



UNIVERSITY OF SASKATCHEWAN

2022-2023 ANNUAL SUSTAINABILITY REPORT



UNIVERSITY OF
SASKATCHEWAN

TABLE OF CONTENTS

Welcome from the CSO	3
The SDGs and USask	4
The Office of Sustainability	5
The People of Sustainability	6
Commitment 1: Leverage Our Place	7
Commitment 2: Model the Way	9
Commitment 3: Empower Action	12
Commitment 4: Capitalize on Strengths	16
Commitment 5: Catalyze Social Change	20
Appendix A: 2022/2023 GHG Inventory	22

GLOSSARY

- AASHE:** Association for the Advancement of Sustainability in Higher Education
- CO₂e:** Carbon dioxide equivalents, a common unit of measure for greenhouse gas emissions
- CoS/the City:** City of Saskatoon
- GHG:** Greenhouse Gas
- GMCTL:** Gwenna Moss Centre for Teaching & Learning
- JSGS:** Johnson Shoyoma Graduate School of Public Policy
- MOU:** Memorandum of Understanding
- QS:** Quacquarelli-Symonds, or sometimes in reference to the Quacquarelli-Symonds Sustainability Rankings
- RCE/RCE SK:** Regional Centre of Expertise on Education for Sustainable Development, Saskatchewan Chapter
- SENS:** School of Environment and Sustainability
- SDG/UN SDGs:** United Nations Sustainable Development Goals
- Sustainability Strategy/the Strategy:** *Critical Path to Sustainability: USask's 2021-2030 Sustainability Strategy*
- STARS:** Sustainability Tracking, Assessment, and Rating System
- THE:** Times Higher Education, or sometimes in reference to the Times Higher Education Impact Rankings
- USask:** University of Saskatchewan
- USSU:** University of Saskatchewan Students' Union

Message from the Chief Sustainability Officer



During my first year as Chief Sustainability Officer, I have been absolutely delighted to learn about the extensive projects, programs, centres and initiatives underway that support [USask's Critical Path to Sustainability: Sustainability Strategy \(2021-2030\)](#). There is significant depth and variety to how USask's researchers, faculty, scholars, artists, staff and students are harnessing our talents and resources to respond to contemporary social, economic and environmental challenges and opportunities; this excellent work deserves to be celebrated and recognized, and it has been so heartening to see the level of commitment to sustainability that exists across our campus.

In addition to acknowledging our progress on campus and in our local community, USask has been globally recognized as a leader in sustainability within higher education through three external ranking and rating agencies within this past year. USask was ranked 67th in the world through the Times Higher Education (THE)



67th

in the world for
THE Impact Rankings



91st

in the world for QS
Sustainability Rankings



Gold

achieved in 2023
STARS submission

Impact rankings (out of nearly 1600 institutions), 9th in Canada and 91st in the world through the QS World Ranking System: Sustainability and received our institution's first Gold rating through AASHE's Sustainability Tracking & Assessment Rating System (STARS). While our behaviours, actions and future plans must continue to be guided by our own Strategy, USask's performance through these external mechanisms does highlight our continued commitment to being the university the world needs.

And while there is much to celebrate, it is also important to recognize that there is still much work to be done. USask's GHG emissions did decline in 2022-23 – dropping 2% from our 2021-2022 levels – and while the direction of the trend is encouraging, the path towards achieving our 2030 target (and our ultimate target of net-zero by 2050) is not without obstacles. Reaching our 2030 target will only be achieved by decreasing our demand for energy – but with 110 heated, cooled and electrified buildings on our main campus, both infrastructure changes to our buildings and behavioural changes from our campus community are needed. USask continues to explore ways to fund the needed infrastructure changes (ex. building automation, HVAC system and envelope upgrades) but it will only be through the collective efforts across our campus community that we will optimize the use of our space (and consequently diminish the need to expand our footprint), ensure that sustainability improvements are embedded within any proposed renovation project, and carefully consider the impacts of air travel on USask's emissions footprint.

While this 2022-23 Progress Report aims to identify and showcase numerous examples of our success, it is certainly not an exhaustive summary. Because the work supporting sustainability happens across all areas of USask, mechanisms to easily and quickly capture this work remains a challenge. If you are a member of USask's community and wonder why your contribution to the Sustainability Strategy hasn't been highlighted, please let us know at sustainability@usask.ca and we will do our very best to include you in our 23-24 Progress Report.

Again, my most heartfelt thanks to everyone across campus who is supporting our sustainability commitments through their work, both through large projects and daily actions. Your efforts to support a sustainable future are sincerely appreciated.

Janelle Hutchinson
Chief Sustainability Officer
University of Saskatchewan

The SDGs and USask

The United Nations' Sustainable Development Goals (SDGs) are an urgent call for action by all countries—developed and developing—in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth, all while tackling climate change and working to preserve our oceans and forests.

USask's Sustainability Strategy was developed with a strong foundation built on addressing the SDGs. The broadness of the goals combined with the specificity of the actions nested within each goal allow every member of the campus community to connect their studies or their work to progress on the goals. We encourage everyone to visit the [UN's website](#) to learn more about the goals and their recommended actions.



Throughout this report, we have included connections to the SDGs by way of the numerical icons.

These icons are not intended to be comprehensive assessments of all of the work done on any one SDG, but instead to acknowledge and celebrate the great work achieved by USask community members and how it supports specific SDGs.

The Office of Sustainability



Janelle Hutchinson
Chief Sustainability Officer

As the University of Saskatchewan's first Chief Sustainability Officer, Janelle leads the implementation of our Sustainability Strategy and assists leaders across the organization with moving the work of the sustainability strategy forward. Janelle works with individuals within key portfolios with specific responsibilities for academic/curriculum, research/discovery, institutional operations and external engagement to implement the strategy. Additionally, Janelle is responsible for institutional-level sustainability work such as reporting on the success of the strategy and other sustainability-related initiatives, coordinating governance and advisory tables, creating and managing policy and procedures, leading communications strategies, and representing the university to external stakeholders.



Matt Wolsfeld
Reporting & Engagement Specialist

Matt works to celebrate and map the progress of the Sustainability Strategy and to facilitate the development of a strong culture of sustainability that is visible throughout campus. By supporting the collection of sustainability data across all areas of campus life, reporting on the progress of the Sustainability Strategy, and leading campus sustainability engagement initiatives to bring all community members into the fold, he helps to create a campus community that intentionally chooses and initiates sustainable behaviour, contributing their part to achieving USask's sustainability goals.



Dana Kwan
Community Engagement and Event Coordinator

Dana works to identify and implement opportunities, events and engagement strategies which will increase awareness of the Sustainability Strategy and mobilize action throughout multiple groups across campus, including students, faculty and staff.

Sustainability Leadership Table

The Sustainability Leadership Table is intended to be an evolving group of special advisors who help to operationalize the Sustainability Strategy in their respective areas. The inaugural 3 members of this group include:



Robert Bierman
Director, Planning, Design & Construction

Robert leads the charge in USask's Path to Zero plan towards the university's 2030 goal of cutting campus GHG emissions by 45% from 2010 levels and a long-term objective of reaching net-zero emissions by 2050. Much of his work helps to achieve progress within Commitment 2 of the Sustainability Strategy.



Dr. Nancy Turner (PhD)
Associate Vice-Provost, Teaching & Learning

Nancy helps to reimagine what education for sustainability at USask means by working towards progress within Commitment 3 of the Sustainability Strategy. Her work helps to support the development of a generation of leaders well-versed in the area of sustainability, regardless of academic discipline.



Dr. Maureen Reed (PhD)
Distinguished Professor, SENS
UNESCO Co-Chair in Biocultural Diversity,
Sustainability, Reconciliation, and Renewal

Maureen's focus is on deepening USask's sustainability research and enhancing the visibility of external training partnerships on the national and global stages. Her work spans across many areas of the Sustainability Strategy, though much of her work in the area of sustainability research can be mapped within Commitment 4.

The People of Sustainability

The work of achieving the goals of the Sustainability Strategy would not be possible without the tireless work of staff and leaders all across the university. This page is dedicated to some of the important sustainability champions that help push the Strategy forward from within their own areas of work. The Office of Sustainability is always keen to expand and celebrate members of USask's community who support the sustainability strategy, so please contact us if you would like to be included within next year's report.



Aditi Garg
Educational Development Specialist

Aditi helps educators to design courses and programs that allow students to develop competencies for social, environmental, and economic sustainability and to help meet the UN SDGs through teaching and learning. She also helps with curriculum mapping and development and the internationalization of teaching and learning.



Gary Brunet
Director, ICT Support Services

Gary works to embed sustainability into the university's vast IT systems network. This includes addressing electronic energy consumption across campus devices and helping to reduce printing dependency on campus.



Jennifer Drennan
Strategist

Jennifer acts as one of the leads of the university's THE Impact Ranking submissions, an annual international ranking that compares post-secondary performance across metrics tied to the SDGs.



Quintin Zook
Director, Consumer Services

As the director of Consumer Services, Quintin oversees areas such as parking and transportation, protective services, and the Merlis Belsher Place and Marquis Hall buildings. He is a strong advocate for sustainability in these areas and helps to work towards achieving the SDGs across his wide portfolio.



Christine Hennig
Client Experience Specialist

Christine plays a key role in the partnered initiative between ICT and the Office of Sustainability to reduce printing dependency on campus. By promoting sustainable printing practices as well as digital tools and workflows, this project seeks to minimize both environmental and financial impact at USask.



