Future focused

Sustainability report 2024 St. George campus







Land acknowledgement

We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.

At the University of Toronto's St. George campus, we continue to take bold climate action.

We're working hard to reduce our greenhouse gas emissions beyond carbon neutrality, in addition to developing programs and services that empower students, staff and faculty to drive all aspects of sustainability across academics, research and campus operations.

These efforts reflect our ongoing commitment to become climate positive by 2050 and effect positive change on our journey towards regenerative sustainability.

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Back row: Ali Alnaggar, Scott Hendershot, Sherif Shakour, Larry Yang, Kevin Leong, Christie Anderson, Elliott Stambler I Front row: Natalie Vasilivetsky, Vic Cassano, Catherine Thorn, Chelsea Dalton, Kaitlyn Myles

Our mission is to embed sustainability into the fabric of university operations and the on-campus experience.

While our work is centered on the St. George campus, we collaborate closely with the President's Advisory Committee on the Environment, Climate Change and Sustainability, as well as partners at U of T Mississauga and U of T Scarborough, to support a more sustainable tri-campus.

About the Sustainability Office

Our team includes 12 members: a director, a senior manager, five project managers, four energy managers and an administrative assistant. Our office also hires workstudy students and student volunteers on a rotating basis.

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Leading the sustainability journey

In 2024, Facilities & Services launched an ambitious strategic plan that will serve as our roadmap to 2030, driven by the vision of providing a world-renowned campus where students, faculty and staff can thrive in safe, vibrant and sustainable environments.

The plan is made up of five central priorities, with a key pillar dedicated to leading the sustainability journey. This pillar outlines several critical objectives: accelerating our plan to become a climate-positive campus, developing and implementing climate resilience and indirect emissions strategies, engaging the U of T community as active partners and continuously exchanging knowledge and best practices with other global sustainability leaders.

The Sustainability Office is excited to tackle these objectives and continue making lasting and widespread positive change.

2024 highlights

#1 in the world, again

For the second year in a row, U of T was named the most sustainable university in the world by the QS World University Rankings.

Free Store

Diverting 1,282 kg of materials from landfill in its first two months, the launch of the Free Store offers a space for the campus community to shop for and donate gently used items.

Community engagement

In 2024, we increased campus engagement with events including Sustainability Week, Waste Reduction Week and community clean-ups. We expanded our Student Sustainable Ambassadors program and awarded over 300 Sustainable Change certifications.

Project Leap

We are now one year into the construction of Project Leap and are on target to cut greenhouse gas emissions in half by 2027.

Geoexchange

We created an educational display showcasing Canada's largest urban geoexchange installation, deep beneath Front Campus and guided over 300 visitors through the space.

Electric vehicle superchargers

We collaborated with Jule Power to unveil the world's first batterypowered electric vehicle fast charger.

Bike Share Toronto

We partnered with Bike Share Toronto to offer students, staff and faculty 20% off annual memberships. Since October 2024, over 650 people have purchased memberships with the discount.

Transforming the St. George campus

We're optimizing existing buildings and campus operations while supporting responsible campus growth to reduce our overall environmental footprint.

Climate positive campus

We are committed to making the St. George campus climate positive by 2050, which means reducing more greenhouse gas emissions than we emit. To achieve this ambitious goal, we are executing large-scale, transformative projects.



Aerial view of the St. George campus

St. George campus emissions vs. energy use intensity



Fiscal year

Scope 1 emissions Scope 2 emissions Energy use intensity

Scope 1:

Direct greenhouse gas emissions from sources that are controlled or owned by U of T

Scope 2:

Indirect greenhouse gas emissions associated with the purchase of electricity or steam

Energy distribution by fuel source



Project Leap

Project Leap is our first big step towards our climate-positive commitment. It will reduce scope 1 and 2 greenhouse gas emissions by over 50% by the end of 2027.

In 2024, we completed the first year of construction, making significant progress on all key project elements.

