

President's Sustainability Steering Committee
The University of Texas at Austin

2019-20
Annual Report

WHAT STARTS HERE CHANGES THE WORLD

CONTENTS

COMMITTEE OVERVIEW 2

EXECUTIVE SUMMARY 3

 Highlights from 2019-20 3

 Priorities for 2020-21 4

POLICY UPDATE 5

STARS - GOLD 6

 STARS version 2.2 Summary Table 6

EMISSIONS PLANNING 9

 Emissions Inventory 10

 Emissions Forecast 12

GREEN FUND 15

KEY INTIATIVES 16

 Planet Texas 2050 16

 Degree Options 16

 Curriculum 16

 PEER-Campus Platinum 16

 Energy Building Optimization 17

 Green Labs Initiative 17

 Waller Creek 17

 Student Government 17

 Sustainability Living Learning Committee 17

 Texas Athletics 17

 Student Organizations 18

COMMUNICATIONS 19

 News and Social Media 19

 Social Media 19

 Mitchell Sustainability Symposium 19

ABOUT THIS DOCUMENT

This document was designed not to be printed and to be used as an online pdf with many hyperlinks to additional information. Please consider not printing hard copies of this report.

COMMITTEE OVERVIEW

The [President's Sustainability Steering Committee \(PSSC\)](#) was re-commissioned by President Gregory Fenves in September, 2019 for the 2019-2020 cycle.

The purpose of the PSSC is to recommend policies and practices to the University administration that reflect and expand the University's commitment to sustainability and stewardship of the environment; to ensure the campus policy is in alignment with UT System policy; to monitor implementation of the campus Sustainability Master Plan; and serve to implement a communications plan for both internal and external audiences.

During the 2019-20 academic year, the PSSC had 10 members and met 3 times.

MEMBERSHIP, 2019-2020

Five members of General Faculty

Jay Hartzell, Dean – Chair (Business) Sept. 1, 2018-August 31, 2020

Paul Goldbart, Dean – Vice-chair (Chair-elect) (Natural Sciences) Sept. 1, 2019-August 31, 2021

Molly Polk, (Liberal Arts) Sept. 1, 2018-August 31, 2020

Lucy Atkinson, (Communications) Sept. 1, 2018-August 31, 2020

Lynn Katz, (Engineering) Sept. 1, 2019-August 31, 2021

Three Staff members

Chris Plonsky, (Athletics Director) or appointee

Jimmy Johnson, (Associate Vice President for Campus Safety) or appointee

Juan Ontiveros, (Associate Vice President for Utilities, Energy, Facilities Maintenance) or appointee

Students

Sarah Boatwright, undergraduate student (Student Government), Sept. 1, 2019-August 31, 2020

Jennifer Pranskevich, grad student (Graduate Student Assembly), Sept. 1, 2019-August 31, 2020

Ex-officio

Jim Walker, Director of Sustainability

Staff

Brianna Duran, Campus Environmental Center Coordinator

Jill Parrish, Green Fund Coordinator

Kristin Phillips, Communications Coordinator

EXECUTIVE SUMMARY

While the 2019-20 academic year and all corresponding activities continue to be impacted by COVID-19, and more recently the national attention to civil rights, the PSSC is pleased to report solid progress on several ongoing initiatives as well as the emergence of an unprecedented new conversation.

Background and benefits on each of these initiatives, and highlights of the many other sustainability initiatives at UT Austin are provided in later pages.

Highlights from 2019-20

Campus Sustainability Policy Update

Unfortunately, while the PSSC completed the content update to the UT Austin Campus Sustainability Policy ([HOP 3-1010](#)) over the summer of 2019, the update had not been forwarded to the President's Office for final review and consideration of approval as of June 1, 2020. We note this here to emphasize the importance of completing this policy update. The PSSC 2018-19 Annual Report includes the PSSC recommendation that the President approve the policy update and provides a thorough review of the changes and additions to the policy.

STARS Gold

In March 2020, UT Austin received final confirmation of [achieving Gold level](#) for the first time in the Sustainability, Tracking, Assessment and Rating System (STARS), an international benchmarking tool for sustainability in higher education. The STARS effort documents sustainability efforts across academic, operations, and policy areas.

Emissions Planning

In February 2020, President Fenves charged the PSSC to provide recommendations related to emissions planning to consider goals and targets for greenhouse gas emissions reductions. The PSSC had several discussions, and several information sessions were hosted by Utilities and Energy Management and additional discussions and activities were planned but interrupted by the campus closure due to COVID-19. The work achieved, while still in draft form, is shared in this report. The PSSC expects to continue emissions planning discussions as part of the update to the UT Austin Sustainability Master Plan in the coming year.

Earth Day 2020 (50th Anniversary)

A year ago, the PSSC and the Office of Sustainability had high hopes for elevating the visibility of UT Austin as a leader in sustainability using the occasion of the 50th Anniversary of Earth Day. The international response to COVID-19 changed Earth Day planning around the planet, including at UT Austin. While the Office of Sustainability was unable to host in-person events as planned, students and others were still positively engaged online through a collaboration with the Texas Regional Alliance for Campus Sustainability (TRACS).

Green Fund

Since its creation in 2011, the [UT Austin Green Fund](#) competitive grant program has awarded over 200 grants totaling almost 4 million dollars to students, faculty and staff for sustainability projects and

research on the UT Austin campus and its affiliate locations. In this year's cycle, the student majority Green Fund Committee reviewed 24 grant applications and voted to fund 20 grants.

Realizing they would have an excess of funding, the students on the Green Fund Committee allocated up to \$200,000 to Student Emergency Services for COVID-19 student relief efforts.

Key Initiatives

The PSSC recognizes many of the initiatives at UT Austin that "reflect and expand the University's commitment to sustainability and stewardship of the environment" do not result from the PSSC's actions. The proliferation of such initiatives is itself an indicator of the growing interest in and importance of sustainability as part of university's daily work and broad educational and research mission.

