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iCAP: A Climate Action Plan

iCAP Forum

Fall 2012

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Office of Sustainability

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Facilities & Services

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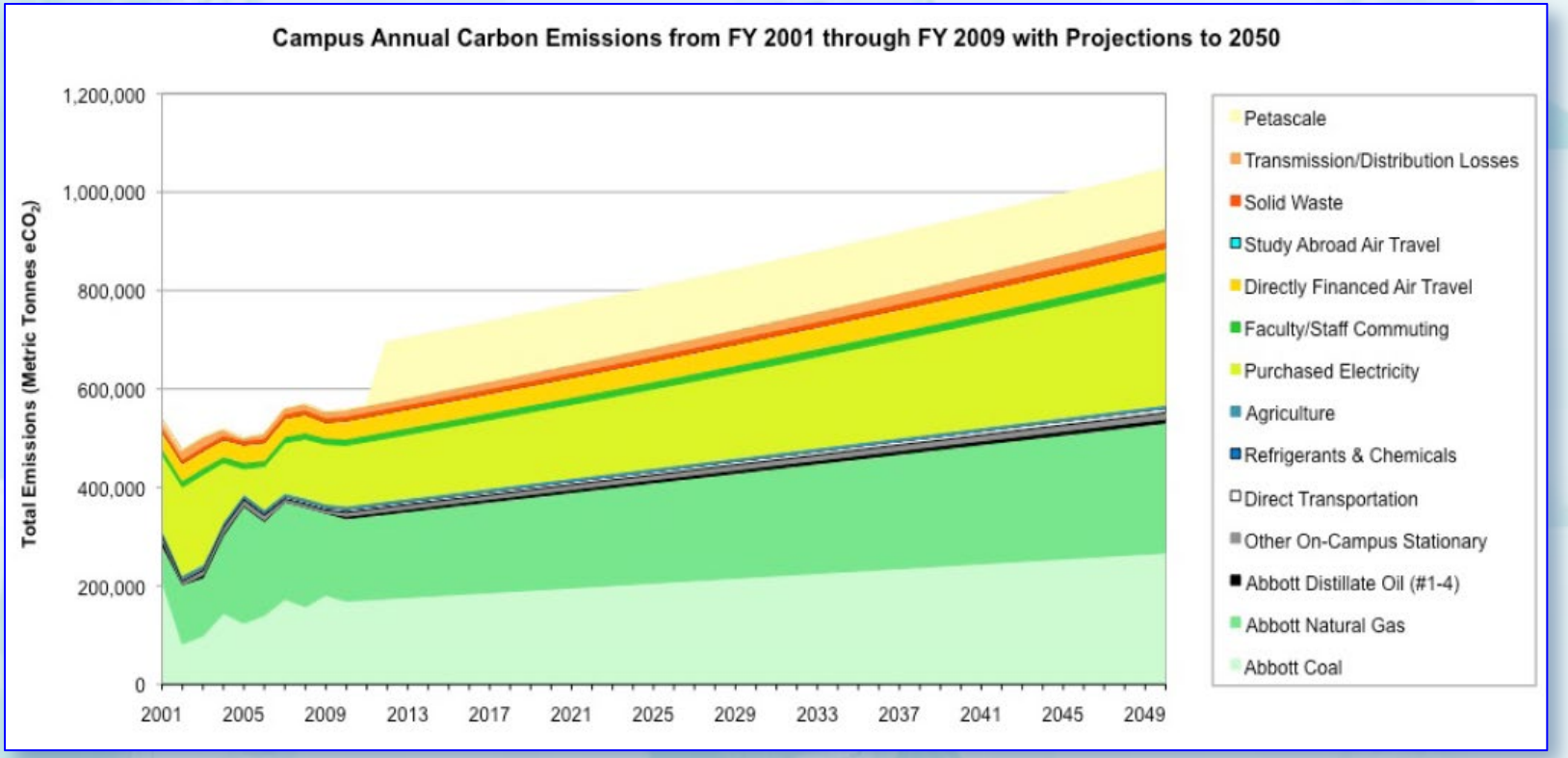
iCAP Overview

Commitments Signed

American College & University Presidents' Climate Commitment (ACUPCC) - signed February 22, 2008

