



Temple University

# Sustainability Annual Report

2023-2024



## A Letter from the CFO and Provost

### *Envisioning our future*

Since its founding in 1884, Temple University has been dedicated to fostering a campus life that connects individuals, ideas and resources to shape a brighter and more promising future for the broader community. In 2008, Temple University took a decisive step in addressing climate change by pledging carbon neutrality by 2050 and establishing the Office of Sustainability. This office, alongside a coalition of campus stakeholders, has worked to ensure a sustainable and resilient future for Temple, holding itself accountable to students, faculty, staff, neighbors, the Philadelphia region and the global community.

Five years ago, the updated 2019 Climate Action Plan set measurable goals and called upon the Temple community to collaborate across disciplines, silos and institutional levels to innovate in university operations, research, teaching and policy. This year marks an important milestone as we reflect on the progress made since the plan's launch, celebrate successes and identify opportunities to further strengthen our commitment to sustainability. This review lays the groundwork for embarking on a new climate action planning process, designed to meet the evolving challenges of our time.

Temple University's progress was best exemplified by its first-ever Gold Rating in the 2023 STARS (Sustainability Tracking, Assessment and Rating System) survey, a significant achievement overseen by the Association for the Advancement of Sustainability in Higher Education. This recognition underscores Temple's position as a world-class, inclusive, urban public university committed to building connected, healthy communities and advancing groundbreaking discoveries that address global challenges.

There were great achievements across all five goal categories, including the creation of an interdisciplinary sustainability science degree program; earning field station designation for the Temple Ambler Campus and Arboretum; the development and expansion of the EcoReps peer education program; more than 1.4 million dollars invested in the Green Revolving Fund; the addition of 3 LEED certified buildings across campuses; and the launch of the zero-waste events program.

Since 2019, Temple has expanded its holistic approach to sustainability, recognizing the interconnectedness of environmental stewardship, human and ecological health, racial equity, and social and economic justice. Guided by these principles, the Climate Action Plan and related initiatives have operationalized sustainability goals in alignment with the university's mission and policies, addressing environmental (E), social (S) and governance (G) impacts.

As we reflect on the progress of the past five years, we look ahead to a renewed climate action planning process that will build on these achievements and deepen Temple University's leadership in sustainability. Together, we are shaping a more resilient, inclusive and equitable future for generations to come.



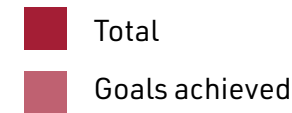
**Ken Kaiser**  
Senior Vice President  
and Chief Operating Officer



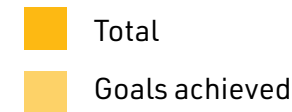
**Gregory N. Mandel**  
Senior Vice President and Provost  
Laura H. Carnell Professor of Law

Letter from the CFO and Provost	3
Goal Progress Summary	5
Road to Carbon Neutrality	6
Academics & Research	8
Culture	12
Design	16
Energy	20
Operations	24
Appendix	30
Content Credits	41

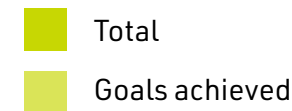
## Academics & Research



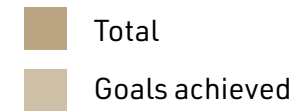
## Culture



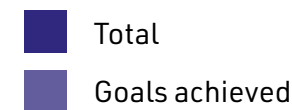
## Design



## Energy



## Operations



Temple's climate commitment began in 2008 when it pledged carbon neutrality by 2050, with an interim goal of achieving 45% reduction by 2030.

Temple established a baseline year of 2006 and began reporting on progress towards carbon neutrality annually. Temple reports all Scope 1 and 2 emissions defined in the Greenhouse Gas Protocol. Temple also reports Scope 3 emissions from commuting, university-financed travel, waste disposal, and transmission and distribution losses.

Since 2006, the university has purchased voluntary renewable energy credits to meet annual carbon emission goals.

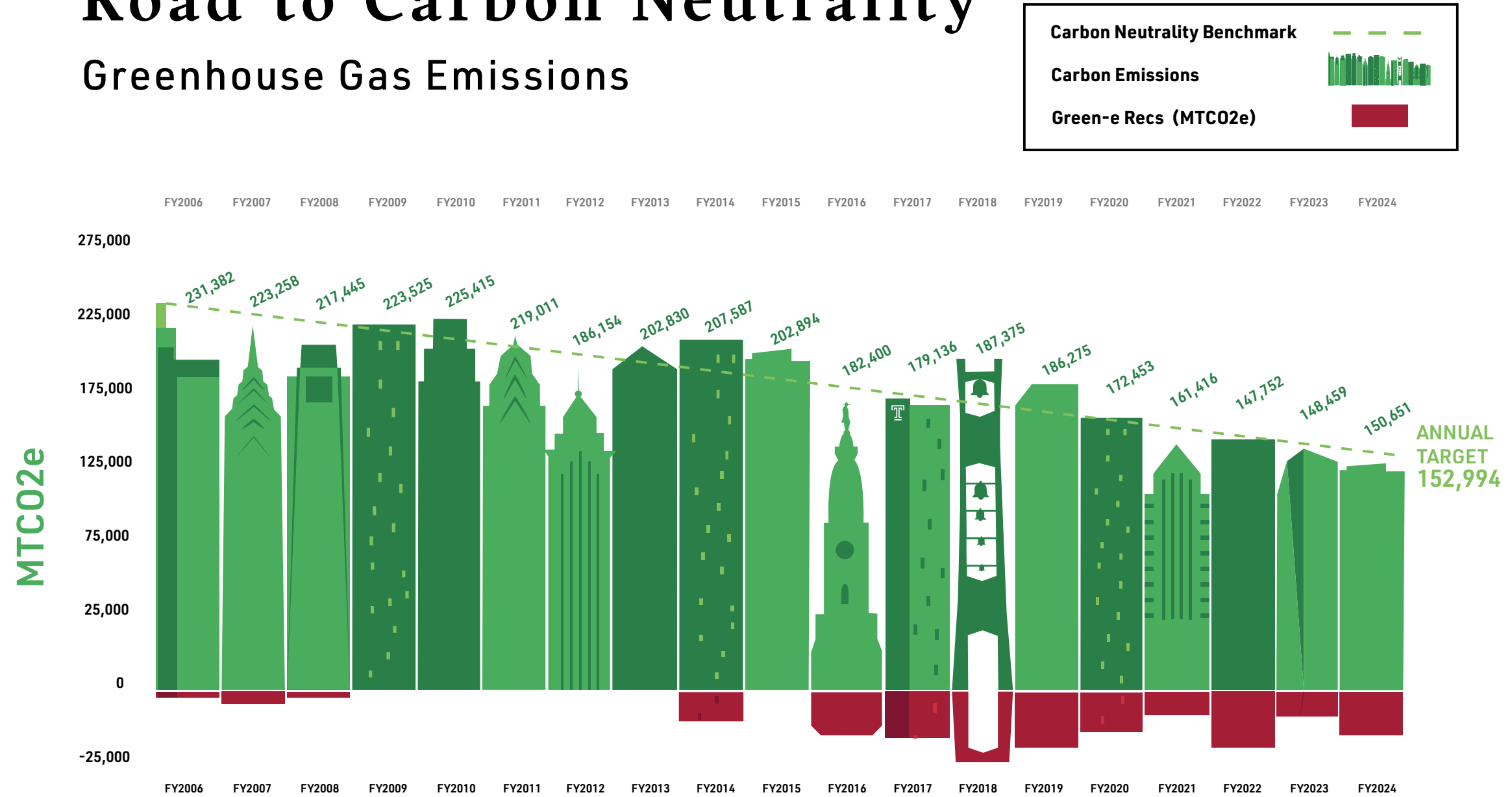
The university's primary emissions sources are purchased electricity (34%), stationary fuel combustion (34%) and FERA, or all emissions that occur upstream from stationary fuel combustion (19%).

