

# Climate Action Plan 2011 Update

Climate  
Leadership  
Award for  
Institutional  
Excellence  
in Climate  
Leadership

# 2011



Vice President Kyu-Jung Whang accepts the Climate Leadership Award from Second Nature president Anthony Cortese.

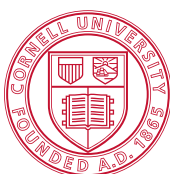
The Climate Action Plan (CAP), released in 2009, provides a roadmap for the Ithaca campus to reduce its carbon emissions to net zero by the year 2050—and achieve carbon neutrality. CAP brings together campus stewardship in research, teaching, and outreach programs. Faculty, students, staff, alumni, and regional communities partner to create a unique “living laboratory” for low-impact behaviors and innovative technologies. The David R. Atkinson Center for a Sustainable Future advances research and collaborations to foster a sustainable future for all. The President’s Sustainable Campus Committee guides the implementation of CAP and Cornell’s other sustainable campus commitments.

**Award Winning.** CAP was recognized by Second Nature, the founders of the national American College & University Presidents’ Climate Commitment, and in 2010, Cornell received the first annual Climate Leadership Award for Institutional Excellence in Climate Leadership.

**Unprecedented Success.** In two short years, Cornell reduced its campus greenhouse gas emissions by 25 percent through smart investment in facilities and energy efficiency, exceeding 2009 CAP projections.

**Local to Global Engagement.** Cornell partnered with local governments and organizations through the Tompkins County Climate Protection Initiative to reduce local carbon emissions. Cooperative Extension launched a statewide climate and energy team to help businesses, governments, and homeowners reduce energy costs and emissions. Meanwhile, faculty members Jefferson Tester (chemical and biomolecular engineering) and Natalie Mahowald (earth and atmospheric sciences) authored reports for the United Nations’ Intergovernmental Panel on Climate Change.

[www.sustainablecampus.cornell.edu/climate](http://www.sustainablecampus.cornell.edu/climate)



Cornell University

# A Five-Step Approach to Climate Neutrality

## Green Development



Brian C. Nevin Welcome Center

### Reduce energy growth through campus planning, space efficiency, and efficient construction.

#### Achievements

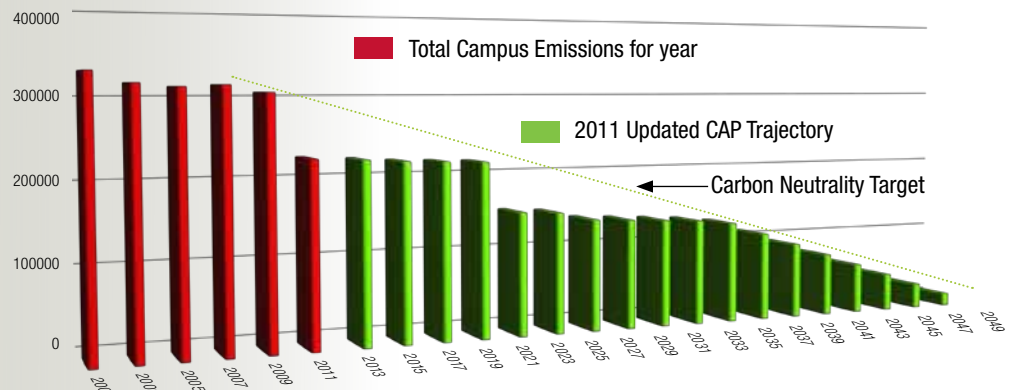
- Campus building projects since 2009 exceeded Cornell's target of LEED Silver. Four projects achieved LEED Gold recognition:
  - Riley-Robb Biofuels Research Laboratory
  - Physical Sciences Building
  - Combined Heat and Power Plant Office
  - Animal Health Diagnostic Center
- Energy modeling and building energy intensity standards helped reduce campus energy use by more than 30 percent below current energy standards.
- Campus Master Plan guidelines informed the university's development, infrastructure, and landscape decisions.
- New space planning standards helped to maximize the effective use of space and facilities.

#### Vision for the Future

- A firm foundation for green development is now in place. Future challenges include implementation, maintenance, and the improvement of these practices across campus.
- Eight new building projects are targeting LEED Gold or higher:
 

Cornell Plantations' Brian C. Nevin Welcome Center	Stocking Hall
Human Ecology Building	Rice Hall
Martha Van Rensselaer Hall renovations	Fernow Hall
Milstein Hall	Warren Hall

**A Living Plan.** Recognizing that energy prices, government regulations, and research opportunities are constantly changing, CAP remains a living plan that requires regular assessment and updates. This and future updates will continue to incorporate new strategies developed by faculty, students, and staff.





## Energy Conservation

**Use less energy by retrofitting buildings, using energy management tools, and energy education.**

### Achievements

- \$45 million was budgeted for energy conservation initiatives over the next five years. New staff positions were created to implement conservation measures in laboratories and building systems.