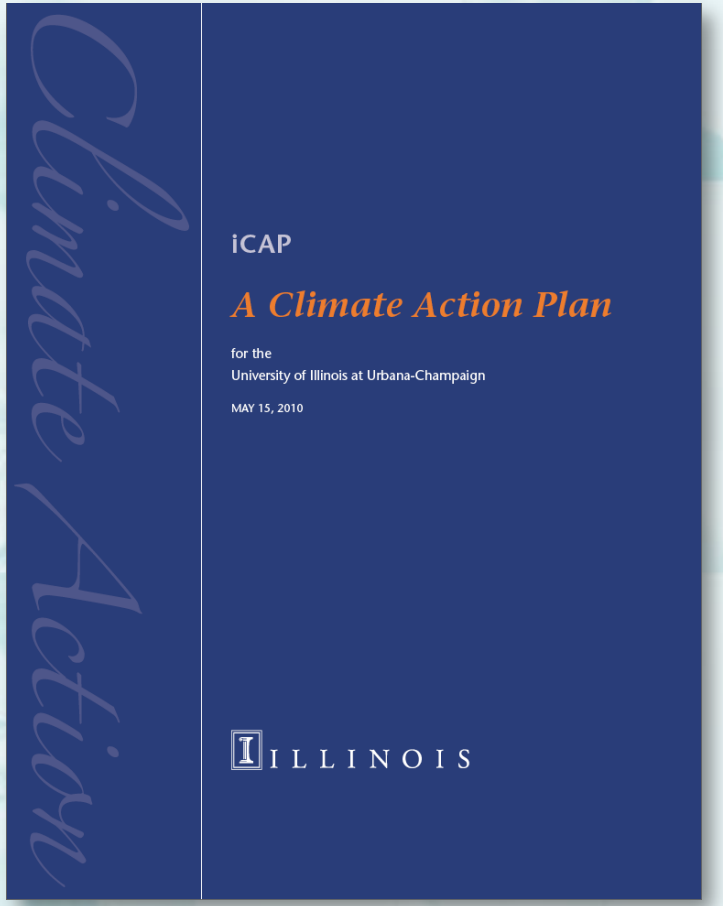
Illinois Campus Sustainability Compact second five-year commitment signed August 27, 2010

