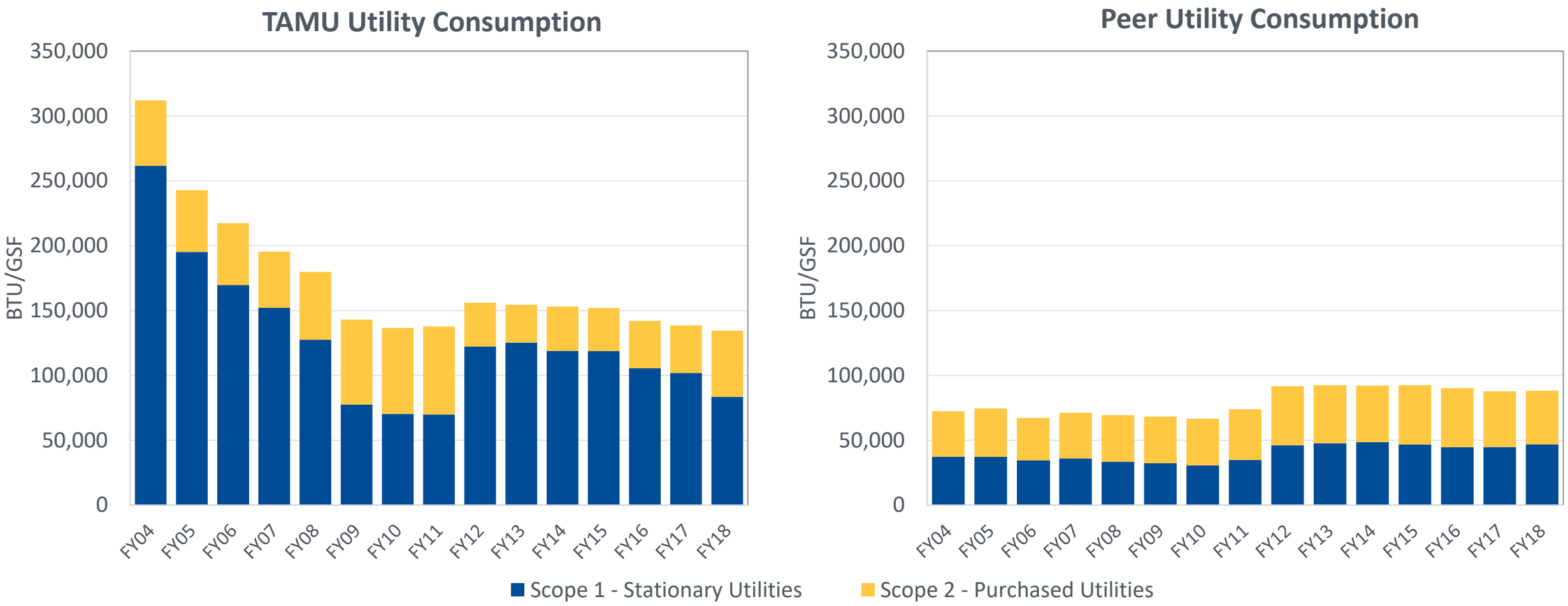
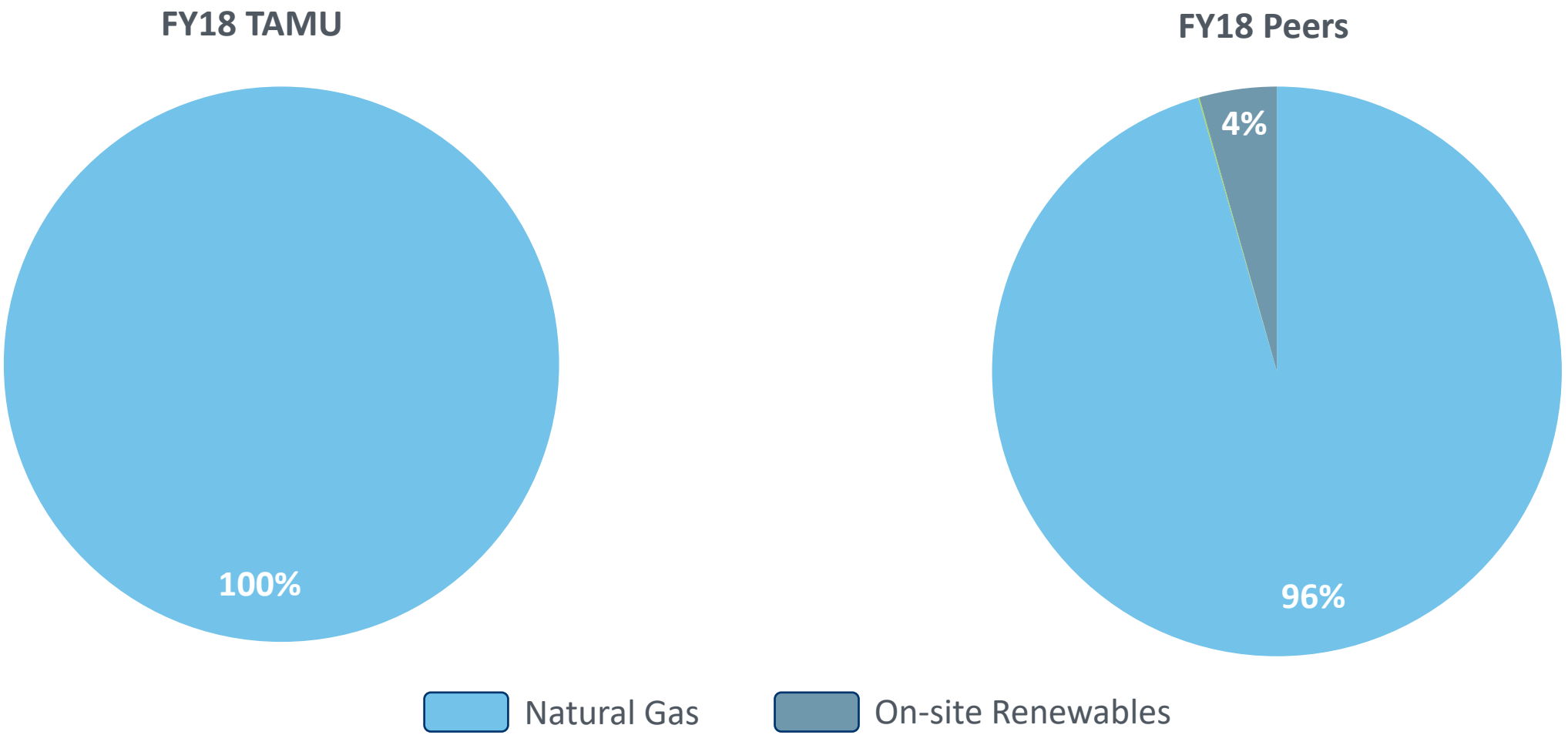
Total Energy Consumption by Scope