Since 2006, Temple has reduced gross emissions by 35% even while increasing the physical space of the university by more than 35%. Strategies for reducing emissions include efficient operations; investing in new carbon reducing technology; sourcing renewable energy; and shifting the culture of Temple students, faculty and staff to become climate leaders.

Temple is on track to meet our interim goal of achieving 45% reduction by 2030 and will continue to investigate strategies to achieve carbon neutrality by 2050. Our continued success would not be possible without the support of a multitude of campus partners.

# Road to Carbon Neutrality

## Greenhouse Gas Emissions



## Climate Action Milestones

- April 2008** — Signed the American Colleges and Universities' Presidential Climate Commitment (ACUPCC)
- May 2009** — Completion of baseline greenhouse gas inventory
- April 2010** — Held public forums to review and comment on climate action plan
- May 2010** — Published 2010 Climate Action Plan
- November 2015** — White House's American Campuses Act of Climate Pledge signed
- April 2016** — Signed the Climate Leadership Statement
- April 2019** — Published the 2019 Climate Action Plan
- October 2019** — Temple University joins the Climate Collaborative of Greater Philadelphia



# Academics & Research



Research



Co-curricular



Curricular

The Temple University Office of Sustainability seeks to prepare future practitioners, entrepreneurs, researchers and scholars to take the lead in generating innovative climate solutions. In tracking and supporting sustainability curricula across departments, the Office of Sustainability ensures Temple continues to grow the impact of sustainability-focused courses, degree programs and learning outcomes in every school and college within the university. As an R1 research institution, Temple empowers students, faculty, staff and alumni innovators in a world-class research and knowledge enterprise that addresses the most complex, compelling and challenging problems we face for generations to come.

## Timeline



**2019-2020**

Temple Ambler Campus and arboretum received field station designation in 2020.



**2020-2021**

Co-curricular Walk Audit Certification Program graduated first cohort in fall 2020.



**2021-2022**

Temple University Libraries collaborates with the Office of Sustainability to create a Climate Change, Sustainability and Environmental Justice collection on TUScholarShare.



**2022-2023**

The Center for Advancement of Teaching and faculty advocates facilitated a two-part workshop, "Teaching Climate Change in Any Classroom," including a campuswide resource fair.



**2023-2024**

Transdisciplinary professional science master's launched by faculty from the College of Science and Technology and the College of Liberal Arts.

## Temple Ambler Field Station

The Ambler Campus was designated in 2020 as the Temple Ambler Field Station, a platform for environmental field research and education. The field station leverages the 187-acre Ambler Campus and arboretum as a living laboratory, providing access to a diversity of natural habitats including old growth and secondary forests, meadows, ephemeral streams, and beautifully designed gardens. The Ambler Field Station also provides research and educational support facilities including laboratory and instructional spaces, offices for visiting scholars, conference rooms, a fully equipped technology center, library, and access to vehicles for use in field research. Ongoing research at the Ambler Field Station spans multiple disciplines, from the natural sciences to engineering and liberal arts.

## Walk Audit Certification Program

Temple's Office of Sustainability partnered with local legacy environmental nonprofit Clean Air Council and their pedestrian advocacy organization, Feet First Philly, to develop a service-learning opportunity, the Walk Audit Training Certification program. The Walk Audit Training Certification curricula gives Temple students experiential learning opportunities in planning equitable, healthy and climate-resilient communities free of traffic violence—connecting themes of asset-based community development, community organizing, engaged urban stewardship and walking as a model for sustainable behavior change. Since the first cohort was awarded their certification of 2020, the program has significantly grown its impact with five more course offerings including a co-curricular project-based learning collaboration with the College of Liberal Arts' department of Geography, Environment and Urban Studies and partnerships with local nonprofits and community organizations such as Tookany-Tacony-Frankford Watershed Partnership and West Mt. Airy Neighbors Association, and the city of Philadelphia's Office of Transportation, Infrastructure and Sustainability and Vision Zero Philadelphia.

## TUScholarShare

TUScholarShare is a service to support the needs of the Temple University community around sharing, promoting and archiving the wide range of scholarly works created in the course of research and teaching. The repository aims to make Temple scholarship freely available online

to a global audience, with the goal of advancing knowledge and learning. The Climate Change, Sustainability and Environmental Justice Collection is a repository for articles, teaching and learning materials, data sets, research, books, and working papers that reflect the intellectual environment of Temple University. The collection seeks to create a culture to support sustainability research by recognizing, incentivizing and connecting the faculty and student community.

## Climate in the Classroom

Climate in the Classroom, a strategic academic engagement initiative, was launched in early 2023 by the Office of Sustainability and faculty and student advocates from across the institution. This public outreach campaign sought to raise awareness of the work Temple students and faculty are doing to integrate sustainability into their degree programs and research activities and promoted as an extension of the Center for Advancement of Teaching's two-part workshop called "Teaching Climate Change in Any Classroom." The semester's worth of engagement culminated in the Bell Tower takeover in April, a celebration and exploration of green learning and green jobs. At the Climate in the Classroom event, attendees and representatives from more than 20 different academic programs and university colleges and departments came together to share their experience teaching and learning about the climate crisis. A packed roster of speakers included Provost Gregory Mandel and a dozen Temple sustainability researchers who reported their latest findings during lightning talks and made a call for more sustainability learning and climate-engaged courses in their discipline.

## New transdisciplinary sustainability science degree programs

In April 2024, Temple University introduced a master's degree and a certificate in sustainability both focused on practical skills and broad perspectives. These pioneering curriculums are part of a broader effort to establish a Sustainability and Environmental Justice Collaborative between the two colleges and reflect the university's commitment to addressing urgent environmental challenges. The program, developed through collaboration between the College of Liberal Arts and the College of Science and Technology, focuses on sustainability science and environmental justice. It aims to prepare students to lead efforts in business, government and academia by integrating sustainability principles across sectors. With five areas of concentration including biodiversity, climate justice and energy systems, the program emphasizes professional development, ethics and collaboration. Faculty leadership believe this comprehensive approach is essential for tackling the climate crisis. The curriculum is designed to equip students with the skills and knowledge to engage in meaningful work and make a positive impact.

# Goal Progress



	Secure designation of the 187-acre Ambler Campus/ arboretum as a research field station providing facilities and a diverse ecosystem that support both basic and applied research in sustainability disciplines by June 2019.	<b>ACHIEVED:</b> Temple Ambler was designated a field station in 2020.
	Identify, validate and amplify current sustainability research using the Electronic Research Administration database to document sustainability research and include sustainability research in Office of the Vice President for Research's annual fact sheet by June 2019.	<b>ACHIEVED:</b> Together with the Office of the Vice President for Research's Electronic Research Administration team, the Office of Sustainability has developed a data request protocol for identifying and amplifying major awards for sustainability research.
	Develop a strategy for co-curricular sustainability education that integrates academic courses and noncredit learning experiences that are connected to or mirror the academic curriculum. The strategy is to include a process for collecting data regarding co-curricular sustainability education and an assessment tool by June 2020.	<b>ACHIEVED:</b> The Office of Sustainability developed a strategy for co-curricular sustainability education via the Walk Audit Certification Program in collaboration with local nonprofit and academic partners. The program was first offered in fall 2020 and a data collection process and an assessment tool was piloted during the initial phase of the program and continues to monitor progress on co-curricular initiatives.
	Restructure the undergraduate certificate in sustainability and the interdisciplinary undergraduate certificate in sustainability committee (University College) by June 2019.	<b>ACHIEVED:</b> The restructured undergraduate certificate in sustainability was approved in spring 2021.
	Increase the number of departments with sustainability course offerings by two (2) departments from an October 2017 baseline by June 2022.	<b>ACHIEVED:</b> In the 2023-2024 academic year, the number of departments with sustainability course offerings was 80. This is an increase of 12 departments from the 2016-2017 academic year baseline, and 10 more than the stated goal.
	Partner with the Center for the Advancement of Teaching (CAT) to create professional development opportunities for faculty that promote interdisciplinary, intercollege sustainability courses, and teaching methods for undergraduate and graduate degree programs, to be offered by spring 2020.	<b>ACHIEVED:</b> CAT initiated a Green Pedagogy Faculty Learning Community and hosts regular programs to support the integration of sustainability into curricula across all colleges.
	Coordinate with the University College Office of Digital Education to create an online format for sustainability courses by June 2020.	<b>ACHIEVED:</b> The shift to virtual learning resulted in the creation of an online format for sustainability courses.
	Create an online repository for existing and future sustainability exercises and course material to assist faculty in integrating sustainability into their courses by June 2020.	<b>ACHIEVED:</b> The Office of Sustainability collaborated with Temple University Libraries to create a Climate Change, Sustainability and Environmental Justice collection on TUScholarShare.
	Increase the number of undergraduate/graduate courses that include sustainability by 20 courses from an October 2017 baseline by June 2022.	<b>ACHIEVED:</b> In the 2023-2024 academic year, the number of undergraduate and graduate sustainability-inclusive courses decreased by 36 courses from the 2016-2017 baseline.
	Increase the number of undergraduate/graduate sustainability courses by 10 courses from a 2016-2017 baseline by June 2022.	<b>IN PROGRESS:</b> In the 2023-2024 academic year, the number of undergraduate and graduate sustainability-focused course offerings decreased by 33 courses from the 2016-2017 baseline.