The demolition of one natural gas boiler has been completed, with two electric boilers ready for installation. Lighting retrofits across 38 campus buildings are more than halfway finished and are expected to be completed by the end of 2025. Demand control mockups for lab ventilation optimization were completed at the Terrence Donnelly Centre for Cellular & Biomolecular Research and began at the Leslie L. Dan Pharmacy Building in April 2025. Additionally, integration with the geoexchange system beneath King's College Circle is in progress.





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Since the completion of the geoexchange construction, our Front Campus has been revitalized to a pedestrian-friendly community space.

Canada's largest urban geoexchange system, a giant thermal battery beneath Front Campus, was completed in early 2024. It is now undergoing further construction to maximize its utility by increasing heat pump capacity.

King's College Circle geoexchange

As a part of Project Leap, new and upgraded connections between the geoexchange and campus buildings, including the Terrence Donnelly Centre for Cellular & Biomolecular Research, the Medical 11





Each pipe colour represents a different function of the geoexchange system, helping to enhance the learning experience for visitors in the space.



Sciences Building, the FitzGerald Building and the Leslie L. Dan Pharmacy Building, will unlock the full capacity of the system.

In September 2024, we unveiled an educational display showcasing the inner workings of the geoexchange system, featuring two large windows into the geoexchange classroom, a state-of-the-art, hands-on teaching tool housing the geoexchange mechanical equipment. Located at the southeast entrance of the Landmark Parking Garage, the display is open to the U of T community and the public.

We also offer guided tours, highlighting the sustainable features of Front Campus and the geoexchange system. Since its opening, we have welcomed more than 300 people through the space, including over 200 engineering and architecture students, using our campus as a living lab.

Deep energy retrofits

Our deep energy retrofit program will lower energy consumption of our campus buildings by 40%, reduce greenhouse gas emissions by 80%, modernize our heating and cooling systems, improve occupant comfort and address deferred maintenance items.

The first five buildings to be retrofitted are the Dentistry Building, the Rehabilitation Sciences Building, the Health Sciences Building, 263 McCaul Street and the Exam Centre. Additional buildings will follow.

Two years into the program, we have completed the procurement process and secured a design-build partner for the retrofits of these five buildings. The detailed design study began in April 2025, with construction set to start in the 2025–26 academic year. Stakeholder engagement is ongoing, with outreach to building occupants, including a comfort survey of Dentistry Building occupants. The survey gathered insights on heating, cooling, lighting and other building elements, ensuring retrofit plans align with occupant needs. Any concerns not addressed will inform future projects.

Looking ahead, we are developing a building condition and energy performance benchmarking tool. The tool will assess future candidate buildings for deep energy retrofits. This tool will evaluate energy use, emissions, deferred maintenance costs and risks, while also aligning with the university's long-term campus planning.





Carbon modelling

We developed a methodological tool for tracking and projecting campus carbon reduction efforts and guiding strategic decision-making. This model will establish an energy baseline and project future emissions based on current and planned project initiatives, impact of climate change, campus growth and grid emissions. Designed to be transparent, modular and regularly updated, the model will support the Climate Positive plan by identifying gaps and the strategic plan for future project implementation. It will be ready for internal use by spring 2025, with plans for future publication to enhance stakeholder engagement and communication on U of T's progress toward its 2050 climate goals.



Air travel emissions mitigation initiative

The air travel emissions mitigation initiative offsets emissions from business-related air travel by investing in university-based projects focused on carbon reduction. In 2024, we launched our second carbon reduction project to reduce the impact of medical inhalers, developed by members of U of T's Temerty Faculty of Medicine. This initiative supports healthcare providers and patients at a U of T primary care clinic in transitioning from propellant-based to dry powder inhalers, which have a significantly lower carbon footprint.

Ten additional carbon reduction projects are in development, with four projects slated for implementation in 2025. We launched a project call in March 2025, asking students, staff and faculty to submit carbon reduction project ideas. We look forward to exploring the innovative solutions suggested by our community.



Supporting biodiversity

In June 2024, we completed an extensive bird-safe retrofit on the windows of the west side of the Edward Johnson Building, an area with a high number of collisions. Additionally, the glass pavilion entrance to the Landmark Parking Garage on King's College Circle has been treated with bird-safe markers. The glass railings on the stairs of the other three Landmark Parking Garage entrances are scheduled for treatment in spring 2025. We continue to assess other potential buildings for future bird-safe retrofit projects.