Peers have lower consumption levels, but Texas A&M is getting close



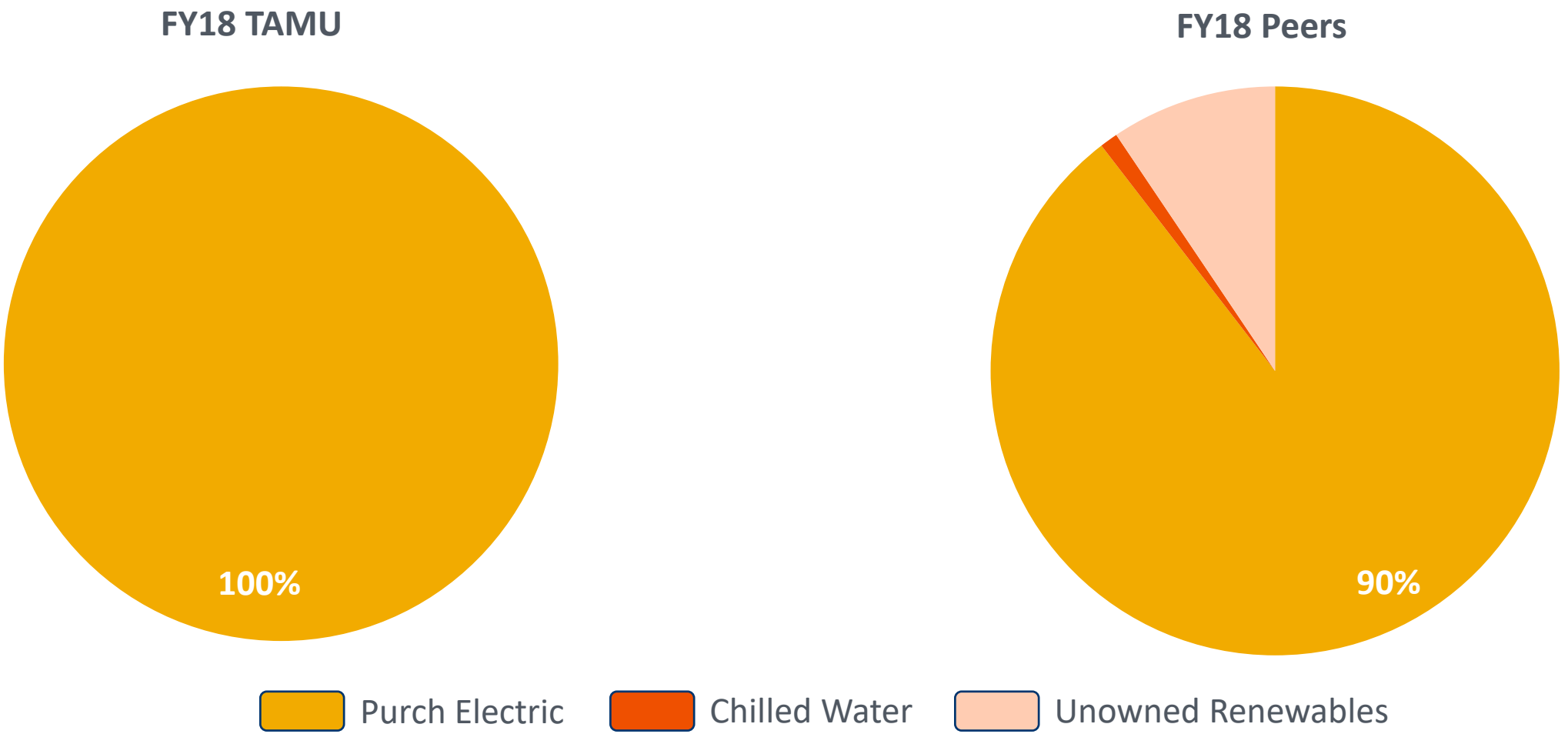
Scope 1 Sources of Utility Consumption

Some peers own on-site renewables generating carbon-free energy



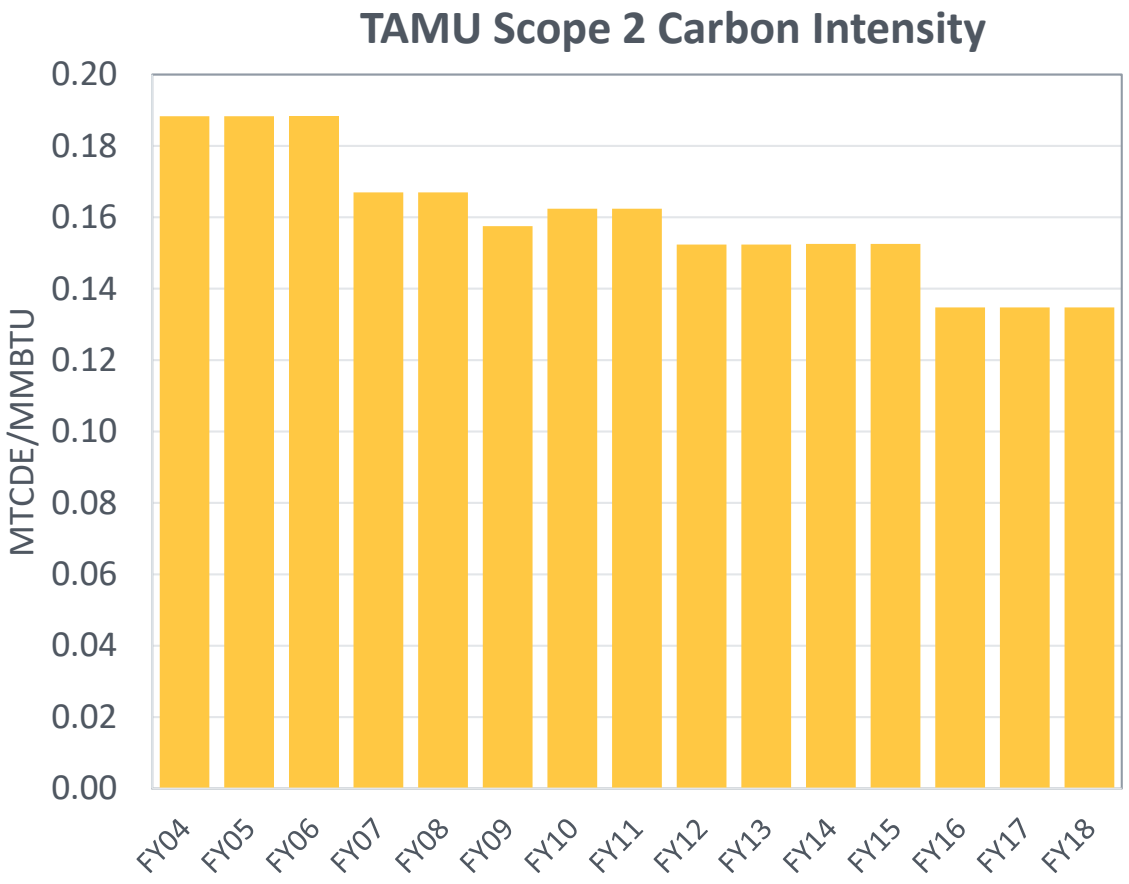
Scope 2 Sources of Utility Consumption

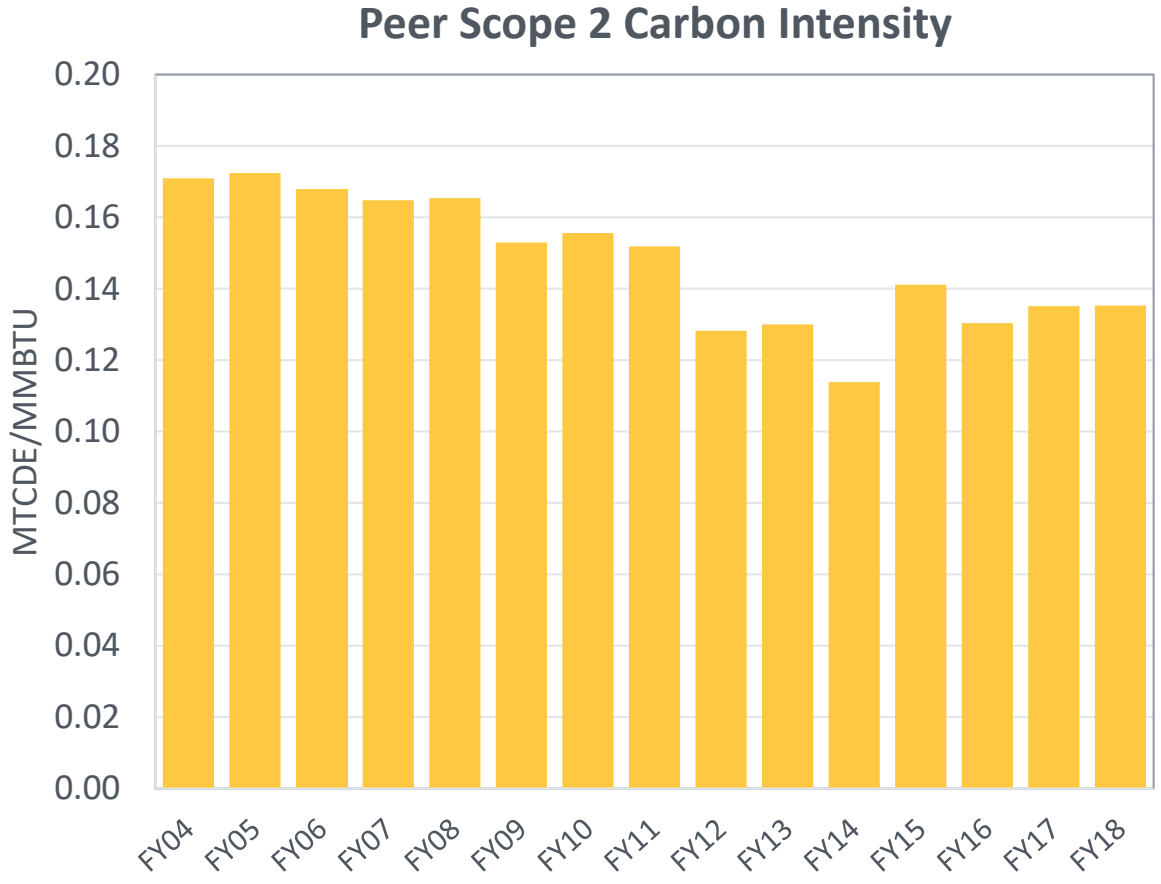
Some peers purchase chilled water, others consume energy from unowned renewables