# Culture

Temple strives to integrate sustainability principles in all aspects of campus life. Innovative outreach campaigns, engaging events and leadership development programs foster dialogue, forge connections and deepen understanding of the climate crisis in the individual, institutional and public spheres. A cultural lens provides a holistic perspective on sustainability, invites diverse voices, and centers equity and inclusion. Culture goals look to identify and provide resources and support to the Temple community to build their capacity to embody, promote and lead sustainable change on campus.

## Timeline



### 2019-2020

The Green Grant was first awarded in 2019.



### 2020-2021

Temple University's EcoReps program was launched in fall 2020.



### 2021-2022

The Transportation and Sustainability survey was issued to students, faculty and staff in spring 2022.



### 2022-2023

The Sustainable Food Services Committee, comprised of student, staff and faculty representatives, was established in 2022.



### 2023-2024

An additional pop-up thrift sale was held in the spring of 2024 resulting in the largest fundraising total to Barnett Irvine Cherry Pantry in the history of the program.

## Green Grant

Temple University's Student Green Grant builds upon Temple University's commitment to sustainability by funding projects led by students that focus on advancing Temple's sustainability mission and have a positive impact on our local environment and community. The first Green Grant was awarded in 2019, and a total of \$7,822 dollars have been invested in sustainability-focused student-led projects and initiatives. Throughout the program's five-year history, award-winners and project outcomes have been diverse and addressed a wide range of critical sustainability issues including research and development for low-waste consumer products and recycling technology, Leave No Trace and outdoor ethics programs and training, artworks educating about the importance of biodiversity, and a series of workshops to facilitate sustainable behavior change and celebrate Earth Day.

## EcoReps

EcoReps is a peer education program that trains and develops undergraduate students to embody, promote and lead sustainable change and climate action on campus. The EcoReps program is for all students from every college and major, who are concerned about our climate future and passionate about positive, sustainable change. EcoReps is a gateway to sustainability programming, volunteer opportunities and leadership development. Participants gain professional sustainability experience and top-rated transferable skills and career competencies. EcoReps have led educational programs, advocacy initiatives and outreach campaigns on campus each semester since fall 2020. In FY24, EcoReps from 48 unique majors representing 10 schools and colleges led a total of 88 events about slow fashion, food rescue, urban agriculture, sustainable transportation, and community engagement and advocacy. For more information about the EcoReps and their impact, read the [2023-2024 EcoReps Annual Report](#).

## Measuring Sustainability Culture

In 2019, the Office of Sustainability added a series of questions about campus perceptions of climate change to the Transportation Survey, administered once every three years. The assessment evaluated Temple University's commitment to sustainability practices, individual's attitudes of their carbon footprint, and the effectiveness of current and future sustainability practices on the campus. Eighty-seven percent of students, faculty and staff strongly agree or

somewhat agree that Temple has a responsibility as a leader in sustainability, climate action and environmental justice. Eighty-one percent of faculty, 67% of students and 65% of staff believe climate change is either very important or extremely important to them.

## Tackling Food Insecurity







The Cherry Pantry opened in 2018 after a survey revealed that 35% of Temple’s undergraduate students were food insecure. Items at the Barnett Irvine Cherry Pantry are available to anyone with an active OWLcard, which includes students, staff and faculty. Recipients can use the pantry once per week and can take home up to 16 points worth of nonperishable food and an unlimited amount of perishable food, as well as two personal hygiene items during the first full week of the month. In February 2023, pantry staff secured refrigeration that allowed the Barnett Irvine Cherry Pantry to offer perishables consistently for the first time since the doors opened through direct donations from the Give + Go Green and Temple Thrift programs. The Office of Sustainability and the Division of Student Affairs regularly partner on a range of education and advocacy programs to promote food justice and access such as World Food Day, a campuswide fair first held in the fall of 2023. In FY24, the Office of Sustainability made the largest monetary donation in the history of the program, made possible by the first-ever spring thrift sale.

## Sustainable Food Services Committee

In the spring of 2023, the Office of Sustainability convened staff and student stakeholders to launch a committee to spearhead sustainable food services initiatives in partnership with Temple Culinary Services. The group first met to identify key strategic priorities for the integration of sustainable practices into dining operations including sustainable procurement; waste reduction initiatives; and consideration of student dining behavior, marketing and incentives for action. Committee members then reconvened to report on their progress and contributions to the broader institutionwide climate action planning effort.

# Goal Progress



-  Create a student educator program to build student awareness on campuses by 2020. **ACHIEVED:** Temple University EcoReps program was launched in fall 2020.
-  Increase student sustainability engagement through the development of a student green fund by 2019. **ACHIEVED:** The Green Grant was first awarded in 2019.
-  Conduct an assessment on sustainability culture by 2021. **ACHIEVED:** The Transportation and Sustainability survey was issued to students, faculty and staff in spring 2022. The survey included questions relating to sustainability culture.
-  Establish a housing and dining services/academic working group to identify opportunities for collaboration and cooperative programs by 2020. **ACHIEVED:** The Sustainable Food Services Committee was launched spring 2022. Student, staff and faculty representatives comprise the committee.
-  Begin to address food insecurity at Temple by 2019. **ACHIEVED:** Since opening in 2018, Cherry Pantry has been committed to fighting food insecurity for Temple students. In 2022, they expanded their services to include regular fresh produce, and monetary donations from Temple Thrift sales go directly to the Cherry Pantry.
-  Work with University Housing and Residential Life to incorporate the responsibility of sustainability engagement with students in the residence halls into an existing staff member’s essential duties by 2020. **ACHIEVED:** Univeristy Housing and Residential Life leadership incorporated the following language to the job description of their assistant director role: “The assistant director is also responsible for the development and implementation of student engagement opportunities, including, but not limited to ... sustainability initiatives.”
-  Create sustainability certificate program through continuing education by 2023. **IN PROGRESS:** The Office of Sustainability has begun to author a case study to summarize institutional best practices and existing programs. This information will inform recommendations for the structure of a sustainability certificate offered through continuing education.







# Design

More than 70% of Temple's greenhouse gas emissions are a result of the operations of its built environment. Since 2006, Temple has added more than 3,000,000 square feet of new building space but has reduced greenhouse gas emissions in part through energy efficient design. To achieve Temple's carbon neutrality goal by 2050, we must continue to improve the efficient use of Temple's existing buildings and incorporate innovative design and technology strategies.

## Timeline



### 2019-2020

Mazur Terrace, a Verdant Temple priority capital project, is completed.



### 2020-2021

Charles Library is awarded LEED Gold certification.



### 2021-2022

Liacouras Walk South is completed.



### 2022-2023

Students hand paint educational murals in the Tiny House.



### 2023-2024

Samuel L. Paley Hall continues its transformation into a WELL-certified building.