James Cook
Manager, Campus Planning & Real Estate

James is responsible for the long-term planning of development and real estate management for campus lands. His advocacy for sustainability helps to bring important social and environmental factors into the decision-making process for large projects that will impact USask across many decades to come.



Jody Gress
Marketing & Communications Specialist

As a member of USask's marketing and communications team, Jody collaborates with the Office of Sustainability to produce content, engage in meaningful storytelling, and spread effective digital communications to help engage the campus community in sustainability.



Vasily Bigildeev
Energy & Emissions Officer

Vasily develops and implements initiatives and strategies to conserve energy and reduce the university's greenhouse gas emissions. He works towards enhancing practices on campus as they relate to energy management. He also oversees many initiatives that correspond to Commitment 2 of the Sustainability Strategy.



David Harris
Senior Research Analyst

David oversees much of the university's international ranking and assessment submissions. As these rankings have become increasingly focused on sustainability outcomes, David has become an ally of the Office of Sustainability in driving the collection and reporting of important sustainability-related data and metrics.



Jeff Lindsay
Manager, Safety Resources

Jeff works to embed sustainability concepts in occupational health and safety across campus. This includes important work in diverting landfill-bound materials and the management of hazardous waste across campus operations and research.



Karsten Liber
Executive Director, SENS

Karsten is the Executive Director of SENS, where he oversees the development of SENS graduate programs, certificates, and micro-credentials with a strong focus on sustainability. As SENS' primary ambassador, Karsten also encourages the translation of academic research into community, government, or corporate action.



Wendy James
Director, GMCTL

Wendy is the Director of the Gwenna Moss Centre for Teaching and Learning. She leads teams who work on sustainability in teaching and learning through embedding sustainability in programs, helping faculty redesign courses around reflect/share/act, and gather data about the impact of the Sustainability Strategy.

COMMITMENT 1:

LEVERAGE OUR PLACE

USask continues to be responsive to our social, economic, environmental and cultural setting; numerous units and departments across campus offer programming to meet USask's goal of working with communities to achieve the SDGs.

Establish an Advisory Table

Much of the work towards this action in 22/23 revolved around identifying, acknowledging, and empowering where possible the many advisory tables and collaborative teams USask is involved with. Partnerships of particular importance in 22/23 include:

USask and City of Saskatoon Sustainability Task Team

11 17

As part of the Memorandum of Understanding signed between the University of Saskatchewan and the City of Saskatoon in 2018, a Sustainability task team was established to identify opportunities to reduce greenhouse gas emissions and adapt infrastructure, services and programs for the future impacts of a changing climate. Both organizations have committed to pursuing sustainable actions that achieve environment, social and economic benefits. In 2021 a [Climate Commitment & Call to Action](#) was formalized and in 2023 a [website outlining the task team's progress](#) was made live.

Potential National Urban Park in Saskatoon

11 17

Parks Canada is collaborating with partners to create a network of national urban parks in Canada's large urban centres and Saskatoon has been selected as a potential site. The shared vision for these parks is to conserve nature, connect people with nature and advance reconciliation with Indigenous peoples.

USask is proud to serve as a member of the National Urban Park Steering Committee, along with Meewasin Valley Authority, City of Saskatoon, Government of Saskatchewan, Metis-Nation of Saskatchewan, Rural Municipality of Corman Park, Saskatoon Tribal Council, Wanuskewin Heritage Park and Saskatoon North Partnership for Growth. The Steering Committee continues to explore the potential benefits and challenges to the region with this opportunity and to contribute to a National Urban Parks Policy (under development).

Nurture & Convene Public Discourse

Our work to inspire widespread awareness, engagement, and action was furthered by many of USask's excellent public speaker series and community cafés. These include:

Johnson Shoyama Public Lecture Series

4 13 16 17

In 2022, Johnson Shoyama Graduate School of Public Policy (JSGS) hosted 35 public lectures that drew over 3000 attendees from the public, academic, private and non-profit sector to discuss a wide variety of topics that align with the SDGs. In an effort to be engaging and accessible, JSGS public lectures are hosted online, there is no cost to attend, and participants are encouraged to engage and challenge speakers through interactive Q&A. Most JSGS Lectures are recorded, and are then made available on JSGS's YouTube page in an effort to spread awareness and engagement.

35

public lectures

3,000

attendees

USask SDG Week: Open for the SDGs

From March 6-10, 2023, the university celebrated the United Nations' Sustainable Development Goals and Open Education with a series of panels, workshops, professional development sessions, and other events. Highlights included UNICEF Canada CEO David Morley speaking at the Global Café Speaker Series, a sustainable clothing swap hosted by the WCVSA and USSU, and an intro to the university's new Sustainability Faculty Fellows.

15

17

events across campus
throughout the week

GIWS Distinguished Lecture Series

4 6 13 14 16 17

GIWS continued its distinguished lecture series in 2022, offering a weekly virtual seminar series open to all featuring top water experts from around the world. All lectures are recorded and kept online for convenient and long-term educational engagement. Topics covered in 22/23 include three-dimensional water scarcity assessments and partnering with Indigenous communities to improve groundwater sustainability.

COMMITMENT 1:

LEVERAGE OUR PLACE

USask continues to be responsive to our social, economic, environmental and cultural setting; numerous units and departments across campus offer programming to meet USask’s goal of working with communities to achieve the SDGs.

Build Bridges and Create Portals

USask is home to many community-based research and service groups that aim to help effectively and equitably engage the surrounding community as partners and collaborators. Just some of these groups in 2022 included:

Student Wellness Initiative Towards Community Health (SWITCH) 3 4 10 11 17

The Student Wellness Initiative Toward Community Health (SWITCH) is a registered charity and non-profit organization created by students to enrich educational experiences and provide much needed health services for Saskatoon’s core neighborhoods. In addition to traditional clinical services, SWITCH offers counselling, speech language pathology, physical therapy, occupational therapy, chiropractic, acupuncture, cultural supports, gynecology, pediatrics, pharmacy, and nutritional education.

CLASSIC 4 10 11 16 17

Community Legal Assistance Services for Saskatoon Inner City Inc. (CLASSIC) provides free, professional, and confidential legal services for low-income members of the Saskatoon community who otherwise cannot afford legal advice or representation since 2007. CLASSIC runs three programs:

- Walk-in advocacy clinic (WAC): Under a supervising lawyer, law students work on files, go to court, draft court documents, and more.
- Legal Advice Clinic (LAC) : Law students help take notes for lawyers who give advice to low-income individuals with family, civil, and criminal issues.
- SIP (Systemic Initiatives Program): Law students help research and organize in the community to achieve social justice.

Saskatoon West Dental Clinic 3 4 10 11 17

The Saskatoon West Dental Clinic is owned by the College of Dentistry and operates as an outreach clinic serving priority populations in Saskatoon in an inclusive and culturally appropriate manner. The clinic follows the fee guide provided by the College of Dental Surgeons of Saskatchewan, but also provides dental services on a sliding payment scale for patients in financial need, and patients in financial need will not be turned away for urgent services.

College of Medicine’s Division of Social Accountability 3 4 5 10 11 16 17

The USask College of Medicine’s Division of Social Accountability (DSA) was created in 2011 to incorporate social accountability into all the College does. It works with community, health professionals and administrators, faculty, students, and residents to facilitate a college wide response that aims toward addressing the health needs of underserved populations in Saskatchewan and the broader global community, through innovative medical education, thoughtful research, and advocacy for health equity.

In 2022/23, the DSA updated its roadmap for curriculum design and evaluation process that includes an updated equity, diversity, and inclusion (EDI) lens and EDI checklist, as well as more learning and support opportunities for faculty. It also produced an online EDI course aimed at providing education to staff and faculty within the college, with seven modules made available in fall 2023.

600

registered attendees across seven public webinars

158

participants in anti-racism crash courses

35

consultations with community organizations

COMMITMENT 2: MODEL THE WAY

USask's entrepreneurial campus spirit pushes campus operations to support, adopt, diffuse, and scale sustainability solutions to work towards the achievement of our long-term greenhouse gas reductions targets.

