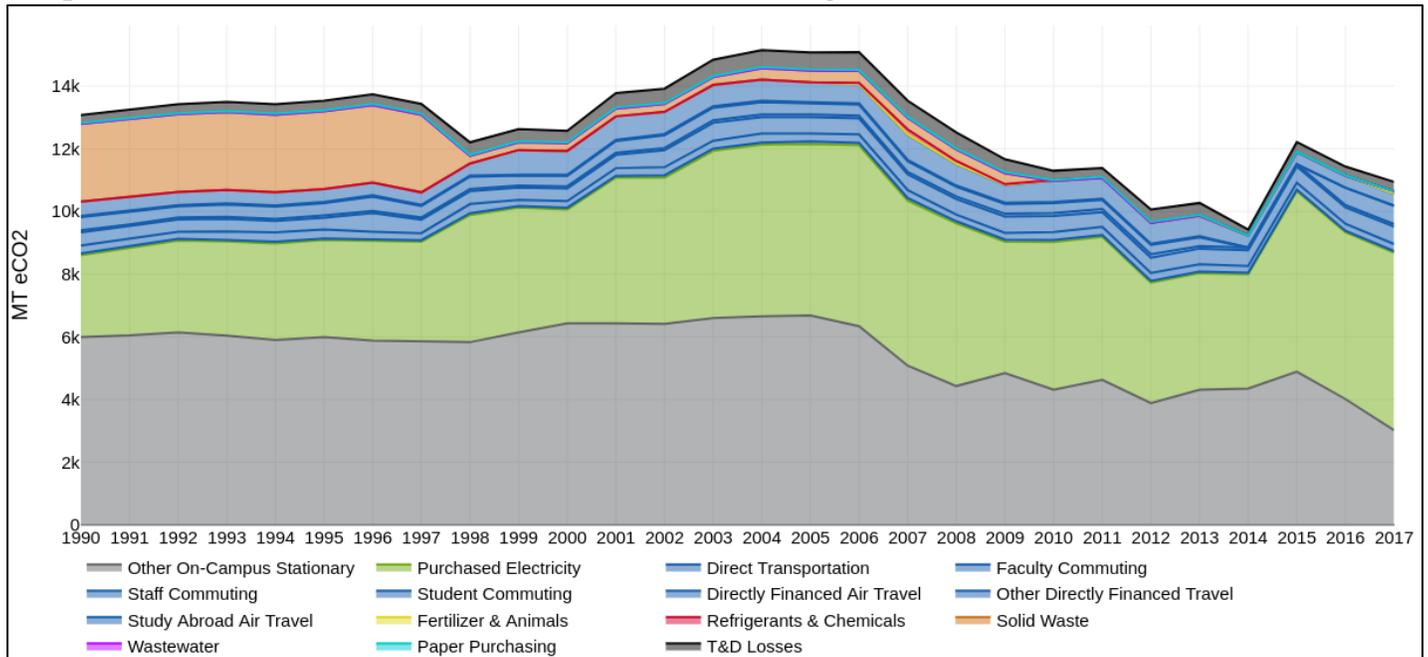




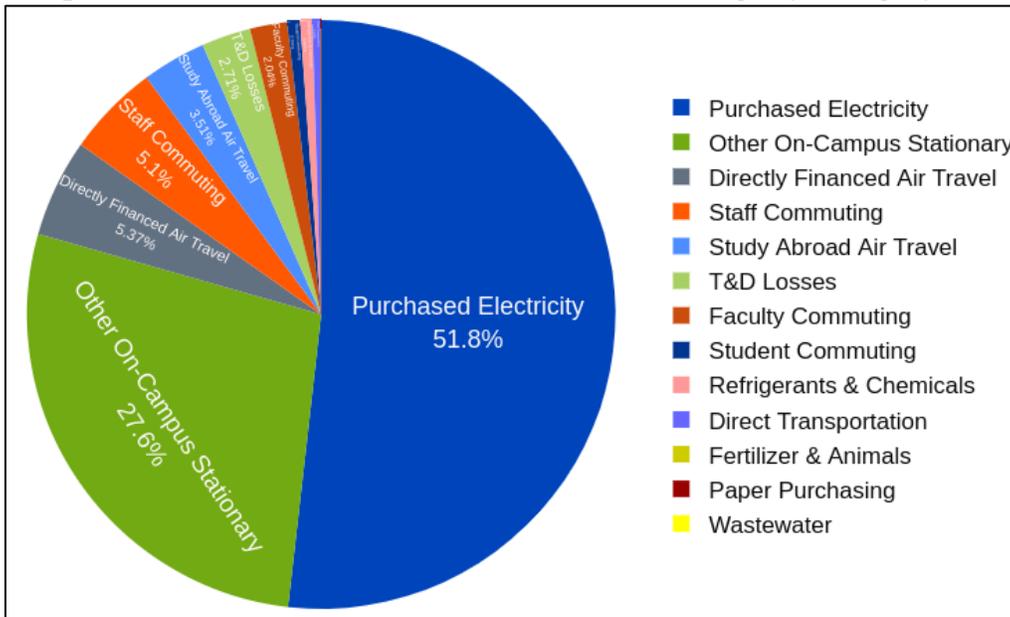
2016-2017 Ursinus College Greenhouse Gas Inventory

