Skidmore College
Campus Sustainability Plan

Combined Annual Report

Fiscal Year 2021 and Fiscal Year 2022

Submitted by the Campus Sustainability Subcommittee of the

Institutional Policy and Planning Committee

November 2022 (Updated March 2023)

<u>Campus Sustainability Subcommittee Members</u>

Apple Alvarez '24, Student Government Association Sustainability Commission
Beth Brucker-Kane, Associate Director, Donor Engagement and Stewardship
Megan Buchanan, Associate Athletic Director
Darren Drabek, Associate Director of Admissions
Grace Geurin '24, Secretary, Environmental Action Club
Jen Natyzak, Assistant Director of Sustainability Programs
Dan Rodecker, Director of Facilities
Tarah Rowse, Director of Sustainability Programs and Assessment, Chair
Rik Scarce, Professor, Sociology
Carol Schnitzer, Director of Purchasing
Mark Youndt, Professor, Management/Business, Director of Sustainability for Academic Affairs
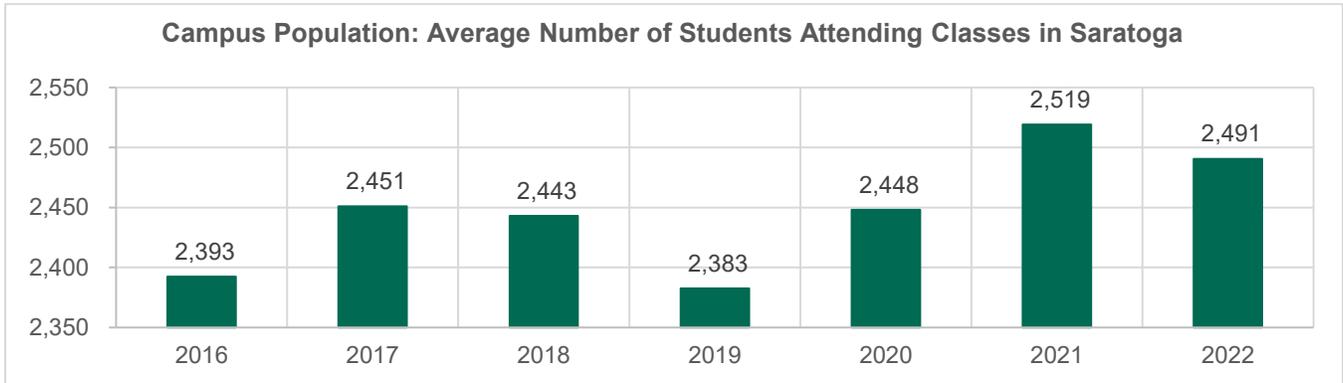
Contents

Report Overview

Skidmore's commitment to sustainability is grounded in the three pillars of environmental responsibility, social equity, and economic viability. The College recognizes limits to growth and aims to adopt practices that protect the environment and improve quality of life now and in the future. The [2015-2025 Campus Sustainability Plan](#) (CSP) established goals in five key focus areas: energy, food, waste, lands and grounds, and engagement. When the CSP was adopted, the Campus Sustainability Subcommittee (CSS) committed to a mid-point review that would reconvene working groups to evaluate the goals, metrics, and progress. However, given the demands of responding to the COVID-19 pandemic and other strategic considerations, the CSS instead completed a [2020 Mid-Point Report](#) that covered the first five years of plan progress. For this current report, data for two fiscal years[1] (2021 and 2022) was collected and presented with historical data for the past seven years (in most cases) to align with the CSP timeframe. The report intends to present a high-level snapshot of key sustainability metrics in relationship to the CSP goals, as well as a brief overview of key initiatives that took place during the reporting period. The report is not meant to chronicle the full scope of sustainability activities taking place on campus. Additionally, during data collection and analysis, metrics and methodologies were assessed in relation to best practices resulting in changes to focus area results. Specific tracking and methodology adjustments are documented in this report.

---

[1] The fiscal year is from June 1 to May 31 (e.g., fiscal year 2022 is from June 1, 2021 to May 31, 2022).

Campus Statistics

In addition to examining aggregate data and trends, progress is considered in relationship to the campus student population and total building space. The population of students attending classes in Saratoga in the year 2000 baseline was 2,173. This report period shows the largest student population in recent history (2,519 in 2021 and 2,491 in 2022). In fiscal year 2021, space changes (addition of the Annex and the Center for Integrated Sciences North Wing and subtraction of Harder Hall) increased (by approximately 70,000 square feet) the total square feet of building space to 1,970,000 square feet. There was no change in building space in fiscal year 2022.

Campus Population: Average Number of Students Attending Classes in Saratoga

Year	Students
2016	2,393
2017	2,451
2018	2,443
2019	2,383
2020	2,448
2021	2,519
2022	2,491

Focus Area 1: Energy

Skidmore's energy goals focus on increasing renewable energy use, decreasing emissions, and reducing energy intensity. A major sustainability accomplishment that will play an important role in managing building energy consumption is the Sustainable Construction and Renovation Policy adopted in March 2021. Also completed during the report period was the Center for Integrated Sciences (CIS), developed to Leadership in Energy and Environmental Design (LEED) standards. One other project was the New York Higher Education Large Scale Renewable Energy Consortium, which sought to purchase electricity from new, large-scale renewable energy projects through power purchase agreements. The effort is no longer active, except for a small offshoot project that provides potential for Skidmore to obtain around 8% additional renewable electricity. Campus energy consumption from primary sources (electricity and natural gas) show a slight increase in the past seven years of the CSP reporting period. In comparison to 2016 consumption, 2022 electricity use (25,740,112 kWh) was 9% higher and natural gas use (101,449 MMBtu) was 11% higher.

Campus Energy Consumption

Natural Gas (MMBtu) / Electricity (kWh), 2016–2022
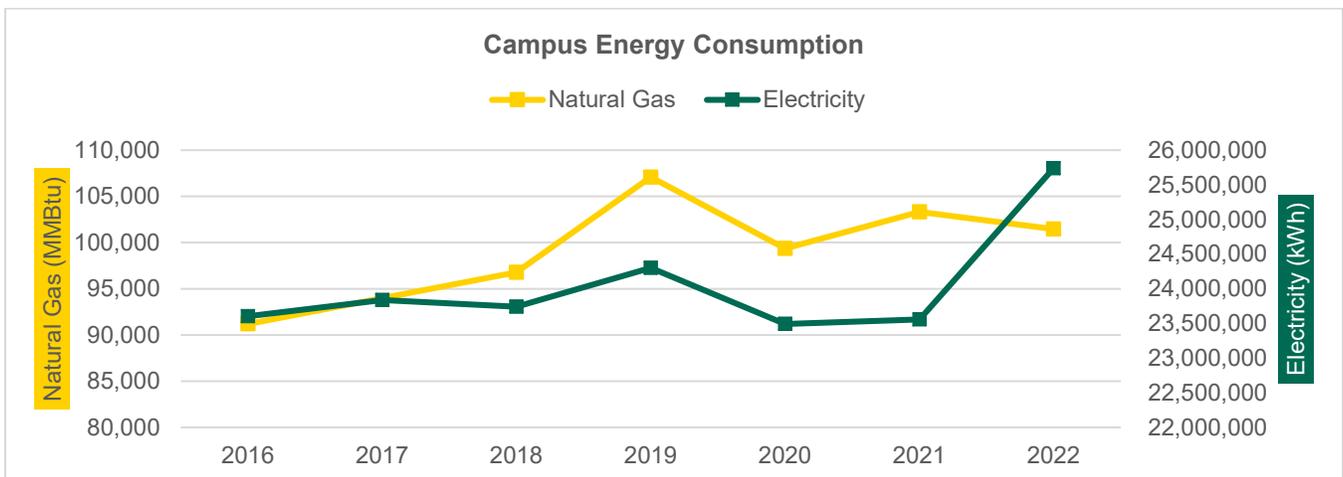
Goal 1: 60% of our electricity from renewable sources