Invest in Solutions

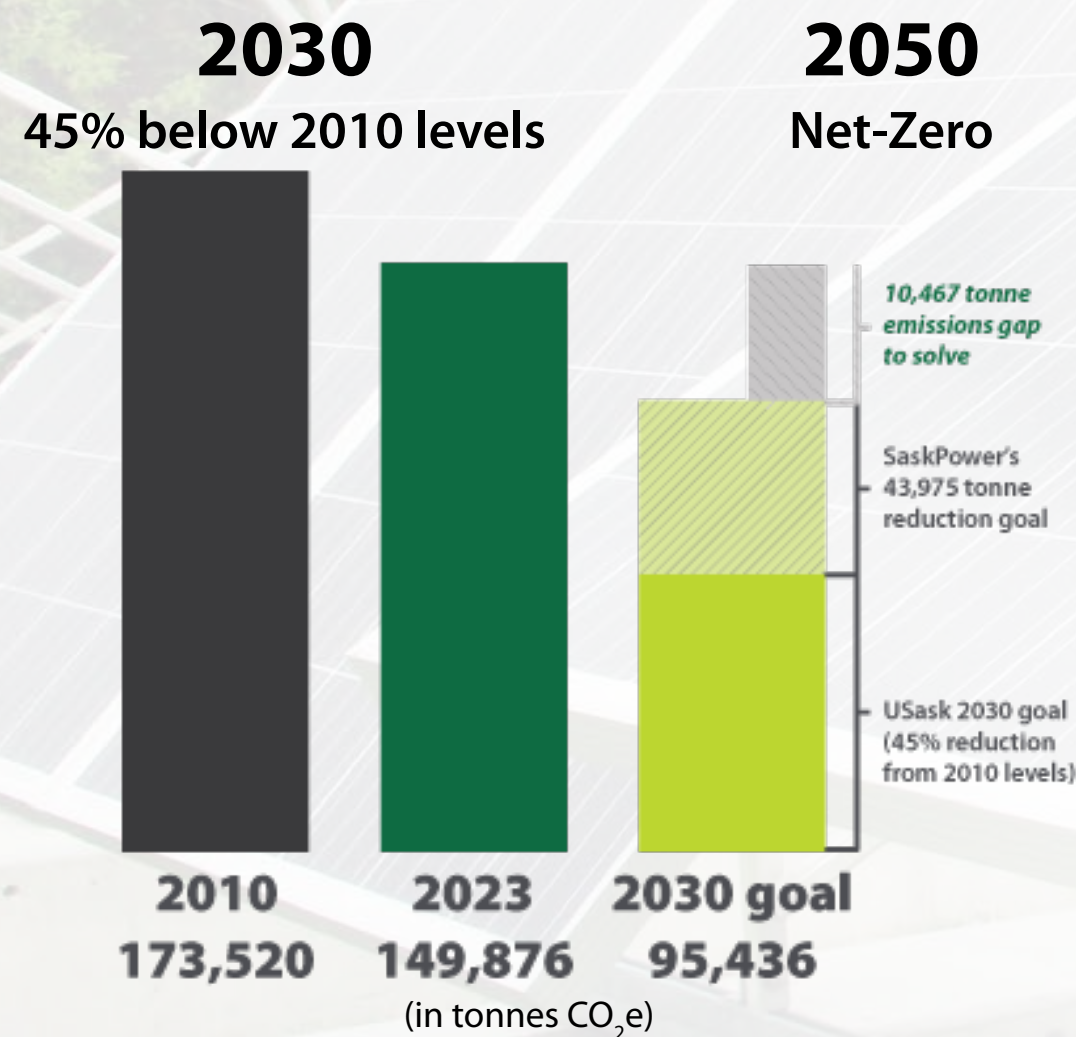
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USask has identified three primary pathways to achieving our GHG reduction goals: decarbonizing our heating/cooling system, reducing demand through building infrastructure improvements including improved space utilization and building better as USask systematically embarks on capital projects and renovations. An overview of these efforts across 22/23 are as follows:

Decarbonization

Throughout 2022-2023 a decarbonization study laid out a plan towards decarbonizing energy supply, heading towards a net zero emission goal for 2050. The final report is expected in fall 2023.

USask's GHG Reduction Goals



Reducing Demand

The Optimizing Energy Efficiency (OEE) partnership with the Government of Canada continued to improve campus' physical infrastructure through renovations, retrofits, and additions. The partnership has implemented 137 separate energy saving measures, which helped to save \$879,690 in 2022-23. The combined efforts of all of these measures will help to prevent 4,881 tonnes CO₂e annually by 2030.

26

building HVAC systems retro-commissioned

15%

average reduction in supply air volume

\$879,690

in 2022 energy savings

73,872 GJ

in annual energy reductions

4,881 CO₂e

projected annual GHG reductions in 2030

Build Better

An \$85-million bond approved in 2018 is continuing to help USask move towards greener buildings on campus while also addressing significant deferred maintenance. Major upgrades were underway in the W.P. Thompson and Arts Buildings in 2022 and the Murray Library in 2023. Additional funds were secured to support improvements at VIDO in 2022. These improvements include upgrades to building heating and ventilation controls and additions like new energy efficient windows.

COMMITMENT 2:

MODEL THE WAY

USask's entrepreneurial campus spirit pushes campus operations to support, adopt, diffuse, and scale sustainability solutions to work towards the achievement of our long-term greenhouse gas reductions targets.

Bolster Action & Remove Barriers

We continue to examine and amend our institutional policies where necessary to make action for sustainability easier and more convenient while removing incentives for unsustainable or harmful behaviour. Some initiatives which had particular impact in 22/23 were:

Sustainability Revolving Fund

The Sustainability Revolving Fund (SRF) continued to provide valuable funding for operational sustainability improvements on campus. Originally a \$1 million fund created in 2014, as of April 30, 2023 the fund has grown to \$1.577 million through the utility savings created by its projects. The most recent approved project was Phase 3 of urinal replacements across Health Sciences B-Wing, Murray, and Agriculture that will save 34 million liters of water annually.

9 11 17

\$1.577M

in sustainability project funding available through the SRF

Some of the SRF's successes include:



The replacement of water aspirators in labs with electric vacuum pumps

\$25,000

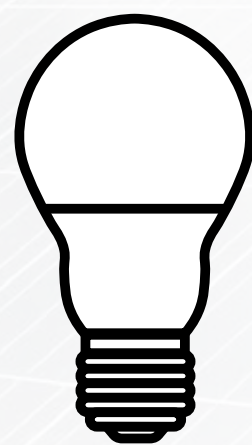
in annual water cost savings.



Urinal replacements in Engineering, Physics, Thorvaldson, and Edwards

\$77,000

in annual water cost savings.



The replacement of ~75,000 light bulbs around campus with LEDs

\$300,000

in annual electricity cost savings.

Fume Hood Sash Closing

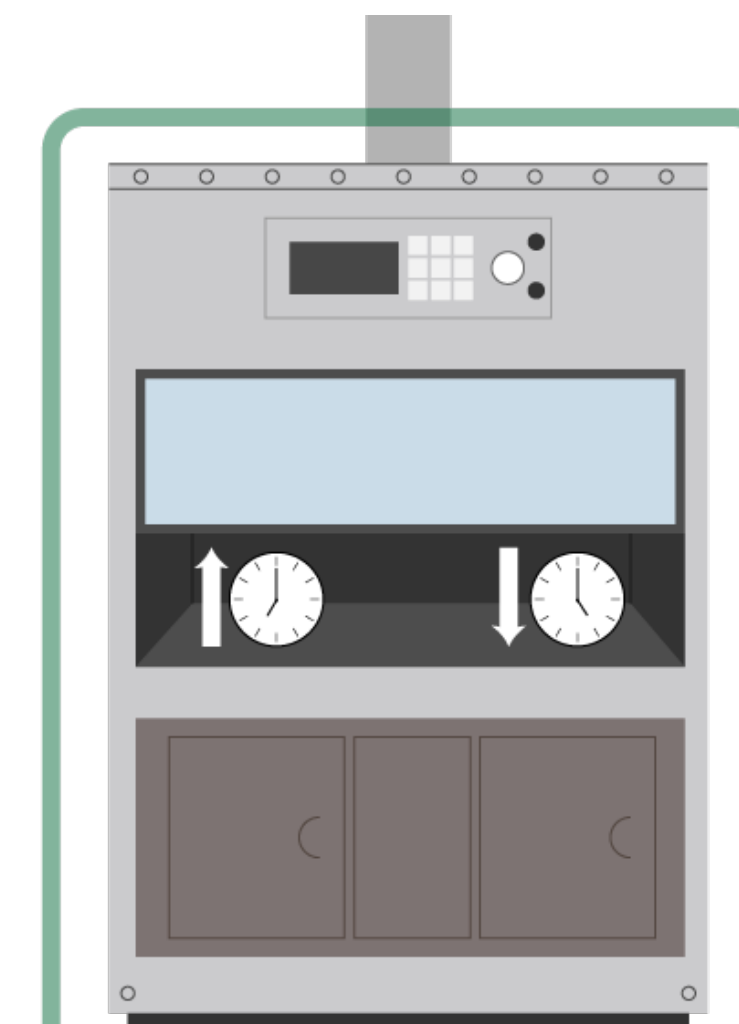
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Efforts were furthered in 2022 to encourage efficient lab operations in our energy-intensive research spaces. Particular efforts were directed at appropriate fume hood usage, notably closing sashes when fume hoods were not in use. Targeted communications and lab signage was deployed in the Spinks Addition and Health Science Complex to educate lab users on the energy impacts of unchecked fume hood use and how to keep their lab emissions to a minimum. Estimates for D-Wing alone suggest that changing fume hood schedules and keeping them closed when not in use could save up to 7.4 tonnes CO₂e in GHG emissions annually.



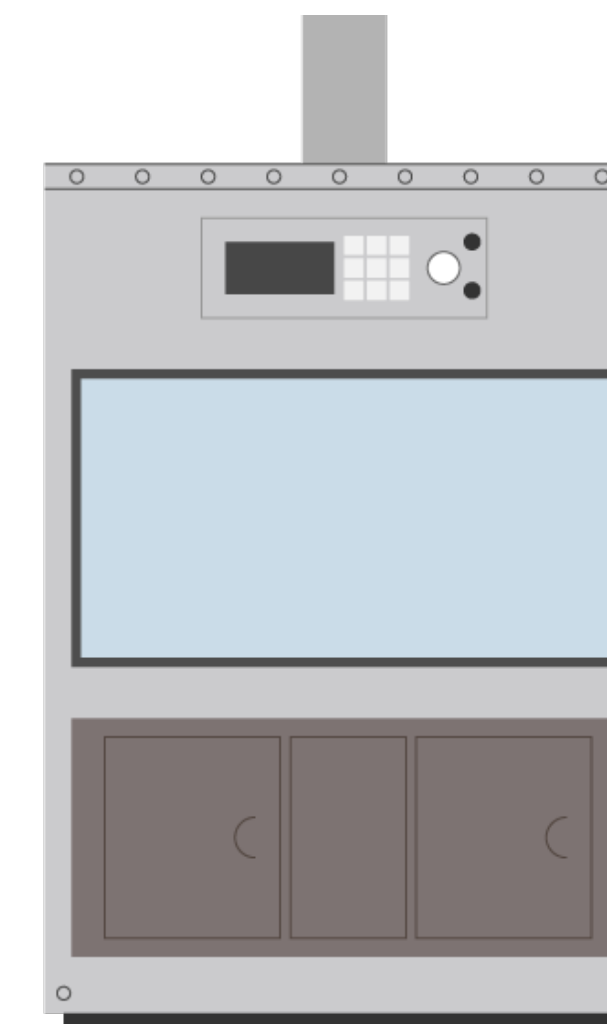
Sash set at 18" 24/7

\$1,675/year
11 tonnes CO₂e/year



Sash set at 18" ~50 hrs/week

\$700/year
4.6 tonnes CO₂e/year



Sash closed 24/7

\$225
1.5 tonnes CO₂e/year

COMMITMENT 2: MODEL THE WAY

USask's entrepreneurial campus spirit pushes campus operations to support, adopt, diffuse, and scale sustainability solutions to work towards the achievement of our long-term greenhouse gas reductions targets.