The PSSC would like to amplify several of these initiatives to the university leadership:

- Planet Texas 2050
- Student Government
- Housing and Dining Sustainability
- Texas Athletics Sustainability
- PEER Platinum recertification for campus utility
- Green Labs Program
- Growth in sustainability focused degree options
- Growth in sustainability focused student organizations

Priorities for 2020-21

The primary focus of the PSSC, in collaboration with the Office of Sustainability, for the coming year will be guiding the five year update to the [2016 UT Austin Campus Sustainability Master Plan](#), referred to as SMP 2.0. The PSSC will integrate the ongoing interest in greenhouse gas emissions planning, and explore more concrete inclusion of social equity intersections into the update. The PSSC will also ensure goals in the SMP 2.0 remain aligned with [UT System policy on Sustainability Practices \(169\)](#) and STARS.

COVID-19

The PSSC will look for opportunities to encourage sustainability approaches to the campus recovery from the COVID-19 closure. The PSSC leadership understand that if the pandemic worsens and alters current Fall 2020 planning, those activities may take precedence over sustainability priorities.

Certainly the engagement approach for the Sustainability Master Plan will also need to adhere to campus health guidance.

Social Equity

The PSSC believes social equity goals are as fundamental and woven into sustainability and human health as environmental goals. The PSSC leadership believe the national moment for undoing systemic inequity cannot be ignored within sustainability focused conversations. The PSSC will work with the Office of Sustainability and other units, such as the Division for Diversity and Community Engagement, on best practices for ensuring sustainability activities model equitable policies and thinking.

POLICY UPDATE

The UT Austin Campus Sustainability Policy ([HOP 3-1010](#)) was developed by the initial formation of the PSSC in 2007 and adopted as policy in 2008 by President William Powers. In alignment with good institutional policy maintenance practice, and to ensure the policy is addressing current issues appropriately, a policy update began in 2018.

The Office of Sustainability compared the 2008 UT Austin policy with the [UT System policy on Sustainability Practices \(169\)](#) which was adopted in 2009 and most recently reviewed in October, 2018. The Office also compared the 2008 UT Austin policy with the goals and strategies in the [2016 UT Austin Sustainability Master Plan](#) and against achievements across the university over the last 10 years. Attention was also given to issues which have risen in importance since 2008 related to sustainability policy and practice such as storm water management and food systems.

The Office created a first draft of new policy formatted to align with current UT Austin guidance and offering initial language for new topical areas. Several sections were carried forward largely unchanged.

Section 1 Purpose Statement of the policy reads:

The University of Texas at Austin seeks to create a disciplined culture of excellence that generates intellectual excitement, transforms lives, and develops leaders. The Commission of 125 defines this culture as “excellence in all University endeavors, characterized by strong leadership and an engaged intellectual community, combined with individual and institutional accountability.” This includes excellence in advancing environmental stewardship and sustainability on our campus, in our academic and research programs, and in our public service and outreach activities.

Sections 2 through 6 and 8 through 11 are largely template to align with current policy guidance.

Section 7 lays out responsibilities related to operational functions of the university, mirroring the overall focus of the 2008 policy. Each topical sub-section is addressed below.

The Office facilitated numerous conversations across campus with affected units and individual leadership on the policy language as well as the need for any accompanying procedures that would need to be documented. These conversations resulted in two sections being pulled back for further discussion, Food Services and Air Quality.

The Office then worked with the PSSC to arrive at a final draft (detailed in the PSSC 2018-19 Annual Report) submitted to the UT Austin Policy Office review. The draft policy update went through the Policy Office Advisory Group process with minor grammatical changes. The draft policy update was then submitted in late Fall 2019 to the UT Austin Office of Legal Affairs for review and is still pending finalization by the Office of Legal Affairs as of June 1, 2020.

STARS - GOLD

The Sustainability, Tracking, Assessment and Rating System (STARS) is administered by the Association for the Advancement of Sustainability in Higher Education (AASHE) and is the primary benchmarking tool for sustainability in higher education institutions.



The program is open to all institutions of higher education in the U.S. and Canada, and the criteria that determine a STARS rating are transparent and accessible. Because STARS is a program based on credits earned, it allows for internal comparisons as well as comparisons with similar institutions.

In 2008, UT Austin was the only Texas research university to participate in the STARS pilot program to test the various credits and benchmarks eventually included in STARS version 1.0. In 2011, 2014 and 2018 UT Austin achieved a [Silver rating](#).

The effort to compile the submission for 2020 began in spring 2019 led by the Office of Sustainability and a part-time graduate assistant (Kelsey Wingo, MPA '21). Compiling a STARS submittal requires extensive communication with many different units across campus, in operations, academics, auxiliaries and administrative. The table below shows each STARS credit, the UT Austin score and a note of interest. The final submission requires an [affirmation letter from President Fenves](#).

In early April 2020, AASHE provided the final confirmation of [UT Austin’s STARS Gold](#) rating.

STARS version 2.2 Summary Table

Category	Subcategory	Credit	Score	Highlights	
Academics	Curriculum	AC 1	Academic Courses	9.33 / 14.00	Online database of UT Austin courses with sustainability content coming soon
		AC 2	Learning Outcomes	3.21 / 8.00	Improving documentation of learning outcomes
		AC 3	Undergraduate Program	3.00 / 3.00	
		AC 4	Graduate Program	3.00 / 3.00	
		AC 5	Immersive Experience	2.00 / 2.00	
		AC 6	Sustainability Literacy Assessment	2.00 / 4.00	Assessment to be expanded to additional academic programs
		AC 7	Incentives for Developing Courses	2.00 / 2.00	Course Development Awards funded by Mitchell Foundation.
		AC 8	Campus as a Living Laboratory	4.00 / 4.00	
	Research	AC 9	Research and Scholarship	9.22 / 12.00	Online database of UT Austin courses with sustainability content coming soon
		AC 10	Support for Sustainability Research	3.00 / 4.00	
		AC 11	Open Access to Research	0.67 / 2.00	

