



UNIVERSITY OF MINNESOTA
Inside the atrium of the Science Teaching and Student Services building at the University of Minnesota, which was completed in 2010 to LEED Gold standards.
Photo courtesy of Nicole Holdorph.

American College & University Presidents' Climate Commitment
IMPLEMENTATION GUIDE
Version 2.1 - 2012

TABLE OF CONTENTS

EXECUTIVE SUMMARY	4
Implementation Guide Updates, Version 2.1.....	4
Supporting You in Implementation	4
OVERVIEW OF THE COMMITMENT	5
Successful Implementation.....	5
Membership Dues.....	5
Governance and Support.....	5
THE IMPLEMENTATION LIAISON.....	6
Resources for Implementation Liaisons.....	6
<i>ACUPCC Working Groups.....</i>	<i>6</i>
THE REPORTING FRAMEWORK.....	7
Reporting Timeline.....	7
ACUPCC Reporting System.....	7
Extension Requests.....	7
Non-Fulfillment.....	8
REPORTS FOR THE ACUPCC.....	8
The Implementation Profile.....	8
<i>Tangible Actions.....</i>	<i>8</i>
<i>Creating an Institutional Structure.....</i>	<i>9</i>
The Greenhouse Gas Inventory.....	10
<i>Methodology.....</i>	<i>10</i>
<i>Temporal Boundaries.....</i>	<i>10</i>
<i>Operational Boundaries.....</i>	<i>10</i>
<i>Options for Completing Greenhouse Gas Inventories.....</i>	<i>11</i>
<i>Scopes of Greenhouse Gas Reporting.....</i>	<i>12</i>
Developing The Climate Action Plan.....	13
<i>Why Climate Neutrality?.....</i>	<i>14</i>
<i>Setting Climate Reduction Targets.....</i>	<i>14</i>
<i>Incorporating Climate Neutrality & Sustainability into the Educational Experience.....</i>	<i>15</i>
<i>Expanding Research Efforts to Achieve Climate Neutrality & Advance Sustainability.....</i>	<i>15</i>
<i>Expanding Community Engagement to Achieve Climate Neutrality & Advance Sustainability.....</i>	<i>15</i>
<i>Tracking Progress.....</i>	<i>16</i>
Implementing The Climate Action Plan.....	17
<i>Financing Mitigation Efforts.....</i>	<i>17</i>
<i>Installing Renewable Energy Projects.....</i>	<i>17</i>
<i>Purchasing Renewable Energy Credits.....</i>	<i>18</i>
<i>Utilizing Carbon Offsets.....</i>	<i>18</i>
<i>Addressing Curriculum & Research.....</i>	<i>19</i>
<i>Engaging With the Local Community.....</i>	<i>19</i>
The Progress Report On The Climate Action Plan.....	20
<i>Target Dates for Climate Neutrality.....</i>	<i>20</i>



<i>Efforts to Reduce Reporting Fatigue</i>	20
MANAGING PRESIDENTIAL TRANSITIONS	21
FOUNDING SUPPORTING ORGANIZATIONS OF THE ACUPCC	22
ADDITIONAL RESOURCES	22
AASHE Resource Center.....	22
Campus Green Builder.....	22
Clean Air – Cool Planet.....	22
Sustainable Endowments Institute: Billion Dollar Green Challenge.....	22
Sustainable Education & Economic Development (SEED) Center	22
USGBC Center for Green Schools.....	22
APPENDICES	23
Appendix A: ACUPCC Mission & History, Commitment Text.....	23
Appendix B: ACUPCC Campus-led Sustainability Faculty Development Workshops	23
Appendix C: ACUPCC Campus Student Led Peer-to-Peer Sustainability Education Programs	23
Appendix D: GHG Verification/Certification	24
Appendix E: Institution Owned Forests	24
Appendix F: List of URL’s Included in the Implementation Guide	24

Contributors

Implementation Guide Version 2.1 2012

Sarah Brylinsky, Program Associate, Second Nature
 Steve Muzzy, Senior Associate, Second Nature
 Cherie Peacock, Sustainability Coordinator, University of Montana
 Linda Petee, Sustainability & Risk Management Coordinator, Delta College
 John Pumilio, Director of Sustainability, Colgate University
 Jesse Pyles, Sustainability Coordinator, Unity College
 Matt Williams, Program Manager, Office of Sustainability, Auburn University
 Thomas Williams, Sustainability Coordinator, Scottsdale Community College

Implementation Guide Version 1.2 2009

Original Principal Author:

Julian Dautremont-Smith, Associate Director
 Association for the Advancement of Sustainability in Higher Education (AASHE)

Original Contributing Authors:

Dr. Anthony D. Cortese, President, Second Nature
 Georges Dyer, Senior Fellow, Second Nature
 Judy Walton, Director of Strategic Initiatives, AASHE



EXECUTIVE SUMMARY

Since its launch 5 years ago, the [American College & University Presidents' Climate Commitment](#)¹ (ACUPCC) has helped transition the sustainability movement in higher education from a series of isolated projects to a cohesive network of shared best practices, successful solutions, and deep investment in sustainability education for all students.

Since 2006, the ACUPCC has grown from [12 founding presidents](#)² to a network of 665 institutions, representing all 50 States and every institutional demographic that U.S. higher education has to offer.

Signatory institutions have completed thousands of projects to reduce energy use, curb greenhouse gas emissions, engage students in deep systems thinking, and save money—demonstrating powerful and necessary leadership for the rest of society.

Implementation Guide Updates, Version 2.1

This updated Implementation Guide (IG) provides signatory institutions with guidance in navigating the implementation of the ACUPCC in order to submit reports, plan for climate neutrality, and create programs to advance sustainability on campus. The IG should be shared with anyone on your campus involved with meeting the goals of the commitment.

Included in this IG update are practical examples from signatory campus staff who have implemented the ACUPCC successfully – referred to by the ACUPCC and in this report as “Implementation Liaisons.” The ACUPCC is not *only* a commitment made by individual institutions but it is *also* a collective learning network, with avenues for sharing successes and challenges.

The challenge of planning for and reaching the goals of climate neutrality and education for sustainability may seem daunting, but together the lessons of individuals across the network provide a strong basis for shared learning, collective progress, and creative solutions.

Supporting You in Implementation

In order to assist your efforts, the [ACUPCC Support Staff](#)³ at Second Nature are available to answer questions and hear your concerns. We encourage you to contact us regularly! The ACUPCC Support Team is in place to ensure successful implementation, learn from your accomplishments, and share your efforts with the wider ACUPCC network and the higher education sector.

ACUPCC Support

reporting@secondnature.org

617.722.0036

For specific contacts, please visit the [ACUPCC Support Staff](#)⁴ webpage.



Follow the ACUPCC on [Facebook](#)⁵, [Twitter](#)⁶, [LinkedIn](#)⁷, [YouTube](#)⁸, and subscribe to the [ACUPCC Newsletter](#)⁹ and [Second Nature's blog](#)¹⁰ to stay current on resources and events and to learn and share information on signatory activities.



Download the ACUPCC 5 Year Report *Celebrating Five Years of Climate Leadership* for more stories of successful implementation, financing strategies, and educational initiatives. presidentsclimatecommitment.org/reporting/annual-report/five-year-report



OVERVIEW OF THE COMMITMENT

The ACUPCC provides a framework for colleges and universities to become climate neutral and advance education for sustainability. The Commitment recognizes the unique responsibility that institutions of higher education have as role models for their communities and in training the individuals who will develop the social, economic and technological solutions to reverse global warming.

Presidents make the following institutional commitments by signing the ACUPCC:

1. To eliminate operational greenhouse gas (GHG) emissions
2. To provide the education, research, and community engagement to enable the rest of society to do the same, and;
3. To publicly report progress on an annual basis

Successful Implementation

Successful implementation of the ACUPCC includes the following elements:

- Establishing an institutional structure to oversee the development and implementation of your school's program
- Completing an emissions inventory within a year and annually thereafter
- Developing a Climate Action Plan that includes steps to integrate sustainability into the curriculum, research, and community engagement
- Making your Climate Action Plan, GHG inventories and Progress Reports publicly available

Membership Dues

[ACUPCC Membership Dues](#)¹¹ enable Second Nature to administer the basic functions of the ACUPCC network and provide a wide range of benefits, including discounts, resources, expertise, training, education, networking opportunities and ongoing program support.

These functions help signatory institutions reduce greenhouse gas emissions, realize financial savings and successfully implement climate action and sustainability initiatives. ACUPCC Membership Dues also leverage foundation and corporate support that further assists signatory institutions in their climate action work and helps keep the dues at a minimum.

Governance and Support

The [Steering Committee](#)¹² is the chief governing body of the ACUPCC and is responsible for guidance, policy and direction of the initiative. It is comprised of 20+ presidents and chancellors that reflect the diversity of higher education.

[Second Nature](#)¹³ is the supporting organization of the ACUPCC and provides the following:

- Implementation Support, including direct support for signatories; development of climate action planning resources; and management of the online [reporting system](#)¹⁴.
- Networking events such as the [Regional Symposia](#)¹⁵ and workshops and [webinars](#)¹⁶.
- Outreach to Presidents and senior leaders with opportunities to advance sustainability.
- Development and distribution of [publications](#)¹⁷ (in partnership with dozens of key experts), including a voluntary carbon offsets protocol, academic guidance with hundreds of examples of successful sustainability education efforts, and a document to help presidents understand and develop the skills to lead profound change initiatives such as the ACUPCC.
- Communications, including media outreach to publicize the power of the network and activities of member schools; management of the [ACUPCC web site](#)¹⁸; development and dissemination of the monthly [Implementer newsletter](#)¹⁹; and creation and distribution of the [annual report](#)²⁰.