## Mazur Terrace Completed

A priority capital project listed in the Verdant Temple landscape master plan broke ground in 2019. An underutilized area between Mazur Hall and Gladfelter Hall in the College of Liberal Arts was transformed into a beautiful green gathering place on campus. Once it was completed, it immediately became a haven for students, faculty, staff and community members. The inviting design transformed an impermeable area to a space that mimics the natural environment. The grass quad and landscaping beds provide sustainable stormwater management infrastructure as well as mitigation of the urban heat island effect.

## Charles Library Awarded LEED Gold

Charles Library was awarded LEED Gold certification during the 2020-2021 academic year. LEED, Leadership in Energy and Environmental Design, is a widely accepted green building rating system. Charles Library was designed and constructed with sustainability in mind. Energy efficient lighting, day lighting strategies, sustainable materials and a large green roof earned Charles Library LEED Gold certification.

## Liacouras South Completed

The renovation of Liacouras Walk South is one of Temple University's most transformational projects to date, revitalizing an inaccessible and underutilized plaza into a gathering space for students, faculty, staff and the surrounding community. The renovations included the replacement of existing dated and damaged pavement as well as site re-grading to improve general flow and ADA access. The large underutilized outdoor space was reimagined by making it far more active and attractive through the installation of a central water feature and plaza as well as an adjacent campus green for open gathering and outdoor learning. New landscape planting, site furniture and lighting were also installed.

## Tiny House Mural

Completed in the spring of 2017, the Temple Tiny House was designed and constructed by students as a project-based learning collaboration between the Office of Sustainability and the construction engineering and architecture programs. It has since been used to support the needs of the Temple Community Garden and as a community-facing demonstration tool to model regenerative design on campus. In 2023, student artists and leaders of the student organization, Sci-Design, were commissioned to design and create hand-painted murals in the Tiny House's interior that educate visitors about its various sustainable design features. Featured illustrations include rainwater harvesting, the green roof, the solar array and high-performance thermal envelope construction elements. The murals increase the visibility and understanding of sustainable design on campus and the expanded public programming it enables further affirms Temple's commitment to sustainable design and education.

## Paley Hall Transformation

The completion of the Charles Library provided Temple University with the opportunity to reimagine the former Paley Library, now called Samuel L. Paley Hall, for its new residents, the College of Public Health. The new design maintains most of the existing structure of the building but modifies and expands it to meet the new programmatic needs of the College of Public Health. Adaptive reuse is one strategy that Temple employs to demonstrate its commitment to sustainable building practices.

Additionally, Samuel L. Paley Hall is the first time Temple will seek WELL Building certification. This certification focuses on developing a built environment with people's health and wellness at the center of design. Samuel L. Paley Hall's WELL certification signifies the adoption of a more holistic lens of sustainability in campus planning efforts and a further commitment to the university's mission of cultivating a campus culture of physical, mental and social wellness.

# Goal Progress



Incorporate green building standards for renovation, new construction and landscape projects into the university's adopted green building policy by 2019.

**ACHIEVED:** Many green building standards are being incorporated into Temple design standards. New construction and major renovation projects set LEED Silver minimum as the goal.



Develop Temple standards for new and existing building design and campus infrastructure that incorporate sustainability and climate resilience by 2020.

**ACHIEVED:** All new construction and major renovation projects will be designed to meet or exceed LEED Silver. All campus infrastructure and systems will be designed to ASHRAE 90.1-2019.



Develop and adopt technical specifications for all projects that incorporate its sustainable design framework by 2021.

**ACHIEVED:** Technical specifications for plumbing, mechanical and electrical systems have been developed and publicly available on Temple's Campus Operations website.

Complete the full implementation of the Verdant Temple landscape master plan by 2030.

**IN PROGRESS:** Temple University has completed many iconic projects including the transformation of Polett and Liacouras walks and Mazur Terrace.





# Energy

The need for a new approach to energy use and sources is inherent in Temple's climate commitment. Temple is committed to implementing a balanced three-pronged approach to reducing greenhouse gas emissions. The approach focused first on the efficiency of systems, second on sourcing less carbon-intensive forms of energy, and, as a last resort, purchasing carbon offsets or renewable energy credits. This strategy has been successful and has helped Temple achieve progress towards carbon neutrality year after year.

## Timeline



**2019–2020**  
Temple issued renewable energy RFP.



**2020–2021**  
Barrack chilled water plant optimization project completed.



**2021–2022**  
Building Energy Performance Program kicks off.



**2022–2023**  
Green Revolving Fund project allocated \$1.25M.



**2023–2024**  
Green Revolving Fund supports lighting efficiency upgrades in three buildings.

## Temple Issued Renewable Energy RFP

Temple University has committed to reducing carbon emissions associated with its electricity use through an investment in renewable electricity. In 2019, Temple issued an RFP for the purchase of renewable energy. While this effort was challenged by market disruptions resulting from the coronavirus pandemic, Temple is committed to revisiting this effort and making good on its climate action commitments.

## Barrack Chilled Water Plant Optimization Project

Temple University has several central chilled water plants which maintain comfortable temperatures for building occupants. The chilled water from the central plant moves heat entering the buildings back to the central plants which then rejects the heat to the environment. An optimization project at the Barrack Central Chilled Water Plant (CCWP) improved efficiency by 12%—an annual energy savings of more than 2,500,000 kWh. This project served as Temple's pilot project for the Green Revolving Fund. High-value efficiency projects like the one at Barrack CCWP help Temple achieve our carbon neutrality commitment.

## Building Energy Performance Program

The Building Energy Performance Program was created through the city of Philadelphia's Building Energy Performance Policy. The policy applies to nonresidential buildings located in Philadelphia County with 50,000 or more square feet of indoor floor space. The program aims to achieve energy efficiency and reduce unnecessary water use in the largest nonresidential buildings in Philadelphia. Temple has participated in the program since 2021 and has audited more than 15 Temple-owned buildings. Audits identified opportunities to increase efficiency, helping us to achieve our carbon neutrality commitments.

## \$1.25M Projected Funded Through Green Revolving Fund

The Green Revolving Fund was established in 2019 with an initial investment of \$300,000. Since then, the Energy and Utilities and Sustainability departments have continued to grow the fund. At the close of FY23, the Carlisle Chiller Plant Optimization Project was selected to receive funding through the Green Revolving Fund. The chilled water plant, located on the Health Sciences Center campus, will be upgraded with equipment and controls that will optimize the performance of the existing plant. The upgrades will enable the chiller plant to operate as efficiently as possible and ultimately consume the least amount of energy, while still meeting the building needs. Transformation projects like these would not be possible without investment from the Green Revolving Fund.

## Green Revolving Fund Lighting Project Investments

A dedicated funding source earmarked for energy efficiency projects allows Temple to fund projects that might be put on hold when financial resources are needed for state of good repair investments. While most of the lighting on campus has been upgraded to LED's, there are still places to optimize efficiency. In 2023-2024 the Green Revolving Fund supported light upgrades in Montgomery Garage, Klein Hall and Annenberg Hall. The investments totaling \$130,000 will reduce annual emissions by more than 800 MTCO<sub>2e</sub> annually.



# Goal Progress



Adopt mechanical, electrical and architectural standards for renovation and new building projects which limit dependency on fossil fuels and promote established sustainable practices by 2020.

**ACHIEVED:** ASHRAE 90.1 - 2019 is Temple University's mechanical and electrical standard. LEED Silver certification or the equivalent is Temple University's architectural standard for new construction and major renovations. Both ASHRAE and LEED promote established sustainable practices which limit dependency on fossil fuels.



Create requirements for the designers of projects of a certain size to collaborate with the energy team to incorporate energy implications in design decisions by the end of 2018.

**ACHIEVED:** All major construction and renovation projects require input and approval from the energy team.



Create a Green Revolving Fund in 2018 to direct the actual energy cost savings into additional energy projects.

**ACHIEVED:** The Green Revolving Fund has been created and rebates from energy efficiency projects have been deposited to the fund. Once projects have been completed and energy savings have been verified, utility savings will be deposited to the Green Revolving Fund.