Beginning with this report, we are adjusting how Skidmore counts renewable energy sources to conform with best practices in environmental reporting. Clean energy accounting standards direct that organizations only claim credit for actively procured renewable electricity for which Renewable Energy Certificates (RECs) were owned, retained, and retired each year. In 2022, 16% of Skidmore's electricity came from such sources. In the past, Skidmore counted all forms of renewable electricity (including renewable energy from the grid as well as renewables for which we did not retain the RECs). The effect of this change in accounting is a reduction in our renewable electricity percent claims.

Renewable Electricity %
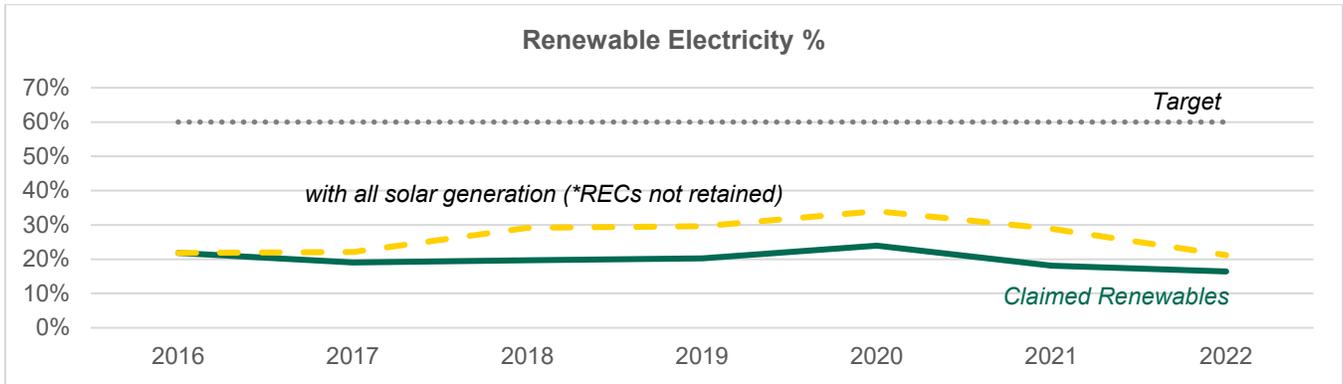
Skidmore partnered in the development of two renewable energy projects that came online in 2014—the Denton Road solar array and the Chittenden Falls small-hydro facility. These projects are both Power Purchasing Agreements for which Skidmore owns the RECs. Collectively, the two projects generate approximately 5,000,000 kWh each year, which corresponds to about 20% of Skidmore's electricity consumption on average. While our calendar year 2016 and 2022 solar RECs were retained and retired, RECs from calendar years 2017-2021 were not retained. In addition, from 2018 to 2021, Skidmore purchased Green-e® certified RECs equivalent to 10% of our consumption.

Electricity Consumption (kWh)
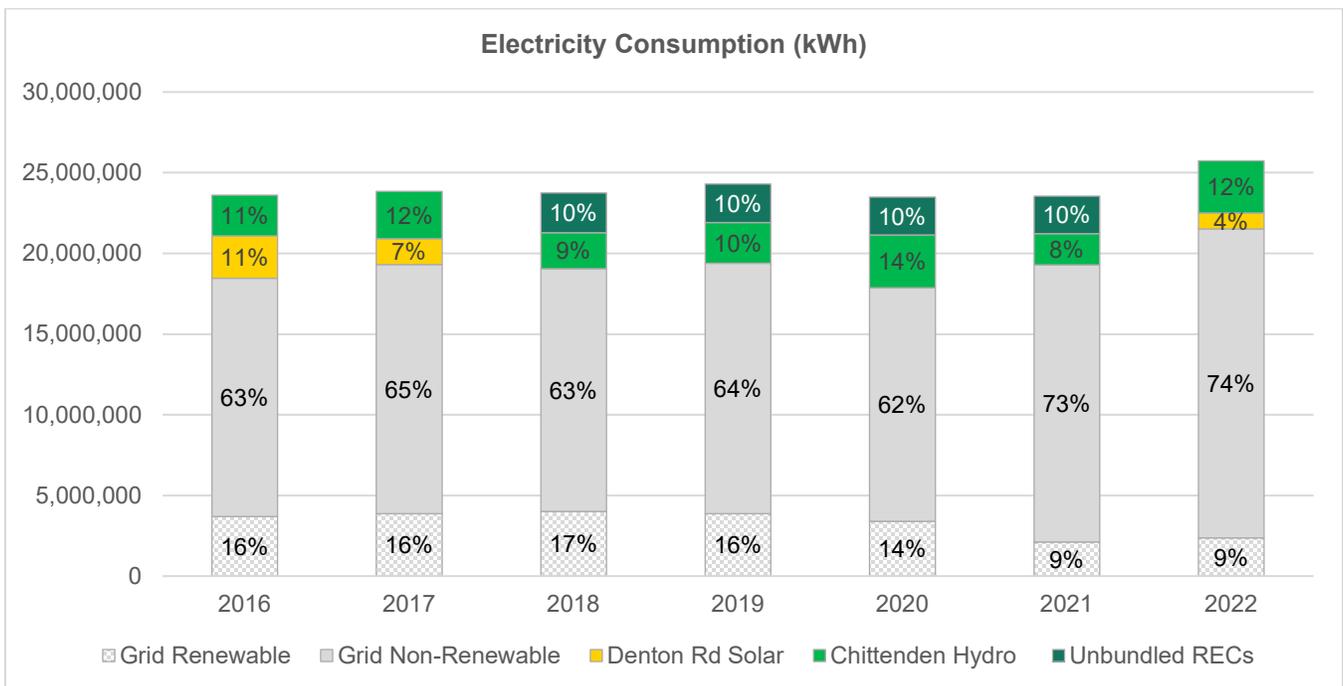
Goal 2: 60% of our heating and cooling from renewable sources

When the geothermal-tied CIS North Wing came online in fall of 2020, Skidmore saw a small increase in the percent of building space that was heated and cooled from renewable sources. In 2021 and 2022, 37% of the total campus square footage was heated and cooled with geothermal. With the CIS East Wing becoming operational in fiscal year 2023, 40% of the campus building space will use geothermal.