Share Widely Our Progress

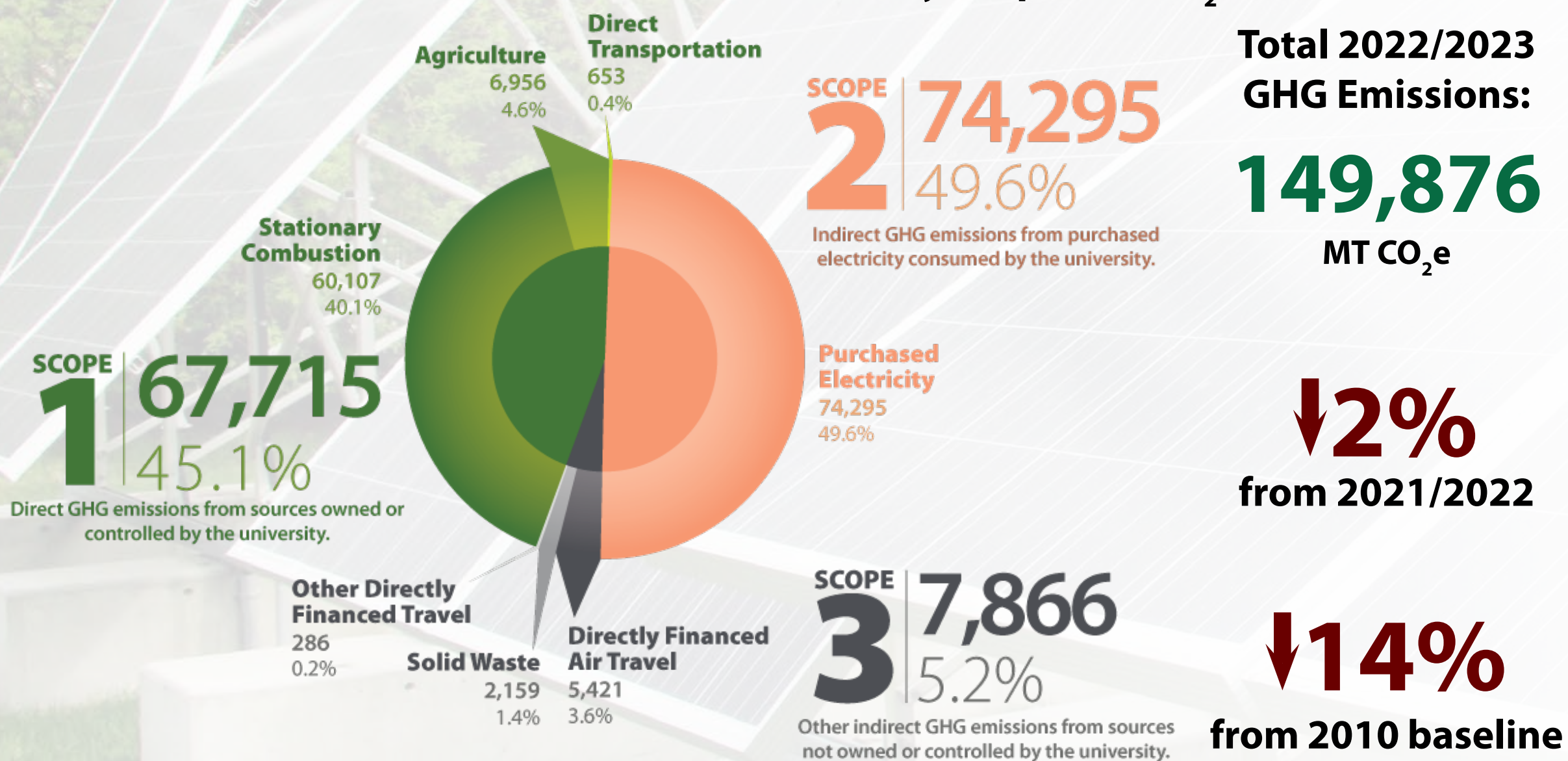
As we invest in solutions and change behaviours around campus, USask is working to identify proper and effective metrics for change and mechanisms for sharing these effectively with the community. Measures taken in 22/23 include:

2022-2023 GHG Emissions Inventory

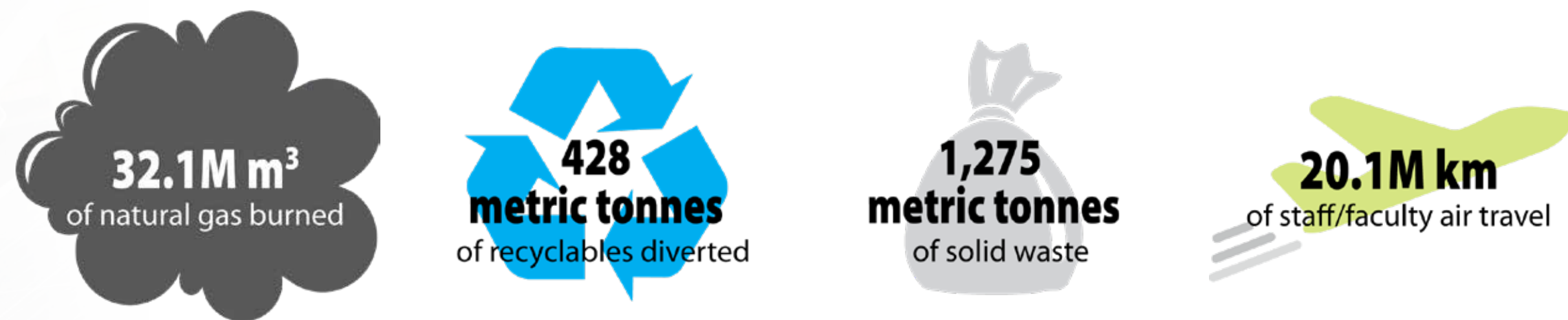
USask decreased its emissions by 2% from 2021/2022 levels this past year. For a more detailed look at our 2022/2023 GHG emissions, please refer to Appendix A of this report.

7 11 13

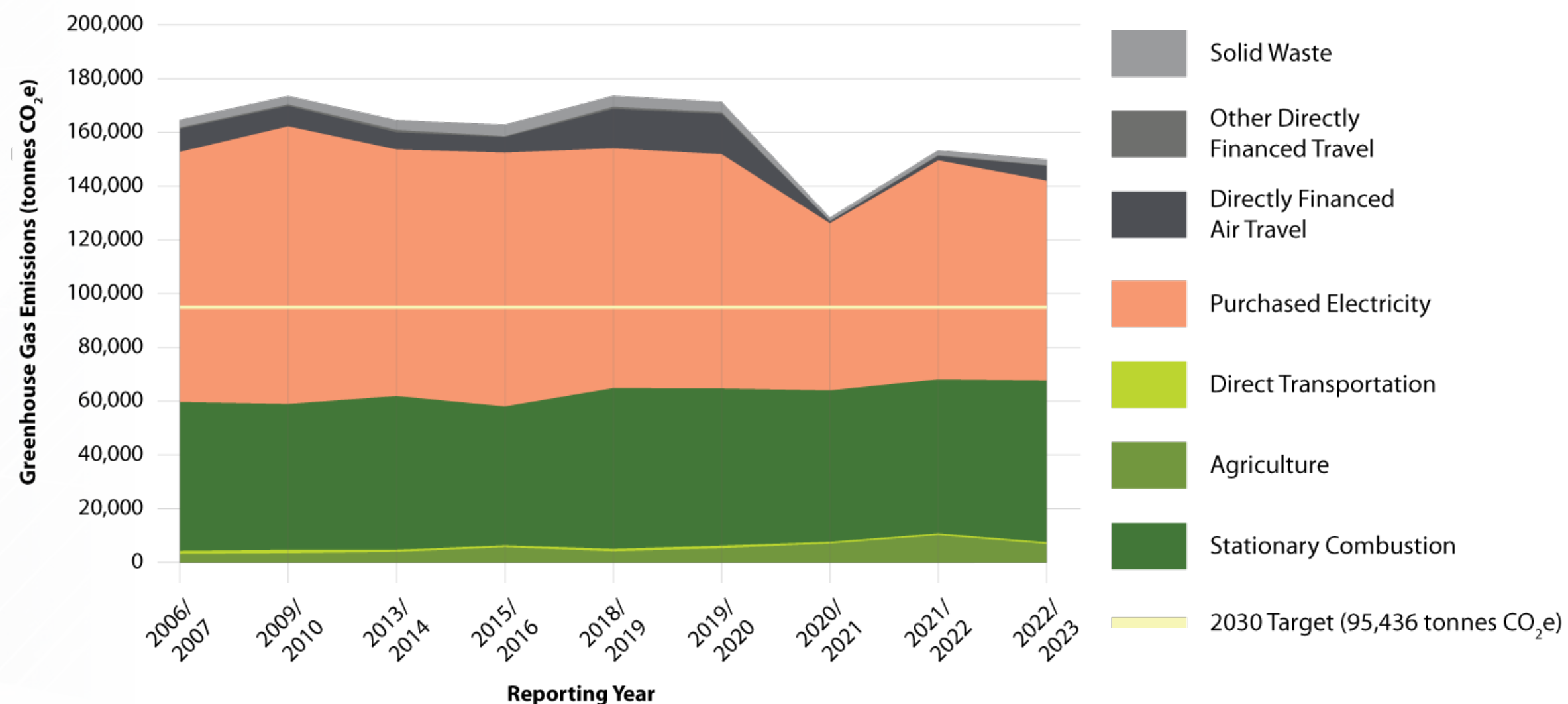
USask 2022/2023 GHG Emissions By Scope (MT CO₂e)