ISO 50001 energy management system

In 2024, we achieved a major energy efficiency milestone by completing our ISO 50001 ready recognition submission. We implemented our energy policy, developed an energy planning tool and conducted energy performance standard implementation for seven pilot sites. Throughout the program, we actively engaged with building teams, who responded positively, noting improvements to operational efficiency. We also completed an internal ISO 50001 audit and submitted our final report to Natural Resources Canada.

Sustainable building design standard

In 2024, we reviewed our progress to date and made a strategic shift regarding our standard structure to best deliver results for U of T and benefit all stakeholders. During this time, we re-established our core working group and conducted an industry building standards assessment with local specialists to help us navigate current and upcoming building standards. We are now targeting to release the new standard in late 2025.

Energy modelling and performance standard

Our energy modelling and performance standard outlines specific targets for energy, carbon and water efficiency in new construction and renovation projects. Since its initial release, it has been applied to 130 capital projects.

This standard is currently under review, with an updated version set for release in 2025. The revised standard will introduce new requirements for embodied carbon and climate resilience.

Engaging our community to empower sustainable change

We empower students, staff and faculty as sustainable change agents, providing opportunities for education, engagement and collaboration that drive positive change on and off campus.



Free Store

We launched the Free Store in October 2024, providing students, staff and faculty with a space to shop for and donate gently used clothing, housewares, office supplies and furniture. The Free Store promotes circularity and responsible consumption while reducing greenhouse gas emissions through reuse.

Open three days a week, the Free Store has attracted a steady stream of visitors, diverting 1,282 kg of materials from landfill in its first two months of operation. It has also garnered significant media attention, including over 300K views on Instagram and features on CBC Radio and Toronto Today.

Sustainable Change Programs

The Sustainable Change Programs engage the university community through a self-assessment approach that promotes sustainable practices in offices, labs, events and everyday student life. In February 2024, we launched the Sustainable Student program, which quickly became our most popular initiative, with over 150 students earning certification as Sustainable Students. Additionally, in 2024, 55 offices, eight labs and 81 events were certified. Since the inception of our Sustainable Change Programs in 2022, we have awarded 809 certifications.



Sustainable Action Awards

During Sustainability Week in March 2024, we held the fourth annual tricampus Sustainable Action Awards. We recognized six winners and five runners-up under student, staff, faculty and external business partner categories. These awards celebrate individuals and teams making meaningful sustainability contributions on and off campus.



Student Sustainable Ambassadors

The Student Sustainable Ambassadors program launched as a pilot in January 2024, with 10 students volunteering to support sustainability education and events across the university. In fall 2024, we expanded the program, hiring 15 students to continue supporting university events while also leading initiatives at the Free Store.



Collaboration

The Sustainability Office is dedicated to engaging with the U of T community and the broader higher education community to foster collaboration, share knowledge and learn from our peers. In 2024, we participated in over 20 U of T case competitions, conferences, webinars and guest lectures, with topics ranging from environmental design to sustainable labs to engineering science.

Ron Saporta, chief operating officer of property services & sustainability, delivered the keynote address at U of T's 2024 Alumni Reunion weekend, where he highlighted the university's sustainability achievements and its roadmap to becoming climate positive. Ron also spoke on the plenary panel at the International District Energy Association 2024 Campus Energy conference in San Francisco, alongside campus energy leaders from across North America.

Research, learning and commercialization

In 2024, we hired a project manager focused on expanding our research, learning and commercialization efforts. We're building partnerships with U of T students, staff, researchers and start-ups to facilitate access to data and building resources, support grant applications and increase experiential learning opportunities.

Work-study students

We provide flexible, part-time job opportunities to students through the university's work-study program, recognizing the valuable lens they bring to our work.

In 2024, 13 students worked with our office in key areas such as engagement, communications, digital media and energy management.





Our second annual Bike to Work Day brought together Facilities & Services staff to promote sustainable commuting.