Scope 2 Purchased Utility Carbon Intensity

TAMU scope 2 emissions now being calculated using the Feb 2018 EPA eGRID release; ERCT carbon intensity is currently at peer average levels





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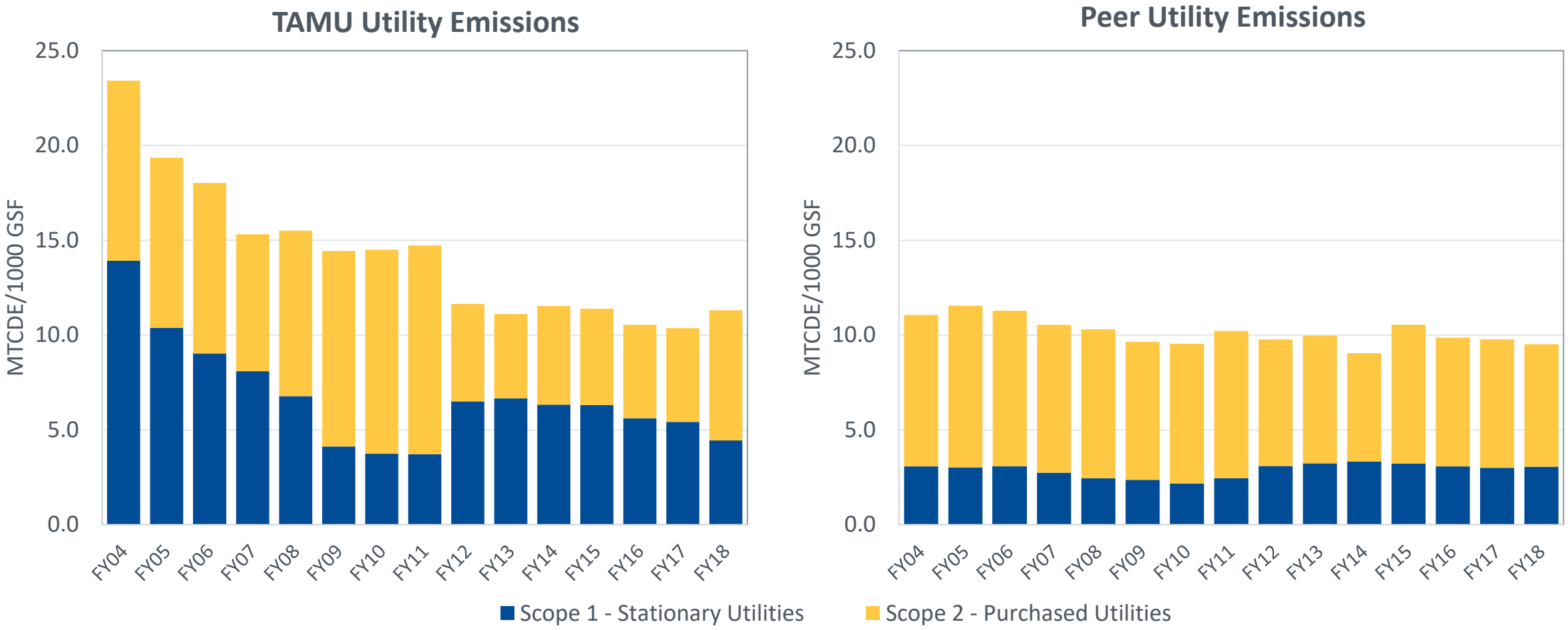
Total Utility Emissions by Scope

Higher consumption and carbon intensity at TAMU both yield more emissions than peers



