

“MU recognizes the increasing need for policies and practices that reduce greenhouse gas emissions and has signed the American College and University Presidents’ Climate Commitment with the goal of making the MU campus carbon neutral.”

University of Missouri Sustainability Policy

Additional Strategies and Projects

Transportation

Currently, transportation accounts for less than 10 percent of MU’s overall carbon emissions. As the campus reduces emissions from other sources, transportation will play a larger role in its greenhouse gas profile. The Climate Action Plan recommends increasing nonmotorized transportation by working with the City of Columbia, focusing on a culture of sustainability with student groups, furthering the use of the Telecenter Network and investigating offsets.

Education

The University recognizes that educating students about sustainability and creating sustainability-literate leaders will have a powerful impact on the future. Therefore, education and outreach are critical components to the Climate Action Plan. Formal education in environmentally related topics, issues and skills occurs across the MU curriculum with relevant coursework offered in at least 40 departments. The Climate Action Plan recommends defining metrics of success related to sustainability education; establishing faculty seminars and furthering cross-disciplinary approaches; and offering additional programs modeled after the environmental studies major and the sustainable agriculture degree program.

Outreach


The Climate Action Plan’s success depends on a number of existing sustainability groups on campus and in the community, including the MU Environmental Affairs and Sustainability Committee, the City of Columbia, student sustainability groups and others working in conjunction with the MU Sustainability Office.

Research

While a comprehensive coordinated research agenda devoted to sustainability does not currently exist at MU, there is indeed significant research going on across the campus, including Sustainable Energy, Energy Economics and Policy, and Energy-related Commercialization & Business Development.

Other Sustainability Measures

Since 2003, the Environmental Affairs and Sustainability Committee has been documenting the sustainability efforts on campus. In 2009 the Sustainability Task Force issued a report that outlined a campus sustainability plan. While the initial Climate Action Plan focuses primarily on greenhouse gas emissions reduction, MU would like this plan to evolve to a more comprehensive sustainability plan including purchasing, water, solid waste and recycling, landscape, and building design and construction.

ENVIRONMENTAL STATEMENT				
 The University of Missouri saved these valuable resources by using 100% recycled paper containing 60% post-consumer waste, processed chlorine free and manufactured with electricity that is offset with Green-e® certified renewable energy:				
TREES	WATER	ENERGY	SOLID WASTE	GREENHOUSE GASES
5 fully grown	2,080 gallons	1 million BTUs	126 pounds	432 pounds of CO ₂

Calculations based on research by Environmental Defense and other members of the Paper Task Force



University of Missouri Campus Facilities

180 General Services Building

Columbia, MO 65211

t: 573.882.3091 — cf.missouri.edu/masterplan/



Climate Action Plan Update

UNIVERSITY OF MISSOURI
MARCH 2011

2011

Links

Find out more about the MU Climate Action Plan

CAMPUS BACKGROUND

1. MU Statement of Values
<http://chancellor.missouri.edu/plansPriorities/values.php>
2. MU Mission
<http://www.missouri.edu/about/mission.php>
3. Campus Master Plan
<http://www.cf.missouri.edu/masterplan/intro/intro.html>
4. Sustainability Policy
<http://sustainability.missouri.edu/about/mission.html>
5. MU School of Natural Resources
<http://www.snr.missouri.edu/>

ENERGY

6. Energy Conservation Projects
http://www.cf.missouri.edu/energy/em_conserve/index.html

EDUCATION AND OUTREACH

7. Environmental Affairs and Sustainability Committee
<http://committees.missouri.edu/environmental-affairs/>
8. Sustainability Office
<http://sustainability.missouri.edu/>
9. Student Sustainability
<http://studentsustainability.missouri.edu/>
10. Research
<http://chancellor.missouri.edu/plansPriorities/energy-researchers/energy-research.php>

REPORT

11. MU Sustainability Task Force Report, January 2009
<http://committees.missouri.edu/environmental-affairs/docs/sustainability%20report-2009.pdf>

Chancellor Deaton’s Commitment

MU Chancellor Brady J. Deaton signed the American College and University Presidents’ Climate Commitment in January 2009.

In doing so, he joined more than 600 presidents and chancellors of colleges and universities in recognizing that global warming is real. By signing, Chancellor Deaton committed the University of Missouri to take the following steps:

1. Develop a comprehensive plan to achieve climate neutrality as soon as possible.
2. Initiate two or more tangible actions to reduce greenhouse gases while the more comprehensive plan is being developed.
3. Make the plan, inventory and progress reports publicly available by providing them to the Association for the Advancement of Sustainability in Higher Education.

Chancellor Deaton’s pledge sent a clear message that MU is committed, financially and philosophically, to a carbon-neutral future. Since the signing, he and the university have completed a number of the required steps, including creating the MU Sustainability Office, hiring a sustainability coordinator and charging the Environmental Affairs Committee to include comprehensive sustainability.