Unconstrained Projections

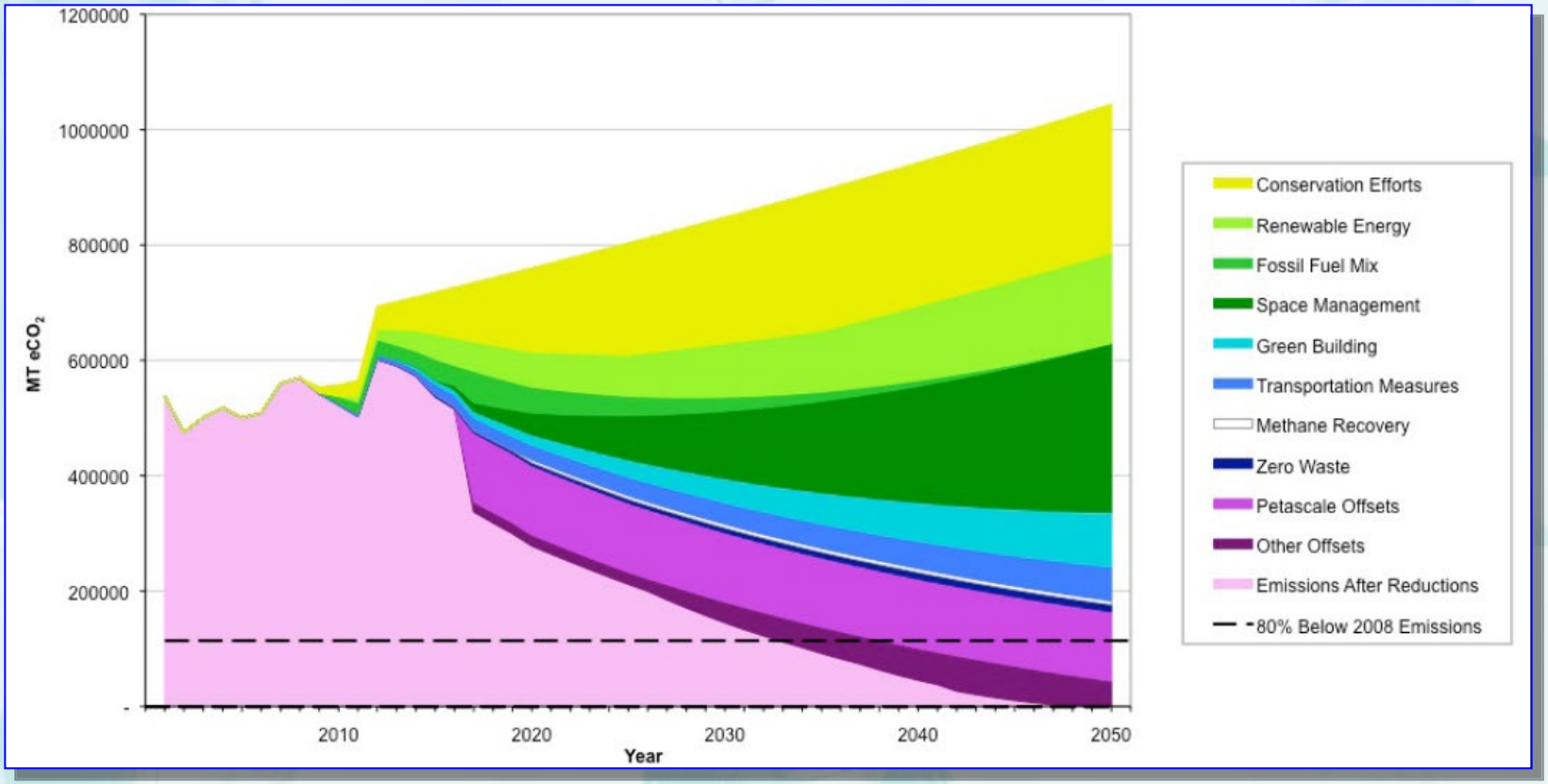


May 2010 iCAP

1. Energy Conservation
2. Financing
3. Eliminate Coal Use
4. Use Renewables
5. Transportation Improvements
6. Building Standards
7. Land & Space Conservation Policies
8. Procurement & Waste Reduction
9. Water Conservation
10. Planning
11. Follow Through



Net Zero Mitigation Wedges



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2011	LEED Gold Certification	DONE
2011	wind turbine	Cancelled
2011	miscanthus boiler at Vet Med	Cancelled
2011	develop Zero-Waste Policy	In Progress
2012	detailed study of energy production and distribution	In Progress
2012	large-scale food composting	In Progress
2012	voluntary air-travel offsets process	Under review
2012	bike sharing program	In Progress
2012	"No Net Increase in Space" Policy	In Progress
2012	eliminate the use of coal during summer months	DONE and recurring
2015	5% renewable sources for electricity	In Progress, 2% from Solar Farm
2015	20% reduction in energy consumption	DONE
2015	15% reduction in building emissions	DONE
2015	30% reduction in transportation emissions	Under review
2015	purchase over 30% of food within 100 miles	In Planning
2015	pilot a methane capture system	On Schedule
2015	20% reduction in potable water use	On Schedule, 19% in FY12
2015	LEED Platinum Certification	Pending

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2016	mandatory air-travel offsets program
2017	eliminate coal usage at Abbott Power Plant
2020	75% Waste Diversion
2020	30% reduction in energy consumption
2020	30% reduction in building emissions
2020	17.5% renewable sources for energy
2020	40% reduction in transportation emissions

2020	50% reduction in agriculture emissions
2020	install a methane capture system
2020	30% reduction in potable water use
2020	connect the raw water system
2022	complete all SAIC tasks
2025	40% reduction in energy consumption
2025	40% reduction in building emissions
2025	25% renewable sources for energy
2025	50% reduction in transportation emissions
2025	40% reduction in potable water use
2025	all new buildings should be net-zero

And NET ZERO EMISSIONS by 2050!

Energy Reduction

- Energy Reduction Target
  - 20% reduction by 2020
- Energy Reduction Progress
  - 25% in 2012!
- Next Milestone
  - 30% by 2020

Energy Emissions

- Energy Emissions Target
  - 15% by 2015
- Energy Emissions Progress
  - 22% in 2012
- Next Milestone
  - 30% by 2020

Water Reduction

- Water Reduction Target
  - 20% by 2015
- Water Reduction Progress
  - 19% in 2012
- Next Milestone
  - 30% by 2020

iCAP Update Process

- Progress Report due January 2013
- STARS participant in June 2012
  - Submission due June 2013
- Over 300 projects and subprojects
- MSTE created an iCAP Portal
  - Now Live!