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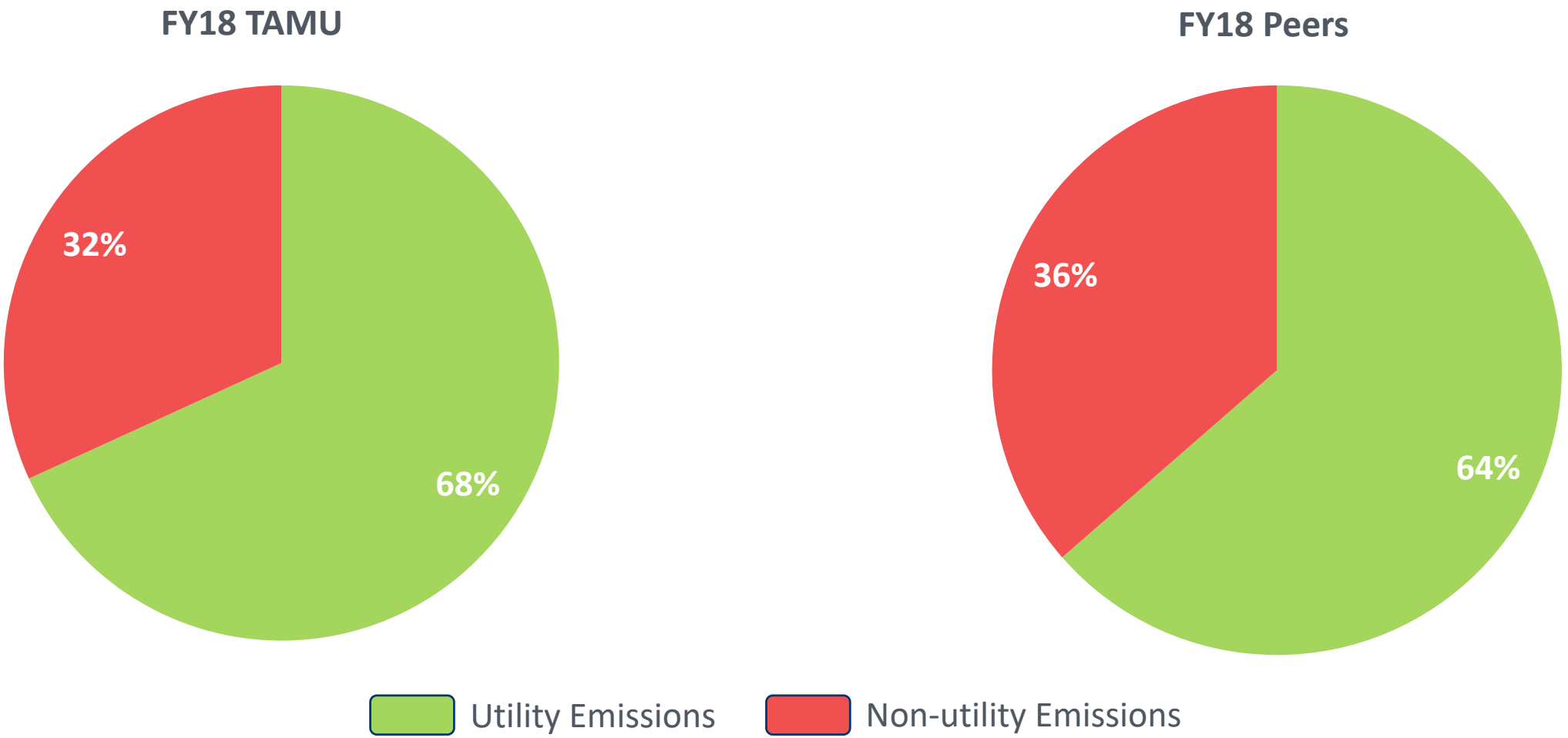
Non-Utility Emissions Sources

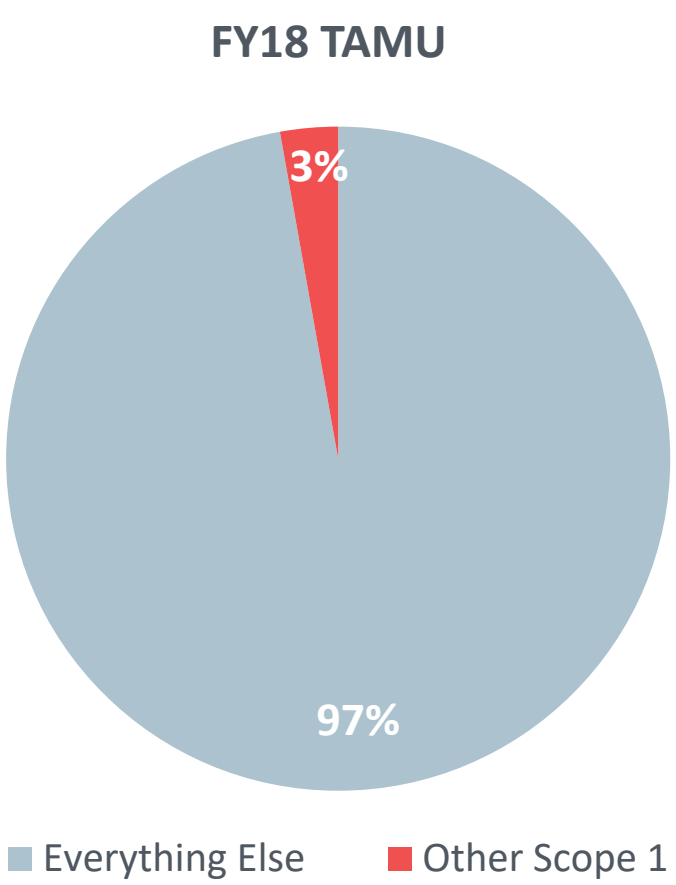
Current Emission Profile Breakdown – Utility vs. Other