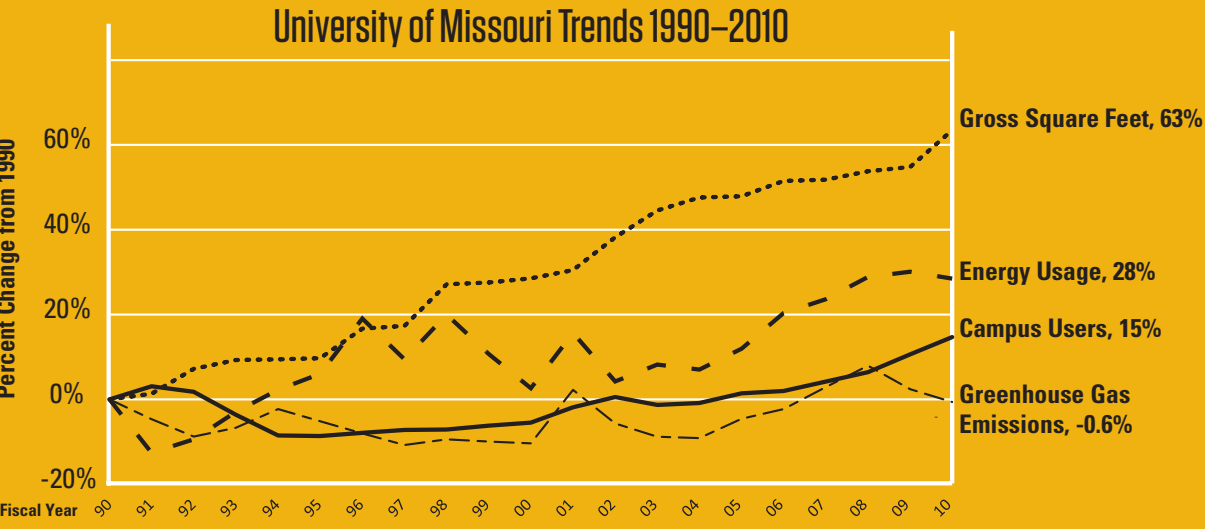
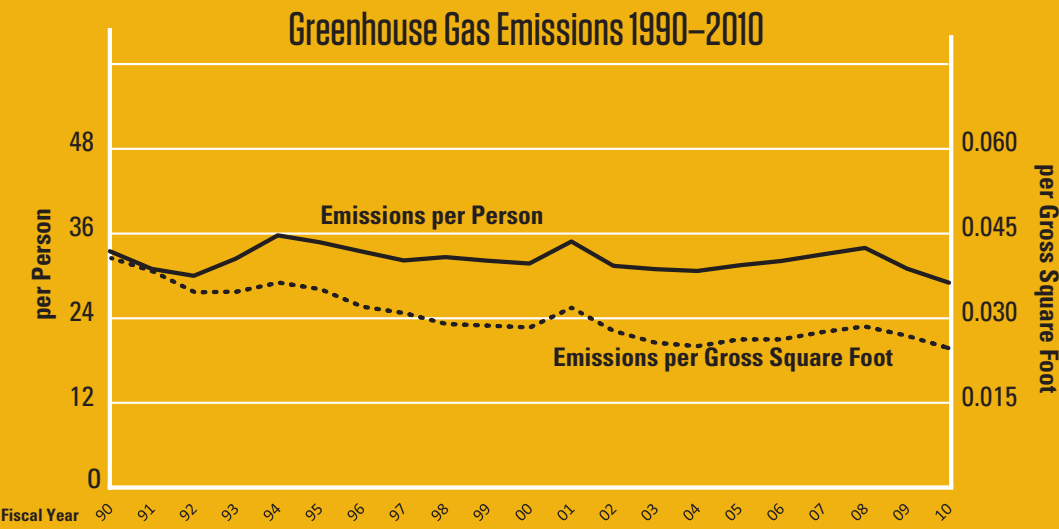


Targets and Goals

MU is committed to becoming carbon neutral and has set a rolling date to achieve that goal. Since the university intends to progress as rapidly as possible, MU will not set that date far into the future; rather, it will review progress at the conclusion of every calendar year and provide a status report to the campus.

In the first phase of the Climate Action Plan, MU by 2015 will reduce carbon emissions by 20 percent from the 2008 emissions baseline. Going forward, MU will have a rolling five-year plan that will be reviewed on an annual basis in conjunction with the Campus Master Plan. Like the Campus Master Plan, the Climate Action Plan will be a working tool used to stimulate dialogue and interaction among the many campus groups that might have direct or indirect interest in the development of the campus as it relates to MU’s environmental, economic and social footprint. The plan will include areas required by the American College and University Presidents’ Climate Commitment: energy, transportation, education, research and financing. It will also include other areas of sustainability — water, site selection, waste management, purchasing, building design and construction, and food.

