

# Syracuse University announces historic plan to achieve climate neutrality

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Syracuse University has released its Climate Action Plan (CAP), an institutional blueprint and timeline for becoming climate neutral. Today, SU submitted its CAP to the Association for the Advancement of Sustainability in Higher Education (AASHE), which serves as the executive agent for the American College & University Presidents Climate Commitment (ACUPCC), of which Chancellor and President Nancy Cantor and SU was a charter signatory in 2007.

The completion of the CAP represents a recognition by the University of the profound impact that global climate change is having on the environment, the economy and quality of life—on campus, locally, nationally and globally—and what new, sustainable steps the University is prepared to take to curtail the release of greenhouse gases (GHG) that create global warming and ultimately to reach climate neutrality within the coming decades.

“We are proud of our Climate Action Plan, as it is notable for its very realistic assumptions and methods, as well as its achievable, incremental goals for reaching climate neutrality,” says Chancellor Cantor. “We are emphasizing energy conservation using proven technologies and behavioral change, which will yield savings that increase over time while avoiding reliance on speculative assumptions about possible future technologies. At the same time, SU is playing an integral role in developing the very innovations that can accelerate our progress toward climate neutrality—for example, through the Syracuse Center of Excellence in Environmental and Energy Systems (SyracuseCoE) and the Near Westside Initiative right here in Syracuse.”

As part of the CAP, SU has committed to becoming climate neutral by 2040. This commitment will be fulfilled through an action plan of five overlapping sustainable components focused on energy conservation through existing technologies; energy efficiency through emerging technologies; creation of energy from renewable sources; changes in the behavior of students, faculty and staff; and limited use of energy offsets, as needed, that benefit local residents and businesses. Each component will include one or more flagship projects, selected and designed for maximum public engagement and scholarly research potential while consistently demonstrating the University’s commitment to fiscal responsibility.

SU’s CAP has three key distinctions:

- 1. It can be fully implemented with existing technologies, while positioning the University to accelerate its timeline to achieve climate neutrality as new, cost-effective technologies emerge.** The CAP is not speculative in that it is based on mechanisms that already have proven effective in reducing GHG emissions. University officials will monitor the feasibility of new

technological advances and more effective energy-saving measures as they become available. Since new energy-efficient technologies are certain to emerge over the coming decades, the plan also positions the University both to take advantage of these new technologies and to actively participate in their development.

**2. It is responsive to SU's intent to increase its engagement with the community and the world; it recognizes and allows for future growth of the University both in square footage and in student enrollment.** The issue of community engagement—particularly student engagement—was a key consideration throughout the development of the CAP—it was designed not just to create a climate neutral and sustainable campus, but also to actively promote climate leadership on the campus and within students.

The developers of the CAP used a set of “business as usual” assumptions to establish a baseline against which progress will be measured. These assumptions estimated that SU's GHG emissions would increase 8 percent by 2030 and 13 percent by 2040, even when accounting for recent advances in design and construction techniques that will cut energy consumption by 30 percent per square foot for new building space added in the future—including those buildings currently under construction. By contrast, the CAP establishes a series of aggressive, constantly decreasing GHG emissions targets into the future, culminating in the complete elimination of net emissions by 2040.

**3. The CAP is managerially responsible in that it accounts not only for the initial cost of implementing improved technologies to achieve required energy savings, but also for the ongoing costs of maintaining the new infrastructure and eventually replacing or upgrading it.** SU's Climate Action Plan is fully funded. A funding stream has been approved that allows the first CAP-initiated projects to get under way in FY 2011. The cumulative savings of implementing the CAP will compound, as each year SU will decrease the amount of energy it purchases; savings compound at a high rate—on the order of 10-15 percent, on average. As a result, the annual savings realized by purchasing less energy will exceed the annual expense of implementing CAP projects around fiscal year 2023. Thus, by implementing the CAP, the University will increase its ability to perform its educational and service missions into the future. “It is a privilege to help lead Syracuse University's effort to fulfill its commitments under the ACUPCC, including both the development of a Climate Action Plan and the education of its students regarding the causes of global climate change and how society can live more sustainably,” says Maxwell School Dean Mitchel B. Wallerstein, chair of the University's Presidents Climate Commitment Steering Committee, the campus group that guides SU's fulfillment of the CAP requirements. “I believe that universities have a particular responsibility not only to act as a source of new scientific ideas and technological breakthroughs related to the environment but also as a training ground where today's students can prepare for their future lives as adults in a world where global climate change will be an omnipresent reality.”

To help track SU's CAP progress, the University is moving toward creating a Climate Operations Center—a central, real-time data repository and reporting source that will allow SU to constantly monitor its GHG emission levels, its energy utilization and the performance of its infrastructure and facilities operations. In addition to assuring the University's compliance with the CAP, the Climate Operations Center will provide real educational opportunities for students and other community members, and a storehouse of empirical data for future research into efficient energy use and building operations.