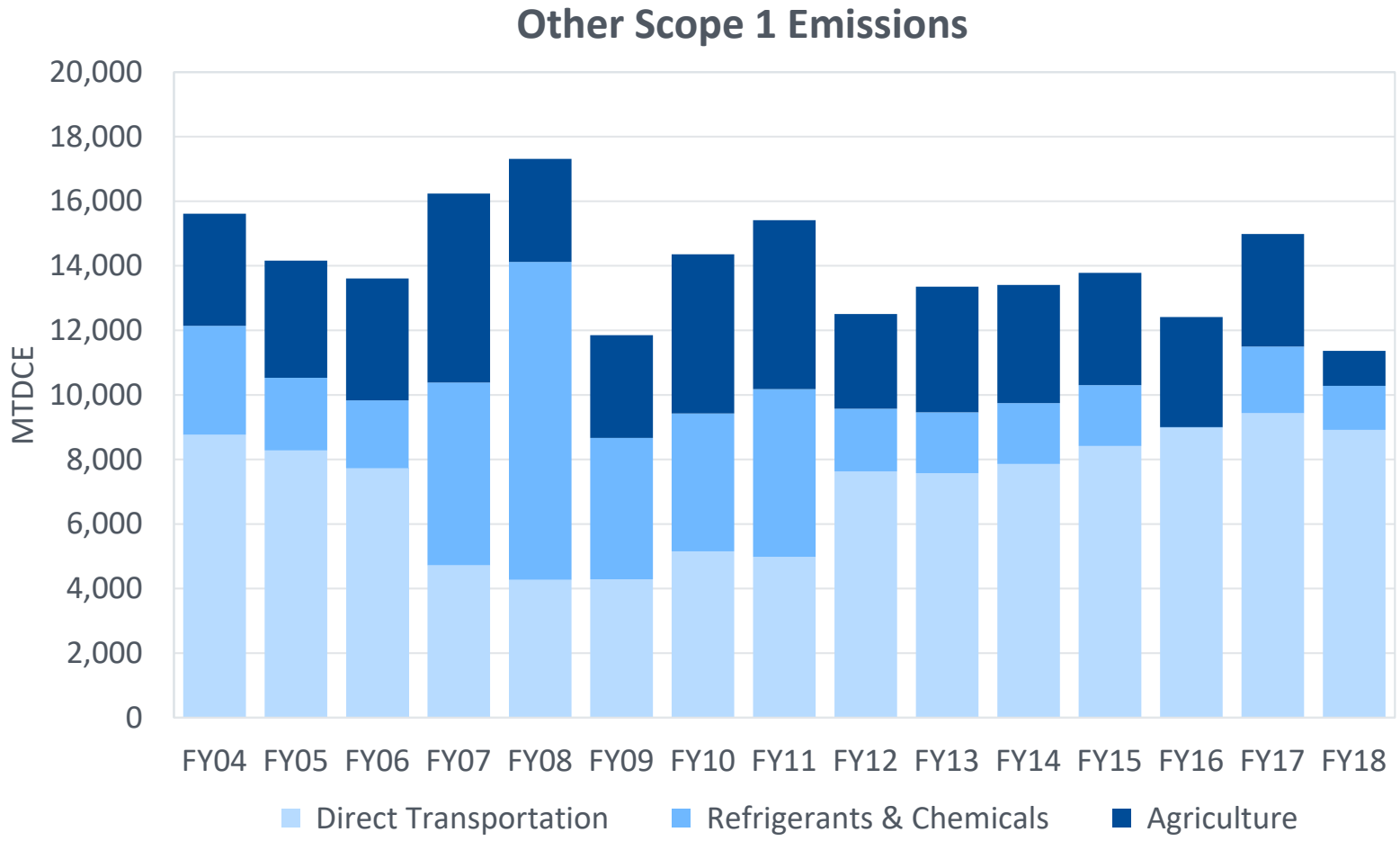
A greater proportion of TAMU's emissions are utility related compared to peers



Other Scope 1 Emissions Are Small Portion of Total

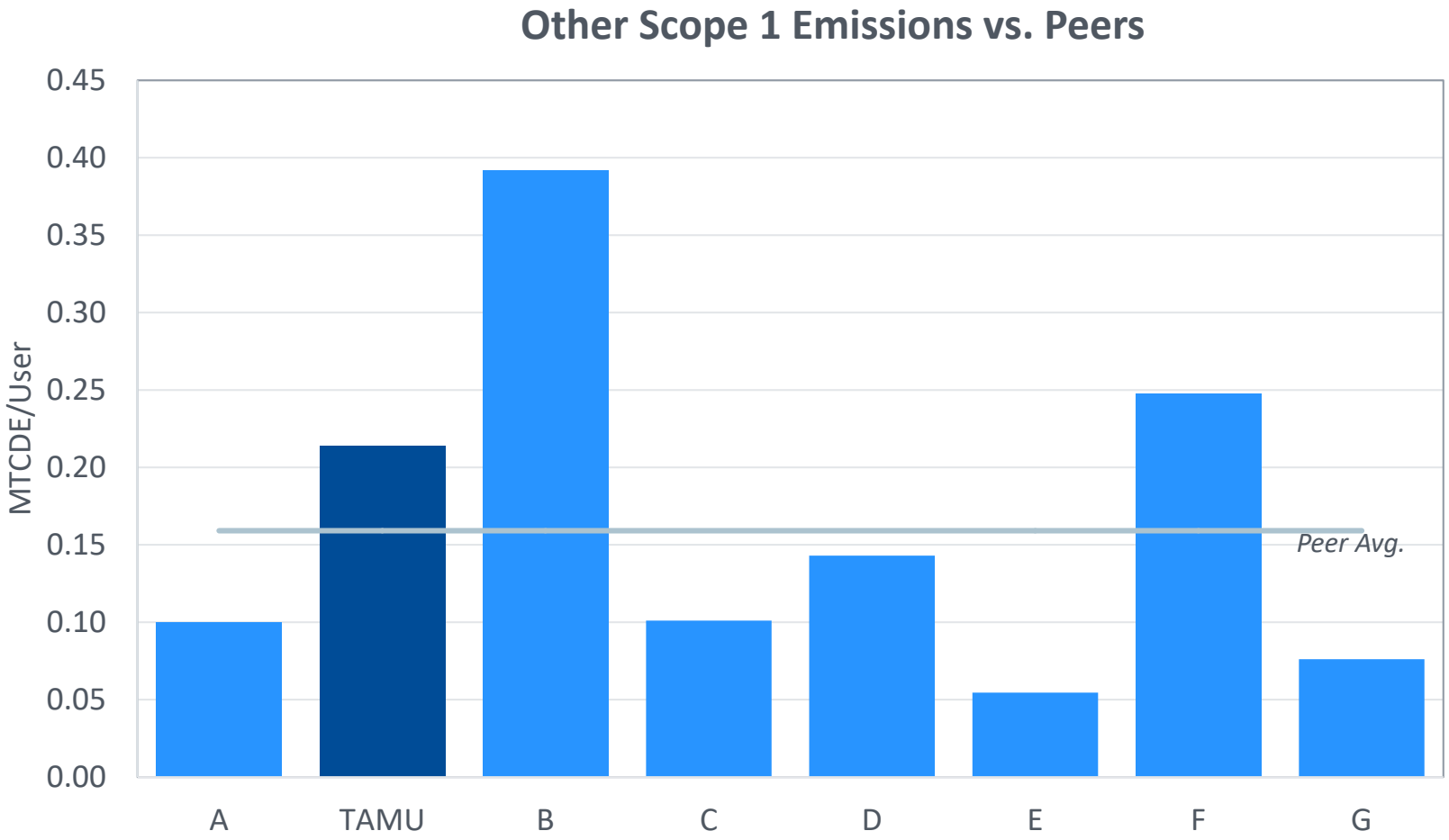
All other scope 1 sources saw a decrease in FY18

