



Vanderbilt University Inventory of Greenhouse Gas Emissions 2012

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Produced collaboratively by the Sustainability and Environmental Management Office, Plant Operations, Campus Planning and Construction and the Division of Public Affairs.

The Sustainability and Environmental Management Office (SEMO) is a collaborative venture between Vanderbilt Environmental Health and Safety and Vanderbilt University's Plant Operations. SEMO's mission is to initiate, promote, coordinate, evaluate and encourage environmental management and sustainability initiatives that improve Vanderbilt's impact on the community and environment.

Plant Operations provides facilities support for all construction, renovation and routine maintenance of University Central space and facilities; housekeeping services for approximately 5.8 million square feet of academic, administrative, residential, and recreational space; grounds care for 330 acres that are a registered arboretum; turf care for athletic fields; and utilities for University Central and the Medical Center.

Campus Planning and Construction (CPC) aims to present a physical environment that meets the programmatic requirements of its customer base while visually expressing the quality to which Vanderbilt University aspires. Functions closely related to the delivery of new facilities are performed by the Facilities Information Services unit within CPC. This group addresses the inventory and management of Vanderbilt's construction document library, GIS mapping and documentation of all utilities and tracking of floor plans for the Space Inventory and Accounting processes.

The Division of Public Affairs serves as the institution-wide hub for communications, marketing and public policy initiatives. Whether developing unique relationships with and communicating to Vanderbilt's vast array of external and internal constituencies, promoting government and community initiatives or creating a broader, deeper and more complete understanding of Vanderbilt, each and every activity of the division supports the University's academic missions of teaching, research, service and patient care.

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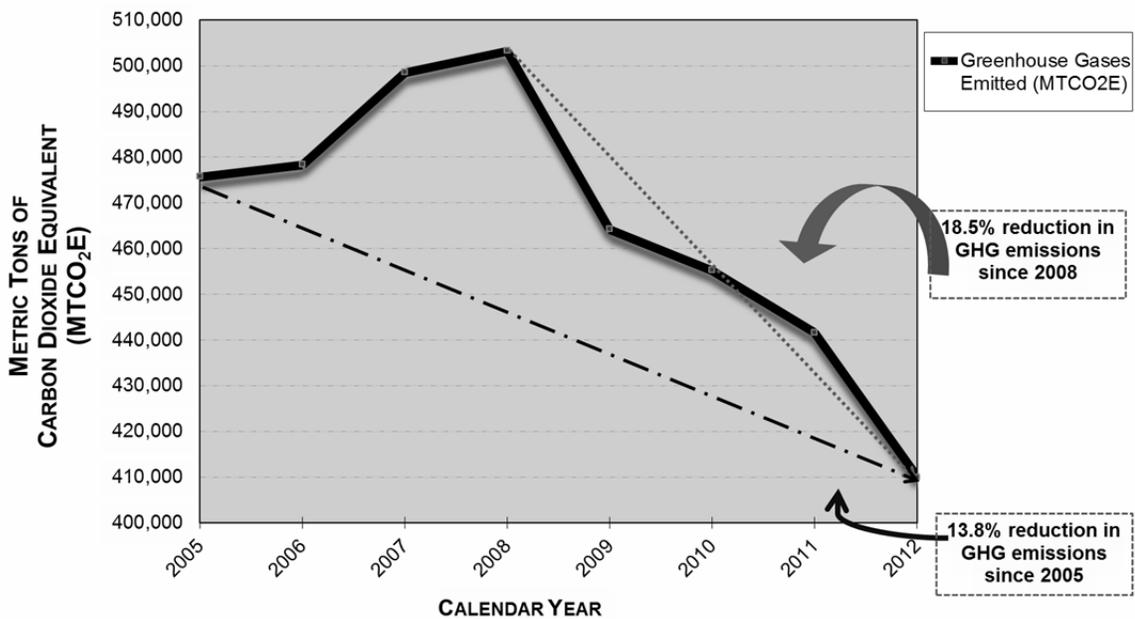
Cover photo provided by Robert Wheaton.

EXECUTIVE SUMMARY

This Greenhouse Gas (GHG) emissions inventory is intended to portray Vanderbilt's current carbon footprint as accurately as possible and to provide trending information to show progress in GHG emissions reductions from 2005-2012. This GHG inventory was developed by Vanderbilt's Sustainability and Environmental Management Office (SEMO).