More Information on
The Commitment

[The Commitment Text](#)

[Why Sign The Commitment?](#)

[Commitment FAQs](#)

Benefits of Dues

[Briefing Paper on the benefits to your institution when paying ACUPCC dues](#)



Second Nature
Education for Sustainability



THE IMPLEMENTATION LIAISON

The Implementation Liaison (IL) is the individual responsible for coordinating the ACUPCC implementation efforts at your institution. Only one individual may be listed publicly as the Implementation Liaison but multiple individuals at your institution may receive ACUPCC correspondence as well as receive a login and password for access to the ACUPCC Reporting System.

To add more contacts, request login privileges, or notify that you will be transitioning out of the role as IL, contact Second Nature at reporting@secondnature.org or call 617 722 0036.

Resources for Implementation Liaisons

Directory: When logged into the ACUPCC Reporting System you will have access the [Directory of Implementation Liaisons](#)²¹. Search IL contacts at ACUPCC signatory institutions for peer support and networking.

The Implementer Newsletter²²: The Implementer is a monthly newsletter that supports climate action planning and implementation efforts by providing timely information on program support resources in response to real-world challenges faced by participants. All Implementation Liaisons and their presidents are automatically subscribed to the Implementer Newsletter. Anyone may subscribe to the newsletter by using the following [link](#)²³.

Implementation Liaison Support Committee²⁴: A group of individuals with implementation experience who provide peer-to-peer support to others responsible for implementing the ACUPCC at signatory institutions. To engage with the IL Support Committee send an email to reporting@secondnature.org

Presidential Fellows²⁵: The Fellows are recently retired college and university presidents engaged in supporting Second Nature and the ACUPCC, particularly for peer-to-peer presidential outreach. For more information on the Presidential Fellows program, contact [Dr. Mitchell Thomashow](#).

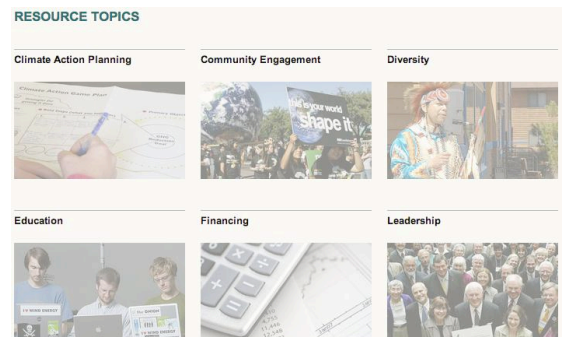
ACUPCC Working Groups

ACUPCC Steering Committee convenes working groups to address challenges and solutions in fulfilling the commitment, as needed; examples include:

- **Adaptation**²⁶: Convened to evaluate higher education's role in climate adaptation and to develop and publish a White Paper that identifies the trends, challenges and opportunities associated with this topic.
- **Academic**²⁷: Convened to develop a 5-year strategy to integrate a sustainability perspective into the educational experience of all students in all disciplines.
- **Financing Sustainability**²⁸: Convened to identify and enhance clean energy incentives and investments specific to the non-profit higher education sector.
- **International**²⁹: Convened to develop a proactive strategy for addressing the international impact of the ACUPCC

Responsibilities of Implementation Liaisons

Appointed by the President or Chancellor, the IL's responsibilities include the following: keeping contact information up to date in the reporting system, submitting reports to the public reporting system, acting as the primary point of contact on ACUPCC matters between their institution and Second Nature, and sharing implementation efforts with his or her community and President.



Visit acupcc.org/resources

[The Resources Section of the ACUPCC Website](#) provides resources on topics including:

- Climate Action Planning
- Education
- Financing
- Community
- Operations
- Research
- Diversity
- Leadership
- and more!



THE REPORTING FRAMEWORK

Public reporting on progress towards sustainability is a key driver for long-term success, and regular, public reporting is a central component of the ACUPCC. Reporting helps signatories learn from one another and demonstrates to external audiences the seriousness with which signatories are implementing the Commitment. For more information, please see Second Nature’s briefing paper, [Why Public Reporting Matters](#)³⁰.

Reporting Timeline

The Commitment Timeline

ACUPCC signatories make a commitment to publicly report on their progress, setting a precedent for transparency, holding themselves accountable to their peers, stakeholders, and the public, and enabling the network to share innovation and best practices.

Within 1 Year	Within 2 Years	Within 3 Years	Within 4 Years
Create institutional structures, initiate two of seven tangible actions, and complete greenhouse gas emissions inventory.	Develop institutional Climate Action Plan; include target date for achieving climate neutrality and comprehensive strategies for sustainability education, research, and community engagement.	Complete updated greenhouse gas emissions inventory.	Submit Progress Report on Climate Action Plan.

After year 4, GHG inventories and Progress Reports are due every other year, ongoing.

When an institution signs the commitment, the Implementation Profile is due 2 months after signing.

All other reports are due yearly on January 15th unless an extension has been requested and granted.

Review your institution’s reporting deadlines at rs.acupcc.org.

ACUPCC Reporting System



ACUPCC Reporting System

Reporting Institutions
HOME

Search Reporting Institutions

Institution Name

Carnegie Classification

State or Province

- Home (Browse Reports)
- Submit or Edit a Report
- Reporting Instructions
- Statistics and Data Views
- Subscribe to the Newsletter
- ACUPCC Resources

The [ACUPCC Public Reporting System](#)³¹ (rs.acupcc.org) allows your institution to demonstrate transparency and integrity for your commitment and contributes to the collective learning of the network and general public.

The Reporting System also allows you to track, assess, and communicate progress to your campus community and beyond, demonstrating to prospective students, foundations, and potential private sector partners that your institution is serious and transparent about its commitment to climate change and sustainability.

Extension Requests

In the event that your institution may be unable to meet the GHG Report, Climate Action Plan or Progress Report reporting deadline despite your best efforts, a request for an extension may be submitted for the following reports:

- GHG Report – One extension request of up to 4 months
- CAP Report – Two 4 month extensions are available for a total of 8 months
- Progress Report – One extension request of up to 4 months



Submitting an Extension Request

Signatories should apply for an extension as soon as you become aware that you will be unable to meet the reporting deadline. Once the original deadline has passed, and until an extension is granted, your institution's report due date will be listed in **RED**, indicating the report and institution is Not in Good Standing, on the ACUPCC Reporting System website.

GHG Reports	Climate Action Plans	Progress Reports
Due 1/15/12	Due 1/15/13	Due 1/15/15

Extensions may be requested through the ACUPCC Reporting System. Once logged in, you will see a heading in the left side column for [Reporting Instructions](#)³². Here you will find the link to [Instructions for Requesting an Extension](#)³³ and the form to the request the extension. Fill out the online form and click "Request Extension."

Non-Fulfillment



*Institutions that miss reporting deadlines are listed as **not in good standing** on the Reporting System (rs.acupcc.org) and in the ACUPCC [Annual Report](#)³⁴. If your institution fails to submit three consecutive reports within the designated reporting schedule – i.e. when you have three reports past due at the same time – your institution will be considered as [unengaged](#)³⁵ from the ACUPCC network and may be at risk of being removed.*

Removal of unengaged signatory institutions from the ACUPCC network is necessary to ensure the integrity of the ACUPCC for those institutions that are engaged with the network and making good faith efforts to fulfill the Commitment. Ongoing, active participation in the network is necessary for the network to fulfill its purpose as a learning community and an agent of societal advancement. Signatory institutions that have been deemed unengaged will have a three-month grace period to submit at least one of the three past due reports. Any institution that has three reports due at the end of the grace period will be removed from the ACUPCC network and their names will be taken off the website. The ACUPCC Steering Committee and the ACUPCC support team will make every reasonable effort possible to assist ACUPCC institutions in becoming and remaining engaged with the network. For more information, visit <http://www.presidentsclimatecommitment.org/unengagedpolicy>

REPORTS FOR THE ACUPCC

THE IMPLEMENTATION PROFILE

Within two months of signing the commitment, ACUPCC signatories are required to submit an Implementation Profile report that provides your institution's contact information, implementation structure for fulfilling the commitment, and the selection of at least two [Tangible Actions](#)³⁶ to take immediately while your more comprehensive Climate Action Plan is being developed.

Tangible Actions

ACUPCC signatories commit to initiating two or more of the following seven specified tangible action options to reduce greenhouse gases within the two years after their implementation start date.

1. Establish a policy that all new campus construction will be built to at least the U.S. Green Building Council's LEED Silver standard or equivalent.
2. Adopt an energy-efficient appliance purchasing policy, requiring purchase of ENERGY STAR certified products in all areas for which such ratings exist.
3. Establish a policy of offsetting all greenhouse gas emissions generated by air travel paid for by our institution.
4. Encourage use of and provide access to public transportation for all faculty, staff, students and visitors at our institution.
5. Within one year of signing this document, begin purchasing or producing at least 15% of our institution's electricity consumption from renewable sources.
6. Establish a policy or a committee that supports climate and sustainability shareholder proposals at companies where our institution's endowment is invested.
7. Participate in the Waste Minimization component of the national RecycleMania competition, and adopt 3 or more associated measures to reduce waste.



Creating an Institutional Structure

The institutional structure can take the form of a committee, taskforce, council or other body that is appointed specifically for the purpose of implementing the requirements of the ACUPCC. If your institution has an established sustainability structure, it is recommended that ACUPCC implementation be integrated within the goals of the pre-existing sustainability structure.

To successfully fulfill the ACUPCC requirements, *the implementation structure should be empowered with the authority necessary to implement the Commitment and should include high-level participants who have the ability to enact elements of the plan.*

Although an individual should be responsible for coordinating the implementation of the ACUPCC, achieving climate neutrality and sustainability will require support from all sectors of campus. Institutional structures should, at a minimum, include staff, faculty, students, and administration representatives.

Signatories may also choose to include trustees, alumni, local government officials, or other members of the community as participants in the process. The institutional structure should have a chair or other designated person who serves as the Implementation Liaison. Beyond this broad outline, the composition of the structure is left to the discretion of your institution.