Total Campus SF and Geothermal SF

	2016	2017	2018	2019	2020	2021	2022
Geothermal %	36%	36%	35%	35%	35%	37%	37%

■ Natural Gas SF   ■ Geothermal SF
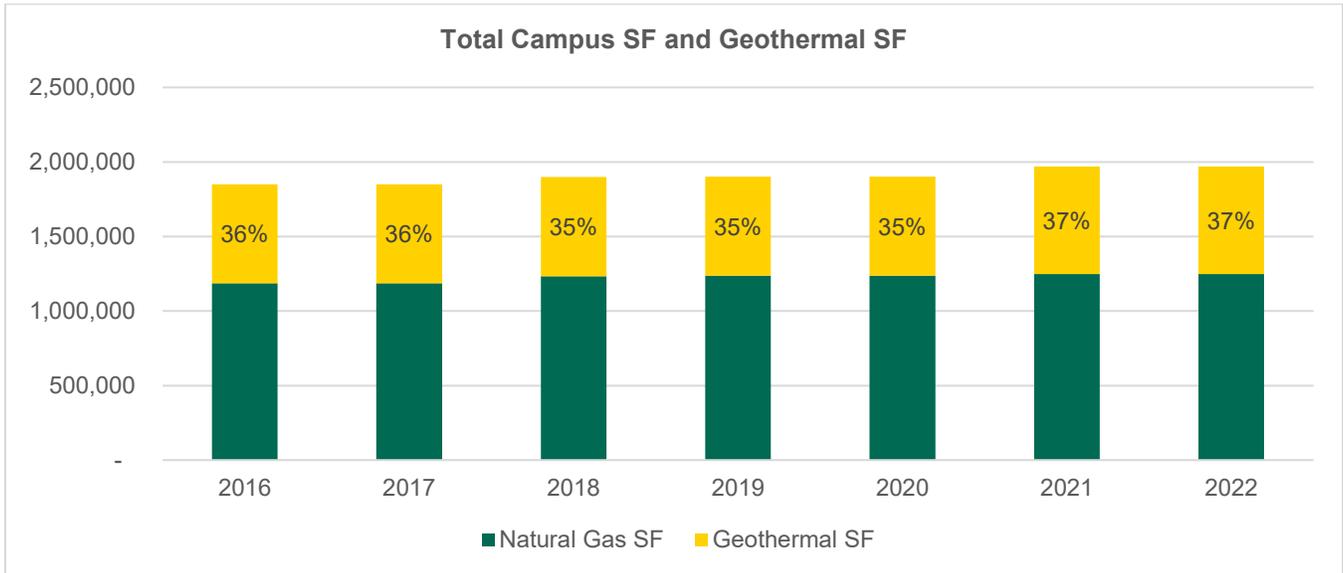
Goal 3: 75% reduction in our scope 1 and 2 GHG emissions

As determined by the 2019 Greenhouse Gas Inventory, Skidmore has reduced Scope 1 and 2 GHG emissions by 52% from the 2000 baseline. Both Scope 1 (direct emissions produced through campus activities) and Scope 2 (indirect purchased electricity) emissions have decreased due primarily to institutional renewable energy (solar, hydro and geothermal) and energy efficiency projects. Skidmore conducts a GHG inventory every three years, with the 2022 inventory scheduled for completion in fiscal year 2023.

Greenhouse Gas Emissions

MTCDE — years: 2000, 2009, 2013, 2016, 2019

■ Scope 1   ■ Scope 2   ······ 2025 Target
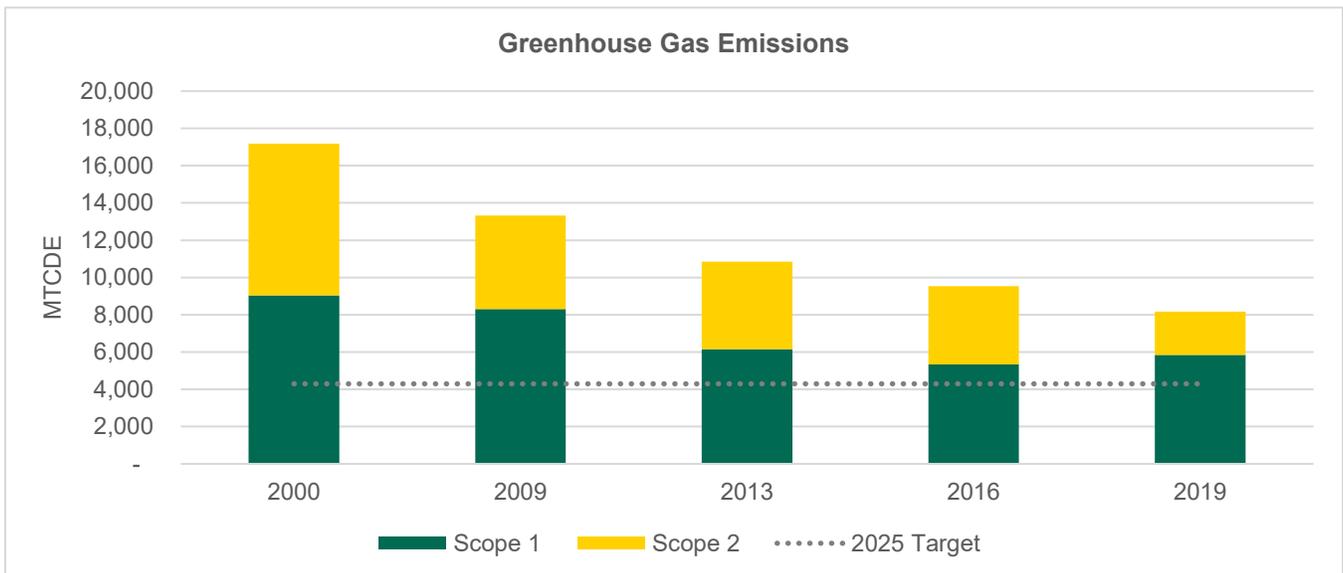
Goal 4: 60% reduction in energy use for heating and cooling per student and square foot