2022-2023 by the Numbers



USask GHG Emissions Over Time



COMMITMENT 3: EMPOWER ACTION

USask's support of a generation of diverse learners and achievers is helping to shift mindsets and expand skillsets to accelerate action to achieve the SDGs.

Equip Champions

Making sustainability experiences and education widely available is helping to equip all disciplines within the USask community with the tools needed to be agents of change in their lives. Progress was achieved in 22/23 through these projects:

Sustainability Leadership Table

One of the first actions of the Office of Sustainability under the Chief Sustainability Officer's leadership was to establish a team of experts to help identify opportunities and action plans for achieving the goals of the 2021-2030 strategy. This table may expand or shift in the future as different efforts become the focus of Sustainability Strategy implementation and is not reflective of the numerous individuals across campus who support the Sustainability Strategy in their work.

17



Robert Bierman
Director,
Planning, Design & Construction

Oversees much of the work in Commitment 2 of the Strategy



Nancy Turner (PhD)
Associate Vice-Provost,
Teaching and Learning

Oversees much of the work in Commitment 3 of the Strategy



Maureen Reed (PhD)
Distinguished Professor, SENS;
UNESCO Co-Chair in Biocultural Diversity,
Sustainability, Reconciliation, and Renewal

Specialist in sustainability research training, important to Commitment 4

Sustainability Faculty Fellows

To support faculty in designing, instructing, and assessing in ways that build student competencies for sustainability, six Sustainability Faculty Fellows were appointed in 2022 for a two-year term. In the first year, Fellows will embed teaching practices in their own courses such that students will be able to reflect, share, and act on key competencies for sustainability. In the second year, Fellows will work within their colleges to support other faculty to make an impact through open educational practices and furthering learning for sustainability. This initiative is led out of the Provost's office with Fellows receiving support from the GMCTL.



USASK'S SUSTAINABILITY FACULTY FELLOWS



Brooke Klassen
Assistant Professor of Management and Marketing,
Edwards School of Business



Shannon Forrester
Lecturer, College of Kinesiology



Dr. Eric Micheels
Associate Professor of Agricultural and Resource
Economics, College of Agriculture and Bioresources



Tate Cao
Assistant Professor in the Ron and Jane Graham School
of Professional Development, College of Engineering



Dr. Kate Congreves
Assistant Professor of Plant Sciences, College of
Agriculture and Bioresources



Dr. Ulrich Teucher
Associate Professor of Psychology and Health Studies,
College of Arts and Science

COMMITMENT 3: EMPOWER ACTION

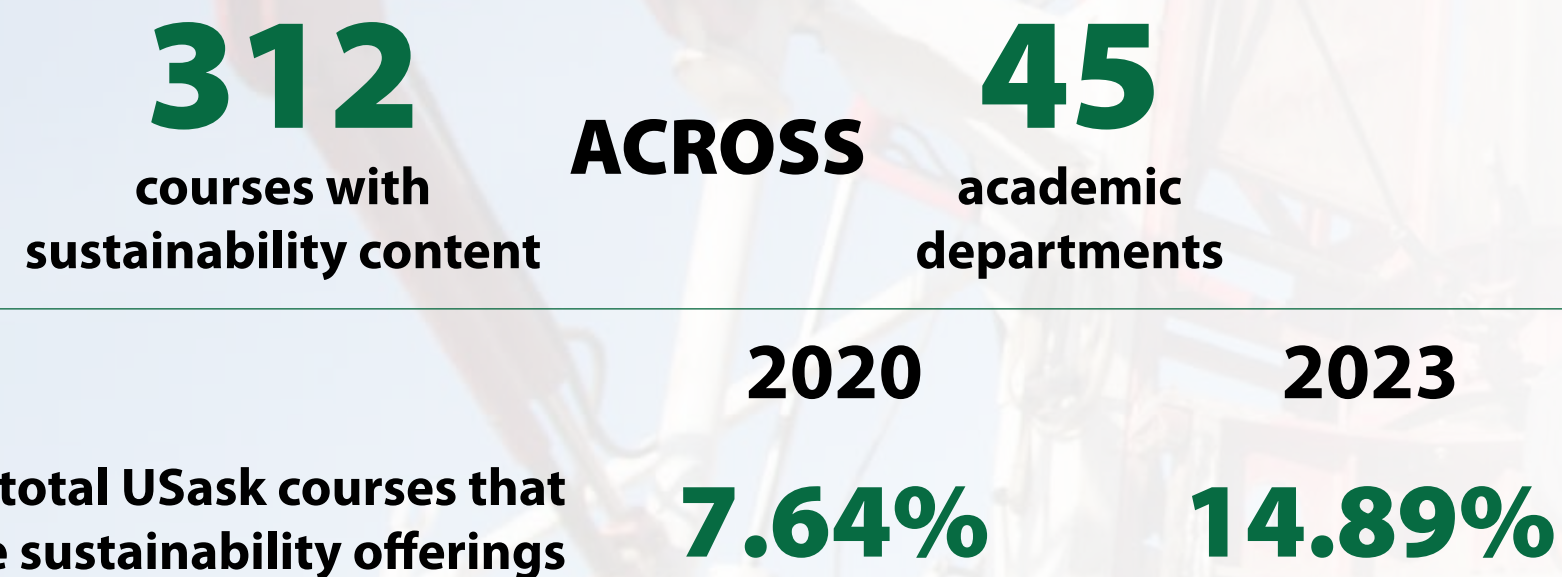
USask's support of a generation of diverse learners and achievers is helping to shift mindsets and expand skillsets to accelerate action to achieve the SDGs.

Engage Sustainability in Curricula

The modification and adaptation of curricula to include contemporary sustainability topics is helping USask accelerate our transformation into the institution the world needs. Efforts in 22/23 include:

Sustainability Course Inventory 4

An inventory of the university's sustainability-focused and sustainability-inclusive courses was created for the 2023 STARS report. This inventory helps us to track not only the number, but the distribution of courses with sustainability content across the university's many colleges and programs. Details can be found on USask's ["Find a Program"](#) page.



Undergraduate Certificate in Sustainability 4

Coordinated through SENS, the Undergraduate Certificate in Sustainability provides significant exposure to sustainability-related concepts and practices while students gain an understanding of how to integrate human-environmental systems within our current reality and how to critically evaluate sustainability efforts. Students choose their elective courses from one of three areas of focus: natural resources and sustainability, community and sustainability, or food systems and sustainability.

Enrolment numbers in the Certificate decreased during the uncertainty of COVID-19, but increased in 22/23 and are anticipated to grow over 23/24, as students from all Colleges seek to enrich their degree programs and to enhance their ability to integrate sustainability into their professions, following graduation.

Sustainability Learning Competencies 4

Six undergraduate competencies critical to practicing sustainability were adopted at USask in 2022. These competencies help students grow their knowledge, skills, and abilities necessary for a sustainable future during their time at USask.

USASK'S SIX SUSTAINABILITY COMPETENCIES

**Communicating
meaningfully**



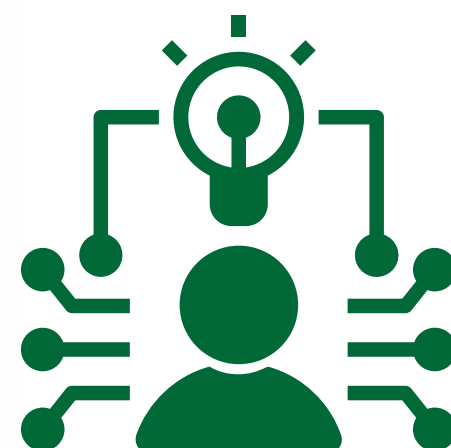
**Engaging in our
intercultural society**



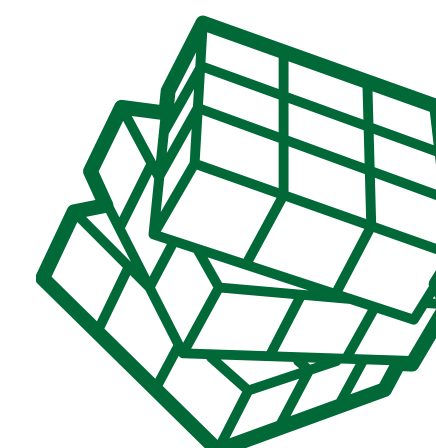
**Nurturing successful
relationships**



**Leveraging
technology**



**Adaptive design and
problem solving**



**Cultivating
well-being**



COMMITMENT 3: EMPOWER ACTION

USask's support of a generation of diverse learners and achievers is helping to shift mindsets and expand skillsets to accelerate action to achieve the SDGs.