More information and resources for developing an Implementation Structure:

- Climate Action Planning Wiki (AASHE): [Chapter 2 Creating an Institutional Structure for Your Climate Action Plan](#)³⁷
- [Second Nature Briefing Paper: Institutionalizing Sustainability](#)³⁸
- [Leading Profound Change: A Resource for Presidents & Chancellors](#)³⁹
- [Boldly Sustainable: Hope & Opportunity for Higher Education in the Age of Climate Change](#)⁴⁰

To successfully fulfill the ACUPCC requirements, the implementation structure should be empowered with the **authority necessary** to implement the Commitment, and should include **high-level participants** who have the ability to enact elements of the plan.

CASE STUDY: CREATING A DISTRICT-WIDE INSTITUTIONAL STRUCTURE

By Thomas Williams, Sustainability Coordinator, Scottsdale Community College

The [Maricopa County Community College District](#) has structured its sustainability operations with several layers of committees and councils. Operating at a district-wide level the Sustainability Committee is comprised of members from each of the ten community colleges. These members are either faculty or staff and usually are serving in a leadership role for sustainability at their respective colleges and meet on a monthly basis throughout the academic year. Recommendations from the Sustainability Committee are sent to the Sustainability Action Council for approval.

The Sustainability Action Council includes members from the Chancellor's Executive Council and includes the Executive-Vice-Chancellor and Provost, the Vice-Chancellor for Business Services and one College President. This council is structured around three chairs in order to have a person for each of the pillars of sustainability (Environmental Responsibility, Economic Feasibility, Social Justice). The Tri-Chairs lead their respective groups and include several other stakeholders, such as representatives from facilities, finance and student services. Once the Sustainability Action Council has agreed to move an action forward, it is presented to the Chancellor and his Executive Council for approval.



THE GREENHOUSE GAS INVENTORY

Signatories agree to complete a comprehensive inventory of all greenhouse gas (GHG) emissions within one year after signing the commitment and to provide updated GHG emission reports every other year thereafter. Although the ACUPCC only requires GHG reports to be submitted every other year, it is recommended that signatories conduct annual emissions reports for the purpose of institutionalizing the process and tracking and assessing progress.

Methodology

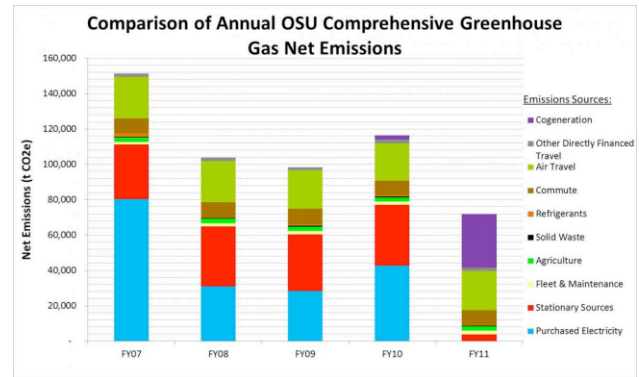
Signatories may use any methodology and/or carbon calculator that is consistent with the standards of the Greenhouse Gas Protocol ([GHG Protocol](#))⁴¹ of the World Business Council for Sustainable Development ([WBCSD](#))⁴² and the World Resources Institute ([WRI](#))⁴³. The GHG Protocol is the most widely-used international accounting procedure for quantifying GHG emissions, and it provides the accounting framework for nearly every GHG standard and program in the world.

To conduct your GHG inventory the ACUPCC recommends the [Clean Air-Cool Planet Carbon Calculator](#)⁴⁴. It is designed specifically for campuses and is the most commonly used tool for campus inventories.

Temporal Boundaries

Before beginning the GHG emissions inventory, signatories must determine the time period over which they wish to evaluate their emissions. To allow for comparability and aggregation of data, signatories are to calculate and report their emissions in one-year periods. Emissions may be calculated according to your fiscal or academic year, rather than by calendar year. Whichever time period is chosen for submission, it should be consistent for each annual greenhouse gas report.

To better inform the Climate Action Planning process, it is recommended that you understand your emissions trajectory over time. Therefore, signatories should endeavor to calculate, to the extent practical, their emissions from years *prior* to participation in the ACUPCC. Each signatory can decide how far back it needs to track its emissions in order to understand its emissions trajectory.



The University of Oregon uses comparative GHG data to create programs for emission reductions on campus. See more GHG modeling at oregonstate.edu/sustainability

For guidance in tracking emissions over time, and specifically how to deal with structural changes such as acquisitions and divestments, consult Chapter 5 of the [Greenhouse Gas Protocol Corporate Accounting and Reporting Standard](#)⁴⁵.

Operational Boundaries

Consistent with GHG Protocol standards, signatories are expected to track and report emissions of the six greenhouse gases covered under the Kyoto Protocol^a: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF₆).

The main focus should be on CO₂ since emissions of PFCs or SF₆ are unlikely to originate on campus, and emissions of CH₄, N₂O, and HFCs are likely to represent only a small percentage of your institution's total GHG emissions.

GHG Gases for ACUPCC Reporting

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF₆)

^a The Kyoto Protocol to the United Nations Framework Convention on Climate Change is an international agreement ratified by over 170 countries that set targets and timetables for cutting the greenhouse gas emissions of industrialized countries.



Options for Completing Greenhouse Gas Inventories

In-House Greenhouse Gas Inventories

Every ACUPCC institution needs to decide who will complete their baseline and annual GHG inventory report. Institutions have conducted successful greenhouse gas inventories using a number of different approaches. A common approach is for sustainability offices and personnel (including student interns) to take the lead on the project. Sometimes sustainability committees complete the inventory. Another successful approach is to make the inventory an outcome of a class project. Some institutions hire an outside consulting firm to do the work while others complete the inventory in-house. While there may be advantages and disadvantages to either approach, *the ACUPCC recommends completing the inventory in-house whenever practicable.*

Completing the inventory in-house provides an opportunity to engage students, faculty, and staff at a level that is difficult to match when hiring an outside firm. The process of collecting institution-wide data, conducting surveys, and communicating results and goals encourages collaboration, builds community, and fosters institutional pride. Conducting a GHG inventory in-house provides educational opportunities for those establishing the scope and boundaries of the inventory, performing calculations, and writing the final report. Because the inventory is completed on a regular basis over the course of many years, the long-term institutional awareness and cost savings associated with completing the inventory in-house can be significant.

There is a learning curve for anyone completing their first GHG inventory, but the knowledge gained is directly applicable throughout the ACUPCC implementation process, and subsequent inventories will be considerably easier and take less time. Completing the inventory in-house builds community, contributes to the educational mission, and saves money.

A basic, first-time inventory can take an individual up to four months to complete. That is why a [four-month extension](#)⁴⁶ is available to signatories that may not be able to make their original deadline.

Regardless of how the report is completed, it is important that the protocol and methodology remain consistent from year to year. The process of completing an annual inventory will be much more efficient for colleges and universities that carefully record their protocol, lessons learned, and best-practices of completing an inventory from year to year.

For this reason, we recommend that ACUPCC signatories create an institution-specific, step-by-step guide for how to complete an inventory at their school. Once a step-by-step guide is created the methodology and protocol can be consistent no matter who conducts the inventory from year-to-year.

If the GHG inventory is performed as a class project, or by an outside contractor, it is still beneficial for a full-time employee of the campus to be familiar with the data, process, and protocols in order to verify the results.

It is the institution's responsibility to submit the most accurate inventory possible. Accurate GHG inventories will make developing and implementing the Climate Action Plan more successful.

See [Colgate University's "2011 Greenhouse Gas Inventory"](#) for an example of how to expand an annual inventory into a step-by-step institutional GHG inventory guide.

Contracted Greenhouse Gas Inventories

Institutions may elect to contract their GHG inventory to a 3rd party vendor. Many Energy Service Companies (ESCOs) provide this service in conjunction with energy retrofit projects.

If you are interested in contracting your GHG inventory, contact the ACUPCC Support Staff for a list of signatories that have used external consultants to conduct their GHG inventory at reporting@secondnature.org. You may also want to view the [list of ACUPCC Corporate Sponsors](#)⁴⁷ as well as the [ACUPCC Corporate Sponsor Case Studies](#)⁴⁸.



Scopes of Greenhouse Gas Reporting

The GHG Protocol defines three “scopes” for GHG accounting and reporting purposes. Signatories are required to report on the emission sources under each scope below. For more information and detail of each emission source see the ACUPCC Reporting System’s [Instructions for Submitting a GHG Inventory](#)⁴⁹. Consistent with the GHG Protocol standards, ACUPCC signatories agree to account for and report on emissions from Scopes 1 and 2, and two areas of Scope 3 emissions: air travel paid for by or through the institution, and regular daily commuting to and from campus by students, faculty, and staff (to the extent that data are available).

Scope 1 Emissions	
Stationary Combustion <small>REQ</small>	<input type="text"/> metric tons of CO2e
Mobile Combustion <small>REQ</small>	<input type="text"/> metric tons of CO2e
Process Emissions <small>REQ</small>	<input type="text"/> metric tons of CO2e
Fugitive Emissions <small>REQ</small>	<input type="text"/> metric tons of CO2e
Total Scope 1 Emissions	0.0 metric tons of CO2e

Scope 1: Direct Emissions

Scope 1 emissions are those that are physically produced on campus (e.g. on-campus power production, campus vehicle fleets, refrigerant leaks). These sources are “owned or directly controlled” by your institution.

Scope 2 Emissions	
Purchased Electricity <small>REQ</small>	<input type="text"/> metric tons of CO2e
Purchased Heating <small>REQ</small>	<input type="text"/> metric tons of CO2e
Purchased Cooling <small>REQ</small>	<input type="text"/> metric tons of CO2e
Purchased Steam <small>REQ</small>	<input type="text"/> metric tons of CO2e
Total Scope 2 Emissions	0.0 metric tons of CO2e

Scope 2: Indirect Emissions

Scope 2 emissions are mostly associated with purchased utilities required for campus operation. They are indirect emissions resulting from activities that take place within the organizational boundaries of the institution, but that occur at sources owned or controlled by another entity.