In 2022, based only on natural gas consumption, the campus had a 47% reduction in energy use for heating and cooling per student and a 5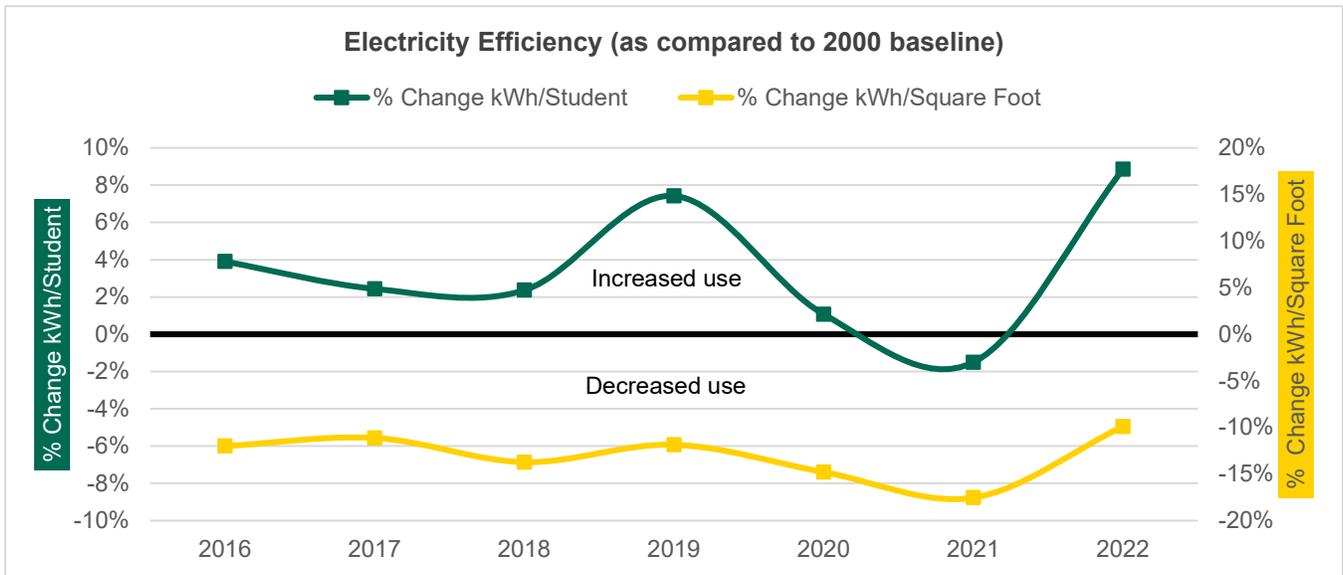6% reduction per square foot, as compared to the 2000 baseline. This metric does not take in to account electricity consumption used for the geothermal systems or the minimal consumption from propane and oil systems on campus.

Natural Gas Efficiency (as compared to 2000 baseline)

— % Reduction MMBTU/Student — % Reduction MMBTU/Sq. Ft.

Target
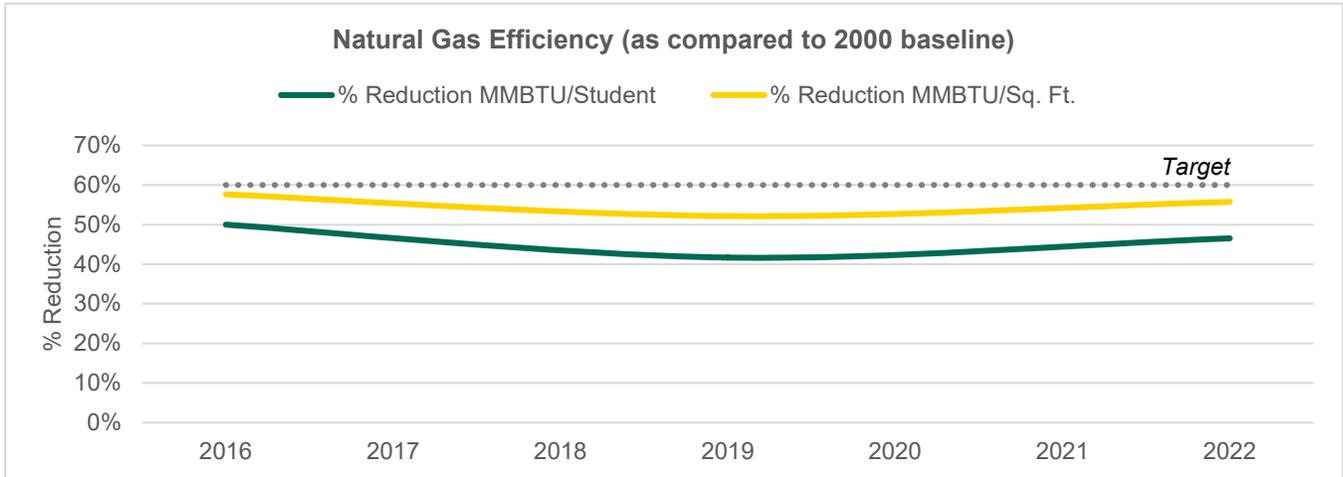
Goal 5: Maintain electricity use per student and square foot

Over the past seven years, electricity use per student has shown an increased use (high of 9% in 2022), whereas electricity use per square foot has shown a decreased use (high of -18% in 2021).

Electricity Efficiency (as compared to 2000 baseline)

— % Change kWh/Student — % Change kWh/Square Foot

Increased use

Decreased use

Current and Upcoming

The upcoming Health, Wellness, Fitness, and Athletics facility will be LEED-Silver minimum designed and certified and is likely to support CSP energy-focused goals, although the benefit of this project will not be seen during the CSP timeframe. Managerial, operational, and strategic energy initiatives that could be considered by the institution include sub-metering, development of a green/energy revolving fund, energy and sustainability management capacity, a climate neutrality commitment and climate action planning, and the development of a large-scale renewable energy project.

Water

While Skidmore does not have a water-focused goal in the CSP, data is available (2010 to 2014 gap) and tracking and reporting is recommended. In the past seven years, water consumption on campus showed an upward trend from 2015-2019 and varied from 10% to 44% higher than 2015 levels.