Enable Diverse Learning

USask continues to enable access to diverse modes of sustainability education and providing varied credential types in the efforts to allow community members to select their optimal mode of learning. Work in this area includes:

EcoHack

November 2022 saw the return of an in-person EcoHack sustainability hackathon. 33 students joined 9 community partners in solving local SDG-related sustainability challenges over the course of a weekend.



33

student participants

9

community partner organizations

11

proposed solutions

Many thanks go out to the sponsors and community partners of EcoHack 2022



Open Educational Resources

The USask Open initiative continued to grow this year, with a 35% increase in the number of students benefitting from using OER instead of commercial materials, bringing our total savings for students since 2015 to close to \$5 million. Several open textbooks created or adapted at USask were released, including, Introduction to Organic Chemistry, Engineering Economics, Instructional Strategies in Health Professions Education, and Embedding Sustainable Development Goals in Teaching and Learning.



35% \$5M

increase in students benefitting from OER

in student savings

SENS Microcredentials

To provide additional educational opportunities for existing students and professionals alike, SENS launched two microcredentials in 2023.



Foundations in Science Communications

This program helps participants learn how to communicate their research to the right people, at the right times, and in the right ways. The goal is to ensure that their research has value and impact beyond research and academia, and to support positive change in policy, practice and behaviour.

Fundamentals of Collaborative Research

This program helps participants learn how to collaborate with diverse knowledge holders in a productive and mutually beneficial way to address some of society's most wicked sustainability challenges.

COMMITMENT 3:

EMPOWER ACTION

USask's support of a generation of diverse learners and achievers is helping to shift mindsets and expand skillsets to accelerate action to achieve the SDGs.

Demonstrate & Experience Learning

USask is enabling students to work with local community leaders to explore how they can apply action towards the SDGs in real-world applications. Examples in 22/23 include:

Community-Engaged Service Learning

Community-engaged projects for sustainability are opportunities for USask students to contribute towards achieving environmental, social, or economic sustainability with community partners while developing and reflecting on the related competencies. This is mutually beneficial – community partners can complete smaller, impactful projects and USask students can gain career-ready skills through placements of approximately 40 hours. USask students reflect on their sustainability competencies via 'wraparound': before, during, and after the experience.

4 11 17

12

student projects
completed in 22/23

Learning for Sustainability Canvas Course

Learning for Sustainability, a free course module, was made available on Canvas to all members of the USask community in 2022. Enrollees learn about the SDGs and reflect on associated experiential learning such as community placements, projects, collaborative online international learning, or other task-based learning. The course has been designed to help students identify the SDGs that are most pertinent to their work and life, build a reflective practice around the UNESCO model of 'Reflect-Share-Act', and reflect on the university's sustainability competencies.

4 10 11 17

23

enrollees in first
year offered

ENVS 401



2023 RCE SK
Award Winner

2022 marked the 10th anniversary of ENVS 401 – Sustainability in Action, the capstone course to the School of Environment and Sustainability's Undergraduate Certificate in Sustainability. The course was designed to be open inquiry-based, with a focus on teamwork and application of knowledge of sustainability and the environment to develop and complete dynamic student-led projects. Since its inception, the course has attracted a high degree of interest (>450 students over 10 years), and has fostered more than 100 student projects, ranging from analyses of USask's financial investing, building a prototype moped from a repurposed engine, waste audits, composting program pilots, and much more.

4 11 17

>450

students enrolled in
ENVS 401 over 10 years

COMMITMENT 4:

CAPITALIZE ON STRENGTHS

USask is bringing together the campus community to create knowledges focused on designing and implementing innovative and workable solutions to sustainability challenges.

Build Leadership and Capacity

USask is working to increase, diversify, and enhance convergence research, encouraging every member of the university to focus some energy into solving sustainability challenges. Work in 22/23 includes:

TRANSECTS

TRANSECTS is a research training collaborative/community of practice involving academic researchers and administrators, teachers, students, early career researchers, professionals, and practitioners. It is designed to co-create and share innovative teaching tools, reduce barriers to knowledge sharing between the global North and South, help participating universities cement long-term relationships for ongoing research, and provide multi-site evidence by which to advocate for institutional change. The ultimate goal of the group is to transform the mentorship of emerging sustainability scholars and practitioners. The group follows ten key principles to guide how it works together in a community of practice:

- Build and nurture respectful and trusting relationships across a diverse collective
- Take responsibility and demonstrate mutual accountability
- Co-produce and share knowledge throughout the partnership
- Pursue reciprocal benefits and relevance for all partners
- Advance equity, diversity, and inclusion through our structures and processes
- Commit to decolonization and reconciliation
- Employ careful, responsible, and responsive language and communication
- Seek learning and welcome adaptation
- Advocate for institutional change in support of transdisciplinary research and teaching
- Participate in self-care and joyful exchange

4 5 8 10 11 13 16 17



Sustainability Awards

4 17

The Office of Sustainability sponsored two new awards in 2023 to recognize exemplary undergraduate sustainability-focused research.

Life and Health Sciences Research Expo Sustainability Progress Awards

USask Health Sciences' Life and Health Sciences Research Expo annually recognizes exemplary research and learning activity at USask across the categories of basic, translational, clinical, and applied science as well as social and population health and, as of 2023, sustainability. The Office of Sustainability was proud to present its 2023 awards to:

- **Sustainability & Planet:** Michele Monroy-Valle; *Uncovering the Hidden Toll of Inadequate Resources on Indigenous Mayan Children: The Devastating Impact on Bone Growth and Health*
- **Sustainability & People:** Samy Abdullah; *A Comparative Study of the Effectiveness of a Locally Produced Fortified Food and Peanut-Based Ready-to-Use Therapeutic Food (RUTF) for the Outpatient Treatment of Maternal and Child Malnutrition: A Community Trial in Urban El Salvador*

USSU Symposium Sustainability Awards

The USSU Undergraduate Symposium is an annual event highlighting the research, scholarly and artistic works of undergraduate students at the University of Saskatchewan. The Office of Sustainability has continued to sponsor sustainability awards at the symposium since 2022 and was proud to present four awards at this symposium in 2023:

- **Sustainability & Planet:** Taya Koob; *Shining a Light on Bat Activity: Artificial Light Increases Foraging Activity of *Lasiurus borealis**
- **Sustainability & People:** Jacob Pilon; *The Effect of Inhibiting Cell Stress in an In Vitro Cellular Model of Multiple Sclerosis*
- **Sustainability & Prosperity:** Fern Toop; *Costs and Strategies for Inclusion of People with Disabilities in the Workplace*
- **Sustainability & Peace:** Caid Brossart, Anna Little, Kyla N. (Brown) Dalsin; *The Unintended Consequences of ORT's Privacy Rules*

COMMITMENT 4:

CAPITALIZE ON STRENGTHS

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Create Innovation Ecosystems

We work to develop hubs of innovation with the capacity to pilot and perfect technological innovations to solve all levels of sustainability challenges. Some of this work includes:

OPUS

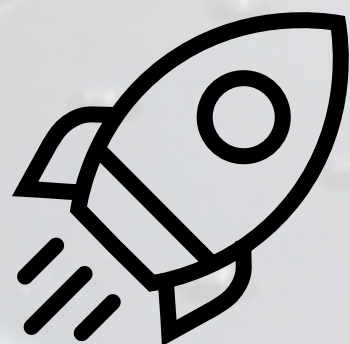


USask is fostering entrepreneurial thinking and culture by engaging students, faculty, staff and the community through a new startup incubator, Opus. Designed as a pre-accelerator, Opus provides aspiring entrepreneurs from USask with the tools needed to build successful ventures on campus. It is:

- Founder Focused – Designed to fit the specific needs and challenges in the deep tech world.
- Startup Supporters – Foundational knowledge and one-on-one coaching to build business acumen.
- Community Connectors – Personal connections to mentors, experts, industry, funders, and business service providers.
- Collaborative & Inclusive – Bringing changemakers from diverse backgrounds and expertise through a shared entrepreneurial experience.

12

Startups



16

Mentees



30+

Programming Hours



(workshops, webinars, events)

46

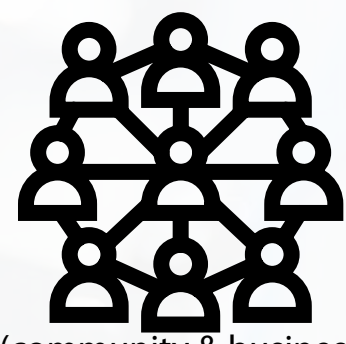
Experts



(mentors, coaches, facilitators)

88

Stakeholders Engaged



(community & business leaders, entrepreneurs, ecosystem service providers)

Signature Research Area Update 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

The University of Saskatchewan recognizes nine distinct areas of research based on output and achievement, enabled by research capacity, investments, history, and a sense of place. Researchers in these areas embrace exploration — responding to emerging questions and needs as they arise in the pursuit of new knowledge.