Category	Subcategory	Credit	Score	Highlights	
Engagement	Campus Engagement	EN 1	Student Educators Program	2.52 / 4.00	Opportunity
		EN 2	Student Orientation	1.16 / 2.00	
		EN 3	Student Life	2.00 / 2.00	
		EN 4	Outreach Materials and Publications	2.00 / 2.00	
		EN 5	Outreach Campaign	4.00 / 4.00	
		EN 6	Assessing Sustainability Culture	0.50 / 1.00	Pursued in concert with AC 6 above
		EN 7	Employee Educators Program	1.58 / 3.00	Opportunity
		EN 8	Employee Orientation	1.00 / 1.00	
		EN 9	Staff Professional Development and Training	1.00 / 2.00	Opportunity
	Public Engagement	EN 10	Community Partnerships	3.00 / 3.00	
		EN 11	Inter-Campus Collaboration	2.50 / 3.00	
		EN 12	Continuing Education	2.00 / 5.00	
		EN 13	Community Service	3.05 / 5.00	
		EN 14	Participation in Public Policy	0.67 / 2.00	Difficult as a state agency
		EN 15	Trademark Licensing	2.00 / 2.00	
Operations	Air & Climate	OP 1	Emissions Inventory and Disclosure	1.25 / 3.00	Opportunity, report online
		OP 2	Greenhouse Gas Emissions	2.31 / 8.00	Opportunity
	Buildings	OP 3	Building Design and Construction	2.27 / 3.00	New construction is required to pursue LEED Silver
		OP 4	Building Operations and Maintenance	2.00 / 5.00	Opportunity, to be discussed through SMP 2.0
	Energy	OP 5	Building Energy Efficiency	4.22 / 6.00	
		OP 6	Clean and Renewable Energy	0.00 / 4.00	Difficult, emphasizes on-site renewables
	Food & Dining	OP 7	Food and Beverage Purchasing	1.11 / 6.00	Difficult with scale of UHD scale of purchasing, lack of third-party certified products
		OP 8	Sustainable Dining	2.00 / 2.00	
	Grounds	OP 9	Landscape Management	1.93 / 2.00	
		OP 10	Biodiversity	NA / 2.00	
	Purchasing	OP 11	Sustainable Procurement	2.25 / 3.00	Opportunity, to be discussed through SMP 2.0
		OP 12	Electronics Purchasing	0.95 / 1.00	
		OP 13	Janitorial Purchasing	0.91 / 1.00	
		OP 14	Office Paper Purchasing	0.26 / 1.00	Opportunity
	Transportation	OP 15	Campus Fleet	0.31 / 1.00	Opportunity
		OP 16	Commute Modal Split	3.50 / 5.00	Opportunity, need Mode Survey of students, staff, faculty
		OP 17	Support for Sustainable Transportation	0.60 / 1.00	

Category	Subcategory	Credit	Score	Highlights	
	Waste	OP 18	Waste Minimization and Diversion	3.05 / 8.00	Difficult
		OP 19	Construction and Demolition Waste	0.92 / 1.00	
		OP 20	Hazardous Waste Management	1.00 / 1.00	
	Water	OP 21	Water Use	3.74 / 4-6	Difficult, primarily due to rate of space growth
		OP 22	Rainwater Management	1.00 / 2.00	
Planning & Administration	Coordination & Planning	PA 1	Sustainability Coordination	1.00 / 1.00	
		PA 2	Sustainability Planning	3.00 / 4.00	Opportunity if sustainability identified as institutional value
		PA 3	Inclusive and Participatory Governance	1.38 / 3.00	
		PA 4	Reporting Assurance	NP / 1.00	Opportunity for third party review
	Diversity & Affordability	PA 5	Diversity and Equity Coordination	1.67 / 2.00	
		PA 6	Assessing Diversity and Equity	0.75 / 1.00	
		PA 7	Support for Underrepresented Groups	3.00 / 3.00	
		PA 8	Affordability and Access	3.00 / 4.00	
	Investment & Finance	PA 9	Committee on Investor Responsibility	0.00 / 2.00	Difficult, in conflict with Board of Regents and UTIMCO policy
		PA 10	Sustainable Investment	0.00 / 3-5	Difficult, in conflict with Board of Regents and UTIMCO policy
		PA 11	Investment Disclosure	0.75 / 1.00	Difficult, in conflict with Board of Regents and UTIMCO policy
	Wellbeing & Work	PA 12	Employee Compensation	0.45 / 3.00	Difficult due to salary spread
		PA 13	Assessing Employee Satisfaction	1.00 / 1.00	
		PA 14	Wellness Programs	1.00 / 1.00	
		PA 15	Workplace Health and Safety	1.09 / 2.00	
Innovation & Leadership	Innovation & Leadership	IN --	Catalog of optional credits available	4.00 / 4.00	Bicycle Friendly University Campus Pride Index Community Garden Energy System Certification Food Bank Green Athletics Green Laboratory Program Grounds Certification Sustainability Projects Fund Voter Education and Support

EMISSIONS PLANNING

The first UT Austin Greenhouse Gas (GHG) Inventory was conducted in 2009 using methods described in The Climate Registry (TCR), General Reporting Protocol for Scope 1 and 2 and follows best practices for Scope 3. Every five years, the [Office of Sustainability](#) updates the GHG Inventory. In 2019, the Office primarily used the [SIMAP platform](#), as well as the Greenhouse Gas Protocol, and collaborated with various on-campus and off-campus entities in data and methodology review.

The [2019 Greenhouse Gas Inventory](#) is available online.

At the January 27, 2020 Faculty Council meeting, a faculty member asked a question prompted by the 2019 Greenhouse Gas Inventory:

While climate change continues to impact Texas and the world, The University of Texas at Austin does not have official goals for reducing our greenhouse emissions. Do you support the University having official goals for reducing our greenhouse gas emissions? If so, what timeline do you envision for enacting those goals?

President Fenves then charged the PSSC with the following:

The President's Sustainability Steering Committee (PSSC) is tasked with providing recommendations on how to align the University's mission, current campus strategic plans including the Sustainability Master Plan, and legacy of resource conservation and stewardship to explore potential goals and strategies to address greenhouse gas emissions. The Steering Committee should base their recommendations on the 2016 Sustainability Master Plan; the results of the 2020 Sustainability Tracking, Assessment & Rating System (STARS) submittal; and the 2019 Greenhouse Gas Inventory Update. Other policy documents may be considered as appropriate.