Scope 3 Emissions	
Commuting <small>REQ</small>	<input type="text"/> metric tons of CO2e
Air Travel <small>REQ</small>	<input type="text"/> metric tons of CO2e
Solid Waste	<input type="text"/> metric tons of CO2e
Custom Source 1 Type	<input type="text"/>
Custom Source 1 Value	<input type="text"/> metric tons of CO2e

Scope 3: Other Indirect Emissions

Scope 3 includes emissions from sources that are not owned or controlled by the campus, but that are central to campus operations or activities (e.g. non-fleet transportation, employee/student commuting, air travel paid for by your institution).

However, signatories are strongly encouraged, to the extent practical, to investigate and report on additional Scope 3 emissions from sources that can be meaningfully influenced by your institution. Other Scope 3 emissions sources that you may choose to include in the inventory include, but are not limited to: waste disposal; embodied emissions from extraction, production, and transportation of purchased goods; outsourced activities; contractor owned-vehicles; and line loss from electricity transmission and distribution.

[Watch the ACUPCC Webinar](#)

[Expanding Scope 3 Emissions Tracking and Reporting](#)

GHG accounting is continuously being refined, especially as it relates to Scope 3 emissions. It is good practice to stay informed with the new thinking and updates in regard to GHG accounting. The GHG Protocol has just ended a public comment period (July 2012) on an Amendment that revises the [Corporate, Scope 3 and Product Life Cycle Standards](#)⁵⁰ to require the reporting of all UNFCCC GHGs and the use of a more consistent set of Global Warming Potentials (GWP). The update does not affect ACUPCC Scope 3 required reporting, but signatories that are looking at their supply chain emissions should keep current on the amendment.

Greenhouse gas inventory resources:

- Climate Action Planning Wiki (AASHE): [Chapter 4 Determining Your Carbon Footprint and Emissions Trajectory](#)⁵¹
- ACUPCC Reporting System [GHG Inventory Reporting Instructions](#)⁵²
- [List](#)⁵³ of over 1600 GHG Inventories submitted to the ACUPCC Reporting System
- Clean Air-Cool Planet [Campus Carbon Calculator FAQs](#)⁵⁴



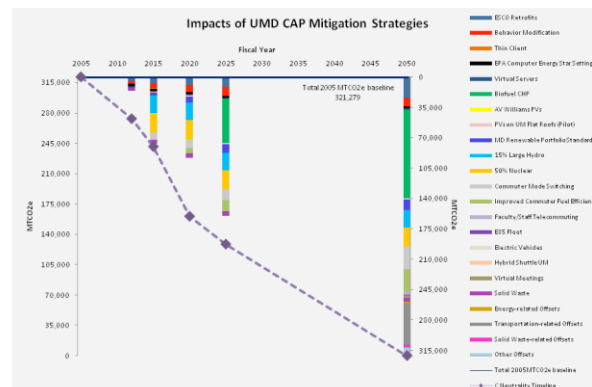
DEVELOPING THE CLIMATE ACTION PLAN

The Climate Action Plan (CAP) is developed within two years of signing the commitment, and should include a final target date as well as interim milestones for achieving climate neutrality.

To achieve climate neutrality under the terms of the Commitment, all Scope 1 and 2 emissions, as well as those Scope 3 emissions from air travel paid for by or through your institution and regular commuting to and from campus, must be eliminated and/or neutralized. Signatories may choose and are encouraged to incorporate their climate action plan into a more comprehensive sustainability plan.

The CAP should:

- Explain how your institution intends to achieve climate neutrality by its target date;
- Describe planned actions to make climate neutrality and sustainability a part of the curriculum and/or other educational experience for all students;
- Describe actions to expand research (if applicable), and community engagement to support efforts toward the achievement of GHG reductions for the institution and/or the community and society;
- Outline mechanisms for tracking progress on goals and actions.



[The Climate Action Plan for the University of Maryland College Park](#) uses detailed visuals to create a plan for reaching climate neutrality.

The CAP can be viewed as a series of aspirational statements of intent, rather than binding commitments. It is expected that your plans will be adjusted and refined over time in response to new information and changing circumstances.

Resources For Developing A Climate Action Plan

- [List of all Climate Action Plans Submitted](#)⁵⁵ to the ACUPCC. Sort by state, institution, and neutrality date.
- Climate Action Planning Wiki (AASHE): [Chapter 9 Structuring Your Plan and Getting It Approved](#)⁵⁶
- [Climate Action Planning Process at Rochester Institute of Technology](#)⁵⁷
- [Climate Action Planning: A Review of Best Practices, Key Elements, and Common Climate Strategies](#)⁵⁸
- ACUPCC Reporting System [Instructions for Submitting a Climate Action Plan](#)⁵⁹

CASE STUDY: INCLUDING THE CLIMATE ACTION PLAN IN THE STRATEGIC PLANNING PROCESS

By Linda Petee, Sustainability & Risk Management Coordinator, Delta College

Delta College incorporated the ACUPCC reporting requirements into its Academic Quality Improvement Process (AQIP) - a program adopted to inform and assess institutional strategic planning. By including the Climate Action Plan (CAP) as an [AQIP Action Project](#), we aligned the CAP with the college's strategic planning process and delivered the tasks of the initiative into the hands of the individuals responsible for implementing it. The AQIP process helped us to successfully coordinate, develop, and complete the [CAP](#) on time and solidified the ACUPCC as a strategic imperative for our institution. When [the Higher Learning Commission](#) reviewed the project they returned the following response:

"This project is an example of Delta's commitment and understanding of the principles of high-performing organizations. It is commendable that you have voluntarily adopted the ACUPCC standards for achieving climate neutrality. This is a standard too few institutions apply or include in their sustainability and facilities master planning processes. This project and your approach to developing a climate action plan demonstrate your commitment to excellence."

Delta College continues to use the same process to implement the goals outlined in the CAP in order to drive action, track progress, and integrate climate and sustainability work into the core mission of the institution.



Why Climate Neutrality?

By signing the ACUPCC, your institution has pledged to create a climate action plan that includes “a target date for achieving climate neutrality as soon as possible.” Climate neutrality – or net-zero greenhouse gas emissions – is a *scientifically necessary* goal if we are to reduce the concentration of carbon dioxide in the atmosphere to safe levels below 350 parts per million (ppm) from the current levels of approximately 400ppm. And a specific, ambitious goal helps create the kind of shared vision across an organization that is needed to achieve the kind of transformational change required to avoid climate disaster.

The imperative for climate neutrality is **Urgent** – In order to limit the global mean temperature increase over historical norms to 2-2.4 degrees Celsius (the temperature at which there is a high probability of catastrophic impacts), global emissions need to be reduced 50-85% below 2000 levels by 2050, with CO₂ emissions peaking before 2015.^b Scientists have indicated that avoiding catastrophe will require *eliminating* net emissions in order to reduce atmospheric concentrations of CO₂ below current levels. It is necessary to drive significant reductions in the short-term while also “keeping the eye on the prize” of climate neutrality in the longer-term. It also provides a **Core Strategic Imperative** – Achieving climate neutrality, and sustainability more broadly, is central to higher education’s mission in the 21st century. Higher education cannot fulfill its obligation to support a thriving civil society if that society is not sustainable.

Climate neutrality also offers **Shared Vision** – While strategic planning must work within the current constraints (financial or otherwise), it must also set a compelling vision of the ultimate goal – a “goal that is worthy of commitment.”^c An aggressive target date for climate neutrality can spur creativity, innovation, and intellectual curiosity. It provides a common aspiration, which helps foster alignment so that the many disparate parts of a large organization can work together toward the same goal, even when complexity and size makes centralized coordination of such efforts difficult. And institutions are encouraged to be **Flexible and Adaptable** – Given the complexity of the challenge of achieving climate neutrality, plans can and should be designed to be iterative and adaptable. We cannot know with certainty what the world will be like 20 or even 5 years from now. New laws, discoveries, technologies and cultural shifts will impact the best-laid plans. Target dates for climate neutrality and interim goals can be adjusted as circumstances change. *The ACUPCC allows for plans to be updated at any time, and the bi-annual progress reports provide a regular mechanism for making such changes.*

Setting Climate Reduction Targets

To aid the target-setting process, your Climate Action Planning committee (ACUPCC Implementation Structure) will want to develop a comprehensive list of potential measures for avoiding or reducing GHG emissions from each of the sources included in the GHG inventory. Criteria that you may consider when evaluating mitigation options:

1. Potential to avoid or reduce GHG emissions
2. Flexibility as a step towards future emissions-reduction measures
3. Return on investment or financial impact ([Life Cycle Analysis](#)⁶⁰ and [Financial Risk Management](#)⁶¹ analysis may be more appropriate than simple payback and ROI calculations)
4. Potential to create positive and/or negative social and environmental side-effects
5. Relationship to other potential measures and opportunities for synergistic measures
6. Potential to be scaled upward if successful
7. Potential to involve students and faculty



More resources for Climate Action Planning are available on the [ACUPCC Resources Website](#)

Once the measures have been evaluated, they can be prioritized based on the same criteria, and early actions can be identified. In many cases, early actions can reduce costs or generate savings. To facilitate the financing of steps toward climate neutrality, signatories may wish to consider establishing mechanisms to reinvest these savings in the secondary and tertiary measures that may have higher upfront costs. Careful analysis of the emissions reduction measures will enable signatories to envision possible courses of action and establish targets that are in line with the commitment to achieve climate neutrality as soon as possible, but that are also realistic, flexible and affordable.