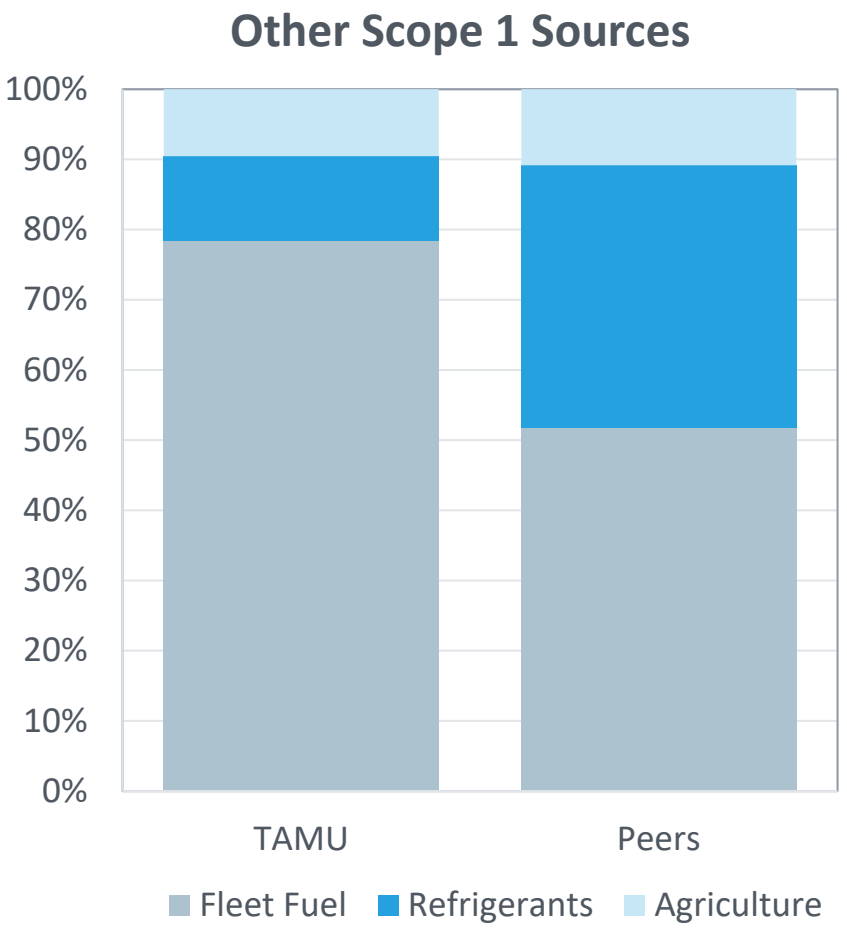




Other Scope 1 Emissions Compared to Peers

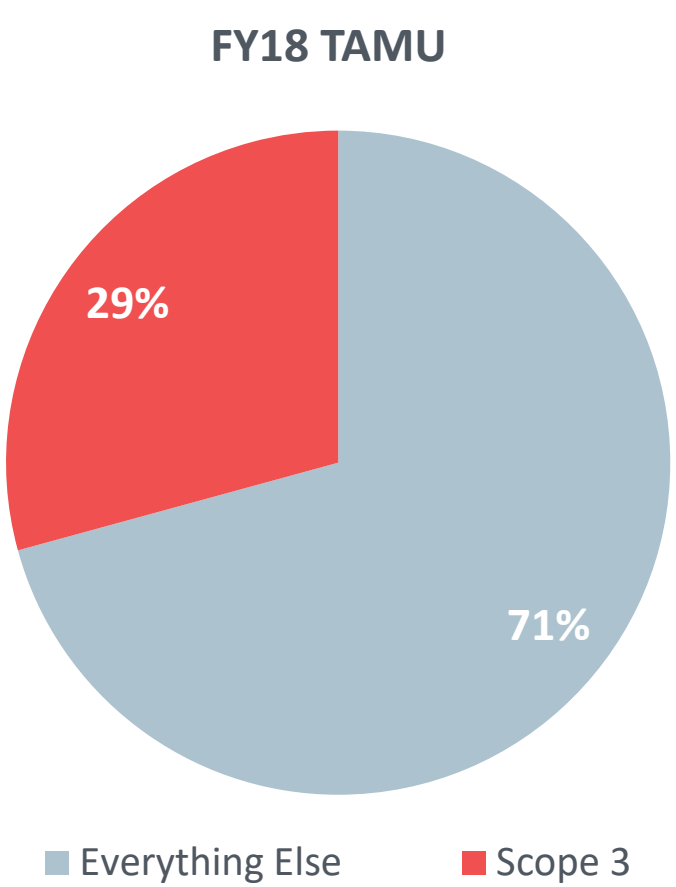
TAMU has more fleet fuel & agricultural emissions than peers