With the following specific deliverables by April 3, 2020:

- Review all sources of emissions identified in the 2019 Greenhouse Gas Inventory
- Forecast future emissions based upon University growth projects
- Propose strategies that are both technically and financially feasible
- Develop further activities and a timeline

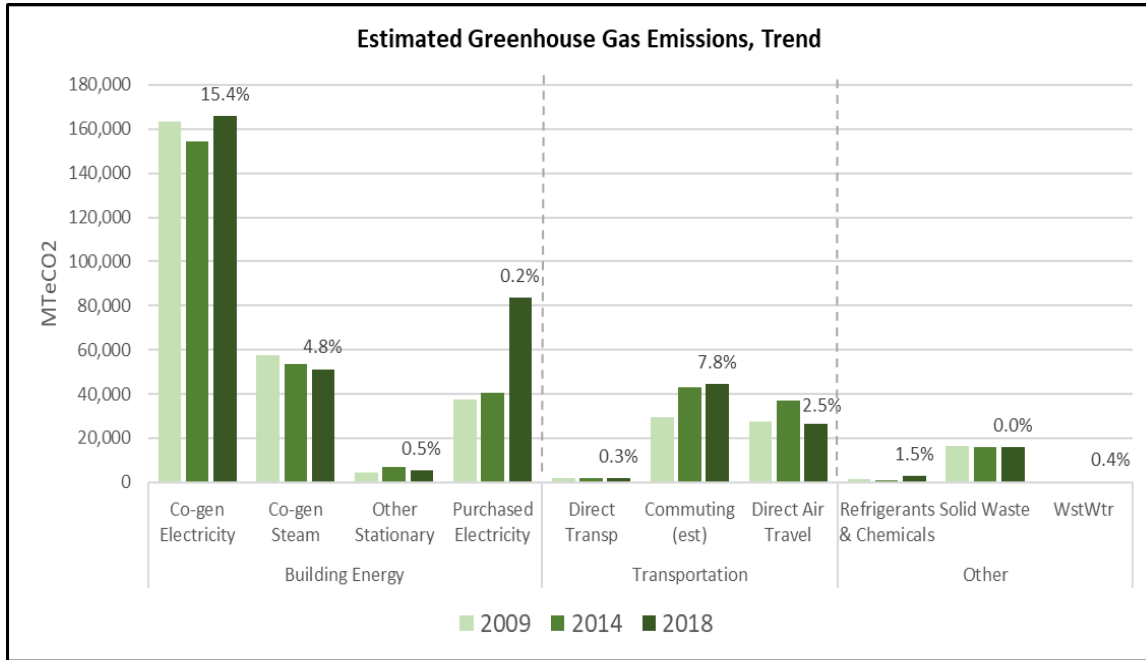
The PSSC was also aware of an ad hoc faculty group interested in how the university was planning to meet the energy needs of the growing Texas Advanced Computing Center at the Pickle Research Campus. Juan Ontiveros, Associate Vice President of Utilities and Energy Management, offered to provide several opportunities just before spring break in mid-March for faculty interested in either the emissions planning effort or the PRC energy growth to establish a baseline understanding of how natural gas supports the university mission.

To address the first two deliverables of the president's charge, the Office of Sustainability concurrently compiled information, below.

The subsequent campus closure due to COVID-19 effectively paused the emissions planning effort (which the PSSC intends to restart over the summer as part of the update to the Sustainability Master Plan).

Emissions Inventory

Most of the data sources for the [2019 Greenhouse Gas Inventory](#) have a high confidence level. The only exceptions are for solid waste due to difficulty with vendor reporting and confidence in actual diversion from landfill, as well as landfill operations related to methane emissions capture or flaring; and commuting due to lack of recent commuting survey data.



		Confidence				
		2019 Share	2009		2019	
			Data	Methodology	Data	Methodology
Scope 1	Co-Gen Heat & Power	20.7%	High	High	High	High
	Refrigerants	0.3%	High	High	High	High
	Direct Transp	0.2%	Medium	High	High	High
Scope 2	Purchased Electricity	7.8%	High	Medium	High	High
Scope 3	Solid Waste	1.5%	Low	Medium	Medium	Medium
	Water & Wastewater	0.0%	High	Medium	High	High
	Air Travel	2.5%	Medium	Low	High	Medium
	Commuting	missing	Medium	Medium	n/a	n/a
	Supply Chain	66.7%	Low	Medium	High	Medium
	Trans & Dist Losses	0.4%	Medium	Medium	High	Medium

There are several notable highlights within the 2019 GHG Inventory.

Scope 1 – University owned sources

UT Austin produced 227,000 MTeCO2* in FY 2018, up only 10,000 MTeCO2 from 2014. Our Scope 1 emissions are primarily from the on-campus Hal C. Weaver Combined Heating and Power Complex

through combustion of natural gas to generate electricity, steam and chilled water. Due to improvements in recent decades, the plant has an average annual efficiency of 89%.

The Main Campus energy system represents a \$3B investment, largely using state legislative funds, accrued over almost 90 years as a utility island operated independently of the surrounding Austin Energy grid and is an international model of efficiency for a natural gas combined heat and power district system.

Data confidence is high.

UT Austin maintains a permit for the Weaver Power Complex under the federal Title V Clean Air Act, the confidence in the methodology for estimating emissions is high.

Scope 2 – Austin Energy purchased electricity

Austin Energy provides electricity to the Pickle Research Campus (PRC) and a handful of buildings around the edge of the Main Campus. The amount of purchased electricity has nearly doubled over the last 10 years due to rapid expansion at PRC, most notably at the Texas Advanced Computing Center (TACC). Data is derived from billing records and is assumed highly accurate.

Austin Energy is a publicly owned utility with a diverse portfolio of fuel sources. Over the last 10 years Austin Energy and the City of Austin have pursued aggressive replacement of non-renewable fuels (e.g., coal and nuclear) with renewable sources (e.g., wind and solar). This policy priority has resulted in Austin Energy having a robust methodology for estimating emissions.