^b Working Group III contribution to the Intergovernmental Panel on Climate Change. Fourth Assessment Report. “Climate Change 2007: Mitigation of Climate Change.” Summary for Policymakers. Bangkok, Thailand. 30 April – 4 May 2007. <http://www.ipcc.ch/SPM040507.pdf>.

^c G. Hanel and C.K. Prahalad, “Strategic Intent.” *Harvard Business Review*. May-June 1989. p. 66



Incorporating Climate Neutrality & Sustainability into the Educational Experience

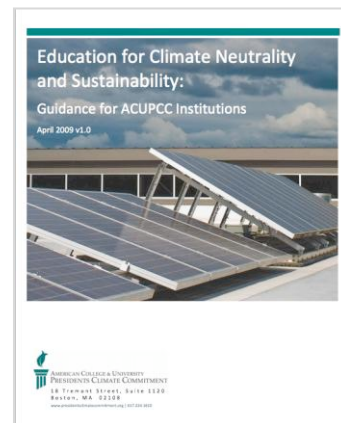
This section of the climate action plan will be highly institution-specific and should take into account your institution's particular strengths. It should start by describing your institution's current educational offerings (both curricular and extra-curricular) related to climate change and sustainability. It should then set out planned actions to make climate neutrality and sustainability a part of the curriculum and other educational experience for all students.

Example actions you may consider include:

- Initiation of faculty development workshops on climate change and sustainability
- Creation of new academic programs related to climate change and sustainability
- Establishment of a graduation requirement in sustainability
- Development of institution-wide incentives or programs to encourage faculty across the institution to address sustainability in their courses
- Participation in climate-related educational initiatives like [Focus the Nation](#)⁶², [Energy Action Coalition](#)⁶³, or [350.org](#)⁶⁴
- Inclusion of students on building, operations, and facilities committees
- Implementation of student life educational initiatives related to climate change and sustainability, such as: peer-to-peer outreach and education efforts like "Eco-Rep" programs; sustainability pledge programs (e.g. Graduation Pledge or Sustainability Pledge); First Year Experience and/or New Student Orientation sustainability sessions; sustainability themed housing; and sustainability competitions between residence halls

Resources For Curriculum Efforts

- Climate Action Planning Wiki (AASHE): [Chapter 3.1 Climate Change and Sustainability in the Curriculum](#)⁶⁵
- Student Sustainability Educators: [A Guide to Creating and Maintaining an Eco-Rep Program on Your Campus](#)⁶⁶ (National Wildlife Federation & AASHE)
- See [Appendix B](#) for a list of ACUPCC Campus-led Sustainability Faculty Development Workshops and [Appendix C](#) for a list of ACUPCC Student Led Peer-to-Peer Sustainability Education Programs
- [AASHE STARS Technical Manual](#)⁶⁷: Education & Research Section starting on page 20
- [The Sustainability Education & Economic Development \(SEED\) Center](#)⁶⁸



[Education for Climate Neutrality and Sustainability](#) is intended to give college and university decision-makers and key staff guidance and resources for fulfilling this component of the commitment

Expanding Research Efforts to Achieve Climate Neutrality & Advance Sustainability

This section of the climate action plan will be highly institution-specific and may be omitted by institutions that are not engaged in significant research activities. If applicable, this section should describe your institution's current research efforts related to climate neutrality and sustainability, and should then describe planned actions to expand these efforts.

Example actions you may consider include:

- Establishment of research fellowships or other financial support mechanisms for research related to climate change and sustainability
- Initiation of major research initiatives related to climate change and sustainability
- Provision of climate and sustainability related research opportunities for students or creation of research institutions or academic centers related to climate change or sustainability

Expanding Community Engagement to Achieve Climate Neutrality & Advance Sustainability

This section of the climate action plan will be highly institution-specific. It should start by describing your institution's current community engagement/outreach efforts related to climate neutrality and sustainability, as well as any other relevant activities not covered elsewhere in the plan. It should then set out planned actions to expand these efforts. This section of the plan should also explain how the surrounding community will be made aware of your institution's participation in and progress toward implementing the ACUPCC.



Example actions that you may consider include:

- Initiation of community service or service-learning activities related to climate neutrality
- Development of community partnerships related to GHG reductions and sustainability
- Introduction of community education initiatives related to climate change and sustainability
- Development of programs that support faculty and staff in making personal efficiency upgrades at their residences, such as subsidized home efficiency audits

Examples of Community Engagement Initiatives

The [Tompkins County Climate Protection Initiative](#)⁶⁹ (TCCPI) is a multi-sector collaboration seeking to leverage the climate action commitments made by Cornell University, Ithaca College, Tompkins Cortland Community College, Tompkins County, the City of Ithaca, and the Town of Ithaca to mobilize a countywide energy efficiency effort and accelerate the transition to a clean energy economy. The [Oberlin Project](#)⁷⁰ is a joint effort of the City of Oberlin, Oberlin College, and private and institutional partners to improve the resilience, prosperity, and sustainability of the Oberlin community.



For more information, visit www.tccpi.org

Tracking Progress

Tracking progress is a critical aspect of a comprehensive climate action plan and should be included in the initial report. Signatories will benefit by establishing a system that tracks project implementation and overall progress en route to the goals specified in the climate action plan. Signatory institutions may want to track project implementation start dates, costs (first cost and annual operating costs), savings (in terms of both money and resources), and greenhouse gases reduced. The system should also evaluate efforts to incorporate climate neutrality and sustainability into curricular and co-curricular educational activities. For example, signatories might conduct periodic sustainability literacy surveys of students and/or faculty to assess the progress of climate-related learning outcomes in the curriculum. Finally, it helps to remember that climate action planning is an iterative process that is at its best when it incorporates the collective knowledge and insights from your campus community.

CASE STUDY: HOW DO YOU REMAIN FLEXIBLE & ADAPTIVE WHEN A MAJOR CLIMATE ACTION PLAN STRATEGY FALLS THROUGH?

By Cherie Peacock, Sustainability Coordinator, University of Montana

The University of Montana-Missoula spent considerable time and money to build a biomass boiler that would have utilized local waste material and reduced the campus carbon footprint by 20%. However, due to declining natural gas prices and local community opposition, the project was put on hold. In response, UM students developed the Smart Buildings Initiative aimed at institutionalizing efficient use of energy. The Smart Buildings Initiative has already accomplished raising awareness of energy efficiency needs in existing buildings and securing funding for real-time energy monitoring and a full-time energy manager. Students understand the many benefits to addressing energy efficiency, from reducing operational costs and GHG emissions to creating jobs and bolstering the local economy. Students also understand the urgency and the scale needed to reverse climate change and are looking to expand the Smart Buildings Initiative to include all of the state run colleges and universities in Montana and have begun working with state-level leaders to remove barriers and incentivize energy efficiency projects on all campuses. If the biomass plant had gone through, UM would have certainly addressed making its existing buildings more energy efficient. However, with the plant put on hold the students found an opportunity to not only address energy efficiency on campus but looked to have a bigger impact. In the end, the learning experience for everyone involved, led by students, will have the greatest impact to reducing emissions in the future.

The Smart Buildings Initiative has the potential to reduce the university's carbon footprint by 20% or more and save money in the process. When a major emission reduction strategy falls through, be flexible and adaptive. It may lead to an opportunity that has a larger and far-reaching impact.



IMPLEMENTING THE CLIMATE ACTION PLAN

Financing Mitigation Efforts

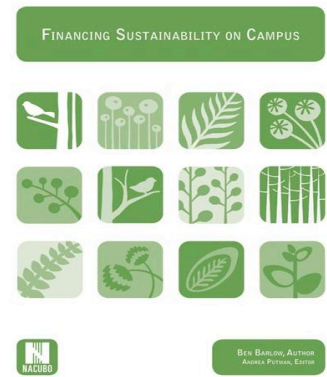
- [Revolving Loan Funds](#)⁷¹ (RLF) provide capital for projects that create some level of return or cost savings, such as energy efficiency or renewable power generation projects.
 - [Greening the Bottom Line: The Trend toward Green Revolving Funds on Campus](#)⁷² (Sustainable Endowments Institute)
 - [Creating a Campus Sustainability Revolving Loan Fund](#)⁷³ (AASHE)
 - [The Billion Dollar Green Challenge](#)⁷⁴ encourages colleges, universities, and other nonprofit institutions to invest a combined total of one billion dollars in self-managed revolving funds that finance energy efficiency improvements.
- [Tax Exempt Lease Purchase Agreements](#)⁷⁵ (TELP) are a unique lease structure available only to tax-exempt organizations, such as government, education and not-for-profit entities. Leases are structured so that the full cost of the project assets is amortized over the lease period.
- [Power Purchase Agreements](#)⁷⁶ (PPA) are primarily used for financing and implementing onsite renewable energy installations. [On-Site Renewable Power Purchase Agreements](#)⁷⁷ (EERE)
- [Efficiency Services Agreements](#)⁷⁸ (ESA) are a pay-for-performance financing solution that allows building owners to implement energy efficiency projects without any upfront capital expenditure.
- [Managed Utility Service Contract](#)⁷⁹ (MUSC) is an off-balance sheet financing mechanism in which a project developer installs energy efficiency measures at no upfront cost to the owner, and creates a special purpose vehicle (SPV) to assume payment of a building owner's energy bill.
- [Energy Performance Contracting](#)⁸⁰ (EPC) is a contractual and financing mechanism through which building owners can undertake comprehensive energy efficiency retrofits with minimal financial exposure and risk.
- [ACUPCC Financing Sustainability Committee](#)⁸¹
- Climate Action Planning Wiki (AASHE): [Financing Campus Climate Action](#)⁸²

Installing Renewable Energy Projects

134 signatory institutions produce 171,000,000 kWh of renewable energy annually. [This is the equivalent of powering 14,702 American household's electricity annually.](#)⁸³ These institutions have on-campus renewable energy sources – helping to make the transition to a clean and just society, and becoming more secure in a changing energy market.