In 2007, Ursinus College signed the American College and University Presidents' Climate Commitment. That commitment spurred action that we are still seeing today as Ursinus College agreed to make its best effort to become carbon neutral by 2060, perform regular inventorying of carbon dioxide, and to educate the community about global climate instability.¹ In 2017, the Office of Sustainability (OS) began the process of collecting data from 2013, which was the last time a greenhouse gas inventory was performed. After careful research of many files, the Office of Sustainability is happy to put forth this latest greenhouse gas inventory, which covers the time frame of July 1, 2016- June 30, 2017. During this period, it is estimated that Ursinus College emitted 10,942.39 metric tons of carbon dioxide equivalents (MT eCO₂). Further overview of data collection methods, interpretation of the data, and implications are explored below and on the backside of this sheet.

Graph 1: Carbon Dioxide Emission Trends at Ursinus College since 1990



Graph 2: Sources of Carbon Dioxide at Ursinus College by Category





Methods and Data Limitations

OS utilized the SIMAP data platform, which is operated by the Sustainability Institute at the University of New Hampshire. The decision to switch from a long standing and trusted carbon calculator tool produced by the University of New Hampshire and Clean Air-Cool Planet was made as the University of New Hampshire no longer updated the Microsoft Excel driven carbon calculator. Instead, the University of New Hampshire, in an effort to modernize, created the SIMAP tool.²

To calculate the college’s carbon emissions, SIMAP takes into account past and current data points pertaining to purchased electricity, on campus stationary sources of emissions, transportation, agriculture, solid waste, refrigeration/chemicals, and number of students, staff, and faculty. Data for the inventory was collected from campus offices and services providers, including: the Facilities Services Department, the Business Office, the Center for International Programs, the Office of Institutional Research and Effectiveness, and Sustainable Waste Solutions.

Table 1: Greenhouse Gas emissions types, or “scopes”, by definition and examples.³

	Definition	On Campus Examples
Scope 1	Emissions directly resulting from sources owned or controlled by the institution.	<ul style="list-style-type: none"> - On-Campus Stationary Sources Emissions from all on-campus fuel combustion (non-vehicular) - Direct Transportation Sources - emissions from all fuel used in the institution’s fleet - Refrigerants - Agricultural and fertilizer use
Scope 2	Indirect emissions from sources that are neither owned nor controlled by the institution, and which are directly linked to on-campus energy consumption	<ul style="list-style-type: none"> - Purchased electricity
Scope 3	All other indirect emissions associated with the activities of the institution, but produced by sources not owned or controlled by the institution	<ul style="list-style-type: none"> - Air travel paid for by the institution (business travel) - Travel influenced or encouraged by the institution (study abroad travel, daily commuting) - Solid waste - Food and paper

While the greenhouse gas inventory covers the major aspects of greenhouse gas emissions, it does not cover every source of carbon dioxide at this time. Emissions associated with transporting purchased food items to campus were not included with the 2016-2017 inventory. There is a potential to have this information included with future reports.

Implications and the Future

Although travel, solid waste, refrigerants, and fertilizer are all important parts of an institution’s climate footprint, at Ursinus College, the bulk of the carbon dioxide emissions are occurring from our energy use. That energy use comes in two forms: Scope 1 sources, which is mainly fuel combustion for our heating and cooling needs, and Scope 2 sources, which is our purchased electricity.

In October of 2018, the United Nations Intergovernmental Panel on Climate Change issued a stark report summarizing that urgent efforts are needed in the next twelve years to keep the global climate from rising higher than 1.5C.⁴ In order for the Ursinus College community to decrease our carbon dioxide emissions, there needs to be a concerted, multi-departmental effort to implement both sustainable energy upgrades to the campus infrastructure and an investment in renewable energy and carbon offsets.

¹ K. Shannon Spencer, “Ursinus College Climate & Sustainability Action Plan,” 2013.

² Visit <https://unhsimap.org> for more information on SIMAP

³ K. Shannon Spencer, “Ursinus College FY 2010-2013 Greenhouse Gas Inventory Report,” 2013, 3.

⁴ United Nations Intergovernmental Panel on Climate Change, “Special Report: Global Warming of 1.5 °C,” 2018