Annual Water Consumption (Gallons)
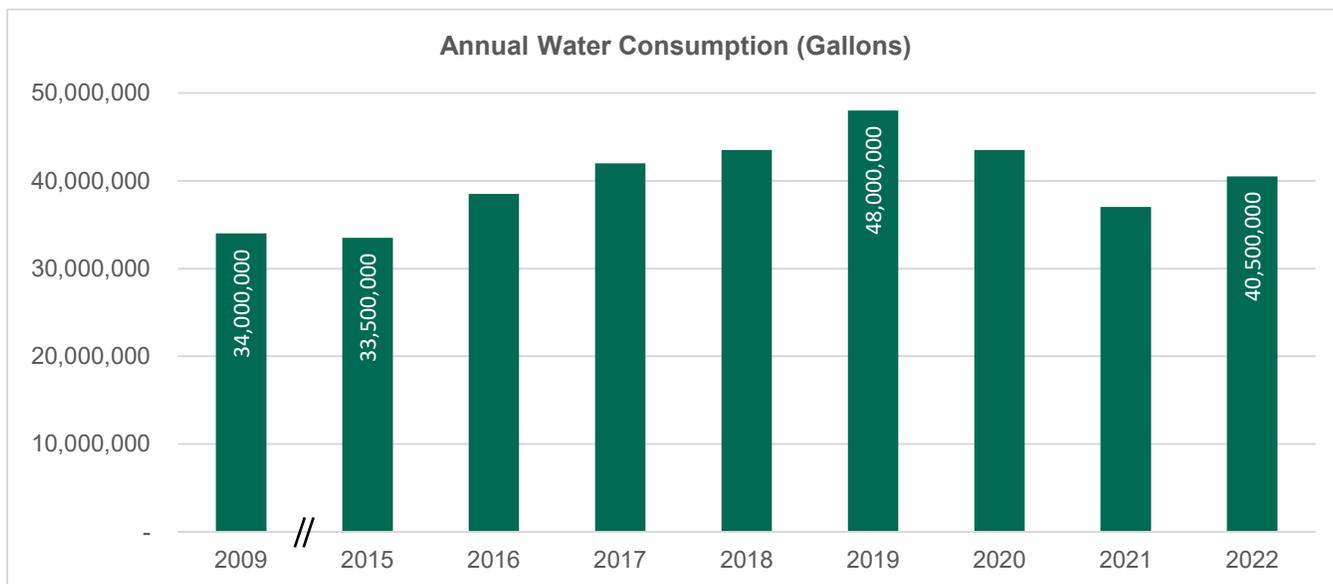
Focus Area 2: Food

Food production, processing, and distribution methods are integrally connected to both ecosystem health and human health. Skidmore aims to advance sustainable food purchasing in order to reduce GHG emissions, promote fresh and healthy food, and to support local, sustainable, and fair agricultural systems. Previously, a sustainable food inventory was conducted by recording and coding all food purchased for the Murray-Aikins Dining Hall in four months of the year (April, July, September, and October). Each product that meets at least one of the five sustainable food criteria is recorded as a sustainable food purchase. The following criteria broadly define sustainable food: 1) local and community-based, 2) fair, 3) ecologically sound, 4) humane, and 5) conscientious (see the Campus Sustainability Plan for full definitions).

Goal: 25% sustainable food in dining services

The 2015 to 2019 inventories were conducted for the calendar year, while the 2021 and 2022 inventories were conducted for the fiscal year. For fiscal year 2021, approximately $407,000 worth of food was cataloged, with a sustainable food percent of just over 5%. Availability of paper invoices and shifts in Dining Services accounting procedures resulted in the data shortfall. No further analysis will be presented for 2021 given the insufficient data.

The inventory methodology for fiscal year 2022 was changed to include all Dining Services food purchases (i.e., Murray-Aikins Dining Hall, Dining Services Catering, The Spa, Burgess Café, Atrium Café). In 2022, approximately $1,171,000 of food was purchased from 46 vendors, with a sustainable food percent of 8%. The total food expenditures and sustainable food percent for 2022 is comparable to 2016, when all food data was mistakenly included in the inventory. Overall, the purchase of sustainable food at Skidmore has remained relatively consistent over the years.
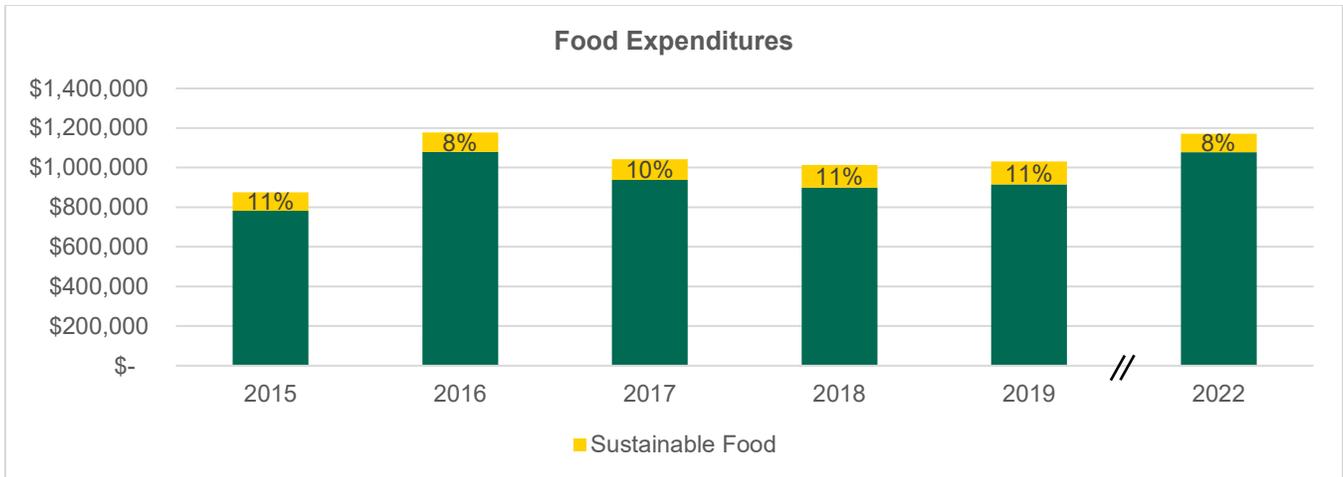
Food Expenditures

Sustainable Food in 2022

In 2022, grocery items account for almost one-third of all food expenditures, while dairy items and tea/coffee account for more than half of all sustainable food.

Category	Cost $	% of Cost	Sustainable Cost $	% of Sustainable Cost
grocery	361,292	31%	10,505	11%
poultry	166,728	14%	0	0%
produce	146,222	12%	14,436	15%
meat	133,941	11%	430	0%
dairy	119,508	10%	33,718	36%
beverages	93,756	8%	3,591	4%
fish	47,761	4%	4,034	4%
baked goods	45,030	4%	8,672	9%
tea/coffee	41,621	4%	18,060	19%
eggs	15,433	1%	0	0%
Grand Total	**1,171,291**	**100%**	**93,446**	**100%**

The sustainable food share by vendor in 2022:

- ***Vendors at 10% or more:*** Sysco (25%), Stewart's (22%), Antonucci Foods (15%), and Yerba Mate Co (14%),
- ***Vendors at 2-9%:*** Formisano Bakery (5%), Hill & Markes (5%), Heidelberg Bread (4%), Black River Produce (4%), and the Skidmore Community Garden (2%),
- ***Vendors at 1% or less:*** Saratoga Apple, Hillcrest Foods, Adventure in Food, Pleasant Valley Farm, Pitney Meadows Community Farm, B.J. Farms, Battenkill Valley Creamery, Gorilla Bars Inc, BJs, and Nestle.