- Total Solar Output: 85,577,602 kWh annually
Solar panels on 93 campuses
- Total Wind Output: 45,695,241 kWh annually
Wind turbines on 48 campuses
- Total Biomass Output: 30,514,735 kWh annually
Biomass systems on 5 campuses
- Total Geothermal Output: 5,605,323 kWh annually
Geothermal systems on 13 campuses
- Total Fuel Cell Output: 4,504,400 kWh annually
Fuel Cell systems on 3 campuses

The case studies at right provide examples of renewable energy projects for biomass,⁸⁴ fuel cells,⁸⁵ geothermal,⁸⁶ land fill gas,⁸⁷ solar,⁸⁸ and wind.⁸⁹



[Financing Sustainability on Campus](#)

A comprehensive handbook to financing sustainability with real world examples, creative strategies, and clear explanations of a wide variety of financial tools and programs.

Case Studies

Biomass

[Middlebury College](#)
[University of Minnesota Morris](#)

Fuel Cell

[Central Connecticut State University](#)
[State University of New York College of Environmental Science & Forestry](#)

Geothermal

[Ball State University](#)
[University of Illinois Chicago](#)

Land Fill Gas

[University of New Hampshire](#)

Solar

[Arizona State University](#)
[Butte College](#)

Wind

[Mount Wachusett Community College](#)
[University of Maine Presque Isle](#)



Purchasing Renewable Energy Credits

Purchasing Renewable Energy Credits (RECs) can offset the emissions associated with your purchased electricity. 156 signatories have purchased a total of 1,279,765,254 kWh RECs. One REC is created for every 1000 kilowatt-hours (or 1 megawatt-hour) of renewable energy produced electricity placed on the grid. A REC represents the property rights to the environmental, social, and other non-power qualities of renewable electricity generation.

The ACUPCC is the [3rd largest purchaser of RECs](#)⁹⁰ in the USA and a significant supporter of renewable energy development.

Utilizing Carbon Offsets

ACUPCC signatories are not required to include offset investments as part of your climate action plan, but the ACUPCC does recognize offsets as a viable tool for achieving climate neutrality. Carbon neutrality as defined by the ACUPCC is feasible at any time through the purchase of carbon offsets or creation of legitimate local offsets. Your institution has the option to consider the purchase of carbon offsets to reach or work towards neutrality.

Offsets can drive emissions reductions, potentially at a lower cost than is immediately feasible on campus. Offsetting may also internalize some of the costs associated with GHG emissions, providing an additional incentive for eliminating emissions over time.

Carbon Offset Resources

[The ACUPCC Voluntary Carbon Offset Protocol](#)⁹¹

[Webinar: Understanding Carbon Offsets: Best Practices in Creating & Purchasing High-Quality Offsets](#)⁹²

[Carbon Offset Research & Education](#)⁹³

By Tim Stumhofer, Senior Program Associate, Greenhouse Gas Management Institute

[What You Need to Know about Carbon Offsets](#)⁹⁴

By Joel Levin, Vice President for Business Development, Climate Action Reserve

[Carbon Offsets 101: What colleges and universities can learn – and teach – about GHG offset quality](#)⁹⁵

By David Antonioli, CEO, Voluntary Carbon Standard Association

[The Carbon Offset Potential of Campus Forests and Other Land](#)⁹⁶

By Jennifer Andrews, Director Of Program Planning And Integration, Clean Air-Cool Planet

GHG Management Institute: [Getting real about “real” carbon offsets](#)⁹⁷

Climate Action Planning Wiki (AASHE): [Chapter 5.9 Carbon Offsets](#)⁹⁸

Resources on RECs

[EPA Green Power Partnership](#)

[Guide to Purchasing Green Power](#)

[Climate Action Planning Wiki \(AASHE\): Chapter 5.4](#)



Investing in Carbon Offsets: Guidelines for ACUPCC Institutions

This document provides guidelines for ACUPCC institutions as they navigate the voluntary carbon offsets market. It is an accompanying document to the [ACUPCC Voluntary Carbon Offset Protocol](#) and aims to expand on and interpret the principles laid out in the Protocol in order to provide more practical and concrete guidance to institutions as they consider investment in offsetting activities.



Addressing Curriculum & Research

Understanding sustainability is requisite for career preparedness in the 21st century. ACUPCC institutions are employing a range of innovative approaches to ensure that climate and sustainability issues are incorporated into the educational experience of all students. The institutions that submitted a Progress Report to date have reported the following data:

Curriculum

- 76,935 graduates study under programs with sustainability learning outcomes.
- 175 signatories combine to offer 9,548 courses focused on sustainability
- 112 require all students to have sustainability as a learning objective
- 66 have offered professional development to all faculty in sustainability education
- 49 have included sustainability learning outcomes in institutional General Education Requirements
- 37 have included sustainability in fulfilling regional or state accreditation requirements
- 18 have included sustainability learning outcomes, tracks, or certificates in every academic major

Curriculum & Research Resources

- [Growing Sustainability Literacy at Northern Arizona University, from the Seeds of the Ponderosa Project to the Global Learning Initiative](#)⁹⁹
- [The Odyssey of Creating a Sustainable Campus at the University of New Mexico: Assets, Barriers, and Strategies](#)¹⁰⁰
- [Assessing Sustainability Education and Student Learning at Green Mountain College](#)¹⁰¹
- [Integrating Sustainability & Climate Action into every students learning experience at Luther College](#)¹⁰²
- [ACUPCC Academic Committee](#)¹⁰³
- [CAMEL: Climate, Adaptation, Mitigation, E-Learning](#)¹⁰⁴

Engaging With the Local Community

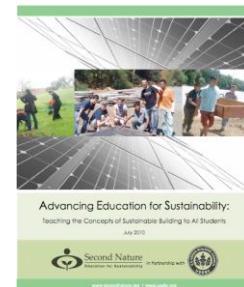
There are many examples of signatories engaging and partnering with their local communities to address climate neutrality and sustainability. The following examples have been pulled from data submitted in Progress Reports on the Climate Action Plan.

The Cabrillo College Governing Board formally joined the [Monterey Bay Regional Climate Action Compact](#)¹⁰⁵ (MBRCAC). MBRCAC is a network of government agencies, educational institutions, private businesses, and non-profit and non-governmental organizations from the Monterey Bay Region who are committed to working collaboratively to address the causes and effects of global climate change through local initiatives that focus on economic vitality and reduce environmental impacts for the region. [Read more](#)¹⁰⁶

California State University Monterey Bay's [service learning program](#)¹⁰⁷ addresses issues of social justice. Students work with dozens of agencies that address issues of homelessness, education, health care for low-income populations, child abuse, poverty, and many others. The university also runs an annual "[Focus the Region](#)"¹⁰⁸ event where students, faculty, staff and members of the community engage in presentations and discussion associated with climate change and sustainability. [Read more](#)¹⁰⁹

Research

- 11,223 faculty members are engaged in sustainability research
- 119 signatories have faculty engaged in sustainability research
- 114 have a program to encourage student climate and/or sustainability research
- 85 have a program to encourage faculty climate and or sustainability research
- 67 have a policy that recognizes interdisciplinary research in faculty promotion and tenure



[Advancing Education for Sustainability: Teaching the Concepts of Sustainable Building](#)

Explores the critical role of the built environment in educating all students about sustainability. Includes examples, recommendations, and a rich appendix of empowering resources.



THE PROGRESS REPORT ON THE CLIMATE ACTION PLAN

The Progress Report on the Climate Action Plan should be submitted four years after signing the commitment or two years after your original Climate Action Plan has been submitted. Progress Reports on the Climate Action Plan are due every two years. The Progress Report form was developed to meet the following objectives:

- Data should be useful to signatories in assessing and advancing their own sustainability goals
- Data should be collected in a way that it can be aggregated to demonstrate the progress of the initiative as a whole and to accelerate the collective learning of the network
- Data should align to the extent possible with existing reporting tools to reduce reporting fatigue
- The form should inform those signatories early in the implementation process what data should be collected

Progress Report Resources

[List of all Progress Reports on the Climate Action Plan](#)

[Instructions for Submitting a Progress Report](#)

Target Dates for Climate Neutrality

The Progress Report form **requires** signatories to set a climate neutrality target date and at least two interim targets for total scopes 1, 2, & 3 emissions. To submit progress reports and remain in good standing, signatories will be required to choose a target date for achieving climate neutrality, and provide at least two interim milestone emission-reduction targets. If your institution provided these three target dates in the CAP form, those will be automatically populated in the Progress Report. These dates can be updated or changed at any time in either the CAP or Progress Report. The update will be reflected in both reports as they are synchronized.

Other Required Fields for the Progress Report

The progress report also requires an update on GHG mitigation, education, research, and community engagement strategies as well as a general statement of progress. Please see the ACUPCC Reporting System [Instructions for Submitting a Progress Report](#)¹¹⁰ or contact the ACUPCC Support Team to schedule a time to walk through the form.

Efforts to Reduce Reporting Fatigue

The Progress Report includes expanded options for reporting on efforts related to the education, research, and community engagement components of the Commitment. To reduce the reporting burden on colleges and universities participating in multiple sustainability initiatives, these questions align with [AASHE's Sustainability Tracking Assessment & Rating System \(STARS\)](#)¹¹¹ credits and criteria.

These questions are aligned with STARS for the following reasons:

1. The development of STARS was the result of a collaborative, transparent process that involved hundreds of individuals in the higher education and sustainability community. STARS credits will continue to be assessed and refined using the same process.
2. There is significant overlap between ACUPCC requirements and STARS credits. For example, completing a GHG inventory, creating a climate action plan, and incorporating sustainability in the curriculum contribute to fulfilling the ACUPCC and earning STARS credits.