Continue to invest in energy efficiency projects, starting in 2020 through the allocation of initial seed funds. Completion of additional projects will be contingent on verified savings.

**ACHIEVED:** More than four projects have been funded through the Green Revolving Fund and more than five projects are being evaluated for future funding.

Reduce energy use in existing building stock by 18% in a typical climatic year by 2030.

**IN PROGRESS:** Existing building stock energy use decreased by 2% from an FY17 baseline.

Sign another Power Purchase Agreement (PPA) by the end of 2021.

**IN PROGRESS:** Temple University released a Request for Proposals from renewable energy developers in 2019. This project has been temporarily put on hold due to market uncertainty.

Develop at least 100+ kW of renewable energy systems at Temple's facilities by 2022.

**IN PROGRESS:** Temple University has identified potential locations for small scale renewable projects. Further evaluation and approval is needed.

# Operations



Air Quality



Dining



Sustainable IT



Waste Management



Transportation



Grounds

Temple has a strong history of integrating sustainability and resilience into its campus operations. To fully meet Temple’s climate commitment, the university must continue to innovate and incorporate sustainability into campus operations decision-making processes. To advance sustainable and resilient operations, Temple must not only develop sustainable best practices and operational policies, but individuals from the Temple community must have the opportunity to easily support and participate in the development of a more sustainable campus environment. Operations goals play an important role in achieving a sustainable campus environment for students, faculty, staff and the community. They are organized into six subcategories.

## Timeline



2019-2020

Computer Recycling Center diverts over 4.5 tons of computer equipment in 2019.



2020-2021

75% of Temple community uses a sustainable form of transportation to get to campus and 4.5% of trips are on a bicycle.



2021-2022

The Office of Sustainability publishes a sustainable landscape management document.



2022-2023

Expanded Weigh the Waste campaign brings Temple closer to 50% food waste diversion target.



2023-2024

Temple University hosts its first zero-waste event, the 2024 Green Building United Symposium.

## Sustainable Information Technology

Temple University’s Computer Recycling Center (CRC) is an award-winning operation that gathers surplus computer and electronic equipment from around the university to refurbish, redeploy, donate and, where appropriate, securely dispose of equipment. On average, the CRC processes more than 80 tons of equipment each year. In 2022, Temple Information Technology Services, in collaboration with the Lenfest Center and Dell, established the Digital Equity Center to provide North Philadelphia residents with access to technology, help desk support and free digital literacy education, distributing over 1,000 devices since its opening.

## Transportation

The 2019 Transportation Survey indicated that 75% of Temple students, faculty and staff utilized a sustainable form of transportation to campus during the 2019–2020 academic year, and in 2022, about 68% of students, faculty and staff reported a commute mode other than a motor vehicle. The Office of Sustainability offers resources and program to support staff, students and faculty to adopt green modes of commuting, including the SEPTA University Pass discount program for students and the WageWorks employee benefit, enabling employees to use pre-tax funds for public transit. The office also facilitates a robust series of sustainable transportation programming such as the Walk Audit Certification program and Bike.Temple, featuring group rides, riding competitions, safety trainings and skill-sharing sessions at campus fix-it stations. In 2021, the Office expanded its Secondhand Sale program by launching the Bicycle Apprenticeship Program to train students to host repair fairs and sell affordable refurbished bikes to students in need.

## Grounds

The Office of Sustainability works with the Grounds Maintenance to integrate sustainable practices for more ecologically responsible landscaping and design practices in response to key objectives outlined in the 2015 Verdant Temple landscape master plan. Temple University has worked to reduce the use of inorganic fertilizers, pesticides, fungicides, and herbicides on campus with a peak 78% reduction rate in FY2021. In 2021, Temple installed 15 irrigation flow meters to monitor and reduce potable water use, establishing a baseline to improve efficiency and ensure future projects include irrigation submeters. In 2022, the Office of Sustainability published a sustainable landscape management document to promote best practices related to managing the natural environment ethically and sustainably.

## Dining

Temple Sustainability works with Temple Culinary Services to infuse sustainability into university dining operations. As part of this commitment to sustainability, Aramark submits annual procurement reporting consistent with the Association for the Advancement of Sustainability in Higher Education's STARS program. Culinary Services reduces food waste through commercial biodigesters in residence halls and the Howard Gittis Student Center, where microbes break down organic materials diverting it from the landfill to the waste water systems. Over the course of the last three years, the Office of Sustainability has grown Weigh the Waste, an organics diversion outreach campaign program, to educate and guide diners to dispose of leftover food in organic waste buckets instead of trash cans. The waste is collected, weighed and placed in the biodigesters, providing real-time feedback and encouraging behavior change through friendly competition. In spring 2024, more than 52 unique student volunteers diverted 3,003 pounds of post-consumer food waste from the landfill over three weeks of collection in the Esposito Dining Center at Johnson and Hardwick residence halls.

## Waste minimization and recycling

Meeting the institution's waste minimization and recycling goals requires a large-scale shift from a linear system of 'take-make-consume-throw away' to circular systems that retain the highest utility and value of products and materials for as long as possible. Temple has reduced total waste and recycling by 56% since 2018. Recycling numbers were 50% less than those in reported in 2018. The Office of Sustainability is committed to expanding on successful programs like Give + Go Green and Temple Thrift to increase diversion campuswide. We have accomplished this by developing a circular system at Temple anchored by two legacy programs, Give + Go Green and Temple Thrift.

Give + Go Green is an annual event produced in partnership with University Housing and Residential Life and the dean of students, where students donate unwanted food and clothing when they move out of the residence halls in May. Each year, collection boxes are placed in the lobbies of residence halls so that students can easily donate items they would otherwise throw in the trash. These clothes are then sold at Temple Thrift pop-up sales, an affordable source of clothing for students and a fundraiser for the Barnett Irvine Cherry Pantry. Since 2008, these complimentary programs have continued to grow and serve as an example of both the behavioral and operational change necessary to achieve Temple's waste minimization and recycling goals. In 2024, Temple University hosted its first zero waste event, the Green Building United Symposium, in partnership with Re:Dish.



# Goal Progress



	Develop a comprehensive Materials Management plan and implementation schedule to achieve the city of Philadelphia's zero-waste partner status by 2020.	<b>ACHIEVED:</b> The Office of Sustainability drafted a comprehensive Materials Management Plan which will be posted to the sustainability website in spring 2025.
	Dedicate a staff person in university housing to achieve compliance with the university's waste minimization and recycling initiatives by fall 2019.	<b>ACHIEVED:</b> The Office of Sustainability continues to work with dedicated staff in university housing to achieve compliance with the university's waste minimization and recycling initiatives.
	Achieve a 50% diversion rate by 2020.	<b>IN PROGRESS:</b> In 2023-2024 academic year Temple recycled 20% of its total waste.
	Increase the core recycling rate to 30% by 2020.	<b>IN PROGRESS:</b> In the 2023-2024 academic year Temple recycled 16% of core recycling.
	Develop and implement a plan for sustainable landscape management that builds on recommendations in the Verdant Temple landscape master plan and incorporates plantings, soil management, water conservation and integrated pest management by 2022.	<b>ACHIEVED:</b> The Office of Sustainability finalized a sustainable landscape management document. Temple University's Sustainable Landscape Practices is published on the Office of Sustainability website.
	Reduce the amount of water required for landscape management by 25% by 2025 from the 2006 baseline.	<b>IN PROGRESS:</b> Existing irrigation systems were retrofitted with flow-meters in spring 2021. Temple is collecting data to establish an accurate baseline for water use associated with landscape management.
	Reduce the use of inorganic fertilizers and chemical pesticides, fungicides and herbicides by 75% by 2025 from the 2010 baseline.	<b>IN PROGRESS:</b> In FY2024, Temple University reduced inorganic fertilizers and chemical pesticides, fungicides and herbicides by 55% from the 2010 baseline.
	Reduce the number of single occupancy vehicles on campus by 10% by 2025.	<b>ACHIEVED:</b> Since FY2019, there has been a 10% reduction of single occupancy vehicles on campus.
	Increase the number of commuters who utilize a sustainable form of transportation to the campus to 75% by 2025.	<b>IN PROGRESS:</b> According to the results of the 2022 Transportation Survey, 67% of Temple students, faculty, and staff utilize a sustainable form of transportation when traveling to campus.
	Reduce fleet-based emissions from 2006 baseline by 20% by 2030.	<b>IN PROGRESS:</b> In FY 2024, fleet-based emissions from Temple's vehicles have increased by 10% since a 2006 baseline.
	Increase the percentage the university's fleet that is alternatively fueled to 50% by 2030.	<b>IN PROGRESS:</b> In FY 2024, 24% of Temple's fleet was alternatively fueled.