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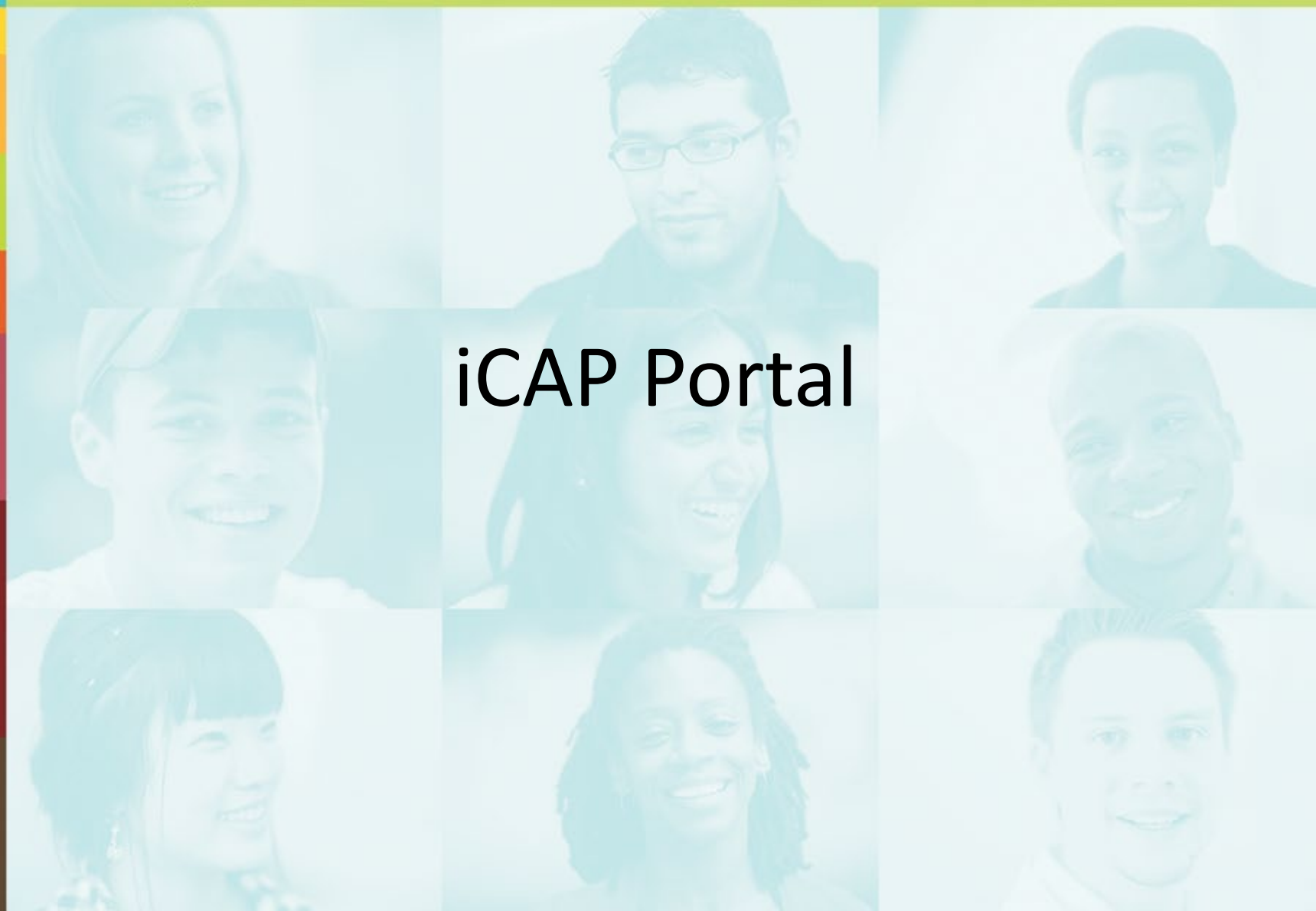


iCAP Portal

Welcome

The Illinois Climate Action Plan (iCAP) outlines a path for the University of Illinois at Urbana-Champaign to achieve carbon neutrality by the year 2050. The Campus committed to this ambitious goal when it signed the American College and University Presidents' Climate Commitment (ACUPCC) on February 22, 2008.

The University of Illinois is in a prime position to solve society's most challenging needs, including the health, social, economic, and ecological impacts associated with climate change. With high-caliber researchers and experts in diverse fields across campus, the University seeks to implement innovative solutions to these pressing issues, and become a leader in sustainability efforts locally, nationally, and globally.

Since developing the 2010 iCAP, the University of Illinois at Urbana-Champaign has developed hundreds of projects to tackle the broad range of sustainability issues that face our campus and our world. This site is a repository for summary information about each iCAP project, both to share the information publicly and to assist in collecting information for reporting purposes. Each project page includes a project description, contact names, funding details, location map(s), metrics and targets to measure success, current status of the project, and regular updates as projects are discussed, approved, and implemented. If you would like to recommend a new project or are aware of an existing project that is not listed on this site, please use the "Suggest a Project" tab to let us know.