Scope 3 – Low control sources

Scope 3 emissions include air travel, waste/recycling, commuting, and wastewater treatment, but by far the largest category is supply chain. The data sources for each of these categories can be estimated from state or national benchmarks (T&D losses), based on qualitative survey data (commuting surveys), or most preferably, drawn from transactions with vendors (air travel, waste, wastewater).

The methodology for supply chain can have a dramatic impact. The total UT Austin supply chain emissions based on FY 2016 data is estimated over 718,000 MTeCO₂, or 66% of our total overall campus footprint. Institutions are given broad latitude in methodology for calculating supply chain emissions, with some only calculating the footprint of purchased office paper. The Office of Sustainability chose to apply an input/output model to the UT Austin annual operating budget (over \$3 billion across 23 economic categories including construction) to achieve a truer representation of our total emissions. The Office combined the [Greenhouse Gas Protocol](#) calculator and the [Carnegie Mellon calculator](#). This methodology could be updated and improved.

Emissions Forecast

Two forecast perspectives are summarized below: the 2017 Utilities Master Plan for the Main Campus and a 2020 Total Emissions Forecast developed by the Office of Sustainability based on a 2010 Climate Policy Financial Risk Assessment. They are different in scope and have been reviewed for basic alignment where they overlap.

2017 UT Austin Utility Master Plan – Main Campus

The 2017 Utility Master Plan (UMP) for the Main Campus studied a number of facets of Main Campus infrastructure related to future campus space growth. The UMP did not address PRC. While the UMP did not specifically address emissions, “a primary focus of this study is a 12 year look ahead of planned load growth for steam, chilled water, electrical, and IT” which are the main drivers for emissions on the Main Campus.

The scope of the study “pulled from a total of 16 different master plans in order to determine the new buildings likely to be built on the Main Campus over the next 12 years.” Most of the potential new building locations are identified in the 2013 Campus Master Plan.

Buildings were further evaluated based on expected energy intensity – a laboratory building typically consumes more power, heating and cooling than a classroom, office or dormitory building.

The UMP determined the Main Campus to have sufficient capacity to meet chilled water (cooling) and steam (heating) needs based on the projected campus growth through 2028, but to exceed existing capacity for hot water and electrical needs by 2028.

The current optimum efficiency peak for electrical generation at the Hal C. Weaver Power Plant is 70 MW. The UMP projected a potential peak of 73.5 MW by 2022 and 83.4 MW by 2028. In order to shift this decision further out, UEM aggressively pursues energy conservation and reduction strategies at the plant level and with demand-side programs in buildings. These projections suggest that if efficiency is to be maintained, the university will either need to expand natural gas generation capacity on the Main Campus, or the university will need to purchase electrical power, or some hybrid. Both of these scenarios have near and long term emissions, space growth and management, and financial implications.

Related to emissions planning, this expanded capacity is reflected in the emissions forecast below.

2020 Total Emissions Forecast by Office of Sustainability

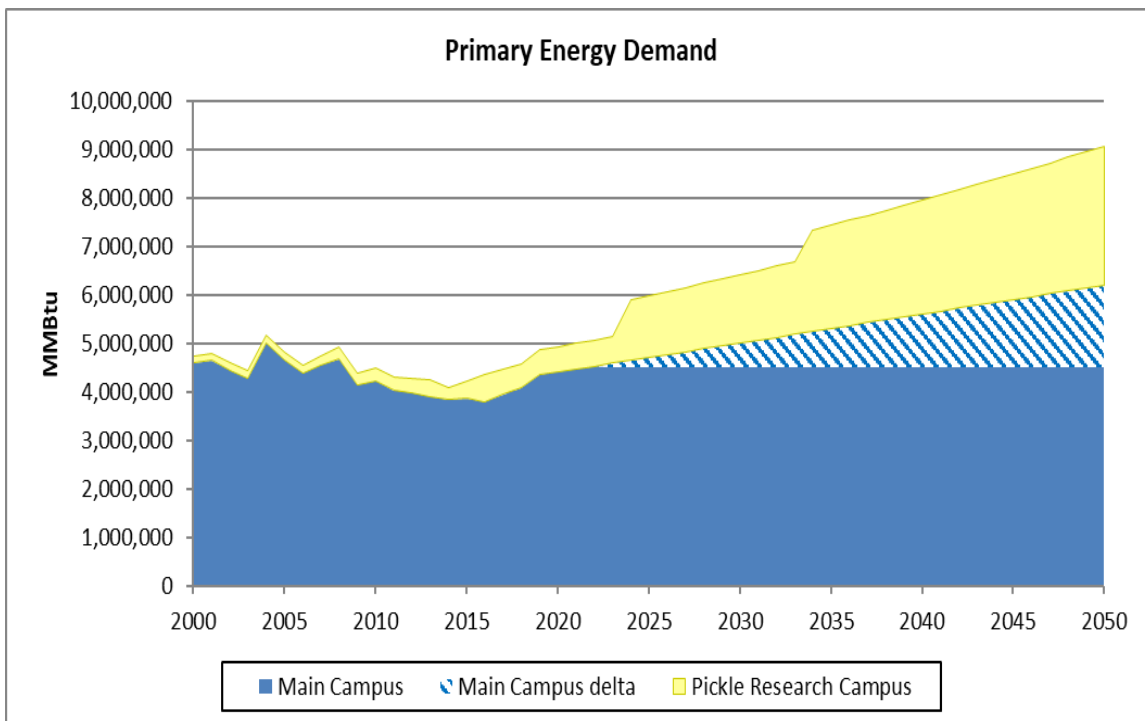
In 2009, as federal policy discussions about a carbon cap-and-trade system unfolded during the 110th (2008-2009) and 111th (2009-2011) Congressional sessions, UT Austin undertook a study of the potential financial risk to the university given the campus investment in the Hal C. Weaver Power Plant. As part of this study, a robust emissions forecasting model was developed. As cap-and-trade discussions faded, the university focus shifted back to financial planning to ensure efficiency.