	Temple University will ensure that 100% of its paint, adhesives and sealers are third-party verified as VOC free by 2019.	<b>IN PROGRESS:</b> Temple University paint standard specifies that all paint is third-party verified as VOC free.
	ITS team will develop a comprehensive strategic plan for sustainable IT at the university by the end of 2019 and begin to implement its recommendations by 2020. The plan will look at procurement, operations and engagement.	<b>ACHIEVED:</b> The steering committee made up of individuals in ITS and the Office of Sustainability identified priority initiatives and has determined an implementation strategy.
	Temple University will require its dining services provider to submit annual procurement reporting consistent with the STARS assessment program by 2018.	<b>ACHIEVED:</b> Aramark, Temple University's dining service provider, has submitted annual procurement reporting consistent with STARS assessment program.
	Temple University's dining services will ensure that a minimum of 20% of its procurement spend is used on food that meets STARS definition of locally sourced by 2020.	<b>IN PROGRESS:</b> Less than 2% of dining services procurement spend was used on food that meets STARS definition of locally sourced.
	Temple University will reach a 50% food waste diversion target by 2022 in its four largest dining facilities (J&H, Morgan Hall Food Court, Morgan Hall Dining Center, and Student Center).	<b>IN PROGRESS:</b> Aramark generates food waste from production, service and storage. Equipment failure in the 2023-2024 precluded Temple from diverting food waste. New equipment was purchased and installed in fall 2024.



# Appendix



## Temple University Greenhouse Gas Inventory Greenhouse Gas Emissions Summary FY 2006–2024

Prepared by the Office of Sustainability

	Emissions Source	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Scope 1 Emissions (MT CO <sub>2</sub> E)	Stationary (oil, natural gas, propane)	57,183	55,541	47,012	62,000	57,005	52,457	47,684	55,570	54,984	57,777	52,532	49,305	55,623	54,761	51,759	55,073	52,525	50,749	51,131
	Mobile (university fleet)	624	644	618	885	847	895	856	923	888	845	835	838	988	877	702	622	715	725	678
	Refrigerants and chemicals	1,764	1,702	1,682	2,301	2,295	2,288	2,284	2,283	2,283	2,294	114	150	123	763	432	1,205	93	82	120
	Fertilizer	8.58	6.65	7.48	3.75	2.21	3.88	2.73	3.62	2.95	2.14	1.86	1.94	1.99	1.55	2.83	1.72	2.57	2.18	2
	<b>Total Gross Emissions Scope 1</b>	<b>59,579</b>	<b>57,894</b>	<b>49,320</b>	<b>65,189</b>	<b>60,148</b>	<b>55,644</b>	<b>50,827</b>	<b>58,780</b>	<b>58,158</b>	<b>60,918</b>	<b>53,483</b>	<b>50,295</b>	<b>56,737</b>	<b>56,402</b>	<b>52,895</b>	<b>56,901</b>	<b>53,336</b>	<b>51,558</b>	<b>51,930</b>
Scope 2 Emissions (MT CO <sub>2</sub> E)	Green-e RECs	(1,253)	(2,312)	(2,196)	–	–	–	–	–	(7,962)	(379)	(22,834)	(15,216)	(18,567)	(17,775)	(12,864)	(4,222)	(13,841)	(2,825)	(5,651)
	Purchased electricity	104,678	100,225	103,657	90,265	98,216	98,173	84,661	82,839	97,345	83,481	76,369	76,295	86,442	77,455	65,680	70,554	67,403	52,719	56,251
	Purchased steam	278	318	330	360	353	349	294	435	366	1,029	1,126	1,074	699	694	748	628	1,021	455	895
	<b>Total Gross Emissions Scope 2</b>	<b>103,703</b>	<b>98,231</b>	<b>101,791</b>	<b>90,625</b>	<b>98,568</b>	<b>98,523</b>	<b>84,955</b>	<b>83,274</b>	<b>89,749</b>	<b>84,131</b>	<b>54,661</b>	<b>62,153</b>	<b>68,573</b>	<b>60,374</b>	<b>53,564</b>	<b>66,960</b>	<b>54,584</b>	<b>50,349</b>	<b>51,495</b>
Scope 3 Emissions (MT CO <sub>2</sub> E)	Faculty commuting	2,159	2,097	2,104	2,200	2,274	2,259	2,257	2,158	2,239	2,297	3,703	2,600	2,569	5,437	1,840	628	7,455	3,349	3,566
	Staff commuting	3,743	3,738	3,698	3,721	3,559	3,407	3,402	5,028	4,816	5,863	7,980	6,600	7,000	11,266	8,104	2,226	6,436	3,315	4,039
	Student commuting	11,354	11,371	11,554	12,068	12,799	13,111	12,701	11,992	12,733	12,752	16,775	16,960	16,892	20,529	15,482	1,951	10,938	8,216	7,567
	University financed travel	5,578	6,029	5,883	6,017	6,697	7,436	386	7,661	8,507	6,335	6,556	9,579	9,237	805	12,271	341	3,845	7,347	8,259
	Solid waste	15,411	14,682	13,675	11,770	12,408	11,485	3,636	3,222	4,321	2,918	3,018	3,658	0.81	0.64	0.55	0.24	0.13	12.60	0.35
	FERA	18,809	19,004	18,879	23,009	22,891	21,080	19,167	22,350	21,974	23,314	21,233	19,920	22,443	22,141	20,954	22,238	21,262	20,496	20,647
	Transmission and distribution losses	10,353	9,912	10,252	8,927	6,070	6,068	8,548	8,364	5,041	4,366	3,588	3,586	4,431	4,159	3,672	3,949	3,772	2,949	3,146
	<b>Total Gross Emissions Scope 3</b>	<b>67,407</b>	<b>66,833</b>	<b>66,044</b>	<b>67,711</b>	<b>66,699</b>	<b>64,845</b>	<b>50,097</b>	<b>60,775</b>	<b>59,681</b>	<b>57,845</b>	<b>62,854</b>	<b>62,903</b>	<b>62,572</b>	<b>64,336</b>	<b>62,323</b>	<b>31,332</b>	<b>53,709</b>	<b>45,689</b>	<b>47,226</b>
<b>Total Gross Emissions</b>		<b>230,689</b>	<b>222,958</b>	<b>217,445</b>	<b>223,525</b>	<b>225,415</b>	<b>219,011</b>	<b>185,880</b>	<b>202,830</b>	<b>207,587</b>	<b>202,894</b>	<b>170,997</b>	<b>175,350</b>	<b>187,882</b>	<b>181,112</b>	<b>168,782</b>	<b>155,193</b>	<b>161,629</b>	<b>148,459</b>	<b>150,651</b>
Scope 1-3 Gross Emissions (MT CO <sub>2</sub> E)	Gross square footage (GSF) <sup>1</sup>	8,266,175	8,271,765	8,271,765	9,171,147	9,353,107	9,353,107	9,245,532	9,644,403	10,821,557	10,495,580	10,466,730	10,093,702	10,696,566	10,934,911	11,190,980	11,223,027	11,246,433	11,241,293	11,186,787
	Full-time equivalent students (FTE)	27,055	27,560	28,535	29,901	31,363	32,251	31,939	31,811	33,563	33,955	34,450	35,750	36,397	36,423	35,641	34,069	32,761	30,683	27,977
	Total gross emission intensity/1000 GSF	27.91	26.95	26.25	24.37	24.10	23.42	20.10	21.03	19.18	19.33	16.34	17.37	17.56	16.56	15.08	13.83	14.37	13.21	13.47
	Total gross emission intensity/FTE	8.53	8.09	7.61	7.48	7.19	6.79	5.82	6.38	6.19	5.98	4.96	4.90	5.16	4.97	4.74	4.56	4.93	4.84	5.38
	Offsets (on-site compost)	-3.4	-5.5	-15.96	-15.1	-15.5	-10.1	-11.9	-11.9	-19.4	-13.5	-13.5	-13.5	–	–	–	–	–	–	–
Scope 1-3 Net Emissions (MT CO <sub>2</sub> E)	<b>Total Net Emissions</b>	<b>230,686</b>	<b>222,952</b>	<b>217,140</b>	<b>223,510</b>	<b>225,400</b>	<b>219,001</b>	<b>185,868</b>	<b>202,818</b>	<b>207,568</b>	<b>202,880</b>	<b>170,983</b>	<b>175,337</b>	<b>187,882</b>	<b>181,112</b>	<b>168,782</b>	<b>155,193</b>	<b>161,629</b>	<b>148,459</b>	<b>150,651</b>
	Total net emission intensity/1000 GSF	27.91	26.95	26.25	24.37	24.10	23.41	20.10	21.03	19.18	19.33	16.34	17.37	17.56	16.56	15.08	13.83	14.37	13.21	13.47
	Total net emission intensity/FTE	8.53	8.09	7.61	7.48	7.19	6.79	5.82	6.38	6.18	5.97	4.96	4.90	5.16	4.97	4.74	4.56	4.93	4.84	5.38