Read the full 2010 Illinois Climate Action Plan.

Latest Updates

Solar Farm

SSC formal proposal submitted via email *10/19/2012*
Due to the Board of Trustees meeting schedule, the SSC have agreed to do a straw-poll about the funding of the Solar Farm project at their upcoming meeting on Oct.

Cycling Savvy Courses

Free Cycling Savvy Course to be Offered October 23, 2012 *10/15/2012*
On October 23, as part of the 2012 Sustainability Week, Champaign County Bikes and the University of Illinois will offer a FREE Cycling Savvy Course.

Zero-Waste Policy

Team status meeting *10/9/2012*
Marcus Ricci, Stephanie Lage, Brian Deal, and Morgan Johnston met to review the status of this report. Marcus has collected a lot of data about how waste is handled on campus, and he has started to draft a summary.

View more updates »

Goals

The ultimate goal of the ACUPCC Climate Commitment is for campuses to be "carbon neutral" with no unmitigated greenhouse gas emissions. The Illinois Climate Action Plan (iCAP) was first submitted in May 2010, and it set aggressive goals for reaching carbon neutrality.

As the flagship public university in the state of Illinois, the campus has a moral and ethical responsibility to lead, to set aggressive goals, to work to meet them, and to serve as a model for the community, state, and nation. The iCAP represents a roadmap to a new, prosperous, and sustainable future for the University. It outlines strategies, initiatives, and targets toward meeting the stated goal of carbon neutrality by 2050.

Download a PDF of the 2010 Climate Action Plan.

iCAP Themes

Full Project Listing

- View a hierarchical listing of all iCAP projects
- View a table listing of all iCAP projects

Instructions

This site is a repository for summary information about each iCAP project. Each project page includes a project description, contact names, funding details, location map(s), metrics and targets to measure success, current status of the project, and regular updates as projects are discussed, approved, and implemented. The projects are searchable from the search bar in the top right of this screen, or they can be found by browsing through the main categories listed on the left.

Featured Project

Solar Farm

To increase the use of renewable energy sources for campus electrical needs and meet the commitments set by the 2010 Climate Action Plan, the University of Illinois issued a Request for Proposal (RFP) for a firm to design, build, operate, and maintain (DBOM) a Solar Farm at the Urbana campus with a corresponding Power Purchase Agreement. The Solar Farm will be connected directly to the University's electrical distribution system in parallel with the electrical service provided by the local utility.

Suggest a Project

All iCAP projects originally started as someone's great idea! If you have an idea to share or know of an existing project not listed here, we want to know about it. You can submit it below or contact us at sustainability@illinois.edu.

Note: please be sure to review the existing iCAP project pages before suggesting a new project!

Name

Email

Subject

Type

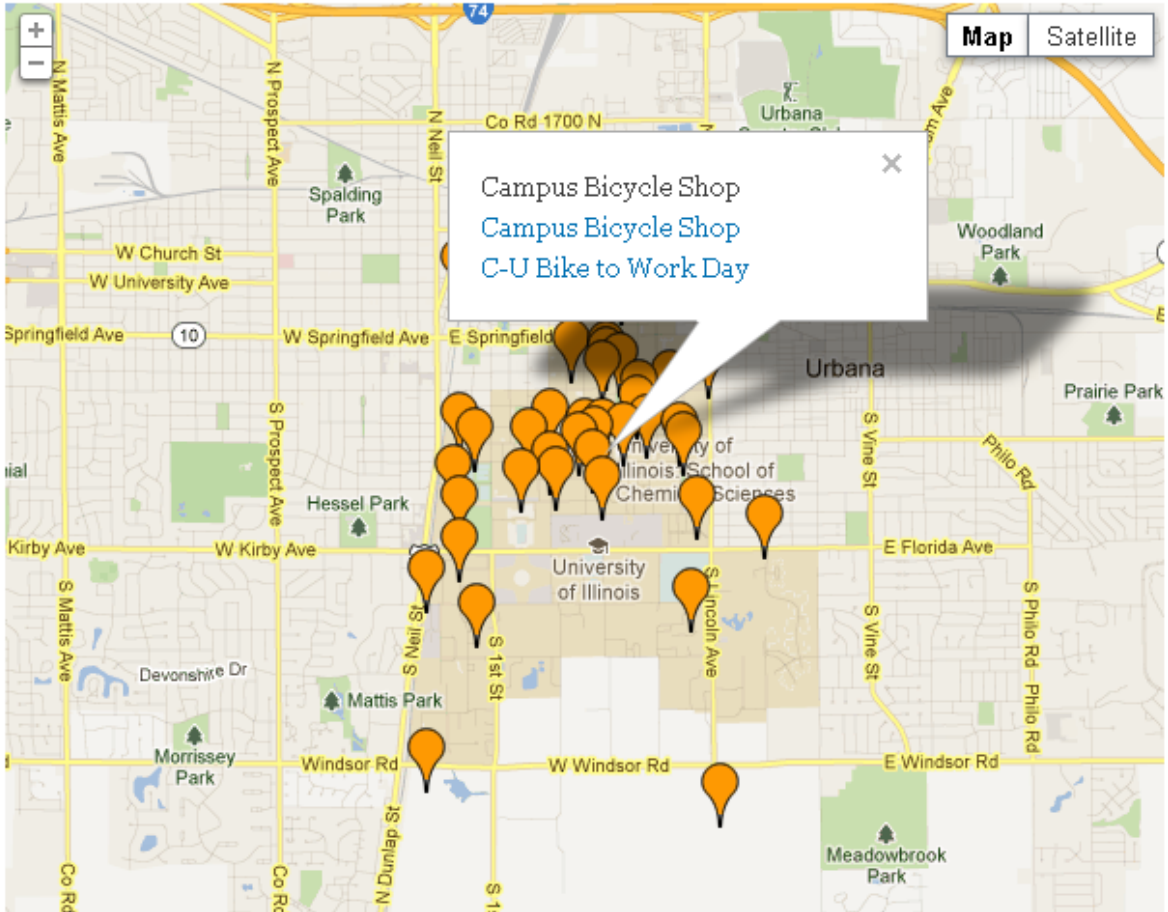
- (•) New Project
- ( ) Existing Project