The Office of Sustainability revisited the emissions forecasting model, updating estimated data points for space and population growth with actual data to create an updated base case forecast. Office staff are not professional modelers and additional review and refinement of the assumptions and methods in this model are welcome.

The main assumptions in the forecast are campus population and space growth. The student on-campus (not including on-line learners) population is assumed to remain essentially flat for the foreseeable future. Space growth on the Main Campus is projected to continue to grow, although more slowly than over recent decades due to limited land area. Space growth at PRC has recently been driven by the Texas Advanced Computing Center (TACC), although a new PRC Master Plan is underway. While TACC adds nominal physical space, the energy use intensity is significantly higher than any other space type.

Year	Student Population	Faculty/ Staff	Total	Main Campus (GSF)	Pickle Campus (GSF)
2000	49,996	13,361	63,357	15,056,579	1,597,246
2010	49,581	14,098	63,679	23,539,064	1,889,347
2020	52,223	15,191	67,414	28,686,514	3,098,362
2030	53,380	16,362	69,742	32,567,133	4,307,378
2040	54,537	17,532	72,069	36,447,752	5,516,394
2050	55,694	18,702	74,396	40,328,371	6,725,409

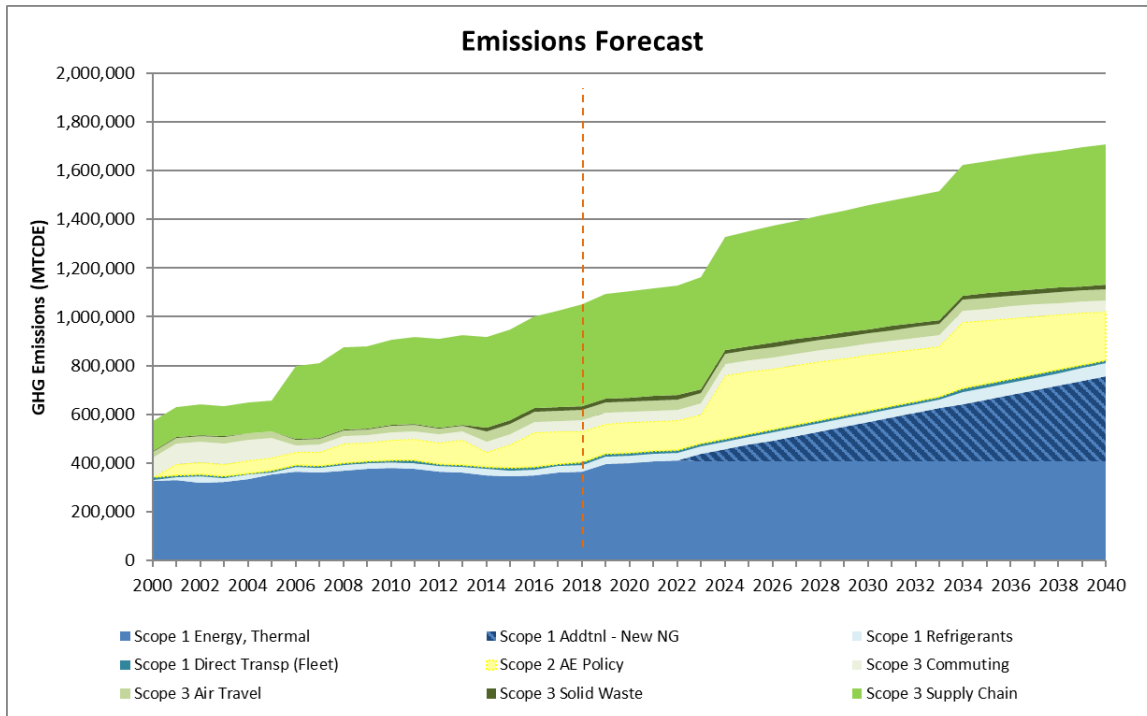
Projecting primary energy sources reveals two key unknowns. First, continued space growth on the Main Campus will exceed electrical capacity and future energy demand will come from either expansion of the existing Main Campus natural gas system, or from purchased electricity from Austin Energy, or some hybrid. For forecasting purposes, the Office assumed expansion of the natural gas system.



Second, the expansion of the TACC is planned to come online in 2024 and will more than double the current total energy demand of PRC; the Office assumed another expansion of the TACC could occur around 2034. The energy source to meet this demand will come from either creation of a new natural gas

system (based on university experience on the Main Campus), or from purchased electricity from Austin Energy, or some hybrid. For forecasting purposes, the Office assumed purchase of electricity from Austin Energy.

For the baseline forecast, emissions factors for each category of emissions are held constant. Assuming Austin Energy’s [current policy of pursuing carbon neutrality](#) system-wide continues, then even as the TACC increases energy demand at PRC, the resulting emissions will still trend toward zero. Adding in Scope 3 emissions – noting the much broader methodology used to estimate Supply Chain emissions – provides a total picture of future emissions.



This forecast demonstrates the main drivers in UT Austin’s emissions are energy consumption for buildings on the Main Campus and PRC, and supply chain. Several of the assumptions driving this forecast are based on decisions to be made by the university over the coming months related to the TACC at PRC, and within the next five years related to space growth and electrical capacity on the Main Campus.

No assumptions have been made about supply chain emission reductions or other strategies, such as carbon emission offsets, although there are numerous best practices for addressing supply chain emissions.

GREEN FUND

In this year’s competition, the student majority Green Fund Committee reviewed 24 grant applications and voted to fund 20 grants.