Signatories that are STARS participants will only need to provide a link to their STARS report. For signatories that are not STARS participants, STARS criteria can serve as guidance, or institutions can use their own methodologies and processes for measuring, tracking and reporting progress.



MANAGING PRESIDENTIAL TRANSITIONS

The ACUPCC is a commitment made by senior leaders on behalf of their institutions. When the signatory president or chancellor leaves the institution, the transition can have a significant impact on climate action planning and related ACUPCC implementation efforts on your campus.

To help support your new president, please contact the ACUPCC Support Team at Second Nature reporting@secondnature.org with the following information: new president name, contact information, and start date. Second Nature will send a welcome email to the new president via the ACUPCC Steering Committee two weeks after the start date to welcome them to the ACUPCC network. The IL should then update the Implementation Profile report with the new president's contact information to ensure he or she will receive all ACUPCC correspondence moving forward.

CASE STUDY: ON-BOARDING A NEW PRESIDENT

By Jesse Pyles, Sustainability Coordinator, Unity College

At Unity College, our presidential transition was accompanied by turnover in other administrative positions, including the Vice President for Finance & Administration and Director of Facilities, positions key to the successful implementation of our climate action plan as written. We managed the presidential transition and maintained climate action planning momentum by employing the following approaches:

Board Endorsement

We secured Board endorsement of the Climate Action Plan under the signatory president. In doing so, we presented the tenets of the ACUPCC, documented our campus planning efforts to date, and ensured that the trustees know that sustainability and climate planning are chief administrative priorities. If your climate action plan isn't suited for Board endorsement, make every effort to introduce the ACUPCC to senior leaders who haven't been closely engaged in the process.

Present Climate Action Plan to New Administration

As soon as possible, I gave a formal presentation to our new president and invited Vice Presidents and other campus leaders to attend, including other new employees. Focus such a presentation on planning history, progress to date, and next steps, identifying the roles that the president and others are expected to play moving forward.

Be Open to Revising the CAP

Our new president and other new members of our campus community have reviewed, supported, and challenged our Climate Action Plan in enriching ways. New people bring new ideas, and campus priorities can shift frequently, so be willing to revise your climate action plan to meet your targets in a way that makes sense for your institution.

ACUPCC Support

Second Nature and the ACUPCC are expanding resources to help campus executives familiarize themselves with the Commitment. The first thing our new president did on the job was to attend the annual [ACUPCC Climate Leadership Summit](#)¹¹². Second Nature staff and [Presidential Fellows](#)¹¹³ are available to reach out to your president, and [publications tailored for presidents and chancellors](#)¹¹⁴ are available on the Resources section of the ACUPCC website.



FOUNDING SUPPORTING ORGANIZATIONS OF THE ACUPCC



The Association for the Advancement of Sustainability in Higher Education (AASHE) supports the ACUPCC by hosting the [climate action planning wiki](#)¹¹⁵ and the [campus sustainability discussion forum](#)¹¹⁶. AASHE also hosts numerous sustainability resources, and has developed the [Sustainability Tracking Assessment & Rating System](#)¹¹⁷ (STARS), a self-reporting framework for colleges and universities to measure their sustainability performance.



[ecoAmerica](#)¹¹⁸ is a founding partner organization of the ACUPCC and is dedicated to supporting the environmental movement and growing the base of public support for environment and climate solutions among mainstream Americans.

ADDITIONAL RESOURCES

AASHE Resource Center

[The AASHE Resource Center](#)¹¹⁹ provides administrators, faculty, operations staff, students, and other campus stakeholders with the tools, information and guidance they need to lead the sustainability transformation.

Campus Green Builder

The [Campus Green Builder](#)¹²⁰ (CGB) online portal to green building information for academic institutions provides a one-stop online resource on campus green building that is free and accessible to all higher education institutions. Though the information provided is relevant to all higher education institutions, the CGB is particularly geared towards under-resourced colleges and universities.

Clean Air – Cool Planet

[Clean Air – Cool Planet](#)¹²¹ works collaboratively with campuses, communities and corporations to pioneer and scale-up innovative solutions aimed at reducing carbon emissions and preparing for climate change.

Sustainable Endowments Institute: Billion Dollar Green Challenge

[The Billion Dollar Green Challenge](#)¹²² encourages colleges, universities, and other nonprofit institutions to invest a combined total of one billion dollars in self-managed revolving funds that finance energy efficiency improvements. Participating institutions will achieve reductions in operating expenses and greenhouse gas emissions, while creating regenerating funds for future projects.

Sustainable Education & Economic Development (SEED) Center

[The Sustainability Education and Economic Development \(SEED\) Center](#)¹²³ aims to advance sustainability and green workforce development practices at community colleges by sharing innovative models and resources and building the capacity of college administrators, faculty, and staff to contribute as leaders.

USGBC Center for Green Schools

[The Center for Green Schools](#)¹²⁴ is working in partnership with students, faculty and administrators to strengthen campus sustainability efforts. The Center and USGBC aim to increase accessibility to LEED for educational facilities and campus development, support student leadership and advocacy efforts and promote sustainability in the curriculum.



APPENDICES

Appendix A: ACUPCC Mission & History, Commitment Text

Mission & History: <http://www.presidentsclimatecommitment.org/about/mission-history>

Full Commitment Text: <http://www.presidentsclimatecommitment.org/about/commitment>

Appendix B: ACUPCC Campus-led Sustainability Faculty Development Workshops

Signatory Institution	Program Link
Auburn University	Fall Line Project: Sustainability in the Curriculum
Carleton College	Cows, Colleges and Curriculum: Sustainability Issues in the Classroom
Central College	Prairie Project: Global Sustainability Education
Dickinson College	Valley & Ridge Faculty Development Workshop
Ithaca College	Finger Lakes Project
Northern Arizona University	The Ponderosa Project
Ohio University	Kanawha Project
Santa Clara University	Penstemon Project
University of Idaho	Palouse Project
University of Maryland College Park	The Chesapeake Project
University of Massachusetts Boston	Sustainability Curriculum Development
University of Southern Maine	The Maine Watersheds Project
University of Vermont	Sustainability Faculty Fellows Program
University of Wisconsin-Oshkosh	The Winnebago Project

Appendix C: ACUPCC Campus Student Led Peer-to-Peer Sustainability Education Programs

Signatory Institution	Program Link
Allegheny College	Eco Reps Program
American University	Green Eagle Program
Auburn University	Res Life Eco-Reps
Babson College	Eco-Reps
Bard College	Bard Environmental Resource People
Bowdoin College	ECO-Reps
Brandeis University	Campus Sustainability Initiative Eco-Reps
California State University, Chico	Environmental Ambassadors
Clark University	Eco-Reps
Coastal Carolina University	Eco-Reps
Connecticut College	Environmental Representatives
DePauw University	DePauw Eco-Reps
Dickinson College	Eco Reps Program
Duke University	Students for Sustainable Living
Green Mountain College	GMC Eco-Reps Program
Ithaca College	Resource Representatives Program
Keene State College	Eco-Reps
Middlebury College	Residential Sustainability Coordinators
North Carolina State University	Generating Residential Environmental Education Now (GREEN)
Portland State University	Eco Reps
Ramapo College of New Jersey	Sustainable Living Facilities
Rice University	Eco Rep Program
Seattle University	Sustainability Education and Engagement Delegates

	(SEED)
Sewanee - The University of the South	Environmental Resident Program
Smith College	Earth Reps
The University of Arizona	Eco-Reps
The University of New Mexico	Eco-Reps
University at Albany	Sustainability Council
University of California, Berkeley	Residential Sustainability Education Coordinators (RSECs)
University of California, Davis	Positive Impact, Sustainability Interns
University of California, San Diego	Econauts
University of Colorado Boulder	Green Teams
University of Massachusetts Amherst	Eco-Rep Program
University of Missouri	Sustainability Peer Resource Outreach (SPROUT)
University of New Hampshire	Energy Waste Watch Challenge
University of North Carolina at Chapel Hill	Residential Green Games
University of North Texas	Eco-Reps (Go Green)
University of Pennsylvania	Eco-Reps Program
University of South Carolina	Eco Reps Program
University of Tennessee at Knoxville	Eco-Vols
University of Vermont	Eco-Reps Program
University of Wisconsin-Oshkosh	Eco-Reps Program
Western Washington University	Residence Hall Sustainability Program and Eco-Reps



Appendix D: GHG Verification/Certification

Emissions inventory verification or certification is not required of ACUPCC signatories, though you are encouraged to take steps to ensure your emissions inventory is complete and accurate. The following organizations provide verification and guidance:

- The Climate Registry's General Verification Protocol (GVP) [provides instructions for executing a standardized approach](#)¹²⁵ to the independent verification of annual GHG emissions reported to The Registry.
- [The Greenhouse Gas Protocol Corporate Accounting and Reporting Standard](#)¹²⁶ contains guidance on ensuring inventory quality. Chapter 7 & 9 include an overview of the key elements of a GHG verification process.

Appendix E: Institution Owned Forests

Institutions that own large tracts of forestland may include carbon sequestered by the forested area in their GHG inventory. Institutions interested in doing so should follow the GHG Protocol's [Land Use, Land-Use Change, and Forestry Guidance for GHG Project Accounting](#)¹²⁷, which provides guidance to ensure that reductions from forest lands are real, lasting, and "additional".

For additional guidance on calculating sequestration in forested land, you may consult "Appendix B: Accounting for Sequestered Atmospheric Carbon" in the [Greenhouse Gas Protocol Corporate Accounting and Reporting Standard](#)¹²⁸. For an overview on the challenges related to accounting for campus-based carbon sequestration, refer to the following article from CA-CP, [A Recommendation on How to Account for Carbon Sinks in Campus Forests or Lands](#)¹²⁹.