Current and Upcoming

Dining Services continues to consider sustainable food options with current and new vendors, as feasible. Key sustainability rating systems, such as the Sustainability Tracking Assessment and Rating System (STARS), do not credit local food when determining sustainable food percentages. Rather, they emphasize third-party certified food (e.g., Fair Trade Organization, Certified Organic, B-Corps) and plant-based food. Skidmore is currently reconsidering the inventory methodology, frequency, and goal.
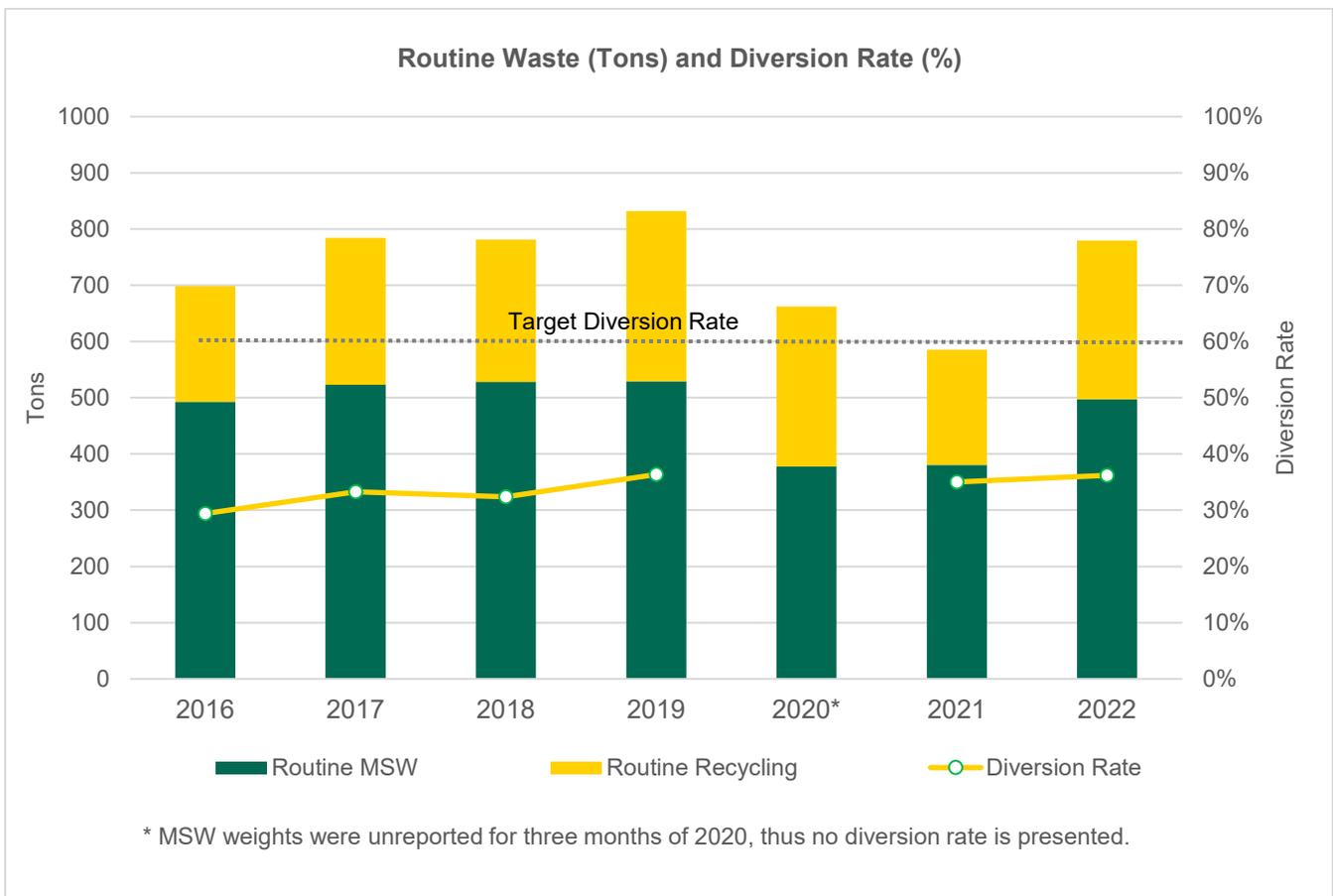
Focus Area 3: Waste

Skidmore's waste goals focus on waste diversion (keeping materials out of the landfill).

- While signature waste diversion programs such as FeedMore and Give+Go operated at a reduced capacity during the report period, they remain priority programs.
- Advancements were made in zero-waste efforts, including the development of a [Zero-Waste Guide](#).
- Student composting in residence halls was successfully piloted.

Goal 1: 60% diversion rate in routine operations

Skidmore tracks institutional waste diversion by measuring (via weight) all routine waste streams and calculating the proportion of materials diverted from the landfill. Diverted materials may be reused, repurposed, or recycled. Since 2016, Skidmore's diversion rate has increased slightly in the past seven years, with a rate of 35% in 2021 and 36% in 2022.

Routine Waste (Tons) and Diversion Rate (%)

* MSW weights were unreported for three months of 2020, thus no diversion rate is presented.

Zero-sort recycling is the largest source of diverted material (64% in 2021 and 73% in 2022). Dining hall composting and Facilities scrap metal collection (included for the first time in the current report period) are the next two largest sources of recycled materials, ranging from 8-15% of the diverted materials depending on the source and year. Remaining sources of diverted materials are student composting in the apartments, fryer oil recycling, Give+Go, FeedMore food donations, electronic waste, and light bulb recycling.

Diversion Materials by Source (Tons)

Year	Zero-Sort	
2022	181	
2021	149	
2020	237	
2019	207	
2018	209	
2017	218	
2016	199	

Legend: ■ Zero-Sort ■ Dining Hall Composting ■ Scrap Metal ■ Give+Go ■ Student Composting ■ Fryer Oil ■ Other Recycling*