- The College of Agriculture and Life Sciences (CALS) launched CALS Green, a six-building energy conservation campaign with a cutting-edge social networking website.
- Student government leaders launched Lights Off Cornell, a campaign where students and building managers worked together to switch off lights across campus.

### Vision for the Future

- Expand energy conservation outreach campuswide and improve energy decision-making by students, staff, and faculty.
- Launch a peer-to-peer “EcoRep” program to engage students in energy reduction.
- Develop a web dashboard in the Human Ecology Building to display real-time energy metering.



## Transportation Alternatives

**Use less energy to support transportation needs.**

### Achievements

- Big Red Bikes, a student-led, free bike-sharing program, was launched on campus; it allows students and staff members to check out bikes as easily as a library book.
- The Campus-to-Campus bus increased service and ridership to New York City. It boasts an amazing 140 miles-per-passenger-gallon—better than the best two-passenger hybrids.

### Vision for the Future

- Continue an ongoing transition of the campus fleet to hybrid and electric vehicles.
- Study the feasibility of Campus-to-Campus bus services to additional metropolitan areas.





# Fuel Mix & Renewables

## Replace fossil fuels with clean and renewable energy.

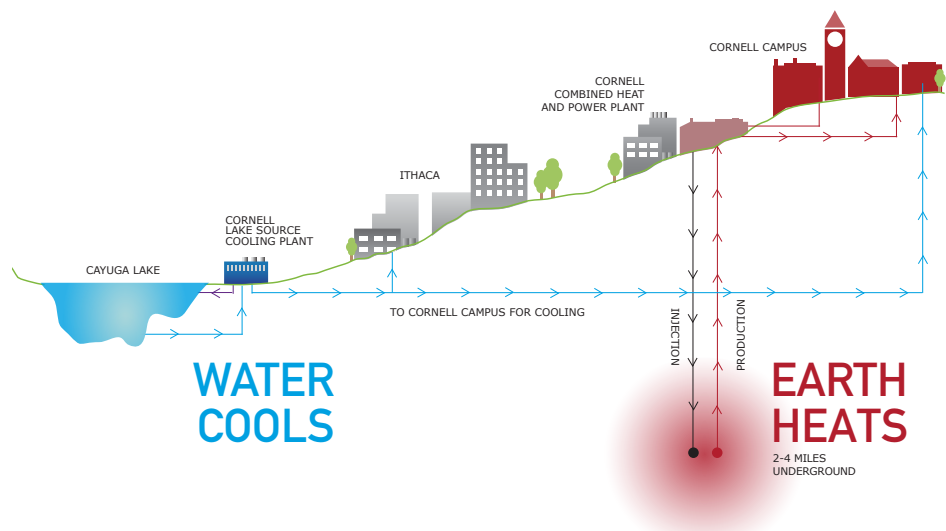
### Achievements

- Cornell ended all campus coal use in March 2011.
- The Cornell Combined Heat and Power Plant, which has replaced coal use, received the 2011 Energy Star Award from the EPA. It now employs much less energy to create the same heating and electricity.
- Funded research, under the direction of Jefferson Tester (chemical and biomolecular engineering), includes plans for enhanced geothermal systems on campus.

### Vision for the Future

- A faculty-led study into an enhanced geothermal system (EGS) is under way. This study, involving three universities and multiple academic disciplines, is the first step toward quantifying the carbon-reducing potential for this important technology.

#### HYBRID EGS SYSTEM: UTILIZING EARTH'S NATURAL ENERGY



# Offsetting Actions

## Reduce carbon emissions beyond campus boundaries.

### Achievements

- Finger Lakes Climate Fund: Cornell contributed to the success of this community endeavor by incorporating off-setting credits during a 2011 on-campus conference.
- USDA funding for Forest Management Carbon Sequestration: Cornell academic leaders continue to study carbon sequestration for future campus and off-campus applications.

### Vision for the Future

- Finger Lakes Climate Fund: Continue outreach in support of this fund, which assists local families with energy efficiency projects.
- Expand forest management and afforestation projects across Cornell lands.



The Climate Action Plan and its 2011 Update were developed by the President's Sustainable Campus Committee (PSCC), co-chaired by: Tim Fahey, Liberty Hyde Bailey Professor and forest ecologist, Department of Natural Resources, College of Agriculture and Life Sciences; Kyu-Jung Whang, vice president, Division of Facilities Services

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Production of this update is a reflection of Cornell's commitment to sustainability—accessible as a pdf at [www.sustainablecampus.cornell.edu/climate](http://www.sustainablecampus.cornell.edu/climate). Only 350 copies of the CAP 2011 Update were pre-printed, and those were printed on recycled paper. Produced by University Communications at Cornell University. Photos by Cornell University Photography and courtesy of PSCC. Cover photo courtesy of Second Nature, Inc. 9/2011 350 CBS 120070