New in 2022

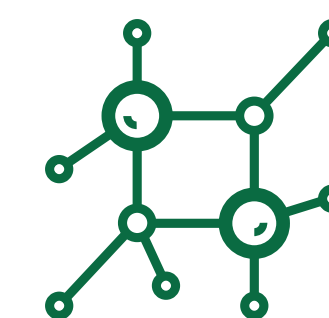
Refreshed in 2022



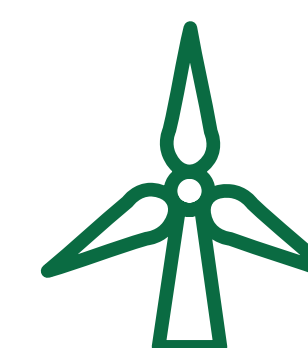
Sustainability and Communities



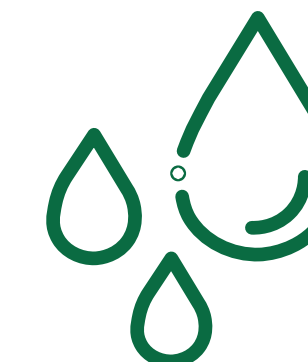
Health and Wellness



Quantum Innovation



Energy and Minerals for a Sustainable Future

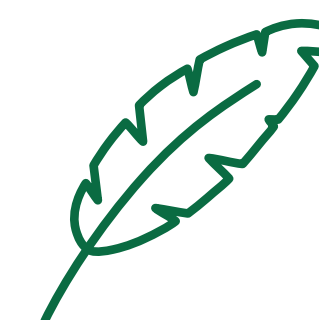


Water

Unchanged in 2022



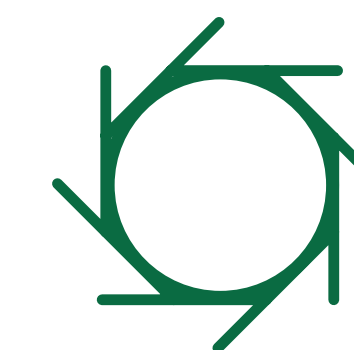
Agriculture



Indigenous Peoples



One Health



Synchrotron Sciences

COMMITMENT 4:

CAPITALIZE ON STRENGTHS

USask is bringing together the campus community to create knowledges focused on designing and implementing innovative and workable solutions to sustainability challenges.

Forge and Lead Collaborations

USask's support of unique multi-community, multi-partner, and multi-sector collaborations is tackling the full spectrum of sustainability challenges, from idea germination to translation into real-life solutions. Work in 22/23 includes:

Sylvia Fedoruk Canadian Centre for Nuclear Innovation 3 7 9 11

The Sylvia Fedoruk Canadian Centre for Nuclear Innovation was established in 2011 to help place Saskatchewan among global leaders of nuclear research, development and training. The Centre invests in partnerships with academia and industry for maximum societal and economic benefit while funding research projects in nuclear topics, supporting new faculty positions, operating a top cyclotron facility as a user-accessible resource, and providing advice on nuclear topics.

In 2022:		Over 4 years:			
4 projects funded in 2022	20% increase in PET scans performed	\$3.76M in project funding	\$8M in external contracts	60 facility user-access agreements or amendments	66 organizational agreements

GIWS 3 5 6 10 11 13 14 17

The Global Institute for Water Security (GIWS) at the University of Saskatchewan (USask) is the top water resources research institute in Canada and one of the most advanced hydrology research centres in the world. GIWS is dedicated to helping protect our precious freshwater resources, mitigating the risk of water-related disasters such as floods, droughts, and fires, predicting and forecasting extremes of global change through the use of advanced remote sensing and modelling techniques, and co-creating traditional knowledge with western science to empower Indigenous communities in protecting water health.

GIFS 2 3 6 8 9 11 12 13 14 15 17

In 2022-23, the Global Institute for Food Security engaged with more than five dozen partner organizations spanning public, private and academic sectors. Through its scientific programs and platforms, GIFS provided these partners with access to world-class technologies and talent to support research and development advancing innovation, sustainable agricultural production and global food security. It also provided advocacy to advance a national innovation framework and science-based regulatory system for Canada.

>60

partner organizations engaged

GIFS is a leader in national initiatives to better understand, measure and support sustainable agriculture and grow Canada's innovation ecosystem:

Supported Canada's first sustainability index for the agri-food sector in 2023



as part of GIFS' founding partnership in the National Index on Agri-Food Performance

Working to grow Canada's engineering biology capacity



with membership in the National Engineering Biology Steering Committee

Advocacy for Key Regulatory Developments in 2023



CFIA's updated guidelines on gene edited crops and House of Commons report recognizing Canada as a leader in efficient fertilizer use

COMMITMENT 4:

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Forge and Lead Collaborations

USask's support of unique multi-community, multi-partner, and multi-sector collaborations is tackling the full spectrum of sustainability challenges, from idea germination to translation into real-life solutions. Work in 22/23 includes:

VIDO

3 11 15 16 17

The Vaccine and Infectious Disease Organization (VIDO), Canada's Centre for Pandemic Research, is a world leader in infectious disease research and vaccine development for humans and animals. As part of the University of Saskatchewan, VIDO's expertise, infrastructure, and history put us at the forefront of innovation and make them a valuable resource, a source of pride for Canada, and a key player in Canada's response to the COVID-19 pandemic.

To strengthen Canada's preparedness for emerging infectious diseases, VIDO is expanding its capabilities as Canada's Centre for Pandemic Research:

- Opening the Vaccine Development Centre, a containment level 3 capable biomanufacturing facility that meets good manufacturing practice requirements—one of only a few in the world.
- Adding containment level 4 capacity, which will allow us to work with any pathogen.
- Building a new animal facility capable of housing a wider range of animals, which will expand our preclinical research and development capacity.
- Attracting new talent to expand our expertise and providing training opportunities to develop the next generation of scientists.

CASES

7 8 9 10 11 13 16 17

The Community Appropriate Sustainable Energy Security (CASES) Partnership is an international research initiative involving 15 northern and Indigenous communities and public and private sector project partners from Canada, Alaska, Sweden, and Norway. Hosted by USask, the overarching goal of the initiative is to reimagine energy security in northern and Indigenous communities by co-creating and brokering the knowledge, understanding, and capacity to design, implement and manage renewable energy systems.

\$8M

in partnership funding

The CASES Partnership facilitates the sharing of experience so that not all communities have to experience the same challenges or recreate solutions, thereby expediting the learning experience and accelerating renewable energy innovation. To date, it has secured over \$8 million in funding, including \$2.5 million in support from the Social Sciences and Humanities Research Council (SSHRC) of Canada.

Research Junction

4 9 11 17

Research Junction is a collaboration between the City of Saskatoon and Research Acceleration and Strategic Initiatives to support the development of joint research projects that address contemporary urban issues for the benefit of Saskatoon residents. So far, over \$400,000 has been distributed for Research Junction projects.

Research Junction funded three new projects in 2022-23 totalling to \$86,000 in awards split 50/50 between USask and the City. All projects were co-led and co-designed between USask and City staff.

\$28,0672



towards tracing Métis presence and placemaking in Saskatoon

\$29,997



towards developing energy efficiency programming for low-income renters and landlords

\$29,300



towards cost-effective and eco-friendly treatment to remove 6PPD-quinone from stormwater

COMMITMENT 5:

CATALYZE SOCIAL CHANGE

USask continues to push for social change by promoting, engaging, and supporting shared knowledges, expertise, and experiences.

Engage in Local & Global Dialogue

USask continues to develop a shared understanding of both the challenges and solutions to global sustainability challenges by engaging in a diverse range of dialogues. Examples include:

International Office Initiatives 17

The USask International Office is home to several initiatives that push forward the university's efforts to stay engaged and productive in global dialogues.

The University of Saskatchewan in the World

USask in the World is directory of all the university's international relationships, classified as one of five types: global partnerships, stay opportunities, networks, visits, and projects. The directory is currently home to 344 relationships with groups such as post-secondary institutes, hospitals, and non-profits.



International Partnership Specialists

The International Office staffs International Partnership Specialists to assist with all aspects of establishing and developing a partnership or agreement. These positions have helped ease this process for all USask staff or faculty.

International Networks and Partnerships 17

Association for the Advancement of Sustainability in Higher Education (AASHE)

The Association for the Advancement of Sustainability in Higher Education (AASHE) is an international association of post-secondary institutions working to empower faculty, administrators, staff, and students to be effective change agents and drivers of sustainability innovation. It works with and for higher education to ensure that our world's future leaders are motivated and equipped to solve sustainability challenges. AASHE also oversees the Sustainability Tracking, Assessment, and Rating System (STARS), which USask submits a full report to every 2-3 years.

Sustainable Development Solutions Network (SDSN)

The Sustainable Development Solutions Network (SDSN) is an international non-profit created to promote integrated approaches to implement the SDGs and the Paris Agreement on Climate Change through education, research, policy analysis, and global cooperation.

Sustainable Education Research Institute (SERI) and Policy Network (SEPN)

The Sustainability Education Research Institute (SERI) is a centre within the College of Education established in 2012 to be a collaborative, innovative, and internationally-linked institute that houses faculty, postdoctoral fellows, graduate students, staff, and other partners conducting research on environment and sustainability in relation to education. The Sustainability Education Policy Network (SEPN) is an internationally recognized network of researchers and organizations based at the USask College of Education helping to advance sustainability in education policy and practice.

Saskatchewan Waste Reduction Council (SWRC) 12 17

The Saskatchewan Waste Reduction Council is dedicated to helping the people of Saskatchewan reduce waste. It is a non-governmental organization that leads in addressing the underlying causes of waste by identifying opportunities, creating connections, and promoting solutions for a waste-free Saskatchewan. The university acts as a sponsoring member of the Council and maintains two seats on its Board of Directors.