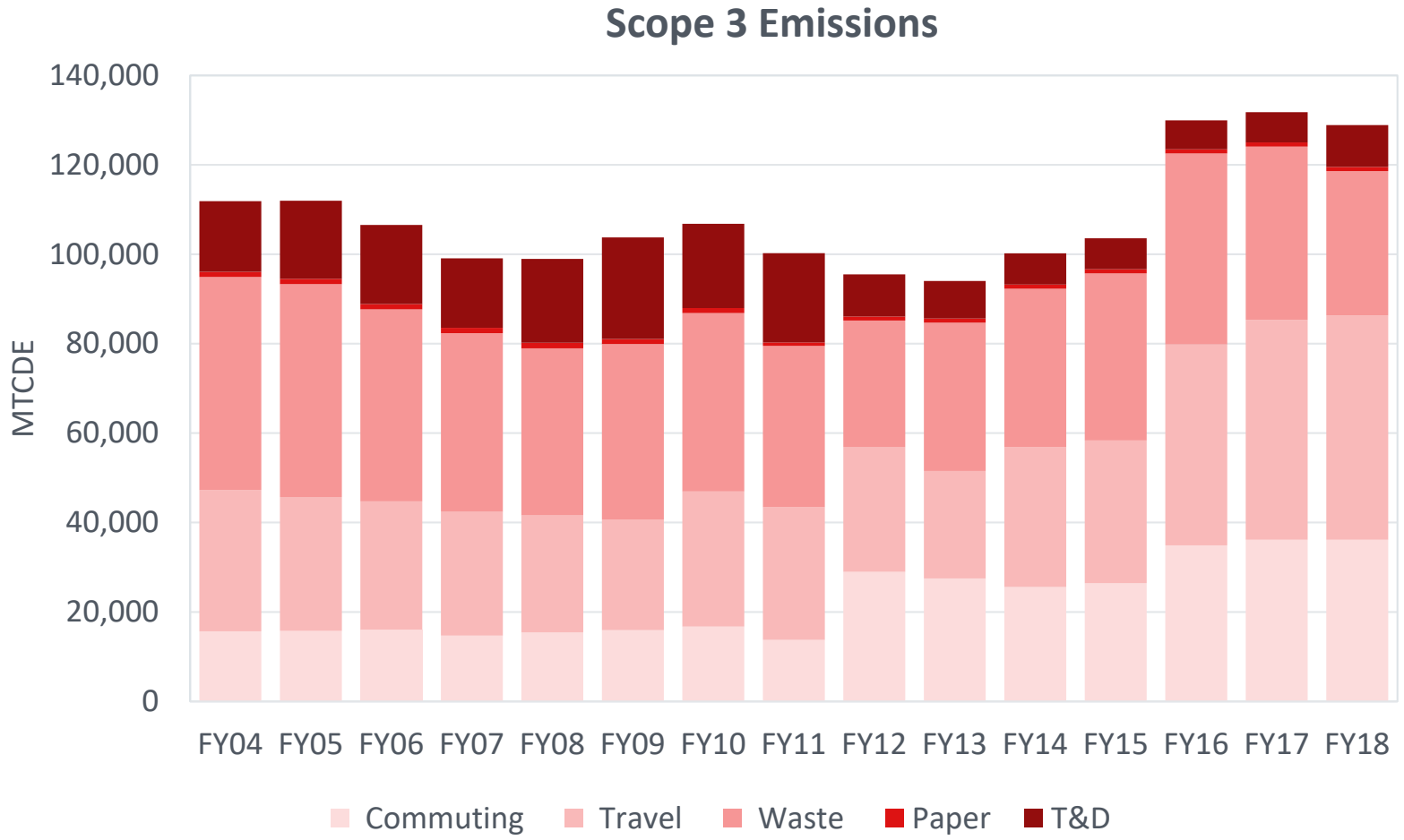




Scope 3 Emissions are Driven by Campus Activity

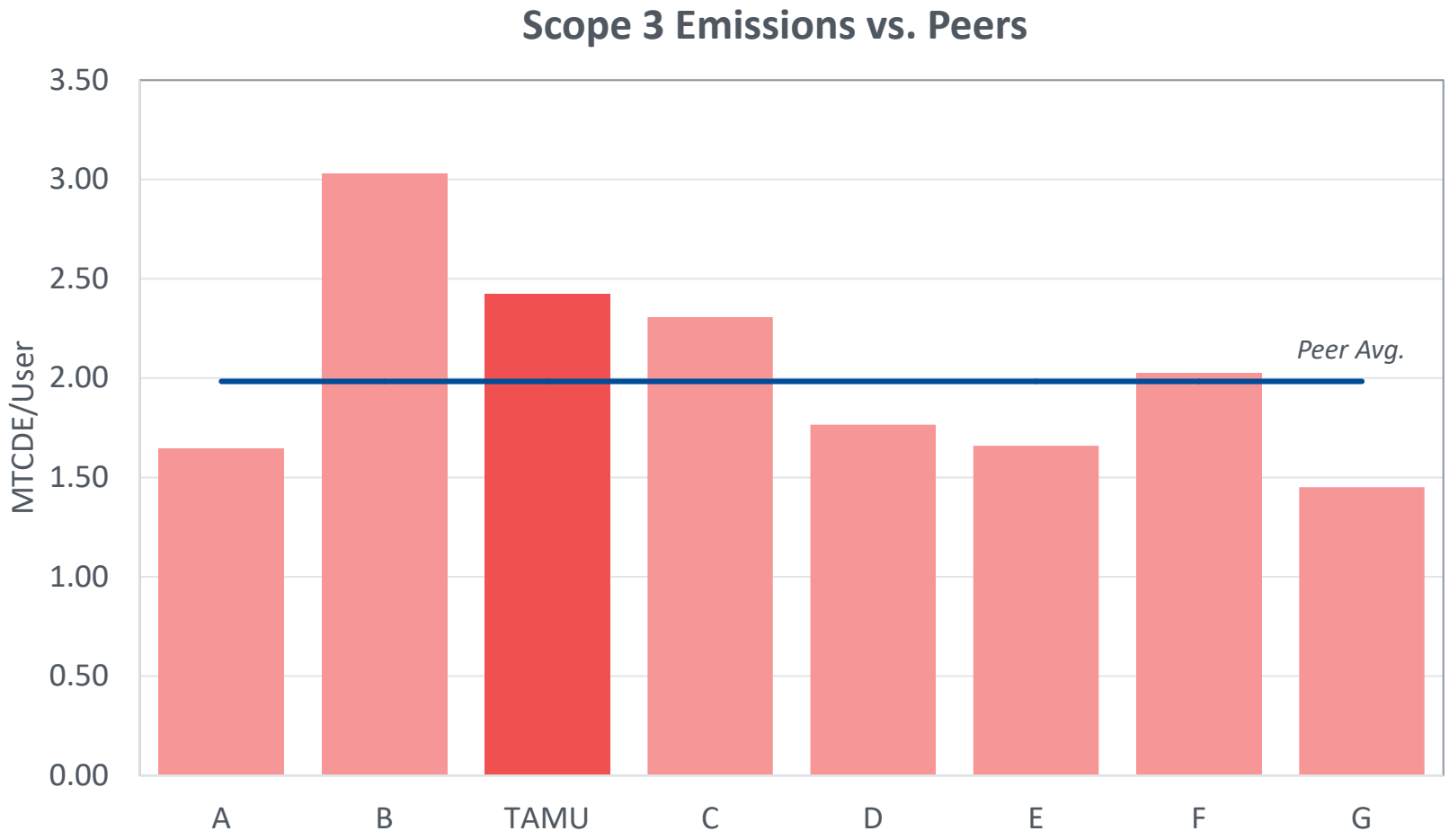
Waste profile decreased in FY18, but T&D losses went up due to more purchased electricity