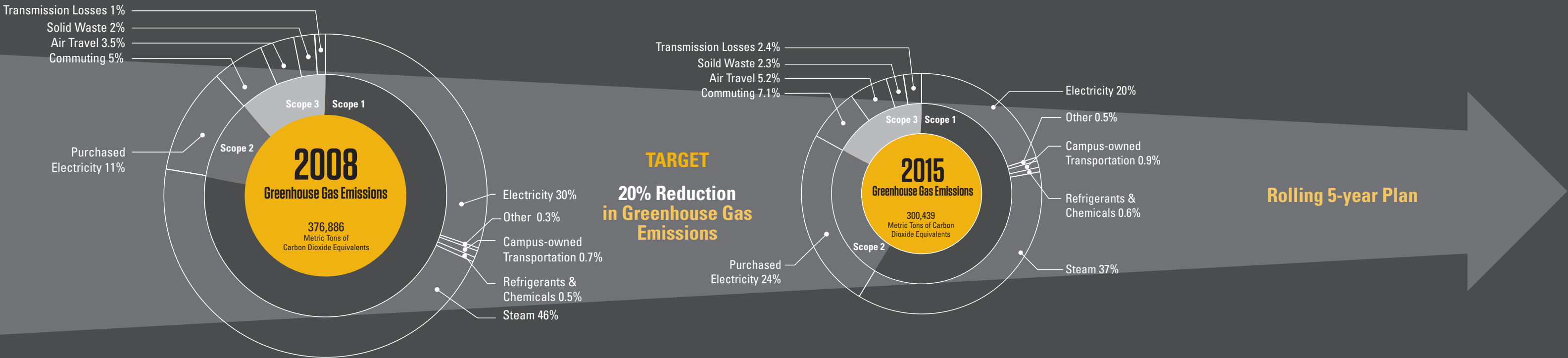
Trends



MU's Campus Facilities–Energy Management has been actively pursuing energy conservation, cost-saving opportunities since the mid-1970s. In 1990, a formal energy conservation program was created and, as a result, campuswide education and general energy use per gross square foot has decreased by 13 percent, and water use per gross square foot has decreased by 61 percent. This is true despite the fact that education and general space has grown by 32 percent during the same period. Energy Management keeps an updated list of energy conservation measures on its website. <http://www.cf.missouri.edu/energy>

University of Missouri Climate Action Plan

In the first phase of the Climate Action Plan, MU by 2015 will reduce greenhouse gas emissions by 20 percent from the 2008 emissions baseline.



- Scope 1**
Greenhouse gases emitted on campus
- Scope 2**
Greenhouse gas emissions from purchased energy
- Scope 3**
All other emissions including waste disposal and non-campus owned transportation

Initial Plan 2008–2015

The first phase of MU's climate action plan targets a 20 percent carbon emission reduction from the 2008 emissions baseline. As of July 2010, the campus already has achieved close to an 8 percent reduction. The targets are based on the following assumptions:

- Fuel Mix & Purchased Power**
Coal use and emissions decrease with increased use of biomass, natural gas, and renewable energy as availability and funds allow.
- Construction and Weather Normalization**
Building energy intensity increases due to renovations and new construction as well as projected hotter summers and cooler winters.
- Infrastructure Upgrades**
Overall energy and emissions decrease due to a multi-year project to upgrade underground utility infrastructure to improve distribution efficiency.

- Energy Conservation**
Decreased energy use due to multiple conservation measures including upgrading mechanical ventilation systems and controls, implementing new lighting technology, installing occupancy sensors, educating building users and installing more Mizzou Dashboards.
- Other Measures**
 - MU will require energy modeling on all projects. New construction will achieve 25 percent improvement, and renovations will achieve 15 percent improvement over code standards.
 - Air-barrier testing will be standard on all projects.
 - MU will conduct a feasibility study of solar hot-water panels at the MU Power Plant.
 - MU will work to optimize space on campus.
 - MU will work toward setting a target date to achieve carbon neutrality.

Rolling Plan

- MU will implement additional renewable-energy technologies.
- Optimizing power plant fuel mix will further decrease emissions.
 - Investing in conservation options with longer paybacks and lower returns on investment will permit the university to implement additional strategies.
 - Continued space optimization and creating "swing space" will allow more aggressive conservation measures.
 - Increased energy-efficiency measures and evaluating building-performance standards will further reduce emissions.
 - MU will continually investigate new technologies as they become available.
 - When economically feasible, MU will increase power production efficiency.
 - Implementing end-user accountability will contribute to reductions.