Appendix F: List of URL's Included in the Implementation Guide

- 1 <http://www.presidentsclimatecommitment.org>
- 2 <http://www.presidentsclimatecommitment.org/about/mission-history>
- 3 <http://www.presidentsclimatecommitment.org/about/contact>
- 4 <http://presidentsclimatecommitment.org/about/contact>
- 5 <https://www.facebook.com/acupcc>
- 6 <http://twitter.com/acupcc>
- 7 <http://www.linkedin.com/groups/American-College-University-Presidents-Climate-4508649>
- 8 <http://www.youtube.com/user/secondnatureboston>
- 9 <http://www.presidentsclimatecommitment.org/news-events/newsletter>
- 10 <http://secondnaturebos.wordpress.com>
- 11 <http://www.presidentsclimatecommitment.org/signatories/dues>
- 12 <http://www.presidentsclimatecommitment.org/about/governance>
- 13 <http://www.secondnature.org>
- 14 <http://rs.acupcc.org/>
- 15 <http://www.presidentsclimatecommitment.org/news-events/symposium>
- 16 <http://www.presidentsclimatecommitment.org/resources/webinars>
- 17 <http://www.presidentsclimatecommitment.org/resources/publications>
- 18 <http://www.presidentsclimatecommitment.org/>
- 19 <http://www.presidentsclimatecommitment.org/news-events/newsletter>
- 20 <http://www.presidentsclimatecommitment.org/reporting/annual-report>
- 21 http://rs.acupcc.org/search/directory/?query=&search_by=&page=1
- 22 <http://www.presidentsclimatecommitment.org/news-events/newsletter>
- 23 <http://www.presidentsclimatecommitment.org/news-events/newsletter>
- 24 <http://www.presidentsclimatecommitment.org/il-support-committee>
- 25 <http://www.presidentsclimatecommitment.org/presidentialfellows>
- 26 <http://www.presidentsclimatecommitment.org/academic-committee>
- 27 <http://www.presidentsclimatecommitment.org/academic-committee>
- 28 <http://www.presidentsclimatecommitment.org/financing-committee>
- 29 <http://www.presidentsclimatecommitment.org/international>
- 30 <http://www.presidentsclimatecommitment.org/node/7374>
- 31 <http://rs.acupcc.org/>
- 32 <http://rs.acupcc.org/instructions/>
- 33 <http://rs.acupcc.org/instructions/extension/>
- 34 <http://www.presidentsclimatecommitment.org/reporting/annual-report>
- 35 <http://www.presidentsclimatecommitment.org/unengagedpolicy>
- 36 <http://rs.acupcc.org/stats/tangible-actions/>
- 37 <http://www.aashe.org/wiki/cool-campus-how-guide-college-and-university-climate-action-planning/2-creating-institutional-s>
- 38 <http://www.presidentsclimatecommitment.org/node/7403>
- 39 <http://www.presidentsclimatecommitment.org/node/7402>
- 40 <http://www.presidentsclimatecommitment.org/node/7313>
- 41 <http://www.ghgprotocol.org/>
- 42 <http://www.wbcsd.org/home.aspx>
- 43 <http://www.wri.org/>
- 44 <http://www.campuscarbon.org/>
- 45 <http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf>
- 46 <http://rs.acupcc.org/instructions/extension/>
- 47 <http://www.presidentsclimatecommitment.org/supporters/corporate>
- 48 <http://www.presidentsclimatecommitment.org/supporters/corporate/case-studies>
- 49 <http://rs.acupcc.org/instructions/ghg/>
- 50 <http://www.ghgprotocol.org/feature/invitation-comment-proposed-addition-gases-reported-ghg-protocol-standards>



51 <http://www.aashe.org/wiki/cool-campus-how-guide-college-and-university-climate-action-planning/4-determining-your-carbon->
52 <http://rs.acupcc.org/instructions/ghg/>
53 <http://rs.acupcc.org/stats/complete-ghg/>
54 <http://www.cleanair-coolplanet.org/toolkit/inv-faq.php#transportation>
55 <http://rs.acupcc.org/stats/caps-neutrality/>
56 <http://www.aashe.org/wiki/cool-campus-how-guide-college-and-university-climate-action-planning/9-structuring-your-plan-an>
57 <http://secondnaturebos.wordpress.com/2011/11/03/cap-planning-process-at-rit/>
58 <http://www.presidentsclimatecommitment.org/node/7375>
59 <http://rs.acupcc.org/instructions/cap/>
60 <http://www.epa.gov/nrmrl/std/lca/lca.html>
61 <http://www.gao.gov/products/GAO-07-285>
62 <http://www.focusthenation.org/>
63 <http://www.energyactioncoalition.org/>
64 <http://350.org/>
65 http://www.aashe.org/wiki/climate-planning-guide/education-research-and-public-engagement.php_-_ClimateChangeandSustainabilityintheCurriculum
66 <http://www.nwf.org/Global-Warming/Campus-Solutions/Resources/Reports/Student-Sustainability-Educators.aspx>
67 <https://stars.aashe.org/pages/about/technical-manual.html>
68 <http://www.theseedcenter.org/default.aspx>
69 <http://www.tccpi.org/>
70 <http://www.oberlinproject.org/>
71 <http://www.presidentsclimatecommitment.org/resources/financing/revolving-loan-funds>
72 <http://greeningthebottomline.org/>
73 <http://www.aashe.org/documents/resources/pdf/CERF.pdf>
74 <http://greenbillion.org/>
75 <http://www.presidentsclimatecommitment.org/resources/financing/tax-exempt-lease-purchase-agreements>
76 <http://www.presidentsclimatecommitment.org/resources/financing/power-purchase-agreements>
77 http://www1.eere.energy.gov/femp/financing/power_purchase_agreements.html
78 <http://www.presidentsclimatecommitment.org/resources/financing/efficiency-services-agreements>
79 <http://www.presidentsclimatecommitment.org/resources/financing/managed-utility-services-contracts>
80 <http://www.presidentsclimatecommitment.org/node/7477>
81 <http://www.presidentsclimatecommitment.org/financing-committee>
82 <http://www.aashe.org/wiki/cool-campus-how-guide-college-and-university-climate-action-planning/8-financing-campus-climate>
83 <http://www.epa.gov/greenpower/pubs/calculator.htm>
84 <http://renewables.morris.umn.edu/biomass/facility/>
85 <http://www.esf.edu/sustainability/action/fuelcell.htm>
86 <http://blog.sustainability.uic.edu/2011/03/uic-geothermal-case-study.html>
87 <http://www.sustainableunh.unh.edu/ecoline>
88 https://asunews.asu.edu/20120213_ASU_solar
89 <http://mwcc.edu/sustain/wind/>
90 <http://www.epa.gov/greenpower/toplists/top50.htm>
91 <http://www.presidentsclimatecommitment.org/resources/guidance-documents/offset-protocol>
92 <http://www.presidentsclimatecommitment.org/node/7355>
93 <http://secondnaturebos.wordpress.com/2011/02/03/carbon-offset-research-education/>
94 <http://secondnaturebos.wordpress.com/2011/02/03/what-you-need-to-know-about-carbon-offsets/>
95 <http://secondnaturebos.wordpress.com/2011/02/03/carbon-offsets-101-what-colleges-and-universities-can-learn-%E2%80%93-93-and-teach-%E2%80%93-93-about-ghg-offset-quality/>
96 <http://secondnaturebos.wordpress.com/2011/02/03/the-carbon-offset-potential-of-campus-forests-and-other-land/>
97 <http://ghginstitute.org/2012/08/03/getting-real-about-real-carbon-offsets/>
98 <http://www.aashe.org/wiki/cool-campus-how-guide-college-and-university-climate-action-planning/59-carbon-offsets>
99 http://www.presidentsclimatecommitment.org/files/presentations/symposium-asu/Reg_Symposium_Curric_NAU_Literacy.pptx
100 http://www.presidentsclimatecommitment.org/files/presentations/symposium-asu/Reg_Symposium_Curric_UNM_Odyssey.pdf
101 <http://wp.me/pFGVp-An>
102 <http://secondnaturebos.wordpress.com/2012/06/07/integrating-sustainability-climate-action-into-every-students-learning-experience/>
103 <http://www.presidentsclimatecommitment.org/academic-committee>
104 <http://www.camelclimatechange.org/>
105 http://www.cabrillo.edu/associations/governingboard/1112Agendas/November_7/Action/110711MBRCAC.pdf
106 <http://rs.acupcc.org/progress/422/>
107 <http://tla.csumb.edu/spirit-service-learning>
108 <http://sustainability.csumb.edu/focus-region>
109 <http://rs.acupcc.org/progress/316/>
110 <http://rs.acupcc.org/instructions/progress-report>
111 <https://stars.aashe.org>
112 <http://www.presidentsclimatecommitment.org/news-events/summit>
113 <http://www.presidentsclimatecommitment.org/presidentialfellows>
114 <http://www.presidentsclimatecommitment.org/resources/leadership>
115 <http://www.aashe.org/wiki/climate-planning-guide>
116 <http://www.aashe.org/forums>
117 <https://stars.aashe.org>
118 <http://www.ecoamerica.org>
119 <http://www.aashe.org/resources>
120 <http://www.campusgreenbuilder.org>
121 <http://www.cleanair-coolplanet.org/toolkit/inv-calculator.php>
122 <http://greenbillion.org/>
123 <http://www.theseedcenter.org>
124 <http://www.centerforgreenschools.org/green-campus.aspx>
125 <http://www.theclimateregistry.org/resources/verification/general-verification-protocol/>
126 http://www.ghgprotocol.org/templates/GHG5/layout.asp?type=p&MenuId=0Dg4&doOpen=1&ClickMenu=Corporate_Standard
127 <http://www.wri.org/publication/land-use-land-use-change-and-forestry-guidance-greenhouse-gas-project-accounting>
128 <http://www.ghgprotocol.org/standards/corporate-standard>
129 <http://www.aashe.org/blog/recommendation-how-account-carbon-sinks-campus-forests-or-lands>