Applicant	Unit/Dept/Organization	Proposal Name	Total Proposal	Requested	Approved
Faculty	McCombs, Dept. of Management	Rainewable	\$ 20,719	\$ 20,719	\$ 20,719
Staff	Division of Recreational Sports	Gregory Gym Arena Lighting Renovation	\$ 759,098	\$ 50,000	\$ 52,500
Staff	Office of Sustainability	Sustainability Truck	\$ 25,000	\$ 21,500	\$ 21,500
Staff	Resource Recovery	Zero Waste Hero Interns	\$ 49,120	\$ 21,450	\$ 7,150
Staff	University Unions	Planter Project at the Texas Union	\$ 1,581	\$ 1,581	\$ 1,581
Staff	Center for Community Engagement	GivePulse Upgrade and Campus-Wide Expansion	\$ 84,000	\$ 40,000	\$ 13,333
Grad student	Radio-Television-Film	Trout's Best Soba Noodles!	\$ 21,455	\$ 13,909	\$ 13,909
Staff	Dept. of Chemical Engineering	Chemical Inventory Modernization Project	\$ 26,590	\$ 23,931	\$ 17,035
Grad student	Dept. of Mechanical Engineering	Department of Mechanical Engineering - ETC Bottle Fillers	\$ 15,500	\$ 13,000	\$ 13,000
Staff	Document Solutions	Paper Waste Reduction Initiative	\$ 39,139	\$ 35,225	\$ 35,225
Grad student	Integrative Biology	The Texas Tropical Network: Information, Collaboration, and Conservation	\$ 7,112	\$ 7,112	\$ 7,112
Staff	The University of Texas Elementary School	Little Longhorns Growing Green	\$ 2,940	\$ 2,940	\$ 2,940
Staff	Office of Sustainability	Green Stewards	\$ 36,200	\$ 36,200	\$ 36,200
Faculty	Dept. of Civil, Architectural, Environmental Engineering	Impact of Climate Change on energy demand at UT Campus	\$ 72,652	\$ 39,646	\$ 39,646
Grad student	Landscape Architecture	Stoma: An Earthwork at the UT Microfarm	\$ 3,989	\$ 3,989	\$ 3,989
Grad student	Curriculum and Instruction	Reconnecting and Re(Storying) Land Relations	\$ 20,000	\$ 20,000	\$ 20,000
Staff	University Housing and Dining	South Asia Garden	\$ 22,799	\$ 14,409	\$ 14,409
Faculty	School of Advertising and Public Relations	Seeing Green: Role of Augmented Reality on Environmental Attitudes	\$ 44,999	\$ 30,500	\$ 30,500
Staff	Texas Institute for Discovery Education in Science (TIDES)	Inventors for Campus Sustainability	\$ 82,300	\$ 33,300	\$ 33,300
Grad student	School of Advertising and Public Relations	Can You Spare a Dime?	\$ 7,520	\$ 5,000	\$ 5,000
					\$ 389,047
	Committee	Support for Outpost and Student Relief			\$ 200,000

KEY INITIATIVES

The PSSC recognizes many of the initiatives at UT Austin that “reflect and expand the University’s commitment to sustainability and stewardship of the environment” do not result from the PSSC’s actions. The proliferation of such initiatives is itself an indicator of the growing interest in and importance of sustainability as part of university’s daily work and broad educational and research mission.

The PSSC would like to amplify several of these initiatives to the university leadership:

Planet Texas 2050

Since its inception in fall 2017 as the first grand challenge initiative from the [Bridging Barriers](#) program, [Planet Texas 2050](#) collaborations have been contributing to:

- A better understanding of the processes and feedback cycles in human-environment interactions, and of the potential threats to societal resilience that can emerge from these interactions;
- A transformational integration of data to create predictive models that incorporate both scientific data and socioeconomic and cultural factors;
- A set of strategies to build resilience in Texas communities, co-developed with those communities.

Degree Options

Since Fall 2016, the undergraduate [Sustainability Studies program in the College of Liberal Arts](#) has grown to over 302 students as of May, 2020. The undergraduate [Environmental Science](#) program, offered through College of Natural Science, Jackson School of Geosciences, and College of Liberal Arts, continues to have a competitive admissions process with strong interest from prospective students. The [Environment and Sustainability track in the Bridging Disciplines Program](#) also continues to be one of the most popular BDP options. The College of Engineering expanded its academic opportunities in sustainability through the development of the [Sustainable Urban Systems MS/PhD program](#) and the [Graduate Portfolio in Sustainable Design](#) within the School of Architecture continues strong.

Curriculum

The [Sustainability Course Development Awards](#), supported by the Mitchell Foundation and administered through the Bridging Disciplines Program, continues to grow sustainability course offerings to students across campus. In [2019, three awards](#) were made. To date, 14 existing courses were altered to include a substantial focus on sustainability and over 20 new sustainability courses were created.

PEER-Campus Platinum

Utilities and Energy Management (UEM) [recertified](#) their Performance Excellence in Electricity Renewal (PEER) certification at the platinum level. Over the past 15 years, UEM has emerged as a university utilities leader, winning numerous awards and becoming the world’s first PEER-certified campus in 2014.

PEER certification is a rigorous, comprehensive framework for evaluating and improving efficiency, day-to-day reliability and overall resiliency of a power system. It’s the first program of its kind in the U.S. and is used to assess the performance of any power system, be it a utility and city, college campus, or transit project, such as a metro rail. The PEER rating system provides a set of metrics to allow organizations to evaluate and set the standard for energy system performance that best meets their consumers’ needs.

Energy Building Optimization

In 2011, the PSSC established a goal of reducing campus energy use by 20% reduction in energy use intensity by 2020. The [Energy Management and Optimization team met the goal in early 2018](#), over two years early.

Energy efficiency in buildings is a constant program, with [project results](#) publicized.

Green Labs Initiative

Since 2011, Green Labs has grown to include over 115 laboratory participants, or roughly 7% of the laboratories on campus. Initial funding came from UT Austin's [Green Fund](#). A new collaboration in 2018 with UT Austin partner [BASF](#) supported a full time staff position to manage the Green Labs Program as well as expand the number of participating labs. The [new Green Labs Coordinator](#) started work in late 2019. The Green Labs Program is assessing the pre-existing programs and opportunities for expansion.