*Other Recycling includes food donations, electronic waste, and light bulb recycling
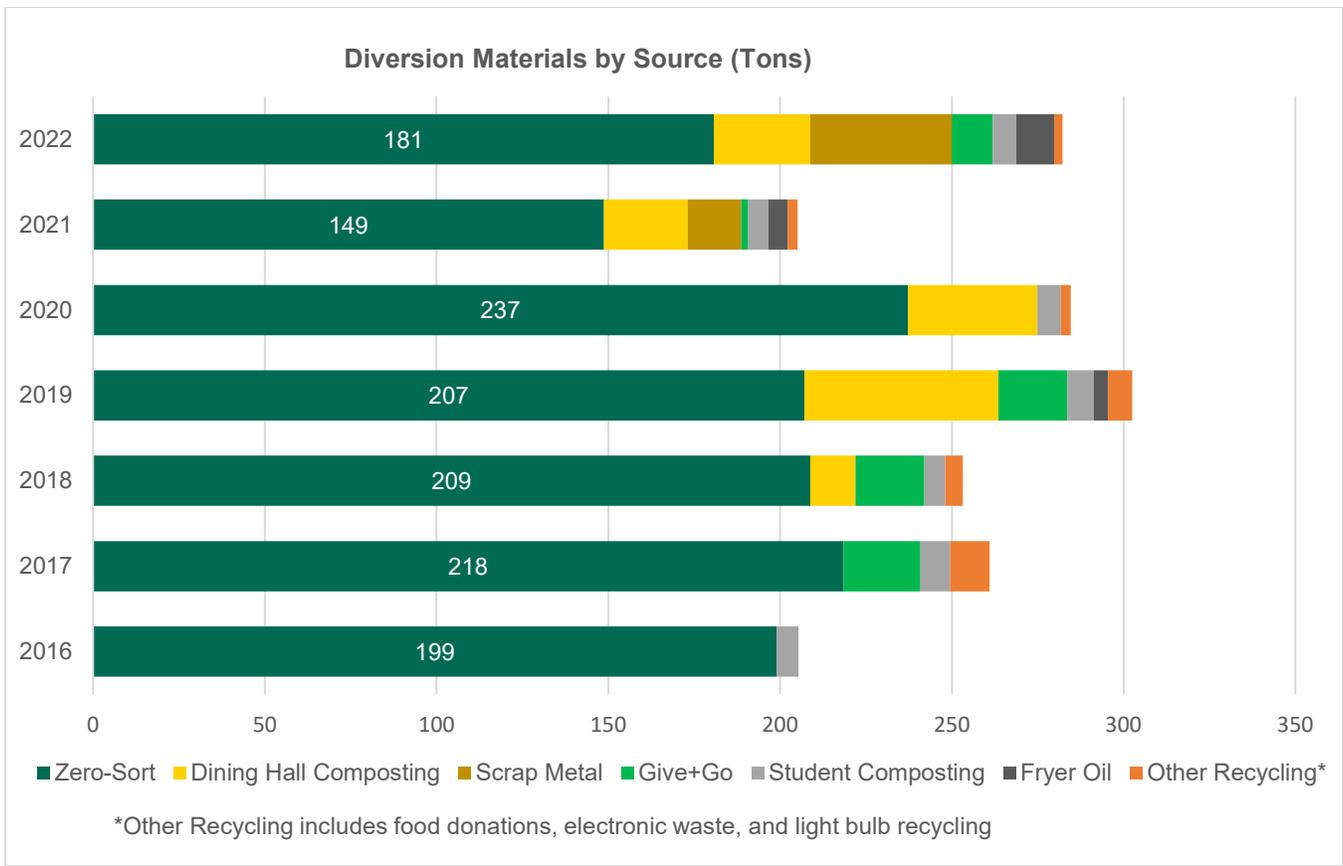
Non-Food Biodegradable Waste

Skidmore manages and diverts, though does not specifically track, vegetative wastes (such as clippings, tree trimmings, and leaves) on a regular basis and for special projects via on-site composting and responsible contractor disposal. Manure from the Van Lennep Riding Center is collected on a weekly basis and transported by Casella to a local Fort Edward facility (Real Bark Mulch) for composting. Approximately 598 tons of manure were composted in 2021, with an additional 618 tons composted in 2022. Manure is not included in our routine diversion rate given its large quantity and high weight by volume.

Goal 2: 50% diversion rate for special projects

To date, the Center for Integrated Sciences (CIS) construction project is the only special project that has been tracked for waste diversion. The project has produced 1,125 tons of material since 2018 with on overall diversion rate of 35%. Temporary special project waste dumpsters are placed on-site for construction, demolition, and renovation projects at Skidmore, as needed. Approximately 74 tons of special project waste was landfilled in 2021, with an additional 80 tons landfilled in 2022.

Current and Upcoming

Priority projects for the coming year are post-consumer food scraps collection at the Dining Hall, student composting expansion to include residence halls, promotion of the ReuseMore reusable container program at The Spa, and implementation of large scale zero-waste outdoor events. The CSS may want to consider adopting a waste reduction goal and examine ways to increase recycling and diversion during move-out and special projects.

Focus Area 4: Lands and Grounds

The COVID-19 pandemic and 2021 Campus Master Planning has reaffirmed the value and importance of Skidmore's North Woods to the College and Saratoga Springs community. The North Woods and adjacent parcels continue to be heavily used by faculty for labs and research and by community members for recreation.

Goal: Create a comprehensive lands management plan for our lands and grounds

While specific actions in support of this goal were not undertaken, the College and Sustainability team completed the efforts and initiatives below.

- Supported an ongoing partnership with the Sarah B. Foulke Friendship Trails, a planned network of trails in Northern Saratoga County. The trail system Master Plan Report was published in July 2021.
- A student intern, Kieran Yater '22, championed a collaboration with SGA and Grounds to approve sites for on-campus pollinator-friendly, low-mow sites, established Summer '22. Such efforts complement the vision of the Campus Master Plan.
- The College maintained annual membership in Tree Campus USA.
- Our student North Woods Stewards:
  - Installed chicken wire on slick North Woods boardwalks to improve trail safety.
  - Built stairs to the Northwoods Apartment North Woods trail access point.
  - Published the North Woods Story Map, capturing the natural, indigenous, and 19th Century history of the land we now call Skidmore's North Woods.
  - Overhauled signage in the North Woods trails.
  - Researched and published a proposal to develop an accessible trail on the Spirit Trail to increase accessibility for wheel-chair users and visually impaired individuals.
- An Environmental Studies and Sciences capstone from Grace Howard '22, Brook Heston '22, and Justine Bowling '22 explored the potential to use Skidmore lands for an educational maple sugaring operation.
- The Anthropology and Environmental Studies and Sciences Departments were awarded Capital Budget funding to construct a parking area on Clinton Rd for safe access to the land north-west of North Woods.

Campus Master Planning

The 2022 Campus Master Plan report, which engaged much of Skidmore's community and Saratoga community members, underscored the value of trees, smaller plants, and biodiversity of the campus landscape. Priority concerns included a continued focus on preservation of the North Woods, an examination of parking policies and practices to avoid expansion of impervious parking surfaces, infrastructure improvements in anticipation of an increase in electric vehicle use, and development of low mow zones in areas such as the apartments, Annex, and Wilson Chapel. A priority within the plan is the implementation of natural and strategic rainwater management systems, increased native plantings, integrated pest management, and sustainable landscapes to improve the quality, diversity, and resiliency of campus landscapes and edges.

Current and Upcoming

To advance both the Campus Sustainability Plan and the Campus Master Plan, Skidmore may want to consider the development of a Sustainable Landscape Management Plan and associated policies.

Focus Area 5: Engagement

The Engagement focus area highlights the goal to increase community understanding and awareness of sustainability knowledge and action. A major accomplishment during the reporting period was the completion of Skidmore's second Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking Assessment and Rating System (STARS) report. Completing a STARS report is a significant community-wide effort and Skidmore earned a STARS Gold Rating in December 2021. The Sustainability Office employed 14 paid staff for fiscal year 2021 and 20 staff for fiscal year 2022 and coordinated more than 50 total hands-on, student-led volunteer opportunities each year with the Community Garden, North Woods, and Compost programs.