# Appendix



## Academics & Research

### Progress to Goals



### Curricular

#### Sustainability-focused Courses

Increase the number of undergraduate/graduate sustainability courses by 10 courses from an October 2017 baseline by June 2022.

*The Office of Sustainability will provide a complete list of courses upon request.*

#### Sustainability-inclusive Courses

Increase the number of undergraduate/graduate courses that include sustainability by 20 courses from an October 2017 baseline by June 2022.

*The Office of Sustainability will provide a complete list of courses upon request.*



### Co-curricular

#### Sustainability Co-curricular

Develop a strategy for co-curricular sustainability education that integrates academic courses and noncredit learning experiences that are connected to or mirror the academic curriculum. The strategy is to include a process for collecting data regarding co-curricular sustainability education and an assessment tool by June 2020.

*The Office of Sustainability will provide a summary of the project descriptions and their learning objectives upon request.*



### Research

#### Sustainability Research

Identify, validate and amplify current sustainability research using the Electronic Research Administration (eRA) database to document sustainability research.

*The Office of Sustainability will provide a complete inventory of sustainability research upon request.*

## Departments Offering Sustainability Courses

Increase the number of departments with sustainability course offerings by two (2) departments from an October 2017 baseline by June 2022.

### 2022–2023 Departments

#### Beasley School of Law

Juris doctor  
Undergraduate courses

#### Boyer College of Music and Dance

Dance

#### College of Education and Human Development

Adult and Organizational Development  
Counseling Psychology  
Disability Studies  
Education  
Educational Administration  
Higher Education  
Special Education  
Urban Education

#### College of Engineering

Civil Engineering  
Construction Management Technology  
Environmental Engineering Technology  
Mechanical Engineering

#### College of Liberal Arts

Africology and African American Studies  
American Studies  
Anthropology  
Asian Studies  
Criminal Justice  
Economics  
English  
Environmental Studies  
Gender, Sexuality and Women's Studies  
Geography and Urban Studies  
History  
Intellectual Heritage  
Italian  
Jewish Studies  
Lesbian, Gay, Bisexual and Transgender Studies  
Philosophy  
Political Science  
Psychology  
Religion  
Sociology  
Spanish

#### College of Public Health

Communication Sciences and Disorders  
Counseling Psychology  
Environmental Health  
Epidemiology and Biostatistics  
Health Information Management  
Health Policy and Management  
Health Related Professions  
Nursing  
Nutrition  
Social and Behavioral Sciences

#### College of Science and Technology

Biology  
Chemistry  
Earth and Environmental Science  
Environmental Science  
Physics

#### Fox School of Business and Management

Business Administration  
Finance  
Human Resource Management  
Legal Studies  
Marketing  
Strategic Management

#### Lew Klein College of Media and Communication

Advertising  
Communication Social Influence  
Journalism  
Media Studies and Production  
Public Relations

#### Lewis Katz School of Medicine

Urban Bioethics

#### School of Pharmacy

Regulatory Affairs and Quality Assurance

#### School of Podiatric Medicine

Community Health and Aging

#### School of Social Work

Social Work

#### School of Sport, Tourism and Hospitality Management

Sport, Tourism and Hospitality Management  
Tourism Hospitality Management

#### School of Theater, Film and Media Arts

Film and Media Arts

#### Tyler School of Art and Architecture

Architecture

Art

Art History

Botany

City and Regional Planning

Community Development

Graphic Arts and Design

Horticulture

Landscape Architecture

University College

University Seminar

# Appendix



## Office of Sustainability Green Grant

Increase student sustainability engagement through the development of a student green fund by 2019.

Academic Year	Green Grant Recipient	Outcomes	Award Amount
2018-2019	Temple Student Government	Started an off-campus compost collection service.	\$1,500
2019-2020	Net Impact	Received funds to set up research and development space for their startup, Bucha Leather.	\$1,000
	Thrift and Flop	Received funds to purchase materials for Thrift and Flop workshops focused on reuse.	\$350
	Temple Student Government	Received funds for seeds to plant a pollinator and edible garden.	\$215
2020-2021	Adventure Bound	Received funds for Leave No Trace (LNT) certification and equipment to support LNT and sustainable camping.	\$1,215
2021-2022	Engineers Without Borders	Received funds to audit and clean plastic waste and for parts and equipment to grind and extrude plastic filament for 3D printer.	\$224
2022-2023	Glass Collab	Received funds for equipment to grind glass waste for reuse in glass studio.	\$1,289
	SciDesign	Received funds for materials and equipment to paint banner of endangered species to be displayed during Campus Sustainability Month and Earth Month.	\$937
2023-2024	Biology Society & Strategies for Ecology Education, Diversity and Sustainability	Received funds to support a series of sustainable workshops and to host an Earth Day Expo.	\$1,092

Case studies for past projects are published on the [Office of Sustainability's website](#).

## Sustainability Culture Survey Goal

A sustainability culture survey was conducted in spring 2022. The full 2022 Transportation and Sustainability Culture Survey report can be found on the Office of Sustainability website.

## Temple University Campus Food Insecurity

Begin to address food insecurity at Temple by 2019.

### Barnett Irvine Cherry Pantry Usage

Academic Year	Total Visits	Unique User Visits	Average Visits Per User
2020-2021	1,262	328	3.85
2021-2022	2,582	725	3.56
2022-2023	4,830	1,173	4.12
2023-2024	9,061	1,794	5.05

## Student Educator Program

Launched in 2020, EcoReps is a peer education and leadership development program for all students passionate about sustainability. To learn more about the activities and impact of the 2023-2024 EcoReps cohort, read the [EcoReps Annual Report](#) on the Office of Sustainability's website.

## Unique Majors of EcoReps

Accounting	Community Development	General Studies	Landscape Architecture	Public Health
Actuarial Science	Computer Science	Genomic Medicine	Legal Studies	Social Work
Adult and Organizational Development	Criminal Justice	Geography and Urban Studies	Management Information Systems	Sociology
Anthropology	Earth and Environmental Science	Global Studies	Mechanical Engineering	Spanish
Biology	English	Graphic and Interactive Design	Neuroscience	Statistics
Biology with Teaching	Environmental Engineering	Health Professions	Nursing	Supply Chain Management
Chemistry	Environmental Studies	Horticulture	Painting	Tourism and Hospitality Management
Civil Engineering	Event and Entertainment Management	International Business	Philosophy	
Communication and Social Influence	Facilities Management	Italian	Political Science	
Communication Studies	Film and Media Arts	Journalism	Psychology	

# Appendix

## Design Progress to Goals

### Verdant Temple Landscape Master Plan

Complete the full implementation of the Verdant Temple Landscape Master Plan by 2030. In 2022, Temple University exceeded the tree planting goal outlined in the Verdant Temple landscape master plan.