Waller Creek

Over the 2018-19 year, the campus completed the [Waller Creek Framework Plan](#) (WCFP) to both invigorate the disparate stakeholders and create a reference point for changing our relationship to this important urban waterway. Over the past year, several initiatives have highlighted this evolving relationship:

- The School of Architecture celebrated the 50th Anniversary of the [Battle of Waller Creek](#)
- The College of Fine Arts launched an [interactive art project](#) that was showcased at the annual [Waterloo Greenway event](#) (formerly Waller Creek Conservancy) and was intended to be showcased on-campus during the 50th Anniversary of [Earth Day activities](#)
- A [proactive student creek clean-up](#) effort
- A [keepsake](#) printable art piece of the creek
- New approaches to [storm water management](#), which was a primary recommendation of the WCFP
- A new, [narrated walking tour](#) of Waller Creek

Student Government

[Student Government](#) continues to demonstrate interest in several ways. In 2017, UT SG created two Sustainability Policy Director positions. Student Government also maintains appointments to the Green Fund Committee and the PSSC.

Sustainability Living Learning Committee

[University Housing and Dining](#) initiated a [Sustainability Living Learning Community \(LLC\)](#) in Fall 2017. Each year, a cohort of approximately 30 new students is immersed in sustainability at Whitis Court Residence Hall. These students are introduced to topics ranging from zero waste to social equity by UT professors, sustainability staff, City of Austin employees, and community activists.

Housing and Dining continued the UT [Farm Stand](#) into [their fifth year](#).

Texas Athletics

Texas Athletics continued their massive zero waste initiatives at football, baseball, and softball games, aided by a change in their waste diversion partner. In 2019, over 20 different student organizations volunteered to [sort waste after football games](#). These efforts won them acknowledgement as a [2019 Green Sports Alliance Innovator of the Year](#), on the heels of their [2018 Green Sports Alliance Innovator of](#)

[the Year](#) for their efforts becoming the first Division 1 baseball program to achieve two consecutive years of zero waste.

Student Organizations

Student interest in sustainability continues to grow as evidenced by an expanding number of related student organizations. Longstanding student organizations like the [Campus Environmental Center](#) (est. 2002) and [Engineers for a Sustainable World](#) (est. 2003) continue to develop their programs including a new environmental justice program, enhanced involvement in New Student Orientation, and a robust aquaponics project. New organizations including Austin Conservation Project, Sustainability Investment Group, and Veggie Lunch Club showcase the broad sustainability interests of our students. There are more than 30 student organizations related to sustainability, equity, and the environment currently listed on HornsLink (note this list now includes equity/justice focused orgs).

Afrikan American Affairs	International Justice Mission – Longhorn Chapter
American Academy of Environmental Engineers and Scientists at the University of Texas	Keep Austin Wizard
American Society of Landscape Architects Student Chapter	Latino Leadership Council
Asian Desi Pacific Islander American Collective	Longhorn Stream Team
Austin Conservation Project	Longhorn Teachers
BEEVO Beekeeping Society	Native American and Indigenous Collective
Campus Environmental Center	Net Impact (graduate student chapter)
Climate and Meteorology Society	Precious Plastic Texas
Design for America (student chapter)	Queer People of Color and Allies
Engineers for a Sustainable World	Sustainability Investment Group
Environmental Justice and Eco-Therapy Student Organization	Students Against Cruelty to Animals
Environmental Law Society	Students Fighting Climate Change
Food Recovery Network	Students for Equity and Diversity
Geography Society	TexASHRAE (student chapter)
GlobeMed at the University of Texas at Austin	Texas Solar Energy Group
Girl Up (student chapter)	University Leadership Initiative
	Urban Studies Society
	Veggie Lunch Club

COMMUNICATIONS

News and Social Media

Several years ago, a [single web portal for UT Austin sustainability initiatives](#) was created that includes a new [green tour](#), calendar, and newsfeed. News stories written by OS are distributed in the monthly *Bleed Orange, Live Green* newsletter and through the Financial and Administrative Services newsfeed. OS is also tracking [media mentions](#) by *The Daily Texan* and other outlets. The Alcalde included a feature on the [history of Earth Day on the UT Austin campus](#).

Social Media

OS maintains a number of social media channels either daily ([Twitter](#), [Facebook](#) and [Instagram](#)) or less frequently ([LinkedIn](#), [Flickr](#) and [YouTube](#)) which have shown a doubling in the last year.

Mitchell Sustainability Symposium

An annual signature event, the [2019 Mitchell Sustainability Symposium](#), was presented for the eighth time on October 25, 2019. The Symposium highlighted the efforts of the PSSC as well as a broad cross-section of collaborative efforts across campus as presented by faculty, staff and students.

8:45	Opening Remarks	Dean Sharon Wood
	Sustainability Planning and Policy President's Sustainability Steering Committee UT Austin Sustainability Master Plan Update	Dean Jay Hartzell Jim Walker
9:30	Human/Built Systems HVAC monitoring research Good Food Purchasing Program Reclaimed Water Facility on Campus UT Outpost Collaboration with Trash to Treasure Demand Side Energy Achievements Battle of Waller Creek 50 th Anniversary	Dr. Lynn Katz, moderator Dr. Zoltan Nagy Neil Kaufman Juan Ontiveros Will Ross, Abbey Lehr Adam Keeling Dr. Allan Shearer
10:30	Natural Systems FRI and Waller Creek Storm Water Management Dell Medical School Performance Monitoring Tower Girl Cam Monitoring Water Needs by Drone Waller Creek Research	Dr. Molly Polk, moderator Dr. Stuart Reichler , Dr. Mary Poteet , Dr. Ruth Shearer Tejashri Kyle Jonathan Ogren , Justin Hayes Nicole Elmer Markus Hogue Hunter Manlove
11:45	Keynote Introduction Comments on Sustainability at UT Austin	Camron Goodman Dean Michelle Addington
1:00	Equity/Community Community, Campus Climate, & Chase Building First-generation College Students Community Engaged Health Homelessness Environmental Justice Project (CEC)	Dr. Lourdes Rodríguez , moderator Dr. Leonard Moore , Virginia Cumberbatch Dr. Aileen Bumphus , Helen Wormington Grace Schrobilgen Kathryn Flowers Avery McKittrick , Cerena Ermitanio
2:00	Looking Forward: Research Planet Texas 2050 Panel	Sarah Boatwright , moderator Dr. Heather Houser , Dr. Adam Rabinowitz , Dr. Michael Young
2:45	Looking Forward: Campus Sustainability	Jim Walker