Suggestion

Pros/Cons

Locations map

Please zoom out to view off-campus projects.



Project Hierarchy

Would you like to go to the Projects Table View?

Expand all | Collapse all

- Educate Future Leaders (Education & Outreach)
- Sustainability Outreach (Education & Outreach)
- Reduce Transportation Emissions (Transportation)
- Report on Progress (Reporting Progress)
- Reduce Emissions from Energy Consumption (Energy)
- Funding for Sustainability (Funding)
- Sustainable Investment Practices (Funding)
- Sustainable Landscapes (Land & Space)
- Reduce Campus Building Square Footage (Land & Space)
- Eliminate Waste (Procurement & Waste)
- Water Conservation (Water)

Transportation emissions account for about 10 percent of the total emissions generated on campus. Generally, this includes commuter, air travel and fleet emissions, some of which are difficult to quantify. The target for this section is to reduce transportation emissions by 50 percent by 2025. This aggressive target will require strategic thinking in all components of transportation-based emissions.

Expand all | Collapse all

- Reduce Transportation Emissions
  - Encourage Low-Emission Vehicles
    - Install Public Use Charging Stations
  - Reduce Business Travel Emissions
    - Decrease Emissions from UI Fleet
    - Encourage Ride-Sharing for Business Trips
    - Encourage Telecommuting in place of Business Trips
    - Encourage Train Travel for Business Trips
    - Offset Emissions from Plane Trips
  - Reduce Vehicle Miles Traveled on Campus
    - Discourage Vehicles on Campus

Transportation emissions account for about 10 percent of the total emissions generated on campus. Generally, this includes commuter, air travel and fleet emissions, some of which are difficult to quantify. The target for this section is to reduce transportation emissions by 50 percent by 2025. This aggressive target will require strategic thinking in all components of transportation-based emissions.

Expand all | Collapse all

- Reduce Transportation Emissions
  - Encourage Low-Emission Vehicles
    - Install Public Use Charging Stations
  - Reduce Business Travel Emissions
    - Decrease Emissions from UI Fleet
      - Increase use of Alternative Service Vehicles
      - Reduce F&S Vehicle Idling
      - Support the Illinois Biodiesel Initiative
    - Encourage Ride-Sharing for Business Trips
    - Encourage Telecommuting in place of Business Trips
    - Encourage Train Travel for Business Trips

Energy is by far the largest contributor to the campus' emissions inventory. The iCAP focuses on a detailed strategy of building energy conservation, de-carbonizing generation systems, and the addition of renewable energy sources. This "conserve-and-load" approach is achievable, affordable, and implementable. The Plan calls for a reduction in building energy use of 40 percent by 2025. The University also seeks to meet the state's Renewable Portfolio Standard of 25 percent renewable energy use by 2025.