Saskatchewan Regional Centre for Expertise on Education for Sustainable Development 17

RCE Saskatchewan is a voluntary network of organizations who are committed to achieving a United Nations University designated Regional Centre of Expertise (RCE) on Education for Sustainable Development (ESD). Each of the 150+ RCEs around the world is a network of individuals, organizations and experts who are committed to using education as a tool for building a sustainable future.

In 2022/23, USask was recognized with 4 awards at the SK RCE's annual recognition event in Prince Albert. Initiatives awarded at this event are marked in this report with the symbol at right.



COMMITMENT 5:

CATALYZE SOCIAL CHANGE

USask continues to push for social change by promoting, engaging, and supporting shared knowledges, expertise, and experiences.

Actively Listen to All Voices

USask's ensures that the voices in our learning and research environments are grounded in principles of equity, diversity, and inclusion. Projects of note in 22/23 are:

Culturally-Relevant Planting

2 10 11 16

The university continues to expand the amount of culturally-relevant plant species growing on campus. The College of Law's Medicine Garden (managed by the Indigenous Law Centre) is home to species such as sweetgrass, sage, wild mint, strawberry, and bergamot, while the Gordon Oakes Red Bear Student Centre recently added tobacco to its summer planters. This tobacco is currently being dried by the Indigenous Student Union in preparation of being able to ceremonially offer it to elders for the spiritual work they do on campus.



McEown Community Garden

2 10 11 16

The McEown Community Garden is an excellent example of the university's dedication to listening to and addressing the needs and concerns of the campus community. Initially started by a collective of students living in the McEown Park residences and formalized in 2015, the Garden is the largest and longest-standing community garden on campus. Each summer, the garden currently serves anywhere from 50-100 gardeners living in the residences at McEown Park, College Park, and Grad House.

USSU Sustainability Committee

4 9

The University of Saskatchewan Students' Union (USSU) Sustainability Committee works each year to help the USSU progress as a leader in sustainable practices while actively contributing to the sustainable growth of our community. It is comprised of two executive members, four student council members, four student members-at-large, and two non-voting staff members from the USSU and the Office of Sustainability.

Each year, the Committee oversees a fund of \$10-15K dedicated to helping students achieve sustainability projects, initiatives, and events.

Leverage Networks for Action

The many networks and partnerships between USask and the private sector, public sector, not-for-profits, and civil society here and abroad help to harness actions and opportunities for scalable social, political, and technological sustainability solutions. Examples include:

Memorandums of Understanding

Reconciliatory Memorandums of Understanding

16 17

USask has signed several memorandums of understanding (MOUs) with Indigenous groups to further develop upon the calls for reconciliation. These include:

- Office of the Treaty Commissioner (with the Office of the Vice President, Indigenous Engagement)(2020)
- Prince Albert Grand Council (2019)
- Saskatoon Tribal Council (2019)
- USask and the Métis Nation, Saskatchewan (MN-S) (2019)
- Wanuskewin Heritage Park Authority (2023)
- Saskatchewan Indian Institute of Technologies (SIIT) (2014)
- University of Manitoba (2016)

Meewasin Memorandum of Understanding

16 17

In 2020, USask and Meewasin signed an MOU to increase strategic collaboration efforts on research, education and outreach projects. Solidifying the relationship and having a shared vision and plan on a variety of touchpoints continues to serve both organizations well.

City of Saskatoon Memorandum of Understanding

16 17

In 2018, the City of Saskatoon and the University of Saskatchewan signed a [memorandum of understanding](#) to explore collaborations that will address issues related to urban planning, land development, reconciliation, transit, research collaborations, and much more. This MOU is still in action today, with university researchers connecting directly with the City and surrounding region through Research Junction and other avenues to advance sustainability.

APPENDIX A:

2022/2023 USASK GREENHOUSE GAS EMISSIONS INVENTORY

Each year the university publishes an inventory of its contributions to global GHG emissions.

The university's overall 2023 GHG emissions decreased by 2% from last year, continuing the trend of reducing GHG emissions to achieve a 14% GHG reduction from 2010 baseline levels.

A colder winter in 2022/23 required more natural gas at USask's heating plant, slightly increasing GHG emissions from on-campus stationary emission sources. While the total natural gas consumption has increased since 2010, the weather-normalized natural gas use intensity per square metre of the USask campus area reduced by 7%. The building space has grown by 21% since 2010.

Our electrical consumption on campus returned this year to pre-COVID-19 levels. SaskPower is on track with its electrical grid decarbonization trend that showed reduced grid emissions intensity. This has helped USask benefit from fewer Scope 2 emissions despite the return to the pre-COVID-19 average.

The lifted travel ban and increased in-person class attendance on campus doubled USask's Scope 3 emissions compared to last year; however, both of these categories remain lower than the 2010 baseline level. It will be important for staff, faculty, and administrators to consider their air travel going forward to ensure our Scope 3 emissions remain at reasonable levels. The Strategy has committed to exploring opportunities to offset travel emissions to help address these concerns.

The university's photovoltaic solar arrays generated 37,300 kWh of electricity, avoiding 21 tonnes CO₂e if purchased from the provincial electrical grid.

Total 2022/2023 GHG Emissions:

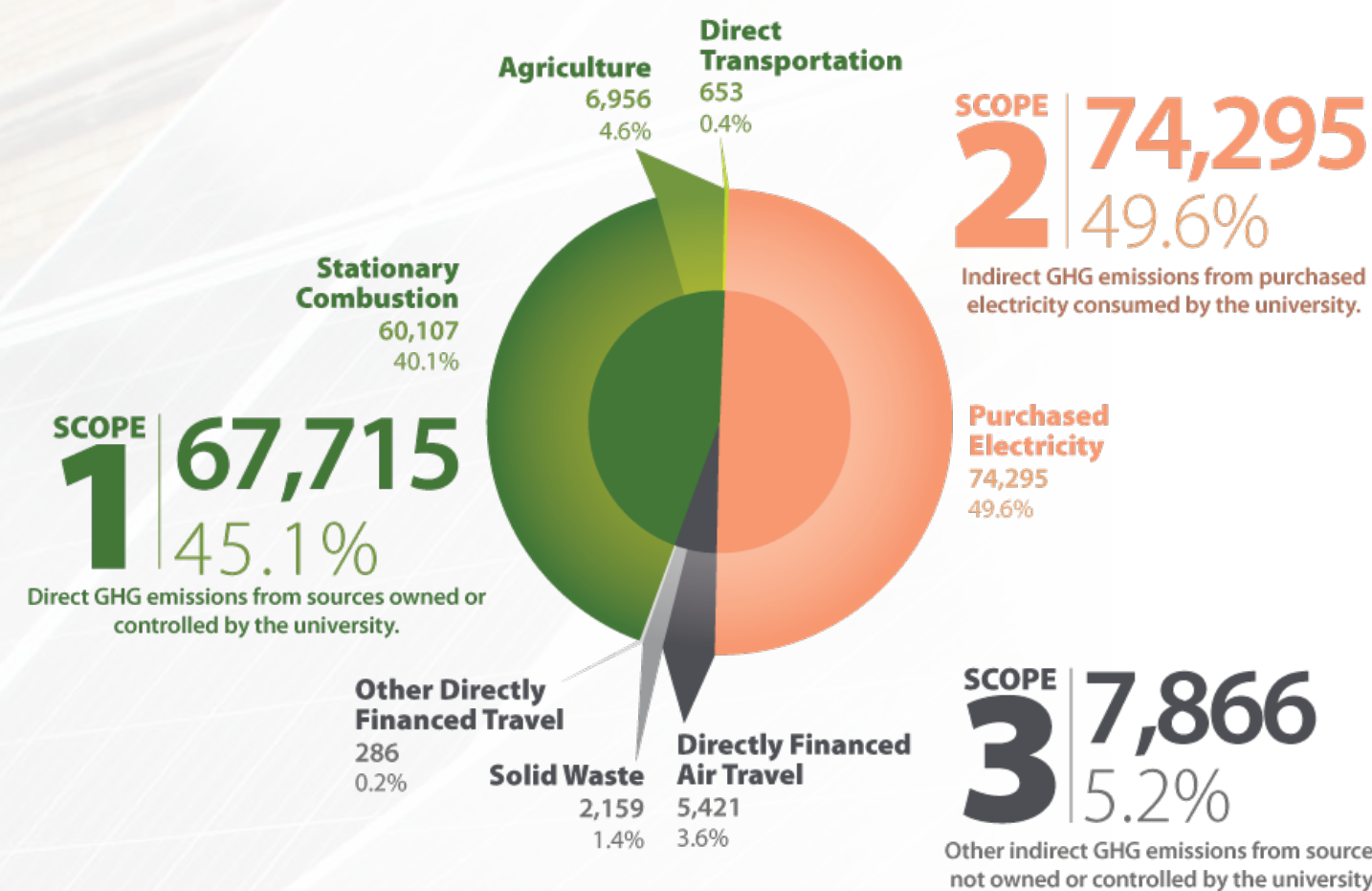
149,876

MT CO₂e

↓2%
from 2021/2022

↓14%
from 2010 baseline

USask 2022/2023 GHG Emissions By Scope (MT CO₂e)



	GHG Emissions (MT CO ₂ e)	Percentage of Total 22/23 Emissions
Scope 1	67,715	45.2%
Stationary Combustion	60,107	40.1%
Agricultural Operations	6,956	4.6%
Fleet	653	0.4%
Scope 2	74,295	49.6%
Electricity	74,295	49.6%
Scope 3	7,866	5.2%
Directly Financed Air Travel	5,421	3.6%
Solid Waste	2,159	1.4%
Other Directly Financed Travel	286	0.2%

USask GHG Emissions Over Time