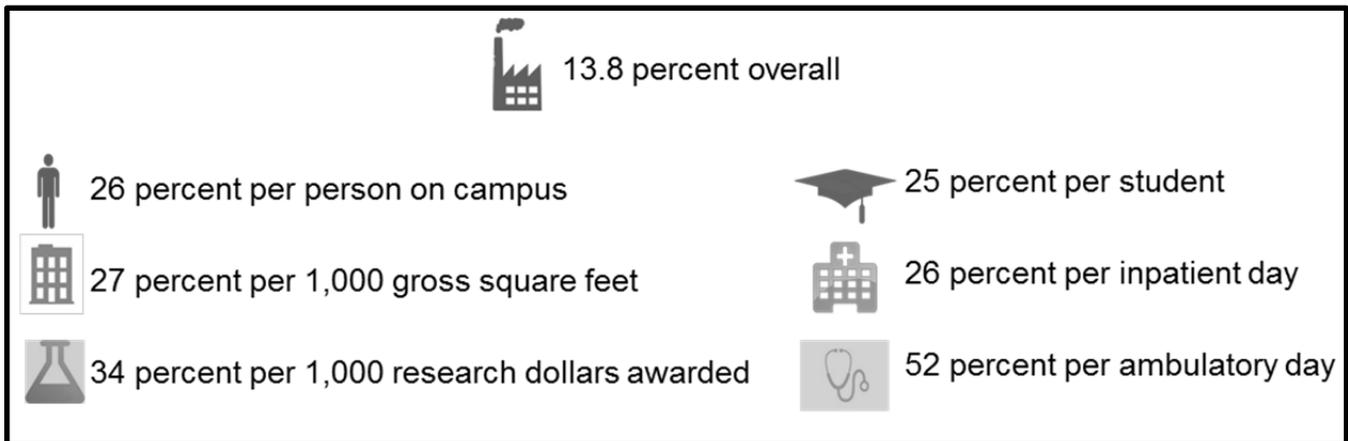
This report, a supplement to previous reports¹, establishes Vanderbilt's GHG emissions for calendar year 2012 so that the Vanderbilt community can better understand its own unique impact on the environment and determine the most effective improvement strategies to implement in the future. Trending data for 2005 through 2012 is provided in Appendix A.

Findings



Total Vanderbilt GHG Emissions, Calendar Years 2005-2012.

Between 2005 and 2012, Vanderbilt University's GHG emissions have decreased by:



¹ Vanderbilt University's Inventory of Greenhouse Gas Emissions 2005-2012 reports are available at <http://www.vanderbilt.edu/sustainvu/>.

- ☛ VU's total GHG emissions for calendar year 2012 was 410,006 MTCO₂E, down 13.8 percent from 2005 and 18.5 percent from the all-time high reached in 2008².
- ☛ Vanderbilt University's EPA-Required GHG emissions for calendar year 2012 was 147,536 MCO₂E, as reported to the EPA on March 20, 2013.
- ☛ As of 2012, GHG emissions from Academic and Research Areas have decreased by 15.1 percent since 2005, and GHG emissions from Patient Care Areas have decreased by 11.7 percent since 2005³.
- ☛ 94 percent of GHG emissions in 2012 came from purchased electricity, coal and natural gas use at the campus co-generation power plant and faculty and staff commuting⁴.

Future Plans

This inventory provides campus stakeholders with a consistent means of comparing annual GHG emissions and sufficiently detailed information to make informed decisions to determine reduction strategies. Annual emissions inventories will be conducted in the future to measure progress, which will continue to be made publicly available on the SustainVU [website](#)⁵.

In Fall 2013, Vanderbilt University began the conversion of its co-generation power plant from coal and gas fuel to all-natural gas. This will continue to meet the power needs of the University and Medical Center, but in a more environmentally sustainable way. This conversion will increase operational efficiency, reduce greenhouse gas emissions, air pollutant emissions and noise pollution, and eliminate associated fuel use and emissions from trucking coal to the power plant⁶.

² Additional information about the University's total GHG emissions for 2005-2012 can be found in Table B.1 in the appendices.

³ Additional information about GHG emissions from Academic and Research Areas and Patient Care Areas can be found in Tables A.1, A.2 and A.3 in the appendices.

⁴ Additional information about the sources of GHG emissions can be found in Figure B.1 in the appendices.

⁵ www.vanderbilt.edu/sustainvu

⁶ More information regarding the VU Power Plant Conversion can be found at <http://www.vanderbilt.edu/sustainvu/2013/04/vu-power-plant-to-convert-to-all-natural-gas/>.