Expand all | Collapse all

- Reduce Emissions from Energy Consumption
  - Energy Conservation Projects
    - Maintenance Division Energy Projects
    - Lighting Retrofit
    - Energy Services Conservation Projects
    - ECE Net-Zero Energy Building
    - Facility Standards
    - Computers and Technology
  - Master Plan for Energy Production and Distribution
    - Stop Burning Coal at Abbott Power Plant
    - Smart Grid for Campus

Solar Energy on Campus

Integrate Solar Energy Sources for Campus Energy needs

Description

Solar energy is the nuclear fusion processes that take place on the Sun. A variety of technologies convert sunlight to usable energy for buildings. The most commonly used solar technologies for homes and businesses are solar thermal water heating, passive solar design for space heating and cooling, and solar photovoltaic's for electricity. Businesses and industry also use these technologies to diversify their energy sources, improve efficiency, and save money.

Parent Project

Use Renewable Energy

Child Projects

Solar Farm
Rooftop Solar PVs
Solar Thermal at ARC
SSC Solar Feasibility Study

Project Team

No project team has been entered.

Office of Sustainability | Natural Resources Building
615 E. Peabody, Room 163, MC-650 | Champaign, IL 61820 | phone: 217.333.4178 | fax: 217.244.2006 | sustainability@illinois.edu

Reduce Emissions from Energy Consumption

Description

Energy conservation is considered the easiest and most cost-effective way to achieve reductions in greenhouse gas emissions. Opportunities for conservation on campus are great. In order to reduce emissions, the Climate Action Plan has laid out potential energy savings on campus in areas such as lighting, building commissioning, fume hoods, behavioral change and incentives, and information technology. All of these areas are prospective energy saving components and can contribute to a more sustainable campus.

Project Metrics

Total Electric Usage for all of campus in kWh

Date	Value
June 30, 2012	432,446,292.00

Carbon Emissions from Energy (MTE)

Date	Value
June 30, 2012	390,570.00

Total Annual Energy Consumption

Date	Value
June 30, 2012	4,594,467.00

1 of 8 »

Child Projects

- Energy Conservation Projects
- Master Plan for Energy Production and Distribution
- Changing Usage of Individuals

Project Team

Primary Contact:

Morgan Johnston

Project Leader:

Kent Reifsteck

Solar Farm

Description

To increase the use of renewable energy sources for campus electrical needs and meet the commitments set by the 2010 Climate Action Plan, the University of Illinois issued a Request for Proposal (RFP) for a firm to design, build, operate, and maintain (DBOM) a Solar Farm at the Urbana campus with a corresponding Power Purchase Agreement. The Solar Farm will be connected directly to the University's electrical distribution system in parallel with the electrical service provided by the local utility.

The University provides electricity, chilled water, and steam service to more than 50,000 people (faculty, staff and students) who work, learn, and/or live on the campus. The electricity generated from campus is delivered to the campus via the University's owned and operated distribution system. Although the University's grid is connected to the local utility transmission and distribution system, which receives transmission services from the Midwest Independent Transmission System Operator (MISO), **the University will use all of the electricity generated from the solar farm project.**

Background

The University is seeking a proposal to lease 21 acres of land in the South Farms area, for the installation and operation of a Solar Farm. The University will lease the land to the selected Proposer for $1.00 per year and establish a Power Purchase Agreement for the renewable energy. The Proposer will be responsible for design, construction, permitting, transportation needs, operation, and maintenance of the Solar Farm, as well as connection to the University's electrical grid.

Related Files:

This FAQ was produced when the RFP was issued.
This letter was sent to residents and community leaders when the RFP was released.
Layout of Proposed Solar Farm

Project Funding

Funding Source	Total Amount Requested	Total Amount Approved	Total Amount Allocated	Total Amount Spent
Student Sustainability Committee (SSC)	$1,050,000.00	$0.00	$0.00	$0.00
Facilities & Services	$85,350.00	$85,350.00	$85,350.00	$1,100.00
Campus Administration	$4,247,217.60	$4,247,217.60	$0.00	$0.00
Totals	**$5,382,567.60**	**$4,332,567.60**	**$85,350.00**	**$1,100.00**

Project Updates

SSC formal proposal submitted via email

10/19/2012 Due to the Board of Trustees meeting schedule, the SSC have agreed to do a straw-poll about the funding of the Solar Farm project at their upcoming meeting on Oct.

No concerns found for Franklin's Ground Squirrels on site

10/18/2012 As a follow up to the EcoCAT submittal for the Solar Farm, Jim Sims worked with Dr. Edward J. Heske and Torrey W. Rodgers, from the Illinois Natural History Survey, to arrange a field survey to check for Franklin's Ground Squirrel.