To view a complete tree map of Temple University Main Campus, visit the [Sustainable Campus](#) page on the Office of Sustainability website.

## Energy Progress to Goals

### Building Stock

Reduce energy use in existing building stock by 18% in a typical climatic year by 2030.

Energy Type	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Electricity (MMBtu)	752,390	698,685	678,602	611,041	614,376	612,699	612,854	673,308
Natural Gas/ Steam/ Oil (MMBtu)	940,730	1,051,647	1,039,967	963,207	1,042,875	986,788	948,751	969,255
Energy Use Total (MMBtu)	1,693,120	1,750,332	1,718,569	1,596,650	1,673,832	1,615,827	1,576,187	1,655,707
% Change from FY17	–	3%	2%	-6%	-1%	-5%	-7%	-2%

## Operations Progress to Goals

### Waste Minimization

Achieve a 50% diversion rate by 2020 and increase core recycling to 30% by 2020.

Fiscal Year	2019	2020	2021	2022	2023	2024
<b>Basic Materials</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>
Mixed office paper	408	258	131	133	148	249
Corrugated cardboard	84	55	31	83	64	52
Single stream recycling	1,583	1,043	265	1,329	962	99
Municipal solid waste	3,933	2,748	712	2,369	1,021	2,093
<b>Subtotal- Basic Materials (Recycling)</b>	<b>2,075</b>	<b>1,356</b>	<b>428</b>	<b>1,544</b>	<b>1,097</b>	<b>401</b>
<b>Subtotal- Basic Materials (Trash)</b>	<b>3,933</b>	<b>2,748</b>	<b>712</b>	<b>2,369</b>	<b>1,021</b>	<b>2,093</b>
<b>Secondary Materials</b>						
Biodeigesters	80	45	18	23	9	0
Fryer oil	24	4	4	4	37	37
Vegetation compost	9	3	0	414	0	0
Construction and demolition (recycling)	135	176	34	15	2,118	130
Construction and demolition (trash)	40	97	32	14	43	96
<b>Subtotal- Secondary Materials (Recycling)</b>	<b>113</b>	<b>52</b>	<b>22</b>	<b>442</b>	<b>46</b>	<b>37</b>
<b>Subtotal- Secondary Materials (Trash)</b>	<b>40</b>	<b>97</b>	<b>32</b>	<b>14</b>	<b>43</b>	<b>96</b>
<b>Special Materials</b>						
Computer equipment- reused/recycled	89	57	43	57	77	54
Universal & chemical waste (recycled)	0	9	32	28	41	41
Incinerated chemical waste	0	55	24	13	24	24
Scrap metals	118	57	63	–	–	–
Surplus sales	0	93	0	0	0	0
Residential give and go green	–	1	1	1	1	2
<b>Subtotal- Special Materials (Recycling)</b>	<b>208</b>	<b>217</b>	<b>139</b>	<b>86</b>	<b>144</b>	<b>122</b>
<b>Subtotal- Special Materials (Waste)</b>	<b>0</b>	<b>55</b>	<b>24</b>	<b>13</b>	<b>24</b>	<b>24</b>
<b>RECYCLING Campus Totals</b>	<b>2,395</b>	<b>1,625</b>	<b>588</b>	<b>2,072</b>	<b>1,287</b>	<b>560</b>
<b>WASTE Campus Totals</b>	<b>3,911</b>	<b>2,900</b>	<b>745</b>	<b>2,383</b>	<b>1,064</b>	<b>2,189</b>
<b>Total Recycling %</b>	<b>38%</b>	<b>36%</b>	<b>44%</b>	<b>47%</b>	<b>55%</b>	<b>20%</b>
<b>Core Recycling %</b>	<b>35%</b>	<b>33%</b>	<b>38%</b>	<b>39%</b>	<b>52%</b>	<b>16%</b>
<b>Total Municipal Solid Waste and Recycling Reduction</b>	<b>7%</b>	<b>-27%</b>	<b>-80%</b>	<b>-31%</b>	<b>-62%</b>	<b>-56%</b>

# Appendix



## Grounds

Reduce the use of inorganic fertilizers and chemical pesticides, fungicides and herbicides by 75% by 2025 from the 2010 baseline.

Fiscal Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total lbs Inorganic Fertilizer	4,510	6,176	5,123	7,663	7,125	4,325	4,425	4,475	4,625	3,775	1,906	1,007	3,008	2,005	2,009
% Reduction	-	-37%	-14%	-70%	-58%	4%	2%	1%	-3%	16%	58%	78%	33%	56%	55%



## Dining

Temple University will require its dining services provider to submit annual procurement reporting consistent with the STARS assessment program by 2018.

### Sustainably or Ethically Produced Food & Beverage

Purchases met one of the following sustainability standards.

- Rainforest Alliance Certified (SAN Standard for Sustainable Agriculture)
- USDA Transitional Organic
- Fair Trade Certified (Fair Trade USA)
- MSC Certified Fisheries
- American Humane Certified (Cage Free & Enriched Colony Eggs)

Total Spent: \$131,392

### Plant-based Food & Beverage

Purchases includes food meeting one or more of the following categories.

- Fruits
- Vegetables
- Whole grains
- Beans
- Other legumes
- Soy foods
- Nuts and seeds
- Plant oils
- Herbs and spices
- Vegetarian/vegan alternatives

Total Spent: \$953,073



## Transportation

Reduce fleet-based emissions from 2006 baseline by 20% by 2030.

Fiscal Year	Fleet-based Emissions (MTCDE)	% Increase
2006	624.88	-
2007	644.97	3%
2008	621.33	-1%
2009	886.39	42%
2010	849.40	36%
2011	898.15	44%
2012	859.80	38%
2013	930.22	49%
2014	895.34	43%
2015	851.67	36%
2016	841.20	35%
2017	843.64	35%
2018	1041.21	67%
2019	875.04	40%
2020	649.55	4%
2021	635.71	2%
2022	714.94	14%
2023	724.53	16%
2024	687	10%

Increase the number of commuters who utilize a sustainable form of transportation to the campus to 75% by 2025.

Transportation	2016	2019	2022
Bus	7%	8%	6%
Car	28%	23%	31%
Taxi/Rideshare	1%	2%	1%
Subway	17%	18%	16%
Regional Rail	14%	14%	12%
Bicycle	5%	5%	3%
Walk	25%	25%	29%
Carpool	3%	1%	2%

Increase percentage of the university's fleet that is alternatively fueled to 50% by 2030.

Fuel Source	2020	2021	2022	2023	2024
Gas	130	135	135	132	127
Diesel	42	41	33	21	15
CNG	11	11	10	4	9
Electric	32	27	20	10	27
Propane	8	8	8	8	8
Hybrid	-	4	3	33	0
Total Vehicles	223	226	207	208	186
Total Alt. Vehicles	51	50	41	55	44
% Alt. Vehicles	23%	22%	20%	26%	24%



# Credits

---

## **COPY**

Caroline Burkholder  
Rebecca Collins  
Bryce Forys

## **PHOTOGRAPHY**

Sofia Angelini  
Ryan S. Brandenburg  
Caroline Burkholder  
Olivia Kincade  
Joseph V. Labolito  
Betsy Manning  
Maggie Roseto

## **ART DIRECTION & DESIGN**

Caroline Burkholder  
Rebecca Collins  
Xiamari Osorio  
Rebecca Mascione

Sustainability Annual Report Temple University  
2023-2024



<https://sustainability.temple.edu/>



TempleEcoOwls



tusustainability