Sustainability Office events

In 2024, we expanded our engagement across campus through a variety of events. We hosted our first-ever Sustainability Week in March and Waste Reduction Week in October, both weeks filled with sustainability-related programming. We led two community clean-up events, collecting over 40 lbs. of litter and organized over 20 informational booths across our campus. We increased our participation in orientation activities, joining the Club's Carnival and Graduate Resource Fair and collaborating with U of T Student Life. Additionally, we engaged young learners by hosting sustainability-focused tours and activities for grade 5 to 8 students during Bring Your Children to Work Day and for grade 9 students during Take Your Grade 9 Student to Work Day.



Unveiling the world's first batterypowered electric vehicle fast charger with Jule Power

A key milestone this year was our collaboration with Jule Power to unveil the world's first battery-powered electric vehicle fast charger in the Landmark Parking Garage. We secured a central campus location for the chargers, established an agreement between U of T and Jule, and facilitated installation to ensure compliance with university infrastructure standards.

These level 3 chargers were designed, manufactured and installed by U of T engineering alumni and resulted from a longstanding research partnership with the university dating back to 2010. Capable of charging an electric vehicle in under 30 minutes, their innovative design incorporates battery packs to minimize strain on the electrical grid. Through this project, engineering faculty, alongside Jule, advanced thermal management technologies for batteries and power electronics.

Social media engagement

Social media serves as a key connection point between the Sustainability Office and our community. Through our Instagram account, we share program and event details, resources and educational tips to engage and inform our audience. In 2024, we shared 78 posts, and experienced significant growth, surpassing 5,000 followers, amassing over half a million views and reaching over 293,000 accounts with our content. We're excited to continue building our digital presence in 2025 and strengthening our connection with our audience.

Campus as a Living Lab

Campus as a Living Lab is an experiential learning opportunity that engages students, staff, faculty and external partners to collaborate on sustainability challenges that connect to academic and operational activities.

Through undergraduate and graduate Campus as a Living Lab and practicum courses, the following projects were completed by students in 2024:

- Sustainable move-out practices
- Bahen Centre for Information Technology (BCIT) courtyard redesign
- Indoor growing systems
- Flooding and impervious surfaces
- Greenhouse gas emissions of food served on campus
- Comparative lifecycle
 assessment tool

Work-study students

We provide flexible, part-time job opportunities to students through the university's work-study program, recognizing the valuable lens they bring to our work.

In 2024, 13 students worked with our office in key areas such as engagement, communications, digital media and energy management.

What's next?

In 2025, we're excited to continue advancing our sustainability efforts and strategic initiatives while collaborating with key stakeholders and enhancing our community engagement.

Air travel emissions mitigation

We are excited to compile viable projects submitted by the U of T community and begin implementation of several carbon reduction initiatives on campus.

Climate resilience strategy

We will develop a climate resilience strategy focused on infrastructure, operations and community engagement to ensure our campus is prepared for the future. Our first steps will be to identify projected climate risks and top building and infrastructure vulnerabilities.

Deep energy retrofits

We will complete the design phase and begin construction on the first five buildings selected for deep energy retrofits. At the same time, we will continue evaluating additional candidate buildings for future retrofit projects.

Fleet electrification

We will expand our electric vehicle fleet by replacing four gas-powered vehicles, nearing end of life, with electric vehicles.

Sustainable building design standard

We will release our new sustainable building design standard, incorporating sustainability metrics to guide and advance sustainable building practices.

Scope 3 emissions

We are developing an initial action plan to identify the key contributors to our indirect emissions and provide a structured approach for reduction, all while maintaining operational effectiveness.

Project Leap

We will complete year two of construction for Project Leap, with the installation of two electric boilers in our Central Steam Plant, completing LED lighting retrofits in 38 buildings and integrating with the urban geoexchange system beneath Front Campus.

Solar energy

New solar projects are set to begin in summer 2025 at the Ontario Institute for Studies in Education (OISE) and the Koffler Student Services Centre, with over 500 high-efficient solar panels to be installed across both buildings.

Waste reduction

We are developing a waste reduction strategy with the goal of creating a circular campus and going beyond by supporting others pursuing the same mission.

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