The CAP is the latest milestone in the University's long and distinguished history of national leadership in discovery, education and entrepreneurship related to environmental sustainability. Drawing inspiration from its multi-faceted relationship with the Haudenosaunee, SU has earned a place of international prominence in facilitating cross-sector collaboration to cultivate a sustainable society. This reputation is built upon work being done through every school and college of the University focused on crucial environmental issues, including not only the internationally recognized research and innovation-to-market work of the SyracuseCoE, test-beds such as the Near Westside Initiative and the on-campus IBM green data center, but also the visionary creativity of centers such as UPSTATE and COLAB, and grant-funded projects of faculty members across the spectrum of disciplines.

As SU's CAP progresses, the positive environmental impact on campus and in the region will be noticeable—cleaner air, reduced traffic and parking congestion, and energy savings. Additionally, SU's investment in green buildings, renewable energy and energy efficiency will stimulate local job creation, as the SyracuseCoE does by facilitating development of technologies that have high potential for spinning off new local industries.

As a recognized higher education leader in energy conservation and sustainability, SU already has several sustainable programs and initiatives in place that contribute to the goal of climate neutrality as part of the CAP. These programs include:

- the purchasing of 20 percent of campus electricity from renewable sources, including low-impact hydro;
- multiple transportation/commuting initiatives and programs that reduce the amount of automobile carbon emissions released on and around campus, including the use of Zipcars and hybrids on campus;
- Syracuse University's Flexible Work and Sustainability Initiative, which provides sustainable and flexible work options for SU staff members, and "green days," which save on energy and commuting by reducing the amount of non-essential travel for work during Winter Break;
- student-initiated sustainability initiatives, including the implementation of a process that turns dining center fryer oil into biodiesel;
- Leadership in Energy and Environmental Design (LEED) standards for new building and renovation projects of more than \$10 million, including the Syracuse CoE headquarters, the new green data center, the Carmelo K. Anthony Basketball Center and Ernie Davis Hall;
- a space temperature policy that corresponds with energy-saving heating and cooling settings;
- the purchase and use of green cleaning products and supplies;
- a computerized campus energy management system that controls heating, cooling and ventilation systems;

- replacement of incandescent light bulbs with LEDs and CFLs, which has saved more than 600,000 Kwh;
- low-flow fixtures to conserve water in campus buildings;
- an EnergyCAP accounting program that tracks carbon and reduces paper;
- SU Food Services' efforts to buy local products as much as possible to minimize miles the food must travel; issuing to each student a reusable beverage bottle for takeout from dining centers; dining centers not serving canned soda or bottled water; Food Services' testing of a reusable clamshell to replace polystyrene containers for takeout meals;
- an enterprise document imaging program that stores documents, including admissions applications, payments, purchasing requisitions, blueprints and contracts; and
- electronic paychecks and expense reimbursements, and online systems for parking permit registration, student housing, meal plan and class registration.

**Additional potential projects that are being studied as part of SU's CAP include:**

- green computing across the campus;
- demonstration projects for solar- and wind-generated electricity
- improved controls and lighting fixtures;
- increased heat recovery in existing facilities;
- optimizing energy operations at athletic and recreational facilities;
- improved water conservation across campus;
- expanding use of videoconferencing to decrease air and local travel;
- improved campus waste management;
- greater local transportation options;
- increasing the use of alternative-fuel vehicles;
- enhancing SU's energy management systems; and
- expanding the use of ground-source heat pumps (geothermal heating) for heating and cooling.

Complementing SU's climate neutrality efforts will be expanding educational opportunities that will propel SU students and faculty to make profound impacts on global sustainability issues. In

addition to SU's large catalog of academic and extracurricular opportunities to educate students about the scientific, social, economic and political causes and effects of global climate change, new curricular programs are being piloted that span multiple disciplines in sustainability education. For example, a new "Sustainability Science Communications" course brings together science and journalism students in order to teach them how to help the public better understand complex sustainability issues. And trans-disciplinary courses are offered through the Sustainable Enterprise Partnership, a cross-institutional collaboration among SU's Whitman School of Management, the SUNY College of Environmental Science and Forestry and the SyracuseCoE focused on providing world-class education and research on sustainable enterprise management.

In order to assure that exposure to sustainability issues becomes part of each graduate's experience, the University has undertaken a coordinated effort at curriculum enhancement. In fall 2008, Vice Chancellor and Provost Eric F. Spina appointed a task force of faculty, administrators and students representing each of SU's schools and colleges to consider a University-wide approach to integrating global climate change and sustainability into the curriculum.

Assisting the University in completing the CAP has been Constellation Energy's Projects and Services Group. The Projects and Services Group, along with Syracuse-based environmental engineering firm O'Brien & Gere, has provided the technology resources to help SU identify, analyze and prioritize emissions reduction opportunities, and also assisted in developing the time line for achieving carbon neutrality in conjunction with the overall financial impact on the University.

Upon becoming a charter signatory to the ACUPCC in 2007, SU became one of the largest private universities to estimate its greenhouse gas output—an inventory was completed in September 2008—and to develop a Climate Action Plan to reduce those emissions.

To view SU's complete Climate Action Plan and information on the University's participation in the ACUPCC, visit SU's Sustainability Division website: <http://greenuniversity.syr.edu>. To review the full details of the American College & University Presidents Climate Commitment, visit the Association for the Advancement of Sustainability in Higher Education web site at <http://acupcc.aashe.org>.