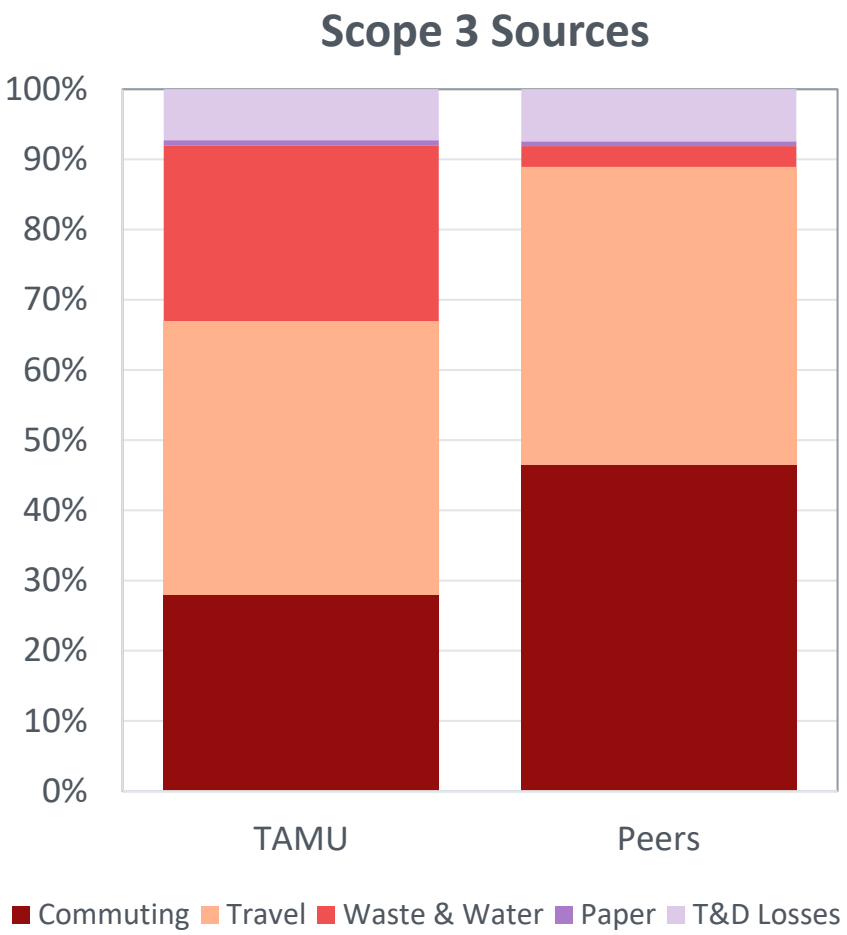




Scope 3 Emissions Compared to Peers

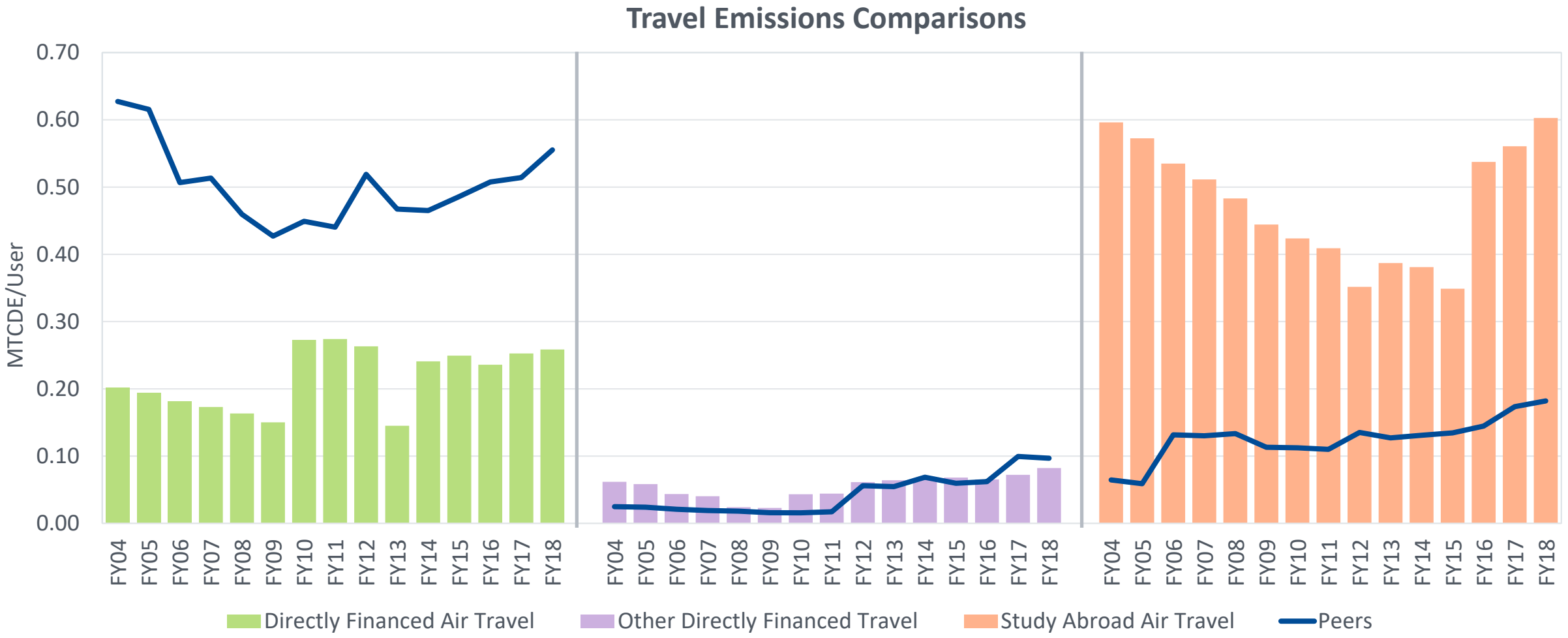
Commuting is a lesser contributor at TAMU, but the waste profile is greater





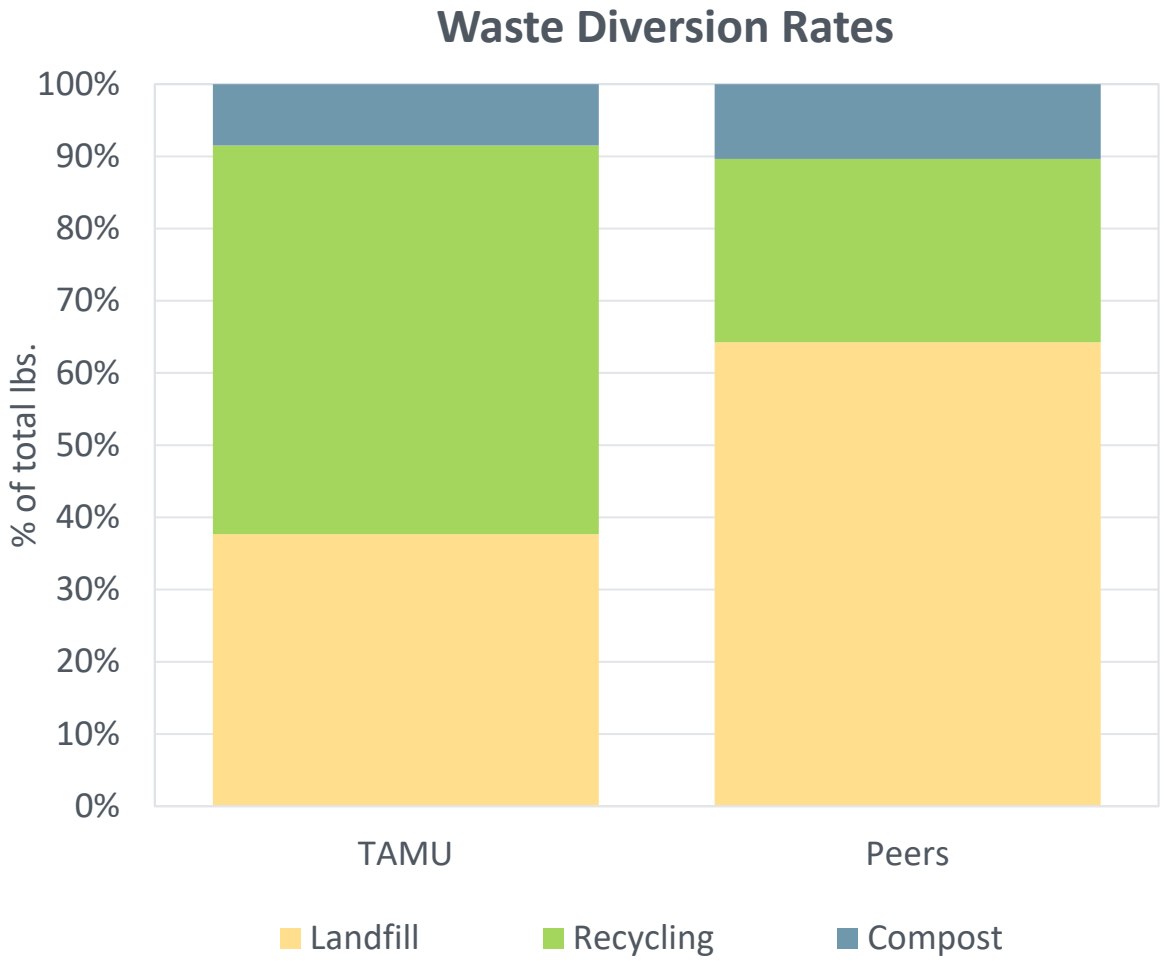
TAMU Sees More Study Abroad Miles Than Peers

Peers have higher levels of other air travel; ground travel is comparable



Campus Waste Profile Has Seen Recent Decreases

A greater proportion of TAMU's waste is recycled compared to peers



Excluding C&D waste

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Conclusion