Goal: Make sustainability an essential feature of Skidmore's identity and a value that is integrated into all aspects of the College

The Sustainability Office's most notable engagement efforts in the past two years are noted below.

- Launched EcoMore, a volunteer program focused on peer-to-peer education.
- Launched the Sustainable Workplace Operations Program, to engage faculty and staff in sustainability practices in their offices and workspaces.
- Published a digital Green Guide to educate the College community on a variety of topics such as water, energy, and outdoor recreation.
- Published an Environmental Justice Study Guide including podcasts, literature, documentaries and more to empower visitors to take on a self-guided study of the intersections of environment and human rights, racism, health, and wellbeing.
- Maintained membership as a Leader in the Renewing the Energy Vision Campus Challenge.
- Joined the Saratoga Safe Cycling Coalition in August 2021, joining 30 other non-profits and businesses in Saratoga Springs to support the implementation of the City's 2016 Complete Streets Plan.

Campus Master Planning

As members of the Campus Master Planning Working Group, stakeholders from the Sustainability Office and the CSS collaborated to strategically connect the Skidmore community on campus and beyond to envision the College's built campus and grounds through the next decade. This Campus Master Planning process was the most comprehensive engagement around building and sustainability since the launch of the 2015-25 Campus Sustainability Plan, and yielded sustainability themes documented within the 2022 Campus Master Plan Report. Key concepts and insights included: 1) a minimization of the College's environmental footprint by prioritizing renovations over new square footage, as feasible, 2) improved visibility of sustainability efforts, promotion of the campus as a living and learning environment, and interpretive environmental signage to raise awareness and encourage positive sustainability behaviors, 3) opportunities to advance practices surrounding waste management and food waste, 4) improved bike parking both in terms of the installed bike rack and rack locations, and 5) consideration of additional certifications for any/all building projects, in addition to adhering to the 2021 Sustainable Construction and Renovation policy.

Current and Upcoming

Advancing sustainability in the curriculum through a sustainable living and learning community, course designations, course development grants, and professional development opportunities are efforts to consider. Developing and conducting a student sustainability literacy assessment, as well as campus and community sustainability focus groups and surveys could help assess perceptions, relationships, and strategic direction. Skidmore should also consider increasing awareness of sustainability through targeted communications, interpretive signage, demonstration projects, and art installations.

Conclusion

Skidmore has a strong history of sustainability action, from renewable energy projects to student-led programs. The Campus Sustainability Plan was developed to guide continued progress in reducing the College's ecological footprint, enhancing the student educational experience, and engaging the entire Skidmore community on sustainability initiatives. Skidmore's progress toward the goals in the past seven years has been challenged by resource limitations, the COVID-19 pandemic, and institutional changes. CSS and key sustainability stakeholders are committed to collaboratively exploring technologies, policies, mechanisms, and structures that will allow for progress toward sustainability goals and metrics, as well as a holistic integration of sustainability in to institutional decision-making.
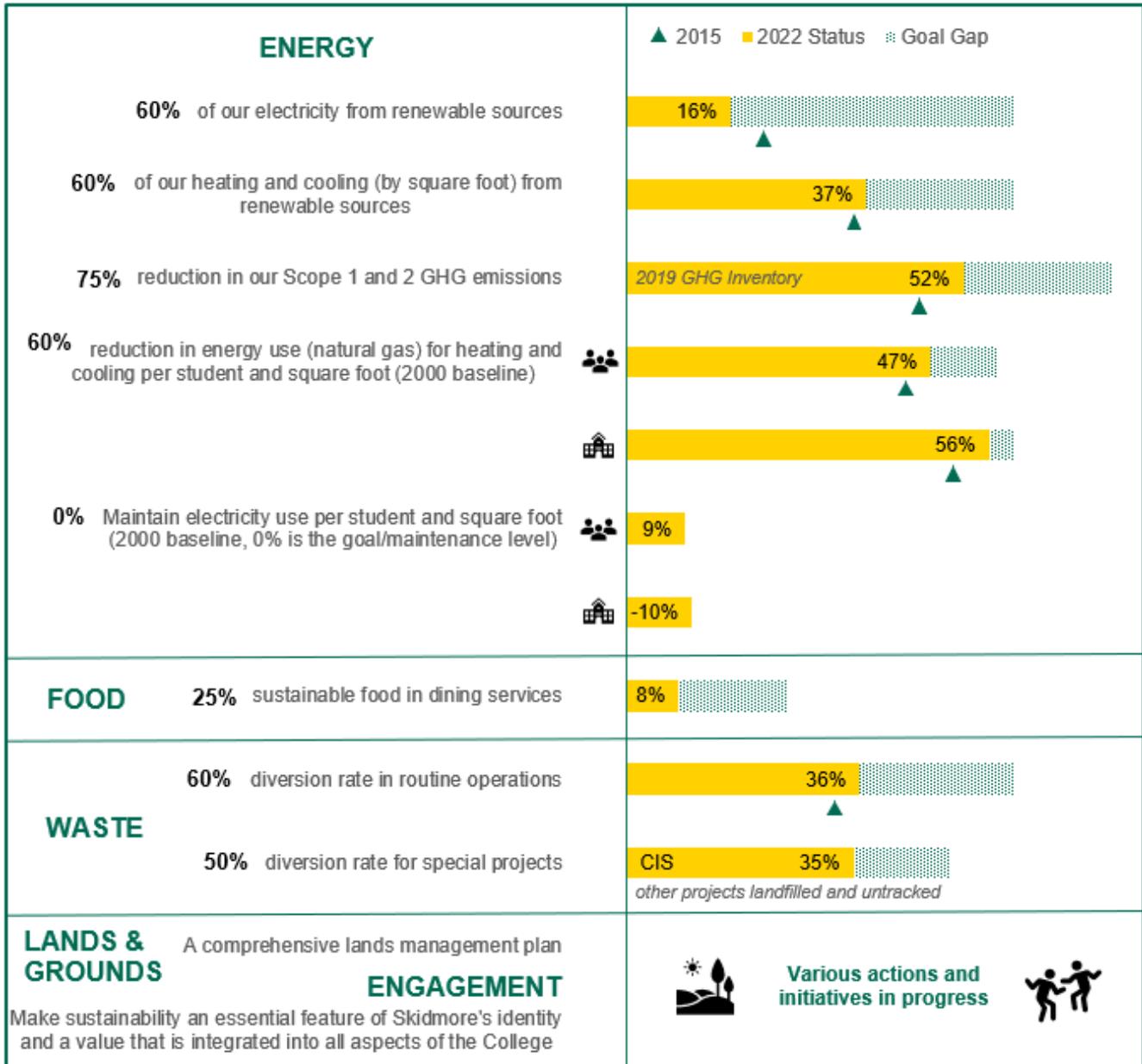
Skidmore Campus Sustainabilty Plan (2015-2025) By The Numbers