View all updates for this project

Parent Project

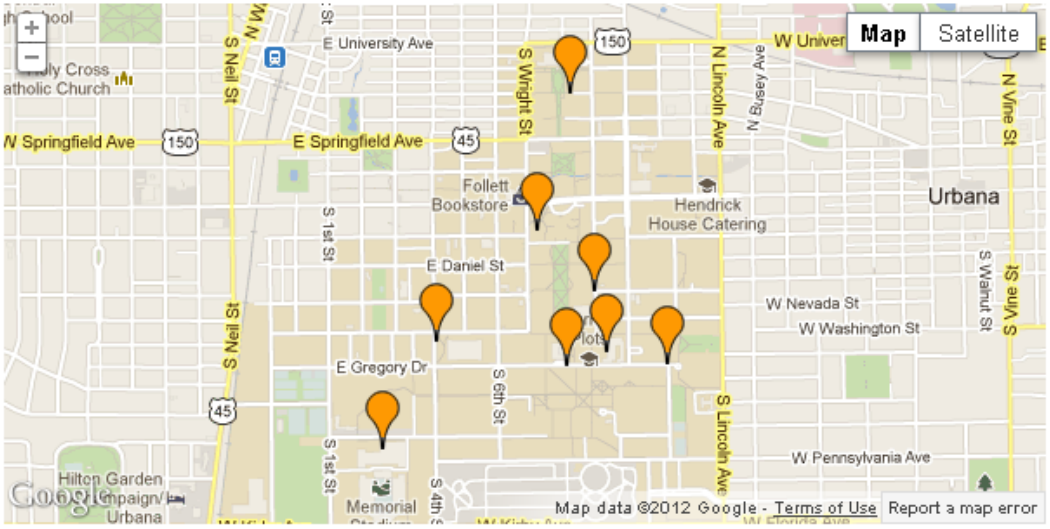
Solar Energy on Campus

Project Team

Presentations with Energy Liaisons

Description

To communicate within departments and colleges, we asked Energy Liaisons established by F&S to promote energy conservation to host presentations in their buildings which will include a display, information, and materials specific to your buildings. The first of these presentations were conducted during Sustainability Week, October 2011. The goal is to use the Energy Liaisons and various campus sustainability committees as grassroots contacts for initiatives such as energy conservation. Highlights of the program include encouraging departments to seek reasonable temperature settings in the buildings, increasing awareness of the Energy Use Policy, training and supporting Energy Liaisons to set up and staff the display in various buildings with posters, examples, and data about the specific building. The project hopes to effect behavior change on campus with regards to sustainability (energy usage, recycling, water use).



Project Updates

Energy presentation at Foellinger

10/6/2012 Energy details on display at Foellinger.

Energy presentation at CSL

10/6/2012 Energy details on display at Coordinated Science Lab.

View all updates for this project

Parent Project

Changing Usage of Individuals

Project Team

Project Leader:

Andy Blacker

Project Updates

- ## SSC formal proposal submitted via email

  Submitted by mbjohnst on October 19, 2012 - 2:44pm

  Due to the Board of Trustees meeting schedule, the SSC has agreed to do a straw-poll about the funding of the Solar Farm project at their upcoming meeting on Oct. 26, 2012. They requested a full proposal be submitted this week, for review by committee members this coming week. The submitted proposal and associated calculations are attached here.

- ## No concerns found for Franklin's Ground Squirrels on site

  Submitted by mbjohnst on September 19, 2012 - 12:00am

  As a follow up to the EcoCAT submittal for the Solar Farm, Jim Sims worked with Dr. Edward J. Heske and Torrey W. Rodgers, from the Illinois Natural History Survey, to arrange a field survey to check for Franklin's Ground Squirrel. None were found.

- ## BAFO will remain in effect until end of calendar year

  Submitted by mbjohnst on September 10, 2012 - 12:00am

  Within the RFP, we requested that any offer be valid for 120 days. However, this project will most likely go to the Board of Trustees in November, which would be beyond the 120 day period. Therefore, Kim Porter requested an extension from the Preferred Vendor, and they have agreed to hold the offer firm until the end of this calendar year (2012).

- ## F&S meeting with SSC re: Solar Farm

  Submitted by mbjohnst on September 5, 2012 - 12:00am

  Jack Dempsey and Morgan Johnston from F&S met with Marika Nell (chair) and Mckenzie Beverage (program advisor) from the Student Sustainability Committee (SSC). This meeting was to give an overview of the Solar Farm project, and the anticipated funding needs.

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Thank you!!